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CHAPTER ONE
INTRODUCTION

1.1 Background

The last decade of the 20th century witnessed an increasing recognition of the importance of knowledge besides the traditional resources of land, labour, and capital. Knowledge can take many different forms and has different meanings to each individual organisation. It can be stored in databases, printed on paper, integrated into an organisation's policies, procedures and reports, or contained within an employee's memory. As a result of the growing awareness of knowledge and its value in organisations in recent years, there has been a growth of the vocabulary around its management recognised in the emerging discourse known as knowledge management.

The concept of knowledge management is certainly not new. It has been around us as long as one can remember. One may even refer to it as God's own idea. The Holy Bible is a revelation of the knowledge and wisdom of GOD to Humanity that has evolved from ancient scrolls to compact print digital Bibles "…the word came to Jeremiah from the Lord saying take a scroll of a book and write on it all the words that I have spoken to you ….against all the nations from the day I spoke to you….even to this day" (Jeremiah 36 1-2: 11572[1]). Also, parents have passed down knowledge and wisdom to their children; and for centuries, family businesses continue to exist from knowledge handed down and workers have exchanged ideas and know-how on the jobs.

As the growing body of published literature on knowledge management underscores the role of knowledge management in organisations in enhancing organisational performance, competitive advantage, positioning, economic success and economic viability this makes it imperative for organisations to formalise their knowledge management practices. For instance, Nonaka & Takeuchi (1995) link knowledge management to organisational success, while Prusak (1997) points out that firms that leave knowledge to its devices put themselves in severe jeopardy.

Knowledge intensive organisations such as law firms have always intuitively appreciated the value of knowledge even though their knowledge management activities have been accomplished without substantial change in how these firms conduct their business. Buckler (2004), notes that some of what is now called knowledge management has been

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1   The Holy Bible, The New King James Study Bible for women (2003).

with lawyers since the time of the manual typewriter. Lambe (2003) posits that from the Code of Hammurabi, almost four thousand years ago, to modern law reports and Lexis Nexis, the practice of law has been a practice of knowledge requiring accurate, effective, and objective use of information.

The changes faced by the legal industry in recent years amongst which are advances in information communication technology, changes in the nature of legal practice, intense competition for clients, partners and law graduates, globalisation and mergers with other consulting companies have added pressure on law firms to maintain a competitive edge. This has resulted in law firms investigating alternative ways of improving the cost effectiveness of their services.

As law firms learn that acquiring and leveraging knowledge effectively within the client organisations can propel the firm to become more adaptive, innovative and competitive, knowledge management has increasingly become a topic of discussion in many competitive law firms. Nathanson & Levison (2002) observe that many United Kingdom and United States firms are funding or anticipating funding major knowledge management initiatives. A 2003 global law firm knowledge management survey report revealed that knowledge management organisation of leading law firms in the United kingdom, United States and Australia recognised knowledge management as a key business driver even though many of the participant firms had embryonic knowledge management organisations (Curve Consultant Survey Report, 2003). Leading United Kingdom law firms now have well-developed precedents and know how systems maintained by full time professional support lawyers who are senior lawyers and experts in their field (Kay, 2002).

In spite of the increasing body of literature on knowledge management by practitioners and researchers reflecting the immense potential for the use of knowledge management in law firms, the gap between theory and research is wide. A lot still needs to be done in the form of extending, refining, and empirically validating models, and developing theories and concepts in knowledge management in general and in law firms in particular. Grover & Davenport (2001) noted that very few studies have emphasised knowledge generation and realisation processes, and advocate the need to study the different levels of knowledge management that consists of integrating it into business strategy, process, structure, culture and behaviour.

Most previous empirical studies on knowledge management have emphasised technology-based initiatives. For example, a series of research studies carried out by Gottschalk on

knowledge management in law firms (Gottschalk, 1999; Gottschalk, 2000; Gottschalk, 2002; Khandelwal & Gottschalk, 2003) emphasised the role of information communication technologies to knowledge management in the law firms and suggests that knowledge management in law firms begins and ends only with information technology. Although technology has been a catalyst to the recent resurgencies of interest in knowledge management, knowledge management is not all about technology. Other notable empirical studies on knowledge management in law firm include: knowledge management practice in Scottish law firms (Hunter et al., 2002); applying knowledge management in law firm alliances (Carine, 2003); information and knowledge management in support of legal research in a digital environment (du Plessis, 2004); a survey of knowledge management in South African law firms (du Plessis & du Toit, 2005); and knowledge management on law firm performance (Forstenlechner, 2006). Besides, most of these knowledge management studies are skewed towards experiences and studies of industrialised nations, which are already becoming knowledge economies. There is very little information on knowledge management and law firms in Africa. Studies identified on knowledge management in law firms in Africa are du Plessis (2004) and du Plessis & du Toit (2005) studies on South African law firms However, the major focuses of du Plessis' studies are on information and knowledge management in support of legal research in a digital environment. Other few empirical studies conducted on knowledge management in Africa have focused on the financial, business, public and research organisations (Ndlela & du Toit, 2001; Okunoye, 2002; Squier & Snyman, 2004). The main settings for African studies on knowledge management have been South Africa and Nigeria. There is little information on knowledge management in other smaller countries such as Botswana and less still on guidelines and techniques of knowledge management in law firms in African countries.

Most knowledge management initiatives in law firms seem to have focused solely on large firms. In a study of knowledge management in Virginia law firms, it was found that most of these law firms were waiting to see how the large firms fared before adopting knowledge management (Gonzalez, 2002). Though large firms may be seen as logical users of sophisticated knowledge management systems, it is crucial for large and small firms alike because knowledge is becoming an essential survival weapon in any business organisation. Law firms in Botswana are small professional service firms, ranging from two to a dozen partners and having less than 100 employees (Fombad, 2002). These firms may therefore provide an appropriate setting for understanding knowledge management in small professional service firm context. It is against the above backdrop, that the main question of this study is formulated.

1.2 Main research question

In the light of the changing legal environment what are the practices and trends related to knowledge management that can provide guidelines for knowledge management in law firms in Botswana?

1.3 Sub questions

In order to shed light to the main problem, the following five sub problems are presented in this study

▸ How is the legal environment changing and what challenges do these changes have for law firms?
▸ How can knowledge management assist law firms in addressing these challenges?
▸ What is the current status and scope of knowledge management in law firms in general?
▸ What is the current status of knowledge management in law firms in Botswana?
▸ How can knowledge management be implemented successfully in law firms in Botswana?

1.4 Research questions

1.4.1 Research questions for sub problem 1 (the changing legal environment and its consequences to law firms)

▸ How is the legal information environment changing?
▸ What are the consequences of the changing legal information environment to the law firm?

1.4.2 Research questions for sub problem 2 (the role of knowledge management towards addressing the challenges in the changing legal environment)

▸ What is knowledge?
▸ What are the different approaches to knowledge?
▸ What are the different types of knowledge?
▸ What is knowledge management?
▸ What are the various approaches to knowledge management?
▸ What are the existing frameworks models and strategies for knowledge management?

▸ What are the technologies and techniques for knowledge management?

▸ What are the benefits of knowledge management?

▸ Which are drivers of knowledge management?

▸ What are the factors that inhibit the success of knowledge management?

▸ What are the enablers to knowledge management?

1.4.3 Research questions for sub problem 3 (the general status and scope of knowledge management in law firms)

▸ What are the different types and categories of knowledge existing in the law firms?

▸ What approaches do law firms mainly follow in knowledge management?

▸ Which tools and technologies are used for knowledge management in law firms?

▸ What are some of the techniques of knowledge management in law firms?

▸ What are the benefits of knowledge management for law firms?

▸ What models and framework exist for knowledge management in law firms?

▸ What factors inhibit the success of knowledge management in law firms?

▸ What factors are critical to the success of knowledge management in law firms?

▸ What are the guidelines for knowledge management in law firms?

1.4.4 Research question for sub problem 4 (the current status and scope of knowledge management in law firms in Botswana)

▸ What are the different categories of knowledge existing in the law firms in Botswana?

▸ What are the tools and techniques used for knowledge management in law firms in Botswana?

▸ How do law firms in Botswana approach knowledge management?

▸ What factors are critical to the success of knowledge management in law firms in Botswana?

▸ What are the perceived benefits of knowledge management to law firms in Botswana

▸ What factors inhibit the success of knowledge management in law firms in Botswana?

▸ What is the role of other institutions and agencies in knowledge management in law firms in Botswana?

1.4.5 Research question for sub problem 5 (the guidelines for implementation of knowledge management in law firms in Botswana)

‣ What are the guidelines for successful knowledge management in law firms in Botswana?

‣ How can knowledge management be effectively implemented in law firms in Botswana?

1.5 Objectives of the study

The general objective of this study is to establish the guidelines for knowledge management in law firms in Botswana in the light of changing legal environment. From the sub problems stated above, the following is set out as the specific objectives of the study:

‣ Identify the types of knowledge generated and shared in the law firms

‣ Investigate the impact of the changing legal information environment on the law firm

‣ Assess the current efforts nature and scope of knowledge management in the law firms in Botswana

‣ Investigate the benefits in accomplishing knowledge management in the law firms in Botswana

‣ Determine the enablers and barriers to implementing knowledge management in the law firms in Botswana

‣ Investigate the role of other stakeholders in the knowledge management process in Botswana

‣ Establish guidelines for knowledge management in law firms in Botswana

1.6 Rationale of the thesis

As an emerging concept, knowledge management is highly valued in research and practice but at the same time relatively diffused and scattered into diverging concepts, perspectives and disciplines. Grover & Davenport (2001) remarked that research in knowledge management seems fragmented. A lot still needs to be done in the form of extending, refining, and empirically validating its models, and developing its theories and concepts. It is only by developing the theories and concepts of knowledge management across specific contexts and locations that a model can be understood. By drawing from the existing theories and concepts of knowledge management, this study complements and contributes to the body of knowledge management research and theory from an African context.

The writing by practitioners and researchers on the importance of knowledge management

in law firms (Kofoed, 2002; Leibowitz, 2002; Parsons, 2002; Curve Consultant Survey Report, 2003; Rusanow, 2003) reflects the immense interest of knowledge management in the legal profession. Lamont (2002) asserts that very few fields could benefit more from knowledge management than the legal profession. Law firms, due to the intensity of knowledge work involved in their operations provide a fruitful arena for knowledge management research. However, in spite of the enormous potential for the use of knowledge management in law firms, very little empirical study has been carried out on knowledge management and law firms and hardly any on knowledge management and law firms in Botswana. This study will therefore provide a holistic approach for the understanding of knowledge management in law firms in Botswana.

Most studies in knowledge management have emphasised technological-based initiatives. Though technology has been a catalyst to the recent resurgence of interest in knowledge management, knowledge management is not all about technology. Fahey & Prusak (1998), point out that technology can never be substituted for the rich interactivity communication and learning that is inherent in personal dialogue. Similarly, considerable emphasis has been placed on knowledge-based systems, particularly, tools and techniques for knowledge representation. Grover & Davenport (2001) underscore the need to study the cultural and technological-based initiatives to knowledge management. It is against this backdrop that this study draws from the multiple definitions and perspectives of knowledge management (information technology, personal, organisational and business perspective); in order to present a unique guideline for knowledge management in law firms in the light of the changing legal information environment. It is the hope that lawyers in Botswana will become aware of the opportunities of knowledge management in their firms and acquire some insights on how to effectively implement knowledge management.

There is currently an interest in information and knowledge-rich professional firms as potential role models for all firms yet they are relatively under-researched (Handy, 1995; Pinnington & Morris, 1996). Law firms are professional service firms. By looking at knowledge management in law firms, this study would make a contribution to the emerging knowledge base view of small professional service firms.

A previous study on the adoption and use of information technology in law firms in Botswana revealed that the adoption and use of information communication technology has not really taken its roots amongst lawyers but did provide new understanding on the basis of which corrective measures could be taken to enhance the implementation of

information communication technology (Fombad, 2002). As a follow up to the above study, and, considering that information communication technology have been a catalyst to the recent resurgence of interest in knowledge management, this study will therefore indicate how lawyers in Botswana are faring with information communication technology in the knowledge economy since the Fombad (2002) study.

This study hopes to add to the body of literature on knowledge management from an information science perspective. Knowledge management is also emerging as an area of interest to information scientist traditionally known as good managers of explicit knowledge. Some writers recognise knowledge management as a partial reincarnation or resurrection of familiar library and information processes and procedures (Broadbent, 1998; Ajiferuke, 2003). Increasingly, special sections of some library and information science journals are devoted to knowledge management issues and special sessions on knowledge management are increasingly being held in conferences organised by information scientists. Most library and information science schools now offer courses on knowledge management. However, the literature on library and information science directly related to knowledge management concepts has seldom been acknowledged in knowledge management literature.

Bearing in mind that most lawyers in Botswana may still not fully understand the concept of knowledge management, studying this concept at the early phase of its implementation seems very appropriate. This is because it will enhance lawyers' understanding of the theories and methods employed in knowledge management practices. It is hoped that the extensive literature that would be provided and the recommendations that would be made may provide Botswana lawyers with valuable information that would be helpful in creating an appropriate environment for the smooth introduction and acceptance of knowledge management as a strategically important resource in the fast emerging knowledge environment.

The researcher's legal background also provoked an interest to explore the understanding of knowledge management in a knowledge intensive industry like the law firm.

1.7 Delimitation of the study

Knowledge management is relatively diffused and scattered into diverging perspectives and disciplines. This study will address only a few of the many different approaches to knowledge management by drawing on knowledge management literature as it relates to law firms.

Although this study determines the guidelines for knowledge management in law firms in Botswana, it is located within the discipline of information science where there has been an increased interest by information professionals in knowledge management activities.

1.8 Definition of terms

In most instances, the terms used are explained and discussed in relevant sections of the thesis. Some of these terms are also included in the Glossary that forms Appendix 1 of this study.

1.9 Overview of chapters

The thesis is structured into nine chapters. The flow of the diagram below gives a brief overview of the chapters.
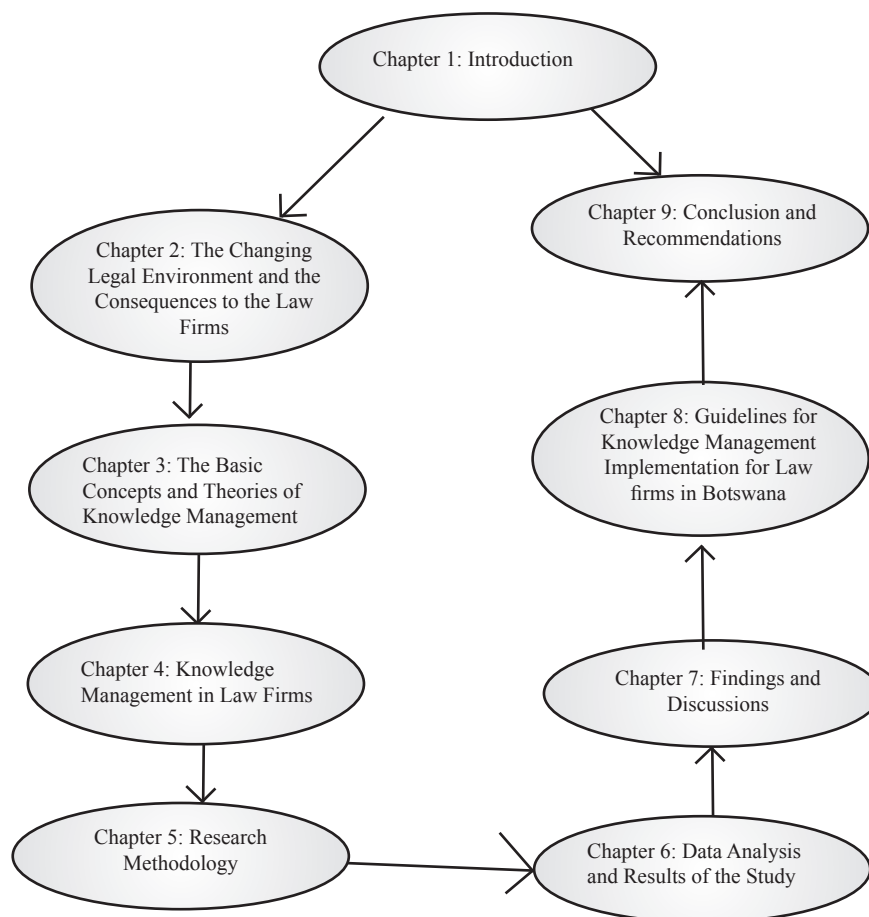
Figure 1.1 Overview of the chapters

The first chapter introduces the thesis and the particularities of the research and leads to the research questions, objectives and rationale of the thesis. Chapters 2, 3 and 4, locate the study theoretically. Chapter 2 focuses on understanding the nature and structure of the law firms and the consequences of the changing legal environment to the law firm. Chapter 3 places the study in the field of knowledge management and explores several concepts of knowledge management. Chapter 4 draws on the literature on knowledge management to locate the study in the context of the law firms. Chapter 5 focuses on the methodological framework and design used in the study. Chapter 6 presents the analysis of the results of the questionnaires and the interviews. Chapter 7 discusses the findings by relating all findings from previous chapters with each other. Chapter 8 presents guidelines for knowledge management in law firms. Chapter 9 concludes the thesis and provides recommendations and suggestions for further research. In essence, Chapter 9 is linked to chapter 1 because it shows that all the objectives of the study set out to accomplish in chapter 1 have been accomplished.

CHAPTER TWO
THE CHANGING LEGAL ENVIRONMENT AND THE CONSEQUENCES TO THE LAW FIRMS

2.1 Introduction

Several factors are challenging the ingenuity and creativity of lawyers and the legal environment compelling law firms to rethink their structures, roles, mission and the manner in which they carry out their business. Progressive law firms are adopting a business-oriented focus in the practice of law and are investigating alternative ways of providing cost-efficient services that may sharpen their competitiveness and broaden their influence within the legal industry and the global economy. The discussions in this chapter is centred around two research questions that seek to address the issues raised in sub-problem 1 of this study:

▸ How is the legal environment changing?
▸ What are the consequences and challenges of the changing legal environment to the law firm?

To put these issues in their perspective, it is proper to start with a brief description of a law firm.

2.2 What is a law firm?

A law firm can be described as a business entity formed by one or more lawyers to engage in the practice of law and the effective and efficient creation and delivery of legal services to clients. Lawyers are both advocates and advisors. As advocates, they represent their clients in criminal and civil matters by presenting evidence and arguing in court to support their client. As advisors, lawyers provide objective and learned counsel to clients concerning their legal rights and obligations. Lawyers are competent in general legal principles and procedures and in the substantive and procedural aspects of the law and have the ability to analyse and provide solutions to concrete legal problems.

Law is a knowledge-based profession and lawyers are classic knowledge workers (professionals with legal knowledge and skills superior to that of an ordinary person). Law firms apply a body of specialised knowledge to client's unique problem to provide a solution.

The general requirement to practice law in most jurisdictions is that one must have at least

a first degree in law after which he/she would be initially admitted to the profession as a student lawyer (pupil) depending on the regulations governing the lawyers' jurisdiction of practice. In Botswana the training of lawyers is a joint responsibility of the Law Society and the Department of Law at the University of Botswana. Competition for admission to study law is more intense than other areas of study in the social sciences at the university. To practice law in the courts of Botswana, a person must have completed a five-year law degree programme, be admitted on the roll of practitioners and must have obtained a practicing certificate unless he/she is exempted from obtaining the same. Sections 18-28 of the Legal Practitioners Act envisages a twelve months professional training period after the law degree. Commonwealth citizens are also allowed to practice law in Botswana provided they fulfill the requirements stipulated in Section 5 of the Legal Practitioners Act.

The Law Society in Botswana created on 2 August 1996, under the Legal Practitioners Act, 1996 is the supervisory professional body that regulates and oversees the conduct of lawyers in their professional work. Membership of the Law Society is compulsory for practitioners who hold practicing certificates; those in the Attorney General Chambers; and those employed by the Government or a statutory corporation (Section 56 of the Legal Practitioners Act). A lawyer sells his/her expertise and knowledge in legal matters. The main source of income is the lawyers' time that he/she spends in deploying knowledge in the service of clients (Lambe, 2003).

Lawyers acquire knowledge from internalising valuable information gathered during legal studies and legal research and through expertise and experience from learning on the job. Most often even after qualification from the law school, lawyers continue to develop their intellectual capacity and professional skills by acquiring specialised` knowledge in particular areas of law and legal procedure and by solving legal problems. Law firms are learning organisations and lawyers are always in need of accurate, up to date information and "snapshots" of law at particular points in time. If a lawyer ceases to learn, he/she would not be able to provide precise, unbiased and expert advice to the client or present the client's case convincingly and confidently (Leckie, et al., 1996). This may explain why lawyers tend to address each other as "learned friend", "learned colleague" or "learned lawyer."

In order to be able to analyse and solve legal problems, lawyers are obliged to develop their intellectual capabilities, reasoning and textual analysis (Leckie, et al., 1996; Best, 2003). Professional skills such as legal research, judicial problem-solving, analysis, application

of the law to relevant facts, negotiation, drafting, advocacy, interviewing and general skills such as, business management, communication, team work, client relation skills, are skills required to build up a competent lawyer (Collins, 1994, Tjaden, 2001).

2.3 Organisation of law firm

Most law firms are organised around sole proprietorship and partnerships. In a sole proprietorship, a single lawyer is responsible for all the profit, loss and liability of the firm. A partnership is the relationship that subsists between two or more persons carrying on business in common with a view to profit (Mozley & Whiteley, 1998). Partnership is seen as a price in a tournament in which the winner forgo immediate returns to the value of their knowledge in order to reap the gains of property rights in the long term (Baden-Fuller & Bateson, 1991; Rebitzer & Taylor, 1999). In the traditional partnership model, the entire partners share equally in the profit of the firm after account has been taken of the cost of running the firm. Increasingly, modern law firms are adopting a two-tiered partnership model consisting of equity and non-equity partners (Susskind, 2003). Equity partners own stakes in the firm, share ownership and liability and are eligible to a share of the firms' annual profits. Non-equity partners on the other hand, are generally paid a fixed salary higher than that of lawyers working in law firms without partnership status and are granted certain limited voting rights with respect to the firm's operations. Lawyers working in law firms without partnership status are most often referred to as "associates," "fee earners" or "junior lawyers." In Botswana these lawyers are known as "professional assistants." Law firms are most often organised in such a way that each partner works closely with a number of associates and trainees who normally refer to that partner (Kofoed, 2002). One of the criteria for election into a partnership is for a lawyer to have demonstrated "thought leadership." That is, he/she will explicitly be assessed to have contributed significant knowledge and ideas to the firm.

Law firms may also employ paralegals (law librarians and legal assistance), clerical, and administrative staff to whom they delegate activities. Schoenberger (1995) outlines four organisational modes for legal practice: the mega-firm (large professional firms having more than 1000 lawyers) providing trans-national legal services; medium size firms (10 to 200 lawyers); the small firm with (2 to 10 lawyers) and the sole practitioner. Using the above distinctions as a rule of the thumb, all the law firms in Gaborone, Botswana could be classified as generally small because they have less than 10 lawyers. Statistics from the Botswana Law Society as at October 2007 shows that law firms in Botswana are either sole

proprietors or limited liability partnership and that the size of the firms varies from one to ten lawyers (Law Society of Botswana, 2007).

2.4 Changes in the legal information environment

Rapid advances in information communication technologies and changes in the business environment have resulted in accelerated changes in the legal environment. In the following section, the forces and the changes that it has brought about to the legal environment are identified and discussed.

2.4.1 The shift from paper-based to electronic sources of information

Traditionally, the practice of law has been built around law books and print technology. For a long-time, legal research facilities were centred on the paper-based law library, the precedent bank and the collection of press cuttings. Berring (1997) observed that the law library was considered as the centre for law firms, and clients considered it as an indication of the lawyer's prowess. Ten years ago in the United States, it was unusual to find a member of the legal profession with basic computer skills and the secretary was indispensable (Armitage, 1997; Brenells et al., 1997). In the same light, a report by the Bar Human Rights Committee of England and Wales (Library Resources for Lawyers Project Africa, 2001), explains, how the law firms used to operate before information communication technologies came into use. According to this Report, opinions, pleadings, and other legal documents were painstakingly drafted by hand and then typed by secretaries. First, drafts were amended and then carefully re-typed before signature. Legal research meant days in the library, searching for books and authorities in the hope that colleagues had not removed them. The quality of research, particularly in relation to new law, depended on the library collection being comprehensive and up to date. Hours over the photocopier followed in order to prepare bundles of authorities for the courts and colleagues. Sending copies to the court, solicitors, and interested parties required hours on the fax machine or an army of dispatch drivers and the journey to court involved a heavy bag of textbooks.

The situation is changing, albeit, gradually. The development of online computer- based research systems like LexisNexis and Westlaw (the first legal online databases) in the 1970s was an indication that legal practice had already entered an era not totally reliant on print (Katsh, 1995). Lawyers then began to find and download court decisions online and were able to carry out computerised searches through massive libraries for case reports, statutes and statutory instruments. Several other online databases such as Justastat, LexisNexis and

Dialog have rapidly emerged to provide important additional electronic research facilities to lawyers while online advisory and drafting tools are also becoming commonplace. Lawtel and the new electronic version of Sweet & Maxwell are recent legal databases containing summaries of legal material. Besides access to external databases, in-house research database systems (sometimes referred to as a know-how database system) have become available in the form of CD-ROM and online computer systems and assist in the storage and retrieval of valuable know-how generated within the law firm itself.

The practice of law underwent a profound change when the first personal computers appeared in the law office. Computers are shouldering much of the burden of routine tasks that used to take an enormous amount of the law firms' time. Lawyers are now able to carry electronic libraries around with light, easy-to-use portable computers and it is becoming increasingly easy to find specific information that used to take lawyers and paralegals hours to locate. Complex and expensive computer programmes enable lawyers to manage the documents and testimony needed in trials and some lawyers use large screen television presentations before juries presenting convincing and vivid arguments.

The literature reveals that lawyers have historically been fearful and resistant to adopt modern technology. In 1996, Katsh observed that many lawyers in the United States, especially sole practitioners and small firms did not even subscribe to, much less use the electronic research opportunities provided by LexisNexis and Westlaw. Some lawyers, particularly the older ones, have barely departed from the use of law books, and still consider print materials as probably the medium of choice. Similarly, in 1999 Lauritsen noted that even though most lawyers in America are using information communication technologies, techno phobia still reigns in many quarters, and many lawyers consider computers to be a strange hybrid of a manual typewriter beneath their dignity and above their understanding. Parsons (2002) reported that older lawyers tend to rely on the research skills of younger lawyers hoping that they are familiar with the latest information communication tools that facilitate legal research. Dubin (2005) noted that most lawyers are resistant to adopt information communication technology.

The resistance to adopt new technology may be partly because lawyers are reluctant to abandon their personal working habits and tools. In a 2001 study, one lawyer commented, "I like the books I'm a little old fashioned that way" (Haruna & Mabawonku, 2001:79). Lawyers' resistance to adopt new technology could also be partly attributed to the legal mindset. With regards to the legal mindset, Koer (1989:28) refers to lawyers as professional

non-believers who in the first instance rather mistrust than trust and who do not take things for granted. It may also be due to the fact that lawyers are generally obsessed with security of electronic information from protecting client's documents to shielding privileged legal advice, and safeguarding accounting information and would apply high standards in terms of authenticity, quality and integrity of the information which they base their decisions to serve their clients. It is ironical to note that a lawyer's career demonstrates the ability to learn and acquire completely new areas of knowledge as observed in section 2.3 above yet when it comes to adopting new technologies they are one of the most reluctant. Another reason why some lawyers are not up to speed on information technology may be because many law schools have not integrated it in their curricula.

2.4.2 Advances in information communication technologies

It is becoming obvious in today's law firms that advances in information communication technologies is dramatically changing the method used by lawyers for processing knowledge and delivering legal services to clients. Information communication technology in law firms can be used administratively or operationally. A common categorisation of the use of technology in the law firm has been in the "back-office," for administrative functions, and "front-office" for operational functions (Widdison, 1993). This description has become colloquial, because advances in information communication technologies have resulted in a seamless operation of both front and back office functions. Nevertheless, categorising information communication technologies in law firms in this manner is still important for a clearer understanding of the ways in which information communication technology is used in the law firm.

Generally, the administrative uses of information communication technology involves the application of information communication technology by lawyers or support staff to tasks essentially concerned with the internal management of the firm and towards improving staff efficiency in matters such as word processing, calendaring, time recording, client billing, accounting, marketing and public relations. Reach (2006) noted that this is done with the use of specialised legal technology software for word processing, accounting systems, calendaring, case management, conflict checking, customer relationship management, document assembly, document management, practice management and time tracking in back-office operations.

Operational uses on the other hand, involve the application of information communication technology by lawyers to tasks directly related to their professional efforts such as legal

research, casework management, or as a tool to facilitate the legal process (Widdison, 1995). Typical applications used to facilitate front office operations are legal information systems, artificial intelligence, case analysis support systems, electronic learning management systems, and litigation support systems.

Nowadays, the adoption and use of information communication technology is moving beyond the automation of existing practices to innovative concepts and applications such as the intranet, internet deal rooms, extranet, document and content management, online depositions, real time chat, portals, groupware, expert systems and knowledge management systems (Hopkins & Reynolds, 2003; Reach, 2006).

2.4.3 The Internet

The internet is a major step forward in information technology and it is challenging most of the paper and print paradigm that supported the practice of law. It consists of almost every resource necessary for legal research. Legal databases such as Westlaw, LexisNexis, Jutastat and Shepard previously based on propriety software legislation now have sites on the internet where a lawyer can log on from any computer and do research. Besides these commercial databases that lawyers have to subscribe to, the internet also offers plenty of free legal information resources and electronic libraries comprising of full text documents. Examples of electronic sources freely available over the internet are the cases and legislation of the following institutions: The South African Legal Information Institute (SAFLII), Australasian Legal Information Institute (AUSTLII), British and Irish Legal Information Institute (BAILII), Canadian Legal Information Institute (CANLII), and the World Legal Information Institute (WORLDLII) (du Plessis, 2004). An online directory for South African legal professionals known as Hortors is also available over the internet.

Due to the proliferation of legal resources on the internet, software programmes have been designed to assist the user in navigating through the World Wide Web. An example is the popular search engine, the Find Law "Law Crawler" designed to locate legal resources located at http://www.lawcrawler.com/index.html. Electronic libraries comprising full text documents are accessible across the internet and it is also possible to access a substantial number of law library catalogues across the Internet. The internet Law Library, compiled by INTRALAW Legal Navigator and created by internet Legal Services integrates with a web browser to provide the user with organised index of links to legal resources on the internet (McCauley, 2005).

The internet also provides a cost-effective medium for electronic communication amongst lawyers and between lawyers and their clients. Electronic communication and collaborative tools like e-mail, video and text-based conferencing, Lotus Notes, Voice-Over-IP, are recent groupware that provide shared experience, support real-time on-line meetings and have accelerated the speed by which client contact and communication with other lawyers can be achieved. E-mail enables lawyers to send memorandums, mull strategies with clients, mark off drafts or briefs with co-lawyers and obtain answers to burning issues or problems by participating in a number of law-oriented mailing lists specific to the issue at hand (Esqlawtech, 2002; Staudt, 2003). Lawyers may monitor new developments by subscribing to e-mail newsletters, and by reading legal newspapers on the web. Legal services are being marketed over the internet through law firm web sites, law department intranet sites, Usenet, and e-mail discussion groups. A host of online information and advisory services are available over the internet through internet law firms, free legal internet service providers and virtual deal rooms (Jean, 2000; Gahtan, 2001; Hamzah, 2001).

As internet technologies continue to emerge with increasing sophistication, it is triggering changes in the way law is practiced and delivered. In a 1999 study, Nye predicted that by the year 2025, the internet would change everything about the practice of law. The virtual court, electronic filing and litigation support systems are internet facilities that will characterise legal practice in the digital age.

2.4.4 Electronic publishing

Legal publishers are increasingly becoming brokers and vendors of information and are reshaping their markets by using web technologies to provide lawyers with ready access to vast amount of current as well as retrospective legal information resources (Paliwala et al., 1997; Perton, 1998; Hoover, 1999). Though it is apparent that electronic publishing will not completely displace traditional paper-based publishing technologies, it is increasingly an important medium to be taken into account in the provision of legal services and needs to be carefully managed.

2.4.5 Information overload

The proliferation of information and electronic resources coupled with the internet and online decisions from courts has aggravated the problem of information overload. The production and dissemination of information has become so cheap and easy that the flow has become greater than one's ability to process. Lawyers are sometimes overwhelmed

with the amount of random and unorganised information and are drowning in a pool of sometimes irrelevant information. Parsons (2002) noted that in the "knowledge economy," the explosion of content and the increasing demands for speed in the provision of legal services has ironically led to information anxiety and attention deficit amongst lawyers. Consequently, tracking relevant information and knowledge amongst lawyers within the firm may be very time consuming as lawyers spend time duplicating research that has already been carried out elsewhere, or creating new agreements and documents when models of such agreements already exist; often resulting in frustration.

2.4.6 Globalisation of legal services

As advances in information communication technology enables law firms to increase their horizons, the decline of centralised economies and globalisation of business practices have broken geographical boundaries, leading to an increase in international collaborative legal practice worldwide. Law firms are growing beyond their traditional local markets to global markets with large corporate firms having offices or federation of national firms in many countries conversely facing increased competition from other global players (Wall, 1998). The interaction of different cultures, the integration of processes and procedures while nurturing a sense of corporate identity presents practical problems. Also, the fact that the services of alternative law firms may be sought anywhere in the world poses a threat to the local law firms (Jackson, 2001:33; Rusanow, 2003). Firms are compelled to differentiate themselves from their competitors and develop business strategies to manage knowledge about their market position, competitors, and key clients.

2.4.7 Consolidation of law firms

There has also been an exponential growth in the size of law firms in recent years resulting in the growth of national and regional law firms. As these national and large size firms become anxious to capitalise on rapidly growing practice, they continue to present merger offers to well-positioned small firms (Bradlow, 1988; Susskind, 2003). It is evident that the "bigger is better mentality" is attractive to many law graduates such that many of them are opting to work in large law firms (Susskind, 2003).

2.4.8 The drive towards specialisation

Legal practice is shifting from the general practitioners' model to the development of specialised divisions within the areas of law. Increasingly, the clients' choice of a law firm

is no longer based purely on the firms' reputation, but rather on the lawyer's expertise and experience in a particular speciality (Susskind, 2001). Specialisation is perceived as a means of fostering the growth of law firms in an era when lawyers are being overwhelmed with the amount of information to grapple with. Intellectual property, information technology, conflict resolution, banking, and international trade, are hot areas of specialisation in legal practice (Bradlow, 1988; Lauritsen, 1999). Internet lawyering is also emerging as a major career path. There are new internet-based networks of lawyers consisting of virtual teams of specialists, and independent practitioners who are assembled to conduct a given piece of work and are disbanded on completion (Susskind, 2003).

2.4.9 Competition amongst firms

The continuous rise in the number of lawyers and law firms has put pressure on law firms to maintain a competitive edge against each other for partners, clients and law graduates. This is particularly so as the supply of lawyers is far exceeding the demand for their services. Statistics from the American Bar Association in 2003 indicated a 25% increase in the number of licensed lawyers in the United States from the previous decade (Susskind, 2003). Financially viable law firms in an attempt to attract the best and brightest lawyers are making large salary offers to many freshly qualified and talented lawyers. This may imply that only firms that provide unique proactive value added services to its clients and make its lawyers smarter may survive.

2.4.10 Pressure on law firm from clients

Clients are becoming sophisticated consumers of legal services. They expect lawyers to have technologies in place that may enhance their effectiveness and are not willing to pay lawyers to deliver work in what they consider as inefficient and expensive ways (Dubin, 2005). Most clients are computer literate, connected to the Internet and may even conduct an Internet search on the legal issue at stake before consulting a lawyer. Bradlow (1988); Nye (1999); and Kofoed (2002) observed that clients have become increasingly fee-conscious and will not hesitate to shop around for the best fees or question billings. Susskind (2003) points out that an emerging trend in the legal business is for clients to access the firm's knowledge electronically. Wall (1998) observed that the "trustee" relationship between the lawyer and the client has been superseded by a relationship in which lawyers are no longer seen to provide a legal service in the traditional sense but are now perceived as conducting legal business with the client.

2.4.11 Disintermediation

New technologies, legal databases and the Internet have accelerated what is referred to as the disintermediation process (Bradlow, 1988; Nye, 1999; Susskind, 2001) Disintermediation consists of any activity that eliminates or bypasses an intermediary (middle man) such as a specialist, professional, or institution from the delivery of a service or transaction that it normally performed (Drucker, 2000; ESQlawtech, 2002). Lawyers are classic examples of an intermediary because they serve as agent, broker and representative between the client and the legal system. The internet, legal technology, and legal self-help books are increasingly taking the place of lawyers by providing lots of answers to most clients' needs. The legal software market has also been flooded with programmes that produce legally acceptable wills, binding residential leases, guidance through divorces, articles of incorporation, real estate documents, and legal contracts (Nye, 1999). Similarly, Legal Web Advisor offer interactive legal advice delivered via extranet using artificial intelligence (Mountain, 2001). The electronic law library (http://www.lectlaw.com) is also a site that is filled with legal advice on every imaginable topic.

In sum, disintermediation may not necessarily lead to the extinction of lawyers because lawyers have the unique expertise to recognise and deal with complex situations when a problem arises. However, the thoughts of disintermediation has given clients the feeling that law is not so complex and that they are paying for the management skills of the lawyer rather than the legal knowledge. It is thus becoming clear in many jurisdictions that the best way for lawyers to survive and strive in the new paradigm is to make use of these same legal technologies and the Internet and provide cost effective, efficient and unique high-quality services that cannot be easily replaced by computer-delivered services.

2.4.12 The foray of professional service firms in the legal information environment

Closely associated to disintermediation, is the foray of professional service firms into the legal information environment. Law firms are professional service firms and like other professional service firms, their basic mission is to deliver outstanding client service, provide fulfilling careers and professional satisfaction and achieve financial success and growth (Maister, 1993:46; Hunter et al., 2002). Professional service firms like accountancy, management and consultancy firms have long realised the need to consolidate their resources, promote a culture of knowledge-sharing, and expand their services to meet the need of the changing client base. These firms have started to provide online multidisciplinary

services based on the needs of the clients. Accountants, financial planners, consultants, trust officers, mediators and a host of other professional service providers are pirating the work traditionally done by law firms such as tax work, employee benefits; management consulting and litigation support (Susskind, 2001). Thus, clients would not bother to seek the services of lawyers when professional service providers are acting as intermediaries and performing the traditional legal services previously done by lawyers even at a much cheaper rate. Law firms are therefore under threat from these professional service firms to expand their services and to meet the needs of their clients.

2.4.13 Increase mobility in the legal profession

The competitive business environment, advances in information communication technology coupled with the possibility for an open market for professional workers have revolutionised lawyers' mobility in recent years. Young lawyers are becoming highly mobile. Some are opting for changes to improve on their curriculum vitae, others in search of greener pastures, and others still in search of high value added jobs that will satisfy their personal tastes and aspirations (Hunter et al., 2002). Furthermore, lawyers sometimes leave their jobs because they are susceptible to problems of low morale and alienation or because the working conditions are not intellectually stimulating and challenging (Rusanow, 2003). Quite clearly, the traditional law firm environment of exceedingly long hours involving low value added work is becoming less attractive to lawyers who are presented with many options. The security and indefinite long-term contract of employment that lawyers enjoyed in the past is no longer guaranteed and it is very normal for lawyers to spend less than three years at the firm. Dubin (2005) observed that new generation of lawyers with high expectations and reliance on information communication technology may be unwilling to stay in firms that do not use the recent information communication technology tools. In addition, senior lawyers in the law firms belong to the aging demography that may retire and carry along with them vast amount of knowledge that they have acquired over the years (Sinotte, 2004).

It is apparent from the different factors examined in this section that the legal environment is currently experiencing several changes. It is therefore necessary to investigate the consequences and challenges of all these changes to the law firm.

2.5 The consequences and challenges of the changing legal information environment to the law firms

The preceding section identified the factors that are responsible for changes in the legal

environment and discussed the changes these factors have brought about in the law firm. These changes are affecting the lawyers' routine, challenging their inefficiencies and practices and are putting pressure on law firms to find faster ways of delivering legal services. In order to successfully manage the above, lawyers need to rethink their traditional strategies and seriously focus on new models of lawyering. The survival and growth of a law firm depends on its ability to find easy cost-effective ways that lawyers may access and share critical information and best practices, and provide proactive services to clients. In light of the rapid changes taking place, a number of challenges are faced by law firms today.

- **Coping with information overload**

The explosion of the large amounts of (often redundant) information that is increasingly available in law firms is a major problem to lawyers because they are overwhelmed with large amount of irrelevant information (du Plessis & du Toit, 2005). In essence, though a vast wealth of information and knowledge resides amongst lawyers and within the law firm, most lawyers do not know where to get it. In order not to miss out on critical pieces of information, lawyers require some skills, strategies, and assistance in seeking, collecting, storing, managing and processing relevant information from many sources in a retrievable fashion (Parson, 2002; Rusanow, 2003).

- **Dealing with technological concerns**

The ubiquitous presence of information communication technology electronic resources and the internet is transforming the legal industry and putting pressure on law firms to find faster ways of delivering legal services (Hopkins & Reynolds, 2003; Reach, 2006). Lawyers cannot afford to continue to rely only on traditional print resources because they may run the risk of not having the best and most current information that could influence the position of his/her client. Law firms are therefore challenged to design effective strategies to deal with advancement in information communication technology examine ways of using technology in improving on their work, delivering better services to the clients and meeting the internet-driven needs of the client.

- **The need to provide proactive legal services to clients**

Clients want more value for money and law firms want to deliver better value without putting more strain on lawyers. As law firms shift their practice from the provision of

informational, transactional, and documentary services that may be handled by sufficiently advanced technology, to more interactive services like client counselling, trial, advocacy, taxation and security, they are compelled to provide efficient, proactive and specific legal services to clients (Susskind, 2003). In order to attract and retain clients and improve on their productivity and profitability law firms are challenged more than ever before to be more efficient, responsive and effective, in the provision of proactive cost-effective services and up to date legal information to potential clients.

- **Increased competition from globalisation, specialisation and the consolidation of legal practices**

The drive to specialisation, the need to operate globally and the consolidation of law firms have increased competition amongst law firms (Bradlow, 1998; Dubin 2005). This is putting pressure on law firms to differentiate themselves from multiple markets and multiple competitors. Global management, virtual offices, flatter management structures and focus on business processes are some of the responses to these challenges (Rusanow, 2003). Law firms are compelled to collect enough information about their businesses and adopt a strategic approach to their future growth, market position, competitors, and key clients and effectively process and analyse these information in robust and reliable ways. Collaboration and communication amongst lawyers with and within other disciplines and community of practice is becoming crucial for the survival of the law firm. As law firms grow bigger and scattered, they encounter cultural resistance to share knowledge across offices and practice groups.

- **Pressures from other professional firms**

The foray by a host of other professional service providers into the work traditionally done by law firms is compelling law firms to define the unique scope of its knowledge, understand its value and leverage and diffuse it in ways that will not replicated by competitors (Hunter et al., 2002). Consequently, law firms must be clear on their business objectives and define those objectives in context to the firm's wider goal.

- **The challenge to acquire new skills and competencies**

Lawyers can no longer afford to be computer illiterate, consider information communication technology as the province of the support staff or consider information communication technology as something only for the information technology department.

Lawyers are compelled to acquire information literacy[2] and information communication technology literacy skills (Chitwood & Gottlieb, 1998; Jackson, 2001:34). Other skills that may be expected from lawyers are information and knowledge management skills, computer and information literacy skills, digital lawyering, electronic publishing skills, and skills in the use of programmes that enhance legal service. Lawyers are also challenged to develop a corporate capability - a unique mix of skills, expertise, processes, management and intellectual capital that would enable it to respond to the changes and develop its markets.

- **Meeting the information and knowledge needs of the lawyer**

As the legal information environment is changing, so too are law firms challenged to fully identify and leverage the different information and knowledge needs of junior and senior lawyers. Lawyers' needs are diverse and constantly changing and most often reflected by the stages of professional development, and the needs of a particular client. Leckie et al. (1996) observe that within the universe of potentially relevant information, what is required by a particular lawyer would vary and individual demographics such as age, specialisation, professional development, frequency of need, importance of the issue at hand, and complexity of the problem will influence the needs of the lawyers.

- **Lawyer mobility**

The increased mobility amongst lawyers from one firm to another poses a threat to law firms (Bradlow, 1998; Hunter et al., 2002). Lawyers leave the firm carrying along expertise that has not yet been captured and preserved in the firm to share with others. The specificity of a lawyer's knowledge, and the close relation he/she enjoys with a client also places the law firm at a risk because an expert may "grab and go" with the client (Morris & Pennington, 1998). There is therefore a growing awareness that if measures are not taken, a vast quantity of vital knowledge and expertise would walk out of the door. Law firms are compelled to improve and solidify retention rates, capture and retain some of the knowledge, wisdom and experience of lawyers and attract and develop the best staff.

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2   Information literacy entails techniques and processes that involve the ability to locate evaluate and manage the use of information for problem solving, decision-making and research from a range of sources (Bruce & Lampson, 2002; Owusu-Ansah, 2003). Information communication technology literacy on the other hand entails the ability to use information communication technology tools and devices but stops short of being able to find, evaluate and use the information to which computer provides access. An information literate person generally acquires information communication technology skills in the process of becoming information literate.

- **Developing the firm's organisational memory**

Law firms are challenged to develop an organisational memory that will increase the firms' ability to retrieve their previous experiences so that the knowledge and competencies representing the past and present collective learning of lawyers are transferred across generations of learning. Organisational memory also referred to, as the firm's intellectual capital is the knowledge and knowing capability of an organisation. It has been defined as the knowledge from an organisation stored and distributed across different retention facilities that can be retrieved, remembered and brought to bear on present decisions (Fiol & Lyles, 1985; Walsh & Ungson, 1991).

- **A learning organisation**

As the need for growth and career development is becoming an alternative for lawyers to leave the firm, law firms are compelled to become effective learning organisations in order to stay innovative and be resilient to weather uncertainties. A learning organisation will generally encourage the development and progression of staff to new areas where growth and career development become alternatives to leaving the organisation (Argris & Schon, 1978: 2-3, 27; Cross & Baird, 2000:69; Delphi, 2001).

- **Ethical and legal challenges**

The rapidly evolving legal information environment has presented some ethical and legal challenges to the practice of law. Potential areas of ethical dilemma include: e-mail and attorney-client relationship (Blades & Vermylen, 2004; Schnell, 2005); e-mail and attorney client privilege and the issue of confidentiality (Weingarten & Weingarten, 2002); lawyers' online comments and unauthorised practice of law (Blades & and Vermylen, 2004); lawyer advertising and solicitation over the internet (Hill, 2002; Bencivengo, 2003; Blades & Vermylen, 2004; McCauley, 2005); the misdirected e-mail and inadvertent receiver (Simko, 2002; Bencivengo, 2003); the admissibility of electronic evidence (Boone et.al., 2002; Giordano, 2004) and the use of electronic evidence in trial (Flaherty, 1996; Widdison, 1997; Girvan, 2001). In the search for newer and more efficient ways of delivering legal services and information to the public, it is important for lawyers to explore the use of this rapidly changing media in a way that properly balances professionalism and ethics.

2.6 Conclusion

In an attempt to address research question one of the study, this chapter examined the law firm, the changing legal information environment and the consequences and challenges of these changes to the law firm. The above changes in the international legal environment

provide the basis from which the changing legal information environment in Botswana will be empirically investigated in order to establish the guidelines for knowledge management in the law firms.

It was seen that law firms are knowledge intensive organisations in which lawyers are sophisticated managers of information and knowledge. The law firm's knowledge resource is its collective insight, specialised expertise and experience. Lawyers collect use and generate large stores of information and knowledge on a daily basis and are basically engaged in the sale of their specialist expertise.

Rapid advances in information communication technology and other significant changes in the business environment have resulted in accelerated changes in the legal information environment. Amongst the factors that have triggered these changes in the legal information environment are globalisation, electronic publishing, information overload, increased client sophistication, internalisation of business practices, competition amongst firms, the drive towards specialisation and an increased mobility rate amongst lawyers.

Amidst these changes, law firms are compelled to rethink their traditional mode of legal practice. The survival and growth of law firms depends increasingly on amongst other things factors such as, the ability to find easy cost effective ways for lawyers to access and share critical information and best practices, deliver high value services to clients, explore the use of the rapidly changing media in ways that properly balances professionalism and ethics. Good academic credentials and legal competence by themselves are no longer sufficient for a lawyer. Lawyers are challenged to acquire information literacy and information communication technology skills that would facilitate information retrieval (Chitwood & Gottlieb, 1998; Jackson, 2001:34).

The realities of these changes, coupled with the increased recognition in recent years of the value of knowledge management and the fact that acquiring and leveraging knowledge can propel the firms to be more innovative and competitive has focused the attention of law firms to harnessing knowledge management in legal practice. A proper implementation of knowledge management will transform the legal practice and fundamentally alter the way lawyers interact and exchange critical legal information across their extended enterprise. Knowledge management is becoming crucial for the creation of an environment conducive for knowledge creation and sharing. It will promote trust, and foster teamwork, enhance consistency and ensure that lawyers across practice groups are working together to identify clients' need and provide uniform advice to the client (Chester, 2002; Rusanow, 2003;

Wesemann, 2006). Law firms in Canada, United States, United Kingdom and Australia are considering knowledge management as a necessity for meeting emerging client demand for efficiency, accountability, and controlled legal cost (Chester, 2002; Nathanson & Levison, 2002). Leading United Kingdom law firms have well-developed precedents and know-how systems maintained by full time professional support lawyers who are senior lawyers and experts (Kay, 2002). Becerra-Fernandez (1999); Whitfield-Jones (1999); Curve consulting (2003); Kay (2002); Leibowitz (2004); and Opp (2004) have noted that a successful implementation of knowledge management in law firms may result in the following benefits:

- ‣ Foster innovation and encourage the free flow of ideas;
- ‣ Improve learning and the ability to stay ahead of competition and changes in the legal information environment;
- ‣ Provide higher quality knowledge work;
- ‣ Improve individual and group competencies;
- ‣ Provide more effective networking and collaboration;
- ‣ Improve customer service by streamlining response time ;
- ‣ Boost revenues by getting products and services to market faster ;
- ‣ Reduce redundancy and enhance employee retention rates by recognising the value of employees' knowledge and rewarding them for it ;
- ‣ Streamline operations and reduce costs by eliminating redundant or unnecessary process;
- ‣ Improve productivity;
- ‣ Facilitate decision-making, and the achievement of other business objectives;
- ‣ Provide better integration of practice across firms;
- ‣ Provide better client service; and
- ‣ Provide a more rewarding working environment.

The main conclusion that can be drawn from this chapter is that the legal information environment is changing and is putting pressure on law firms to seek ways of redefining their traditional mode of lawyering by harnessing knowledge management in the law firm. The next chapter therefore focuses on the concept and theories of knowledge management. An understanding of the theories and principles of knowledge management would provide a solid background for the investigation of knowledge management in law firms - the subject of this research.

CHAPTER THREE
THE BASIC CONCEPTS AND THEORIES OF KNOWLEDGE MANAGEMENT

3.1 Introduction

The preceding chapter presented the legal information environment experiencing the impact of change. It was suggested that knowledge management may play an important role in weathering these changes by transforming legal practices and fundamentally altering the way lawyers interact, communicate, and exchange critical legal information across the firm. In order for lawyers to take advantage of knowledge management, they need to fully understand the concept, approaches, benefits and techniques of knowledge management. This chapter explores some of the basic theories and concepts in knowledge management in order to orientate the researcher towards the issues to be explored in knowledge management in law firms. However, a lot still needs to be done in the form of extending, refining, validating and empirically developing the theories and concepts of knowledge management across specific contexts and locations particularly from an information science perspective. In order to provide the foundation for understanding the fundamental principles to effective knowledge management the discussion in this chapter will be based on the following research questions that seek to address sub problem two of the study:

- ▸ What is knowledge?
- ▸ What are the different approaches to knowledge?
- ▸ What are the different types of knowledge?
- ▸ What is knowledge management?
- ▸ What are the various approaches to knowledge management?
- ▸ What are the existing frameworks models and strategies for knowledge management?
- ▸ What are the technologies and techniques for knowledge management?
- ▸ What are the benefits of knowledge management?
- ▸ Which are drivers of knowledge management?
- ▸ What are the factors that inhibit the success of knowledge management?
- ▸ What are the enablers to knowledge management?

3.2 Defining knowledge

It has been noted how several epistemological[3] debates since the Greek era[4] have failed to settle on a single generally accepted definition of knowledge, and how closely related concepts such as data and information can easily approximate some form of knowledge. An examination of the different definitions of knowledge will provide insights into the meaning of knowledge. The Webster's New Collegiate Dictionary defines knowledge as a range of information and understanding while information in turn is said to be knowledge obtained from investigation, study or instruction; and data is defined as factual information used as a basis for discussion. Nonaka & Takeuchi (1995) consider knowledge as true and justified personal belief that increases an individual's capacity to take action. According to Fahey & Prusak (1998), knowledge is what the knower knows that does not exist out of the knower but rather shaped by one's needs as well as one's initial stock of knowledge. Similarly, Davenport & Prusak (1998) refer to knowledge as the fluid mix of framed experience, values, contextual information, and expert insights that provide a framework for evaluating amid incorporating new experiences and information. It originates and applies in the minds of the knower and in the organisations; it is not only embedded in documents or repositories but also in organisational routines, practices and norms. They argue that knowledge involves the link people make between information and its potential application and as such, knowledge is closer to action than information or data and thus corresponds to competence. Sveiby (1997) describes business knowledge as competence that is the capacity to act effectively and efficiently. However, by considering knowledge as competence, Sveiby (1997) disregards the fact that knowledge is a highly abstract cognitive phenomena that does not necessary provide immediate practical applications. According to Mclerney (2002), knowledge is the awareness of what one knows through study, reasoning, experience or association or through various other types of learning. Quinn et al. (1996) equate knowledge with professional intellect. Brown & Duguid, (2000) point out that while knowledge is often thought of as being a property of individuals, a great deal of knowledge is produced as well as held collectively. Such knowledge is quickly generated when people work together in the tight knit groups, which they describe as "communities of practice."

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3   The investigation into the grounds and nature of knowledge

4   These epistemological debates have been expressed from a variety of perspectives and positions including the rationalist perspective (advanced by philosophers such as Descartes in the seventeenth century), the empiricist perspective (advanced by Locke and others in the eighteenth century), and the interactions perspective advanced by Kant and others in the nineteenth century) For a discussion of a history of knowledge and epistemology see Polanyi (1958, 1962)

knowledge management researchers have also referred to knowledge as a state of mind, an object, a process, a condition of having access to information, stocks and flows, usable representations, the perception of pattern, a constitutive force in society and a basic human need (Maslow, 1970; Machlup, 1980; Van Lohuizen; 1986; Carlsson et al., 1998; Schubert et al., 1998; Alavi & Leidner, 1999; Beijerse, 1999; Zack, 1999).

Drawing from the above definitions, it seems clear that knowledge is easier to describe than to define. For the purposes of this study, knowledge is considered as information (artefacts, such as documents and reports, available within the organisation and out of the organisation) combined with experience, context, interpretation, reflection, intuition, creativity plus the ability to use the information to act or innovate. It includes truths, beliefs, perspectives, concepts, judgement, expectations, methodologies and know-how. It is possessed by humans, agents or other active entities. It is the ability to cause things to happen. Given that most of the above definitions represent different views of knowledge it is worth examining these different approaches of knowledge.

3.3 The different approaches to knowledge

There is a diversity of perspectives on knowledge that highlights the definitional ambiguity surrounding the concept. The different perspectives of knowledge that have been considered pertinent to this study are the data, information and knowledge perspective, the individual perspective, the social perspective, and the organisational perspective. These perspectives are considered in the spirit of accepting a wide range of views as possible rather than attempting to prescribe a particular meaning to knowledge. Each of these perspectives suggests a different meaning to knowledge, a different strategy for managing knowledge and a different implication on knowledge management.

3.3.1 The data, information and knowledge perspective

In order to fully understand the depth of knowledge, it is important to differentiate it from data and information. Several authors, notably in the information system literature (Fahey & Prusak, 1998; Leonard & Sensiper, 1998; Zack, 1999; Davenport & Prusak, 2000; Wright, 2001; Blair, 2002; Saint-Onge, 2002; Sinotte, 2004), assume a hierarchical distinction between data information and knowledge that goes from data (facts and figures) to information (data with context) to knowledge (information with meaning). That is, knowledge is an authenticated and expanded view of information that follows from information, which again flows from data.

A commonly held view amongst knowledge management theorists with sundry variants is that data is a set of discrete raw numbers and facts and unstructured records of transaction about events in an organisation. Information on the other hand is processed, organised and interpreted data that may be easily captured in text and stored for future use. Davenport & Prusak (1998:2) defines information as "data that makes a difference." Knowledge has more value because it is closer to action than data and information, and offers meaning and insight. It is when this information is transferred into people's knowledge base that decisions and actions could be taken.

Researchers like Davenport & Prusak (1998) have elaborated a higher level of this continuum to include wisdom, insight and action on a basis of a value added process, illustrated as a pyramid with data at the bottom and wisdom at the top. However, others (Stewart; 1997:69; Firestone, 2003) have dismissed the notion of data to wisdom hierarchy as bogus and unhelpful on the grounds that one man's knowledge is another man's data. Firestone (2003:24) suggests that firms should rather move from the "levels of information" model to a types of "information model" consisting of "data" "just information" and "knowledge" that forms part of a cycle where information is not made from data but data and knowledge are made from pre-existing information. For the purposes of clarity, this study adopts the recursive distinction between information, data and knowledge. As the diagram below shows, the relationship between data, information, and knowledge is recursive. Value is added to data, turning them to information. Information becomes knowledge when it is processed in the mind of an individual. This knowledge then moves down the value chain and becomes information.
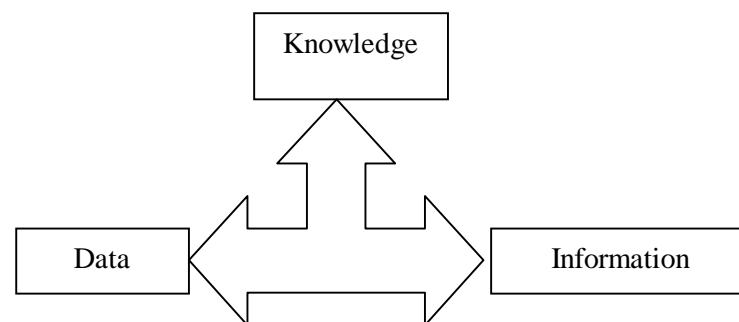
Figure 3.1 The recursive relationship between data, information and knowledge

The data, information and knowledge perspective provides an inroad in understanding the different concepts by presenting a hierarchical relation between data, information and knowledge with each varying along context, usefulness and interpretability. Two significant implications can be drawn from this view. First, for individuals to arrive at the same understanding of data and information, they must share the same data base. Second, it equates knowledge management tools to information management tools. This perspective however falls short of providing an effective distinction between information and knowledge and when information actually becomes knowledge. (Kogur & Zander, 1992; Sveiby, 1997; Alavi & Leidner, 1999; Wright, 2001; Blair, 2002). The real focus is therefore to understand how knowledge is created through the application of experience to data and information.

Cognitive theories shed light on the various mental processes applied by individuals in the creation and acquisition of knowledge from data and information. Broadly speaking, the theory holds that people's perceptions, feelings, thinking and actions result to a significant extent from processes, which go beyond the simple input provided by the senses (Good & Brophy, 1990; Misch & Tobin, 2006*)*. It posits that many of these mental models find their origins in the very earliest stages of development, including many of the games played in childhood. Jacques & Clement (1991) stratified systems theory outlined four cognitive processes that people employ to manage and organise information and also four orders of increasing information complexity. The four cognitive processes are assertive, cumulative, serial and parallel processing while information complexity ranges from the first to the fourth order of complexity. Jacques & Clement (1991) noted that an individual's cognitive processes do not proceed incrementally but rather in a series of discontinuous steps.

The cognition of a human being is therefore his or her internal mental process that begins with the reception of data and information and terminates with action taking (Kagono, 2006). It is the ability to acquire knowledge, or the ability to know and understand. Consistent with the cognitive view, one may posits that information is converted to knowledge once it is processed in the mind of the individual and knowledge becomes information once it is articulated and presented in the form of text, graphic words and other symbolic forms. A cognitive theory thus provides the link between environmental factors and behaviour and also an explanation why similar sensory inputs may lead to completely different behavioural output in different people.

Although the literature reveal some form of interplay between information and knowledge,

and several knowledge management theorists have even equated information to explicit knowledge (Kogur & Zander, 1992; Sveiby, 1997; Alavi & Leidner, 1999; Wright, 2001; Blair, 2002) several distinctions ought to be drawn between information and knowledge. Researchers such as Roos et al. (1997:7), Wiig (1998), Marakas (1999: 264), McDermott (1999), Bhatt (2000a), and Blair (2002) have identified several distinctions between information and knowledge. According to these researchers, knowledge is richer than data and information. Knowledge must exist before information can be formulated or before data can be measured to form information. They observed that in a sense, knowledge is a "meaning" made by the mind. Without meaning, knowledge is information or data. It is only through meaning or organisation that information finds life and becomes knowledge. For example, information is transferred into knowledge when a person reads, understands, interprets and applies the information to a specific function. If a person cannot understand and apply that information to anything, it remains just information. However, another individual can take the same information, understand it and interpret it in the context of pervious experience and apply the newly acquired knowledge in making decisions. Yet, a third person can take the same information and through his/her unique experience and lessons learned, apply knowledge in a way that the second person may not have considered. Thus, knowledge can only live in the minds of people and the moment it leaves the human mind it becomes information.

Another distinction between information and knowledge is that people are at the centre of knowledge management, while information communication technologies are at the centre of information (Marakas, 1999: 264; McDermott, 1999; Bhatt, 2000a; Blair, 2002). In reality, it is not knowledge that is being managed but the people. It is also worth noting that when one loses information we lose something that we can physically possess but when one loses knowledge, he/she loses the ability to do something. Another difference between information and knowledge is that knowledge is a subjective personal process emerging from previous experiences and current events while information is objective data about the environment. Lastly, knowledge belongs to communities and circulates through communities in many ways such that one embodies the ideas, perspectives, prejudices, languages and practices of that community. On the other hand, information is mostly derived from facts, data tools and objects (McDermott, 1999).

The data, information and knowledge dimension and the distinction between information and knowledge does not go very far in clarifying the meaning of knowledge. The personal perspective of knowledge provides yet another dimension to the meaning of knowledge.

3.3.2 Personal perspective of knowledge

From the personal perspective, knowledge is viewed as existing in the individual. This view was epitomised by the Hungarian chemist, economist and philosopher, Polanyi (1958, 1962, and 1966) and expounded by Nonaka & Tackeuchi (1995). Polanyi made a clear distinction between tacit (subsidiary) and explicit (focal, codified, articulated) knowledge. The distinction between tacit and explicit is discussed elaborately in section 3.4.1.2 below. The personal perspective together with the data information and knowledge hierarchy does not provide a conclusive view of the meaning of knowledge.

3.3.3 Social perspective of knowledge

From the social perspective, knowledge is created and inherent in the collective actions of a group of people working together and dependent on the social context where they belong. Knowledge ecology, community of practice and knowledge in networks are basic concepts in this social process (Berger & Luckmann, 1996; Brown & Duguid, 2000). McDermott (1999:105) dismiss the idea that knowledge is stuff "between the ears of the individual" and considers knowledge as belonging to communities. He claims that individuals learn by participating in communities full of knowledge and embody the ideas, perspectives, prejudices, languages and practices of that community. Discussions on communities of practice are elaborated in subsequent sections in the study.

3.3.4 The organisational perspective of knowledge

The organisational perspective draws from the data, information and knowledge perspective, the personal perspective and the social perspective to present a deeper understanding of knowledge formed through unique patterns of interactions between technologies, processes, techniques, and people, which is shaped by the organisation's unique history and culture. From the organisational perspective, knowledge is based on knowledge systems that consist of a series of knowledge processes such as knowledge creation, storage, transfer and application with data, information, knowledge and wisdom as important factors (Ackoff, 1989; Berger & Luckman, 1996). Wisdom is acquired as organisational knowledge accumulates over time, enabling firms to attain deeper levels of understanding and knowledge through the transformation of collective experiences and expertise. New knowledge is introduced in the knowledge system through learning. The ability for a knowledge system to acquire knowledge on its own is known as intelligence.

3.4 The nature of knowledge

The different perspectives of knowledge examined above give an indication of the different definitions of knowledge but do not provide a conclusive meaning of the concept of knowledge. An examination of the nature of knowledge will help to provide a better understanding of this complex notion. Aspects on the nature of knowledge considered in this section are the different types of knowledge, the levels of knowledge and the properties of knowledge.

3.4.1 Types of knowledge

Knowledge can be classified into several types and may differ according to the type of organisation and context. The classification of knowledge in a marketing, banking and financial industry would be different from that of a professional service firm. The following are some of the classifications of knowledge: tacit and explicit knowledge (Polanyi, 1962; Nonaka & Takeuchi, 1995); tacit, explicit and cultural knowledge (Choo, 2002); practical knowledge, intellectual knowledge, small talk or past time, spiritual knowledge and unwanted knowledge (Machlup, 1980); procedural and analytical knowledge (Zack, 1999); human, mechanised, documented, and automated knowledge (Jacques et al., 1996); know-how, know-about, know-why, know-when, know-with and care-why (Kogut & Zander, 1992; Quinn et al., 1996; Zack, 1999); and internal, external, customer, and market knowledge (Alavi & Leidner, 2001; Butler, 2003). However, the classification of knowledge as administrative data, declarative, procedural and analytical knowledge has become a typical way of classifying knowledge in law firms (Edward & Mahling 1997; Gottschalk, 1999; Khandelwal & Gottschalk, 2003). The different classifications of knowledge are examined in subsequent paragraphs.

3.4.1.1 Tacit and explicit knowledge

Over the years, the distinction between explicit and tacit knowledge suggested by Polanyi (1962) in the personal knowledge perspective (section 3.3.2) and expounded by Nonaka & Takeuchi (1995) has been elaborated and expanded upon by other knowledge management theorists (Beijerse, 1999; Smith, 2001; Blair, 2002; Choo, 2002; Mclenerney, 2002; Jasimuddin et al., 2005). Almost every knowledge management article seems to draw a distinction between explicit and tacit knowledge. It is therefore worthwhile for the purposes of this study, to establish a clear distinction between these two categories of knowledge.

In distinguishing between tacit (subsidiary, implicit) and explicit (focal, codified, articulated) knowledge, Polanyi (1966), describes tacit knowledge as everything we know but cannot really express even to ourselves, or knowing how to do something without thinking about it like riding a bike or playing soccer. This type of knowledge is highly personalised, subjective, unspoken, intuitive, hidden and undocumented and consists of technical skills, "know-how" or "understanding." It also consists of cognitive dimensions such as implicit mental models and beliefs that shape our perceptions of the world. He describes explicit knowledge as a small body of knowledge considered as information that enables other people to create their own knowledge.

Nonaka & Tackeuchi (1995) for their part consider tacit knowledge as knowledge that is not fully articulated in the minds of the individuals and as such difficult to explicitly document while explicit knowledge is that which is written down, expressed in words and numbers and can be easily communicated and shared in the form of hard data, scientific formulae, codified procedures or a universal principle. They further classified tacit knowledge into a sub category of technical and cognitive knowledge. Technical tacit knowledge consist of informal skills or know how called "expertise" that results from experience such as the mastering of a specific body of knowledge for example, the skills of an artist or a designer. A person with technical tacit knowledge is considered as being unconsciously skilled. Cognitive tacit knowledge on the other hand are mental modes stirred by beliefs, perception, ideals, values, emotions ingrained in an individual and often taken for granted.

Many knowledge management researchers (Hedlund, 1994; Beijerse, 1999; Choo, 2000; Smith; 2001; Blair, 2002; Hunter et al., 2002; Mclerney, 2002; Jasimuddin et al., 2005) have come to refer to explicit knowledge as formal systematic knowledge; technical academic data or information. It is typically in the form of books, documents, white papers, data bases, policy manuals, mathematical expressions, copyrights and patent. It can be expressed, captured and codified at which point it becomes information. Documented explicit knowledge is referred to as "codified knowledge." Codified knowledge is quite structured. Examples of codified knowledge in law firms are; manuals, specialised databases, collection of case law, standardised techniques of investigation or templates for the preparation of legal documents. On the other hand, tacit or implicit knowledge is referred to as knowledge generated in people's mind, highly personal, undocumented and hard to formalise consisting of subjective insights, intuitions and hunches known as inarticulate intelligence, collective wisdom or elusive knowledge.

Explicit knowledge has also been sub categorised as object and rule-based (Choo, 2000). Object-based explicit knowledge is represented using a string of symbols (words, numbers and formulas) embodied in physical entities (equipment, models and substances) and found in artefacts as patents, products, software codes, computer data bases, drawing tools, photographs, voice recording and films. On the other hand, rule-based explicit knowledge is knowledge codified into rules routines and procedure. An example of rule-based explicit knowledge is intellectual assets. These are codified tangible or physical description of specific knowledge to which a company can assert ownership rights such as assets, plan, blue prints, procedures, drawing, and computer programmes. Intellectual assets that receive legal protection such as trade marks, patents, copyright, trade secrets, and semi conductor masks are referred to as intellectual property.

Tacit and explicit knowledge has been classified into two dominant perspectives of knowledge as a category versus knowledge as a continuum. The knowledge as a category perspective has been discussed in the literature on the topic. For example, Polanyi (1958), Sveiby (1997), Hansen et al. (1999), and Dixon (2000), classify knowledge into a category of explicit and tacit knowledge suggesting that tacit and explicit knowledge represent two separate types of knowledge having distinct features that significantly influence the way it can be shared. On the other hand, Brown & Duguid (1991), Kogut & Zander (1992), Spender (1996), Gottschalk (2002), Hall & Andriani (2003) and Jasimuddin et al., (2005) considered knowledge as a continuum that forms the pool of a knowledge spectrum. They suggest that tacit and explicit knowledge should not be seen as two separate types of knowledge but should rather exist along a continuum of tacitness and explicitness where they are complementary, mutually dependent, interacting and influencing.

Therefore, the key issue should not be in establishing a clear distinction between explicit and tacit knowledge because tacit knowledge forms the background necessary for assigning the structure to develop and interpret explicit knowledge; but rather in understanding the meaning of tacit and explicit knowledge. Besides, what is tacit now may become explicit the next minute and what is explicit can easily return to the source. Alavi & Leinder's (2001) discussions on the linkage between tacit and explicit knowledge reveal that only an individual with the requisite level of shared knowledge space is able to share and exchange knowledge. The explicit and tacit category of knowledge is very crucial because they have become the main knowledge spectrum running across the different categories of knowledge. Although cognitive psychologists sort knowledge into declarative, procedural and analytical knowledge, elements of tacitness and explicitness run through these different categories of knowledge.

3.4.1.2 Declarative procedural and analytical knowledge

Declarative knowledge is knowledge about something; it has much in common with explicit knowledge in that it consist of descriptions of facts, things, methods and procedures (Edwards & Mahling, 1997; Zack, 1999). Kogut & Zander (1992) reported that it is sometimes labelled as "Know-that" and "know-what" and involves knowledge that is consciously accessible, articulated and transmitted without loss of integrity once the syntactical rules for deciphering it are known. An example of declarative knowledge is the administrative data about a firm's daily operation. For practical reasons, declarative knowledge and explicit knowledge may be treated as synonymous because declarative knowledge is knowledge that can be articulated.

Procedural knowledge, also referred to as "know-how," is knowledge that manifests itself in the doing of something or knowledge of how something occurred or is performed (Polanyi, 1958; Zack, 1999). Procedural knowledge that manifests itself in the doing of something is reflected in motor or manual skills such as dancing, playing a piano or sewing a dress. Procedural knowledge on how something occurred or is performed is manifested in the description of the steps of a task or procedure.

Analytical knowledge also referred to as strategic knowledge, know-when and know-why, is the conclusions reached about a particular cause of action an individual may follow (Kogut & Zander, 1992; Edwards & Mahling, 1997). This knowledge is deeply rooted in the intrinsic skills, experiences, ideals, values, minds and emotions of the individuals and is not easy to express. It results from analysing declarative knowledge.

3.4.1.3 Know-how, know-about, know-why, know-when, know-with and care-why

Kogut & Zander (1992), Quinn et al. (1996), Zack (1999), and Dixon (2000) have categorised knowledge from the perspective of a hierarchy of non-rational aspects of knowing, consisting of know-how, know-about, know-why, know-when, know-with and care-why. Tacit knowledge has been associated with know-how, know-why, know-when, know-with and care-why; while explicit knowledge relates to know-about.

Know-how is knowledge on how to do things and corresponds to procedural knowledge, and tacit knowledge (Kogut & Zander, 1992; Grant, 1996). Dixon (2000) refers to know-how as "common knowledge." An example of know-how is knowledge on how to drive a car. Know-about, also referred to as know-that, is knowledge by information, knowledge

by acquaintance or cognitive knowledge. It goes beyond basic skills competencies and experience to a higher level of mastery of a problem area. It is factual knowledge. For example, it is known that one plus one is two. This corresponds with explicit and declarative knowledge.

In the researcher's opinion, know-why, know-when, know-with and care-why corresponds with analytical knowledge and may be considered as a subset of declarative knowledge. Know-why is knowledge why something occurred (Kogut & Zander, 1992; Grant, 1996). It requires a deeper understanding of interrelationships across knowledge areas that may require a system perspective and provide a more robust framework for grounding decisions and actions in complex tasks. An example of know-why is knowledge on why one is sick. Know-when is a conditional knowledge about understanding when to do something (Quinn et al., 1996; Zack, 1999). For example, knowledge on when to take one's drugs. Know with, is relational knowledge that seeks to understand the relationship between one thing to another (Kogut & Zander, 1992). Care-why, is the highest level of knowledge that is socially contextualised (Quinn et al., 1996). It addresses direct, hidden, near and long term cost benefit as well as assesses and evaluates possible contingencies and trade off.

3.4.1.4 Human, mechanised, documented, and automated knowledge

Jacques et al. (1996) characterised knowledge into human knowledge, mechanised knowledge, documented knowledge and automated knowledge. According to Jacques et al. (1996), human knowledge is knowledge contained in the heads of the individuals while mechanised knowledge is knowledge embedded in machines necessary to carry out a specific task. They consider documented knowledge as knowledge stored in the form of archives, books, documents ledgers, instruction charts and design specifications; and automated knowledge as knowledge stored electronically that can be accessed by computer programs. In sum, similar to the other categories of knowledge examined above, this classification embodies tacit and explicit elements. Human knowledge is similar to tacit knowledge while mechanised, documented and automated knowledge are similar to explicit knowledge.

3.4.1.5 Internal, external, customer and market knowledge

It has been observed that internal, external, customer and market knowledge as the three generic classifications of knowledge common to most industries (Alavi & Leidner, 2001; Butler, 2003). Internal knowledge is the vast amount of knowledge that resides in the

organisation and which most often organisations do not know where it is and where to find it. External knowledge is knowledge acquired out of the organisation to advance the organisation's competitive ability. Customer knowledge is the knowledge to the customer about the organisation he/she does business with. Market knowledge is the knowledge of products, processes, competitors, best practices, and project experiences.

It is worth noting that the different categorisations of knowledge examined so far in this section do not attempt to represent a dichotomous or static state of knowledge, but rather provide insights into understanding the nature of knowledge and the different strategic values attached to each category of knowledge. This is because one of the ultimate goals of knowledge management is to understand the knowledge one uses in business.

3.4.2 Knowledge levels

Knowledge can be said to exist exists at two levels irrespective of the types and categories described above. The lower practical or general level that provides insights and understandings which can help to generate more systematic knowledge closer to action, and the higher precise and theoretical level that focuses on high level understanding. For example, Nonaka & Takeuchi (1995) point out that knowledge moves from simple slogans, similes, and metaphors to systematic analogies, and finally to structured models or theories. The classification of knowledge into lower and higher levels is also reflected in the classification of knowledge into core, advanced and innovative knowledge by researchers (Gottschalk, 1999; Tiwina, 2002, Butler, 2003; Gottschalk, 2003; Rusanow, 2003).

Core knowledge is the basic or minimum knowledge required to stay in business (Gottschalk, 1999). This type of knowledge creates efficiency barriers for the entry of new companies since new competitors are generally not up to date with basic business processes. It provides no advantage to the firm to differentiate its product and services from that of a competitor.

Advanced knowledge is what makes a firm competitively visible and active. It enables firms to differentiate their products and services from that of competitors through the application of superior knowledge (Tiwina, 2002).

Innovative knowledge enables firms to clearly differentiate themselves from competition with other firms (Gottschalk, 2003 & Rusanow, 2003). Such knowledge allows firms to introduce new business practices or expand market shares by winning new customers and improving on the conditions of services for existing customers. The next section provides

another dimension to the nature of knowledge by highlighting the properties of knowledge. It provides an understanding of the different ways of improving the flow of knowledge in organisations and the ways that knowledge can be captured, processed, managed and leveraged to achieve business imperative.

3.4.3 Properties of knowledge

Besides the categories and levels of knowledge discussed in the preceding sections, knowledge also possesses certain generic properties such as location, dispersion, appropriability, capacity for aggregation, broadness or specificity, and scope (Grant, 1996; Brown & Duguid, 1998; Hunter et al., 2002; Spanos & Prastacos, 2004).

Knowledge is located either at the individual, collective or organisational level (Hunter et al., 2002). Organisational knowledge is the collective sum of individual knowledge, assets and processed information embodied in routines, databases, sharing of experiences and best practices, sources both internal and external to the organisation, and processes produced and held by an organisation. Individual knowledge is necessary for developing the organisational knowledge base (Grayson & O'Dell, 1998; Carayanniss, 1999; Bhatt, 2000; Brown & Duguid, 2000; Nonaka, et al., 2000). Collective or group knowledge is based on the collective experience, insight and context of the group of knowers with the same interest. Tacit knowledge may exist individually in the human mind and experiences and know-how of a person; or collectively in the shape of codified routines and in-house processes or embedded in the social context of the firm. Explicit knowledge on the other hand exists individually in the form of personal manuals, documents, artefacts and computers; and is collectively distributed and scattered in different locations.

Knowledge dispersion or transferability is the breath of knowledge sharing within organisational boundaries. The higher the degree of knowledge transferability, the higher its impact on knowledge creation (Hunter et al., 2002). Tacit and explicit knowledge have different degrees of transferability and may be transferred in the individual, group or collective form. Explicit knowledge is relatively easy to put down on paper or into another media and thus is directly transferable to the person one wishes to transfer knowledge to. The potential for transfer of tacit knowledge at the individual, group and organisational level is low given that it cannot be easily codified and can only be acquired and developed through practice. Tacit knowledge transfer often requires extensive personal contact in the form of mentoring, partnership, apprenticeship or some form of working relationship (Davenport & Prusak; 1998:95).

Appropriability is the ability of the owner of a resource to receive a return equal to the value created by a resource (Grant, 1996; Hunter et al., 2002). Knowledge is an intangible and heterogeneous resource that is difficult to measure, volatile, increases with use, and can lead in many ways to value creation when deployed strategically. Tacit knowledge is not directly appropriable because it cannot be directly transferred. It is considered as a form of property right that can be transferred by cooperation, provision of incentives, or some satisfactory contract that may provide the owner intrinsic and extrinsic rewards sufficient to motivate the individual to contribute knowledge. On the other hand, explicit knowledge is easily appropriable because it is relatively easy to put down on paper or into another media and thus, is directly transferable to the person one wishes to transfer knowledge to without losing it.

The capacity for aggregation is the degree to which knowledge can be absorbed and added on new knowledge by individuals or group of individuals. Knowledge has the cumulative effect of added value (Hunter et al., 2002). Individuals, organisations and groups may acquire and add value to their existing knowledge base. For example, a doctor's knowledge about a particular patient may be added to the knowledge that other doctors have about that particular patient.

Knowledge may be broad or specific (Zack, 1999; Spanos & Prastacos, 2004). Broad knowledge is general and external knowledge, and it is often publicly available and independent of particular events. This type of knowledge is commonly shared and more easily codified and exchanged. Specific knowledge in contrast, is context specific. That is, it is highly contextualised and situated to the particular aspect of the local environment and is difficult to transfer. Context specific knowledge may be scientific/technical or knowledge of context. For example, the professional skills possessed by a medical doctor is technical/scientific knowledge, while the detailed knowledge that a medical doctor may possess about the idiosyncrasies of a particular sickness treated for years may be considered as knowledge of context.

Knowledge may be vertical and horizontal in scope (Grant, 1996). The vertical scope varies from less abstract to more abstract knowledge, while the horizontal scope varies from knowledge at the basic or operational level to knowledge at the executive level. The knowledge of employees may be considered as less abstract because employees often carry out routine tasks; while the knowledge of the employer may be considered as abstract because they are responsible for taking decisions regarding the firm.

A summary of the nature of knowledge is represented in figure 3.2 below

Types
Tacit
Explicit
Procedural
Declarative
Know-how
Know-what

Internal

External
Marketing
Human
Mechanised
Computerised

Nature of knowledge

Properties
Location
Dispersion
Appropraibility
capacity for
aggregation
Broadness
Specificity
Scope

Level
Core
Advance
Innovative
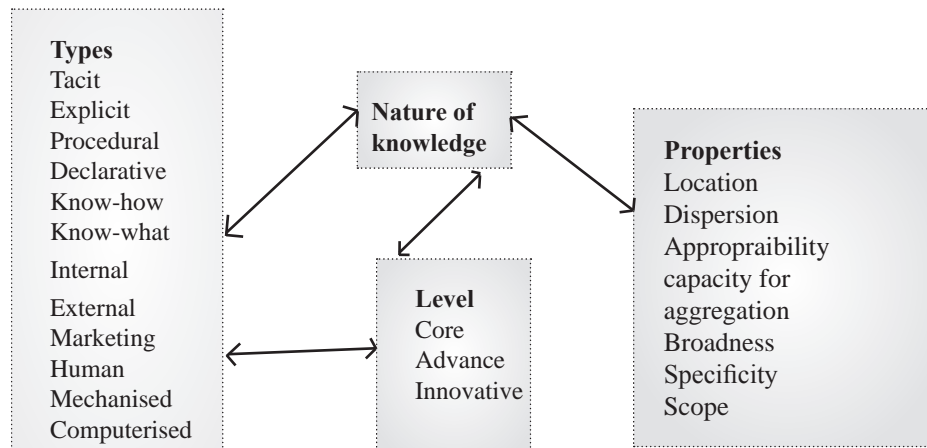
Figure 3.2 Summary of the nature of knowledge

Figure 3.2 shows that each types of knowledge will exist at the core, advanced and innovative level and each exhibit the different properties of knowledge. The nature of knowledge and the different perspective of knowledge examined above have influenced theoretical developments in knowledge management.

3.5 Defining knowledge management

Similar to knowledge, there is still no universally accepted definition of knowledge management. In 2002, Hluppic et al., (2002) identified 18 different definitions of knowledge management. In recent times, almost every article on knowledge management includes a definition of some sort. Several factors appear to have influenced the diverse definitions of knowledge management. First, there is a wide difference in perspectives of the subject by different authors. Second, the fact that the concept of knowledge management is looked at from a wide spectrum of disciplines such as economics, sociology, philosophy, psychology, management, information technology and information science each attributing different meanings to the term. It is also an amalgamation of concepts borrowed from information management, artificial intelligence/knowledge-based systems, software engineering, and business process re-engineering, human resources management, and organisational behaviour. Third, the phrase knowledge management implies that knowledge can be managed when in reality the management of knowledge is about the management of people, processes and systems through which knowledge can be shared. Fourth, like knowledge, knowledge management is an evolving, broad, vague, conceptual, recursive and highly theoretical concept. Therefore, the following definitions are just a representative sample of

the diverse definitions that have been suggested in the knowledge management literature.

Platt (2003) considers knowledge management from an information technology perspective and defines it as accessing, evaluating, managing, organising, filtering and distributing information in a manner that would be useful to end users through a technological platform.

Grant (1996) & Davenport (1997) for their part refer to knowledge management as the systematic, organisational and specific process of acquiring, organising and communicating both the tacit and explicit knowledge of employees so that other employees may make use of it to be more productive. This definition considers knowledge management as focusing on leveraging of knowledge to achieve a business imperative.

Focusing on the intellectual capital point of view, Davenport et al. (2003) described knowledge management as a process of re using intellectual capital. Similarly, Smith (2001:313) considers knowledge management as an ongoing procedure "bottom-up" process that develops and exploits the "tangible assets and intangible knowledge resources" of the organisation and shares it across boundaries in the organisation. Also Boomer (2004) considers knowledge management as a process to embrace knowledge as a strategic asset, drive sustainable business advantage and promote a firm approach to identify, capture, evaluate and share a firm's intellectual capital.

Effective knowledge management presupposes a knower to have the ability and capability to internalise what is learned through listening, observing, reading and gaining of life experiences. Thus, Mclerney (2002) defines knowledge management as an effort to improve useful knowledge within an organisation by encouraging communication, offering opportunities to learn and promoting the sharing of appropriate knowledge artefacts. This definition considers people and learning issues in an organisational context as important tenets.

The process of knowledge creation, codification, transfer and application are essential components in the definition of knowledge management. Disterer (2003) defines knowledge management as the creation, acquisition, capture, sharing and use of knowledge in any form to increase organisational performance. In the same light, Opp (2004) considers knowledge management as the processes of identifying, capturing, disseminating and using knowledge possessed by individuals and members of the firm.

In essence, knowledge management is the name given to the set of systematic and disciplined

actions that an organisation can take to obtain the greatest value from the knowledge available to it. It is not only based on the management and communication of information and knowledge, but also entails managing the balance of people, processes and technology that determines the organisation and its relationship with its markets. It is about creating an environment where knowledge, creativity and innovation is valued, by facilitating communication between people in different locations and from different departments and creating an organisation that encourages ideas, rewards success, while allowing people to fail and learn from failure. It entails leveraging organisations knowledge for competitive advantage. The different perspectives of knowledge management examined below will provide insights into proper understanding of the different definitions of knowledge management examined above.

3.6 Perspectives in knowledge management

The literature on knowledge management like that of knowledge is replete with different perspectives reflecting the complexity of the concept and the potential for definitional ambiguity. In order to provide guidelines for knowledge management in law firms, five different perspectives of knowledge management are considered pertinent for this study: information technology, personal, social, organisational and business perspective (Drucker, 1995; Sveiby, 1996; Alavi & Leidner, 2001; Hunter et.al., 2002; Gloat & Berell, 2003).

3.6.1 The information technology perspective

Drawn from the information technology literature, this perspective considers knowledge management as a technological matter and treats knowledge as objects that can be identified and handled in an information system (Earl, 1996; Sveiby, 1996; Carayannis, 1999; Alavi & Leidner, 2001; Hunter et. al., 2002; Sinotte, 2004). It focuses on information management, information systems, data bases, hardware software, and communication tools. However, this perspective seems to oversimplify the concept of knowledge management because knowledge management is not only about the use of technology to manage information. Technology remains a useful enabler rather than a central tenet at the heart of knowledge management. There is no magic bullet knowledge management software and a majority of researchers agree that the main challenge in sharing knowledge has little to do with information technology and everything to do with changing behaviour including people, structures, work practices, decision-making and business strategies. The social approach therefore presents a logical progression beyond the information management.

3.6.2 The social or people track approach

Knowledge management from the social perspective is considered as a social and learning process that focuses on groups of people and social relationships and is influenced by organisational structures, team work and culture. Organisations create, organise, and process information to generate new knowledge through organisational learning, community of practice, knowledge ecology and knowledge networks. (Malhotra, 1998; Johannsen, 2000; Clarke & Rollo, 2001; Cheng, 2001; Kakabadshe et al., 2001; Lang, 2001; Thomas et al., 2001; Alhawamdeh, 2002; Blair, 2002; Wenger, 2003; Sinotte, 2004).

3.6.3 Individual (personal) perspective of knowledge management

The individual perspective views knowledge management as a continuous interplay between personal tacit and explicit knowledge in the organisation. Nonaka & Takeuchi (1995), in exploring the possibility of gathering people together to develop and make personal knowledge effective in organisations, use this perspective to explain how personal knowledge can be created and later converted into explicit knowledge through four processes of dynamic organisational knowledge creation (Internalisation, externalisation, socialisation and combination) discussed in section 3.8.2 below by which individuals participate and transform knowledge between its tacit and explicit forms.

3.6.4 The organisational perspective to knowledge management

Drawn from the organisational knowledge literature, this perspective considers knowledge management as a series of integrated organisational initiatives which includes strategy, structure, culture, style of management and knowledge systems built and implemented by multidisciplinary teams (Beijerse, 1999; Sinotte, 2004). It also considers knowledge management as the process of creating, storing, retrieving, transferring and applying knowledge (Galagan, 1997; Bhatt, 2001). These different processes allow an organisation to learn, reflect, unlearn and relearn.

The organisational process approach has been criticised for making knowledge management to involve a somewhat mechanistic and sequential process step and for focusing attention on explicit knowledge artefacts.

3.6.5 Business perspective of knowledge management

The business perspective builds on the knowledge-based view and the resource based-

view of the firm. The knowledge-based view identifies knowledge as the primary rationale for the firm. It has long been recognised that economic prosperity rests upon knowledge and its useful application. The knowledge based view posits that the product and services produced by tangible resources depend on how they are combined and applied which is the function of the firms' know-how (Skyrme 1997; Teece, 1998; Alavi & Leidner, 2001). The main trust to creating knowledge-based organisations is to know what one knows and then to share and leverage it throughout the organisation.

The resource based-view of the firm on the other hand considers knowledge as a corporate organisational resource, intellectual capital, manageable asset, skills, capabilities, stock flows and competencies that constitute a basis for competitive advantage (Coase, 1937; Drucker, 1995; Grant, 1996; Spender, 1996; Teece, 1998; Sveiby, 1999). It posits that the knowledge inherent in organisations provides a resource on which firms can build and sustain distinctive ability which they can appropriate to enable them survive in the competitive world.

The different perspectives of knowledge management examined above on their own do not provide a conclusive understanding of knowledge management but they at least provide the basis for understanding the different definitions and view points of knowledge management. This study adopts an integrated perspective of knowledge management that considers an integration of the information technology, social, organisational, intellectual and business perspective as illustrated in figure 3.3 below. The integrated perspective of knowledge management may be better understood by drawing an analogy from the human body and its several parts. Just as each part of the human body performs its own unique function which combined together makes a human being functional; so too, different perspectives may be considered as different parts of the same body (knowledge management) which on their own are not effective but when combined may provide a clear understanding of knowledge management. Drawing from the different perspectives of knowledge management examined in the preceding paragraphs, an integrated perspective of knowledge management adopted for this study is presented figure 3.3.
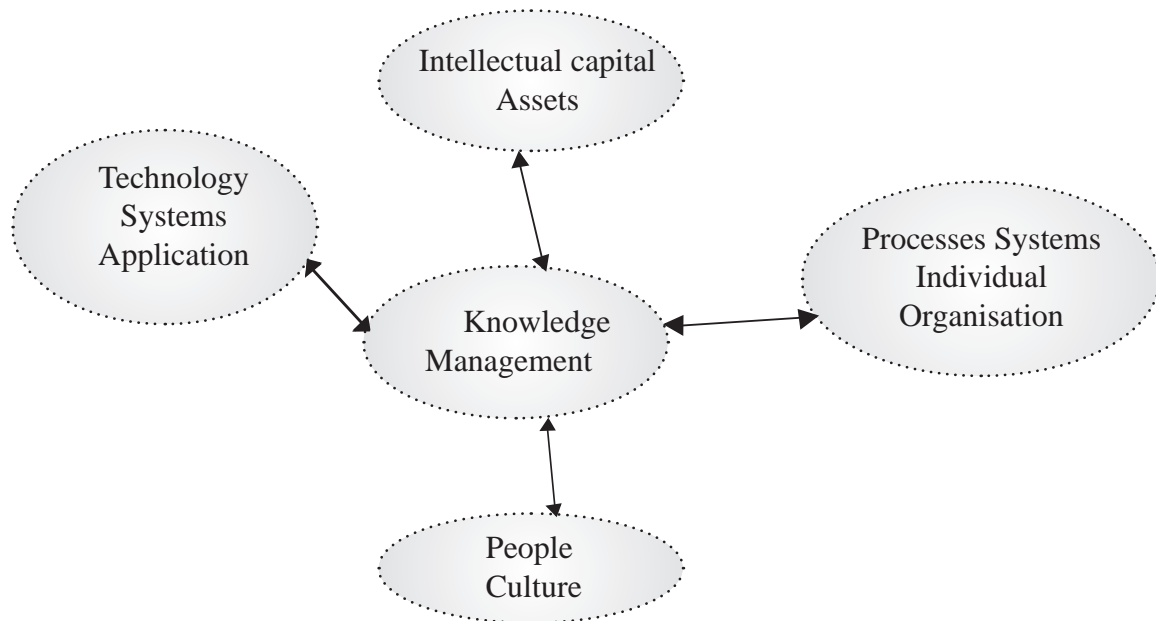
Figure 3.3 Suggested integrated perspective of knowledge management for this study

3.7 Frameworks in knowledge management

Drawing from the different definitions and perspectives of knowledge management, several frameworks for knowledge management are considered pertinent to this thesis. These are: the learning organisation, knowledge markets, knowledge management process and the knowledge management strategy.

3.7.1 Learning organisation and organisational learning conceptual framework

The basis of this framework is that knowledge is associated with learning, and one of the goals of knowledge management is to establish a collaborative learning environment that promotes and rewards the sharing of resources. No organisation can improve without learning; and increasingly an illiterate is no longer considered as the one who cannot read and write but rather the one who is unable to learn, unlearn and relearn.

Learning increases knowledge and therefore the capacity for effective action (Senge, 1990). Learning occurs when an organisation synthesizes and then institutionalises the individual's intellectual capital, learning memories, culture, knowledge systems, routines and competencies. It may be formal, informal or incidental (Marsick & Watkins, 1996).

Formal learning occurs in the classroom and is highly structured. Informal learning is self-motivated, self-directed and purposeful, while incidental learning is unconscious learning that occurs in the course of an activity or job.

Learning occurs at the individual and organisational level. Individual learning is contingent on a person's general characteristics and abilities, and must be considered in the context of the social entity to which an individual belongs. Organisational learning is the continual process of generating and leveraging individual and collective learning to improve the performance of the organisational system (Tearce & Dealtry 1998). It is a focused, time-framed activity aimed at developing a given set of skills or gaining a relatively narrow targeted set of knowledge. Argyris & Schon (1978) describe organisational learning as attempts by organisations to become learning organisations by promoting learning in a conscious, systematic and synergistic fashion that involves everyone in the organisation. Organisational mission, structure, culture and processes facilitate organisational learning of all its members (Marsick & Watkins, 1999; Slocum et al., 1999). In most cases, organisational learning is incidental and informal.

Learning demands unlearning whereby, errors, failure and environmental uncertainty result in restructuring past successes to fit the changing environmental and situational conditions. It also detects and corrects errors of organisational memory at primary and secondary levels (Argris & Schon, 1978: 2-3, 27; Cross & Baird, 2000:69; Delphi, 2001). At the primary level, error detection and correction permits an organisation to carry on with its current policies and achieve its present objectives, while at the secondary level, error detection leads to learning that involves the modification of the organisation's underlying norms and present objectives.

Learning may be internal or external, exploitational or exploratory. Investment in research and development (R&D) is an example of internal learning while learning from an alliance partner or competitor is an example of external learning. Exploitation is the pursuit of new knowledge of things that might come to be known while exploration is the use and development of things already known. Firms need to decide on the level of internal and external learning in order to build and reinforce their competitive advantage. They also have to maintain an appropriate balance between exploration and exploitation for survival and prosperity.

The learning process may be radical, incremental, single-loop, double-loop, or triple loop (Argyris & Schön, 1978; Senge; 1990; Crossan et al., 1995). Radical learning is

transformational and manifested in radical changes of behaviour. Incremental learning is manifested in small changes in the observed pattern of behaviour. In single loop learning people continuously improve their current practices or do what they are already doing better. Double loop people fundamentally reshape learners patterns of thinking with the intent of helping them learn to do different things. In triple loop learning, people create a shift in their context or point of view with the intention of helping them learn, grow and produce the results they truly desire.

A learning organisation is therefore one that features learning as one of the key roles and continuously transforms itself and facilitates the individual and organisational learning of all its members. It is the highest state of organisational learning whereby an organisation skilled at creating, acquiring and transferring knowledge has achieved the ability to transform itself to reflect new knowledge and insights through the development and involvement of all its members (Garvan, 1993; Pedler et al., 1989). It values individual and organisational learning as a prime means of delivering its organisational mission, structure, culture and processes (Slocum et al., 1999; Marsick & Watkins, 1999).

Within a learning organisation, employees are likely to feel empowered when given some significant degree of self-determination of their own career and personal development (informal and incidental) rather than simply having formal training imposed on them. The learning they undertake develops not only their direct technical and work-related skills but their social, organisational and communication skills. Employees learn directly and indirectly through the culture of the organisation, to take responsibility for their work. A learning organisation encourages the development and progressions of staff to new areas where growth and career development become alternatives to leaving the organisation; freely let go of past mistakes; exploits new ways; reviews successes and failures and evaluate individuals and departments on their learning systems and past performances. On-the-job training activities such as "vicing" where employees exchange positions to widen their area of expertise and discover their own potential is an important characteristic of a learning environment (Leonard-Barton, 1995). For knowledge management to be effective, organisations should be learning organisations.

3.7.2 Knowledge markets

Knowledge management operates within a market system. An organisation is a knowledge market when knowledge is exchanged for reward of other valuable things such as money, respect, promotion, other knowledge, or just the feeling of satisfaction from assisting

others (Brown & Duguid, 1998; Davenport & Prusak, 1998: 27-30; Grover & Davenport, 2001). To operate within the dynamics of an effective market, a clear price system (reward) must be established and the market place should be effectively built. It may be formal, such as a knowledge maps, or informal, such as chat rooms, talk rooms, knowledge fairs, water-coolers, and corporate picnics. The players in the knowledge market place are buyers, sellers, and brokers. Buyers are knowledge seekers, seeking insights and answers to complex problems. Sellers are people within the organisation reputable for having substantial knowledge about a process or project and willing to share or articulate their knowledge. Brokers know where to locate important information and facilitate contacts between the sellers and buyers.

3.7.3 Process framework

Knowledge management processes offer an understanding of the manner in which organisations create new knowledge, maintain existing knowledge and discard "old" knowledge (Alavi & Leidner, 2001; Grover & Davenport, 2001, Bhatt, 2005). These processes take place in different contexts from organisation to organisation depending on the organisation's knowledge management focus. The processes are not a monolithic set of activity but are interconnected, recursive, expanding and discontinuous (in situations where new needs and their fulfilment mechanism cannot be created). These processes generally consist of two distinct and interconnected knowledge cycles that feed on each other enabling organisations to learn, reflect, unlearn and relearn. One is the innovative cycle, representing a progression of unstructured knowledge to more structured and reproducible knowledge embedded in processes and businesses. The other is the knowledge sharing cycle representing the process of collecting, organising, sharing, accessing and using information with knowledge repository as the focal point.

Although the literature is replete with different classifications of knowledge management processes, the differences are mainly in terms of the number of processes rather than the underlying concepts. Nonaka & Takeuchi (1995) identify four knowledge conversion processes for organisational knowledge creation as socialisation, externalisation, combination and internalisation. Grover & Davenport (2001) and Ruggles (1998) classify knowledge management processes as knowledge generation, codification and transfer. Duffy (2001) & Carine (2003) consider the key elements of the knowledge management process to be collaboration, content management and information sharing. Skyrme (2002) categorises the knowledge management process as creation, transfer, assembly,

integration and exploitation. Daghfous (2003) classify the knowledge management process as knowledge acquisition, knowledge sharing and utilisation. Bhatt (2001) classifies knowledge management into five processes of knowledge creation, validation, presentation, distribution, and application. Gold et al. (2001) classify the knowledge management process into acquisition, conversion, application and protection. Drawing from the different classification of the knowledge management process, the knowledge management process within the context of this study which are briefly examined below have five sub processes of knowledge creation, codification, transfer, utilisation and protection.

3.7.3.1 Knowledge creation

The knowledge creation process is oriented towards acquiring and developing knowledge, or replacing existing knowledge within the organisational tacit and knowledge base. Knowledge is either acquired within an organisation or from external sources. The process of knowledge creation includes aspects of Nonaka &Takeuchi (1995), four modes of knowledge creation (socialisation externalisation, combination and internalisation). Other terms used to describe the knowledge creation process are: construction, seeking, generation, capture, collaboration, production, development and organisational learning (Duffy, 2001; Gold et al., 2001; Grover & Davenport; 2001; Skyrme, 2002; Carine, 2003).

3.7.3.2 Knowledge codification

The knowledge codification process is based on managing an organisation's internal and external knowledge and the conversion of this knowledge in an accessible and usable form using information technology and information management skills. Activities related to this process are: integration, combination, structure, coordination, conversion, editing, review, approval or rejection, storage, organisation, maintenance, cataloguing, classification, retrieval and organisational memory (Davenport & Prusak 1998; Bhatt, 2001; Duffy, 2001; Gold et al., 2001; Grover & Davenport, 2001; Carine, 2003). As organisations create knowledge and learn, they also forget. Thus, the process of storage, organisation, and retrieval of organisational knowledge also referred to as organisational memory (see section 3.11.6 below) is an important component of the knowledge codification process.

3.7.3.3 Knowledge transfer

Knowledge transfer is the movement of knowledge from the point of creation or codification to the point of use (Nonaka & Takeuchi, 1995; Holtham & Courtney, 1998; Alavi & Leidner,

2001). It refers to ways and means to distribute knowledge in a firm such that it will be easily accessible to those that need it. It also entails encouraging colleagues to share and reuse their knowledge within the firm. Common terms and activities denoting knowledge transfer are socialisation process, knowledge sharing, flows and distribution. Knowledge transfer may occur at different levels: between individuals, individuals to explicit sources, individuals to groups, between groups and from groups to organisation; and the knowledge transfer channels may be informal, formal, personal or impersonal (Nonaka & Takeuchi, 1995; Alavi & Leidner, 2001).

3.7.3.4 Knowledge utilisation

These are processes oriented towards the actual use of knowledge. It refers to the integration of acquired knowledge into the organisation's products, processes, and services in order to sustain its competitive advantage (Bhatt, 2001; Daghfous, 2003.). It depends on the users' absorptive capacity; that is, the ability not only to acquire and assimilate but also the ability to recognise the value of new knowledge and use it. Effective application of knowledge will result in competitive advantage, improve efficiency and reduce costs.

3.7.3.5 Protection processes

These are security designed knowledge management processes aimed at protecting the knowledge within an organisation from illegal or inappropriate use or theft. Knowledge protection processes preserves the rare and inimitable quality of knowledge thus ensuring competitive advantage (Gold et. al., 2001). This is a crucial process as not all forms of knowledge in the firm can be protected with property rights and laws such as trademarks, copyrights and patents. Although it is inherently difficult to protect knowledge, an effort should nevertheless be made. The steps that may be taken to do this include: knowledge incentive alignment, employee conduct, and rules or the design of a security system that restricts access to a firm's vital knowledge.

3.7.4 Knowledge management strategies for knowledge transfer

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. Several researchers: Sanchez (1997), Hansen et al. (1999), Butler (2003) and Connell et al. (2003) identified codification and personalisation as two basic knowledge management strategies. These two different business strategies grounded on the nature of knowledge, address cultural issues differently. Codification focuses on explicit

knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts.

The basis of the codification strategy is to extract and codify knowledge independent from the person who developed it and store this knowledge in the form of interview guides, work schedules, checklists, and bench marks so that it can be searched, retrieved and used by other employees. Personalisation strategy on the other hand ties knowledge closely to the person who develops it and often depends on the communication skill and will of the professional. Core information communication technology systems necessary for this strategy are knowledge route maps and directories pointing to people, document collection and data sets that can be consulted, for example, "Yellow Pages" (expert locators containing the curriculum vitae competency files, and research interest of individuals).

Hansen et al. (1999), maintain that personalisation strategy provides creative analytical rigorous advice on strategic problems by challenging individual expertise while codification strategy provides fast implementation by re-using articulated knowledge. They contend that all organisations working with knowledge management will have to make one of the two strategies their main strategy. Whilst organisations tend to favour one strategy over the other, the reality is that many organisations will adopt a combination of both strategies so as to obtain optimal maximisation of their knowledge resources. Jasimuddin et al. (2005) and Yu (1999) however argued that the two strategies can coexist.

In essence, both codification and personalisation strategies have positive and negative impacts regardless of which is central to the organisation. A successful symbiosis strategy is one that takes advantage of the positive features of both personalisation and codification strategies. Overemphasising one strategy to the detriment of the other may lead to a situation where an organisation loses its competitive edge. This is because the knowledge bases of organisations are both tacit and explicit and most organisational cultures favour easy knowledge replication while at the same time hinder imitation from competitors.

3.8 Models of knowledge management

Besides the frameworks discussed above, three different models for knowledge management are considered pertinent to this study viz, the intellectual capital, the SECI, ba and knowledge asset model, and the modified socio technical (diamond trist) model of Leavitt (1965).

3.8.1 Intellectual capital model

In the knowledge society, knowledge, rather than capital or labour is being considered as the only meaningful economic resource hence the term intellectual capital (Drucker 1995). According to this thinking, the real market value of commercial enterprises consists not only of its physical and financial assets but also of its intangible assets created through intellectual activities ranging from acquiring new knowledge (learning and inventions) to creating valuable relationships. Examples of intellectual assets are patents, copyright, trade marks and trade secrets and other forms of intellectual property estimated to be many times worth book value.

The Intellectual capital model was pioneered by Leif Edvinsson, the corporate director of intellectual capital of Scandia, the Swedish financial service corporation as the Scandia knowledge management approach (Chase, 1997; Edvinsson, 1997; Roos et al., 1997; Corall, 2004). It posits that knowledge is a body of intellectual capital alongside the traditional capital such as plant machinery and other asset. It assumes that intellectual capital and knowledge management are contained in two main categories of human capital and structural/organisational capital and can be segregated into human, customer, process and growth elements.

Human capital, also known as migratory knowledge, (Badaracco, 1991) are the firm's employees characterised by competence, attitude and intellectual agility (Roos et.al., 1997). This type of capital is loaned to the firm and withdrawn when the employee migrates to another firm.

Structural/organisational capital is the intellectual capital that remains in the firm's systems when the employee goes home at night such as the processes, culture and infrastructure. It is categorised as customer, organisational and innovative capital.

Customer capital defines the firm's relationship with its clients or customers or all of those things that bind a particular customer to a particular organisation. This type of capital is of high value in law firms where there are likely to be long standing relationships and prices are likely to be only one of the many factors.

Organisational capital on the other hand is the sum of know-how within the firm while innovative capital is that which is concerned with the firm's future success and profit. The intellectual capital model shown in figure 3.4 below is the Scandia knowledge management approach.
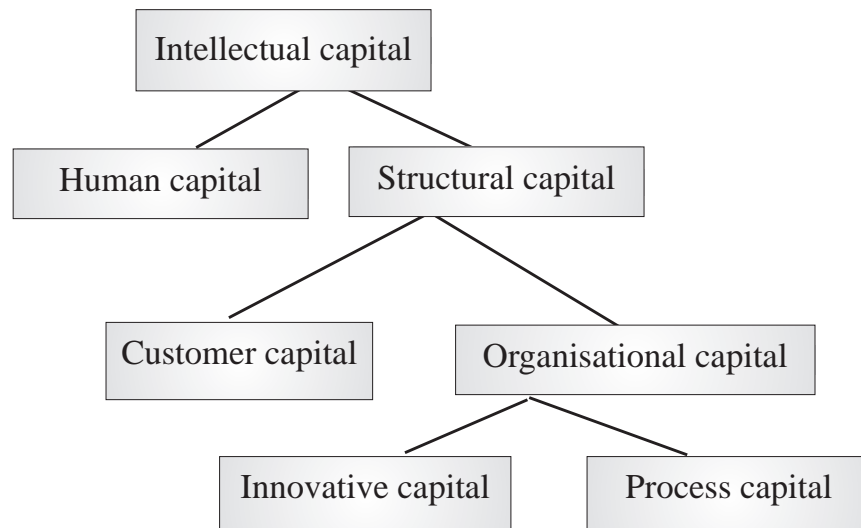
Figure 3.4 The Scandia knowledge management approach (Adapted and modified from Edvinsson 1997 knowledge management approach)

Although a number of studies in the knowledge management literature represent knowledge as essentially intellectual capital, knowledge management and intellectual capital are different but related issues that are most often used interchangeably. Like knowledge management, the practical management objective of intellectual capital is to convert human capital (individual and group learning) to structural capital (organisational knowledge or what is left when people go home, such as documented processes and knowledge base) thereby reducing the risk of losing valuable knowledge when people leave the organisation. This model however ignores the political and social aspects of knowledge management such as reward and recognition, power, relations and empowerment resulting into a simplistic mechanised approach to complex social-related issues.

3.8.2 SECI, knowledge asset and ba model

The SECI, ba and knowledge asset model complement the weaknesses in the intellectual capital model by considering knowledge management essentially as a knowledge creation process thus providing a high-level of conceptual representation of knowledge management. This model was originally developed by Nonaka & Takeuchi (1995) in its simplest form as the theory of dynamic organisational knowledge creation in an attempt to set up an

organisation for knowledge creation. It was subsequently adopted and elaborated upon by Nonaka et al. (2002) as the unified model of dynamic knowledge creation. It consists of three parts: the process of knowledge creation and conversion (SECI); resource development and use (knowledge asset); and a context that allows and supports knowledge creation and conversion (ba).

This study focuses on the first part of this model known as the SECI which is similar to Nonaka & Takeuchi's (1995) theory of dynamic organisational knowledge creation. It is based on the presupposition that human knowledge is created by a continual interplay between tacit and explicit knowledge that flows through individuals, and groups within an organisation. This interaction is called knowledge conversion. This model considers four ways of creating knowledge resulting from the interaction between tacit and explicit knowledge, namely socialisation, externalisation combination and internalisation.

Socialisation is the conversion of tacit knowledge to tacit knowledge. This occurs when one individual shares tacit knowledge directly with another. Tacit to tacit knowledge transfer may occur in the following ways: learning from mentors and peers, observations, constructive brainstorming sessions, on-the-job training, trial and error, imitating others, practising and training, the exchange of ideas, apprenticeship, conversation and everyday comradeship (Beijerse, 1999, Smith, 2001). This knowledge rarely becomes explicit. It has been described as implicit learning or learning by doing.

Externalisation or articulation refers to the process of conversion from tacit to new explicit knowledge, or formalising the inexpressible body of knowledge in the form of metaphors, analogies, hypothesis and models. It includes knowledge that is usually written down or communicated in some permanent or semi-permanent way. Tacit to explicit knowledge transfer may take the form of stories, narratives, multimedia presentations, group reflections, memos and e-mails. This extends the organisation's knowledge base.

Combination is the conversion of explicit knowledge to explicit knowledge in order to create new explicit knowledge. It combines separate pieces of explicit knowledge in to a new whole through a standardisation and systematic procedure. This kind of knowledge creation is usually encountered in education and training. A good example is the use of various data sources to write a research paper. It may also occur when people share their explicit knowledge with one another in a meeting.

Internalisation is the conversion from explicit to new tacit knowledge. It embodies the process of reframing, or interpreting the explicit knowledge using the person's frame of reference so that knowledge can be understood, internalised and accepted by others. This

process involves translating theory into practice, learning by doing and the ability for individuals to apply what they have learnt. One example of internalisation is when new knowledge workers "relive" a project by studying the archives of the project. Another example is learning and understanding the results of something through reading. The process of knowledge creation and conversion (SECI) is shown in figure 3.5 below.
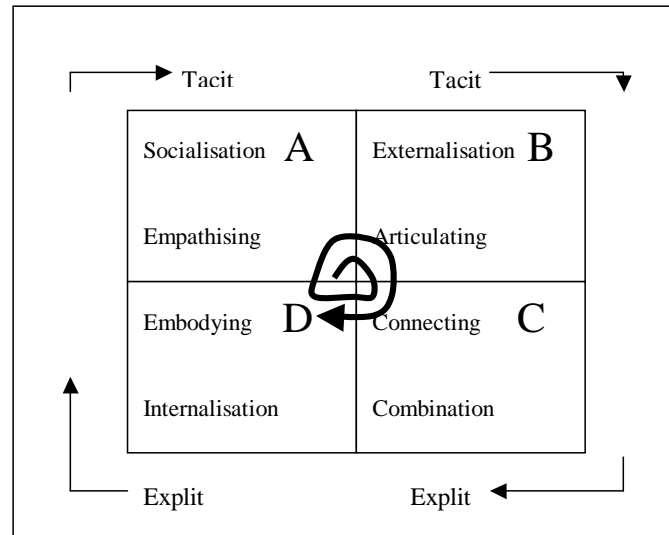
Figure 3.5 The SECI model (Adapted and modified from Nonaka and Takeuchi, 1995)

The figure interprets the relationship between the four modes. It reveals that these processes do not occur in isolation but are highly interdependent and intertwined. That is, each mode relies on, contributes to, and benefits from the other modes. Each box represents a form of knowledge creation. Box A represents socialisation; box B represents externalisation, box C represents combination and box D represents internalisation. At the core of this model, there is a dialectic relationship between tacit and explicit knowledge. The model assumes tacit knowledge can be transferred through a process of socialisation into tacit knowledge and tacit knowledge becomes explicit knowledge through a process of externalisation (top 2 boxes of the model in figure 3.5). The model also assumes that explicit knowledge can be transferred into tacit knowledge through a process of internalisation, and that explicit knowledge can be transferred to explicit knowledge through a process of combination (bottom 2 boxes of the model in figure 3.5). When tacit and explicit knowledge collide, a burst of powerful energy appears in pattern B or in pattern D or between pattern B and D. This process blends two different and distant areas of experience into a single inclusive symbol or image like "two ideas in one phrase."

The second element of the unified model of dynamic knowledge creation is the knowledge asset. It encompasses resources that are used to create knowledge. Nonaka et al. (2002:55) define assets as firm-specific resources that are indispensable to create values to the firm. They are inputs, outputs and moderating factors of the knowledge creating process. Four different qualities of knowledge assets have been distinguished. These are: experimental knowledge assets (expert skills and market experience); conceptual knowledge asset (design and brand equity); routine knowledge asset (the know-how in daily routines and operations and systematic knowledge assets (databases, documents and patents) (Nonaka et al., 2002).

The last part of Nonaka et al. (2002) unified modal of dynamic knowledge creation model is the context condition and environment that facilitate new knowledge creation referred to as the knowledge "ba"(common place for creating knowledge). Ba is the social, historical and cultural mix that the knowledge worker lives in. It can be physical virtual or a combination of both. It is the source of an individuals understanding of the world and the basis for knowledge creation and interpretation of information. The context condition is time dependent and sets the boundaries for the social interaction of the people within the context understanding. Four types of "ba" correspond with the four modes of knowledge creation discussed above. These are: originating ba- the shop floor that enables people to interact with each other and with customers (associated with socialisation mode of knowledge creation); interacting or dialoguing ba-tacit knowledge of local employees used to create sales forces in dialogue with one another (associated externalisation mode of knowledge creation); cyba ba (virtual space corresponding to externalisation); and exercising ba (corresponding to internalisation). The characteristics of the various "ba" and their relationship with the different modes of knowledge creation are important in enhancing organisation knowledge creation.

The SECI, knowledge asset and "ba" interact with each other organically and dynamically. The knowledge assets of an organisation are shared in a "ba" whereas the tacit knowledge held by individuals is concerted and amplified by the spiral knowledge through socialisation, externalisation, combination and internalisation. A clear leadership will direct the process and design the context to enable organisations create knowledge dynamically and continuously. The leadership of the knowledge process and the context is characterised by a series of important tasks such as a knowledge vision and promoting knowledge sharing and a trustful and caring climate.

By focusing on the distinction between tacit knowledge and explicit knowledge, the SECI, knowledge asset and "ba" complement the concept of single loop and double loop learning examined in the organisational framework literature (3.7.1). It offers a conceptual model to systematise the ability to learn and increase the knowledge base. Rather than looking at knowledge as a mechanism that threatens the role of the individual, this model encourages companies to provide the individual employee with an opportunity to demonstrate his or her expertise and ensure that the individual abilities are widely recognised and appreciated.

Knowledge transfer in organisations may be much more complicated and convoluted than this simple matrix presented in the SECI, knowledge asset and "ba" model of Nonaka et al., (2002). Besides, the SECI model has been based on studies in Japan and therefore its applicability in African countries may have to be determined. Besides, knowledge management is not only about managing work processes or people that carry out work processes nor is it limited to the creation and sharing of knowledge. In order to ensure a sustainable knowledge management strategy that may result in competitive advantage, organisational variables need to be considered.

3.8.3 Leavitt's diamond organisational model (Diamond Trist) as modified by Edward & Mahling, 1997; Galbraith, 1997; Pan & Scarbrough; 1999

Leavitt model (1965) has been specifically and widely adopted and cited as a basis for understanding knowledge management in organisations. According to Leavitt (1965), organisations are viewed as complex systems in which four significant variables: task, structure, technology and humans interact to effect changes in the organisation. As the arrow heads in the diagram below indicates, these four groups of variables are highly interdependent so that the change in one usually results in compensatory or retaliatory changes in others. Tasks are the goods and services that an organisation exists to produce. Organisational structure is the distribution of power and shape in organisational form such as system of communication, authority and work flow within the organisation. People are the personnel in the organisation with competence, nature and attitudes. Information technology is considered as a separate component due to its strategic importance in supporting the process of knowledge creation, sharing, application and storage and can also enhance the interaction of individual, group, organisational and inter organisational knowledge.
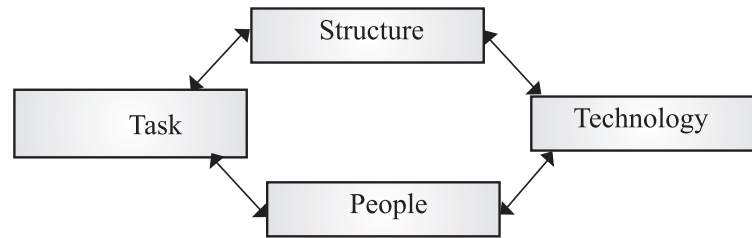
Figure 3.6 Leavitt (1965) Diamond Organisational Model (Adapted from Leavitt, 1965)

However, task, structure, people and technology are not the only organisational variables that may influence knowledge management. This model has been elaborated, adopted and adjusted over the years by other researchers (Edward & Mahling, 1997; Galbraith, 1997; Pan & Scarbrough; 1999) to include other variables such as culture, reward systems, information and decision process. Reward systems are different ways by which organisations compensate its member such as promotion, compensation, and knowledge markets. Organisational cultures are shared beliefs norms, expectations and assumptions that bind people and systems. Information and decision processes deal with issues of planning and control.

An integrated approach of Leavitt's (1965) model and the elaborated version of Galbraith (1997) bring out the value of knowledge management in organisations. Besides the frameworks and models of knowledge management, a solid technological platform is necessary to knowledge management initiatives.

3.9 Enabling tools and technologies for knowledge management

There is a lot in the literature on different tools (software) and technology (hardware) for knowledge management (Davenport & Prusak, 1998; Gottschalk, 1999; Skyrme, 1999; Zack, 1999; Alavi & Leidner, 2001; Bloodgood & Salisbury, 2001:62; Gottschalk, 2002; Tiwana, 2002; Carine, 2003; Daghfous, 2003; Opp, 2004). In general terms, companies considering knowledge management should at least have the basic hardware such as personal computer, phones, scanners and collaboration and communication technologies. Typical knowledge management systems[5] are collaborative technologies, data warehouse, knowledge repository, best practices, document management, knowledge portals, intelligent tools, expert profiles, visualisation software, content management

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5   Knowledge management systems are a group of information technology systems that are applied in managing organisational knowledge. They help leverage and capture explicit knowledge and collective experience and knowledge of employees, support information processing, limit the tacit knowledge that is lost, enhance the organisational process of knowledge creation, storage retrievals transfer and applications used for managing organisational knowledge (Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998, O'Dell &Grayson, 1999; Sveiby, 1999; Alavi & Leidner, 2001; Gottschalk, 2003; Opp, 2004).

systems, online question and answer, customer help desk, discussion forums, bench marking, search and retrieval software and collaboration and project work spaces. Some of these technologies for knowledge management are examined below.

3.9.1 Communicative and collaborative technologies

Communicative and collaborative technologies such as groupware, web based technologies, and content management systems are known to be at the heart of knowledge management infrastructure (Kennedy, 2001; Gottschalk, 2002; Staudt, 2003). They enable professionals in a company to collaborate virtually together without any barrier to geographical location and accelerate the capture and transfer of tacit knowledge by supporting knowledge access, facilitating team work and individual contact with one another. Groupware tools such as email, calendaring, group scheduling, time management and discussion programmes are typical tools for communication and collaboration (Gottschalk, 2002; Staudt, 2003). Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafés are examples of groupware that provide a virtual space, within which participants can share certain kinds of experience; conduct meetings, listen to presentations, have discussions, share relevant documents, create, acquire, capture, transfer and provide a common work space for geographically dispersed group of people.

Collaborative technologies such as internet/intranet, extranet, World Wide Web and enterprise information portals are generic web technologies that create a seamless flow and transfer of information within the firm (Carine, 2003; Daghfous, 2003). Enterprise information portals have enabled and fuelled the widespread awareness and adoption of knowledge management (Skyrme, 1999). They provide a single point of access to information and knowledge held in many forms and connects individuals dispersed across different countries, time, zones and languages.

3.9.2 Knowledge databases and software tools

The best known database technology of knowledge management appears to be the repository of structured explicit knowledge. Other databases and software tools are collaborative hypermedia, summarisation, content management systems, visualisation software, categorisation software, automated document and search and retrieval software (Davenport & Prusak, 1998; Daghfous, 2003; Opp, 2004).

Knowledge repositories capture knowledge for later and broader access and use by others

within the same firms and serves as a bridge between the storage and retrieval system (Davenport & Prusak, 1998; Zack, 1999; Choo, 2000; Corall, 2004). Although most knowledge repositories serve as a single function, it is increasingly important for companies to construct an internal portal for employees to access different repositories from a single screen. Knowledge repositories typically contain specific types of knowledge for particular business functions. Examples of knowledge available in the knowledge repository are client matters, financial information, best practices, knowledge for sales, lesson learned in projects, learning histories, competitive intelligence, document management, legislative developments, assignments, and market development (Davenport & Prusak, 1998; Zack, 1999; Grover & Davenport, 2001; Carine, 2003). Davenport & Prusak (1998) group the different types of knowledge in the knowledge repositories into three categories: external knowledge (competitive intelligence); structured internal knowledge (documents, project proposals, research reports, product oriented marketing materials, client matters, customer data, policy, and financial matters) and informal internal data (discussion databases sometimes referred to as "lesson learned"). Bearing this categorisation in mind, a law firm's repository template may be described as structured internal knowledge.

Collaborative hypermedia is software and database tools that capture and codify tacit knowledge. They are good for informal knowledge types and linking ideas without specifying relationships or roles (Shum, 1997). It is useful for documenting discussions and related documents for organisational memory. Technologies such as summarisation are helpful in dealing with information overload by reducing the load of persons attempting to find the right documents to use in some tasks (Marwick, 2001).

Content management is the process of systematic and structural provision, creation, preparation, administration, presentation, processing and publication of content with the goal of getting the right information to the right person (Davenport & Prusak, 1998; Skyrme, 1999). Content management systems manage highly dynamic contents like search result page and enables contents to be published once and used many times through the use of portals.

Visualisation software shows the relationship between different elements of knowledge, used in conjunction with a categorisation engine (Tiwana, 2002). For example, visualisation could show a pattern of cluster of related documents.

Categorisation software assists in the classification of documents by using natural language analysis to identify core concepts within the document (Davenport & Prusak, 1998). Automated document assembly tools with decision-free functionality supports complex and repetitive tasks (Skyrme, 1999).

For example, it can be used by lawyers for routine divorce complaints. It also captures and converts tacit knowledge into a digital format that can be stored, indexed and shared within the enterprise. Search and retrieval software are core knowledge-based software that provide a prevalent way of finding information.

3.9.3 Corporate knowledge maps and directories of explicit and tacit knowledge

Knowledge maps are repositories that do not provide actual knowledge but points to knowledge (people, documents, collections and data bases where knowledge is stored) that can be consulted (Davenport & Prusak, 1998; Grover & Davenport, 2001; Kofoed, 2002). It is the primary means of representing the entirety of the knowledge base and navigating the system showing how knowledge flows in and out of the business process. Knowledge map is not an activity in itself, but rather form the basis for the development of a strategy for managing knowledge and for tactical decisions. For example, internal expert skill directories called, "Yellow Pages" containing curriculum vitaes, competency profiles, and research interest, and acts as electronic intermediaries connecting knowledge seekers to knowledgeable people or an external directory called "Blue pages." These systems are very instrumental in facilitating the transfer of tacit knowledge, assisting colleagues to locate experts who may assist with advice or facilitate the exchange of ideas on a recorded source of knowledge.

3.9.4 Intelligent tools

Intelligent tools are used to anticipate user needs, cull new knowledge from existing knowledge bases and codify and store structured explicit knowledge (Davenport & Prusak, 1998). Examples of intelligent tools are decision support tools, neural network for data mining expert systems, case-based reasoning, virtual reality, genetic algorithm and internet search engines (Davenport & Prusak, 1998; Kofoed, 2002). Expert systems are computerised systems that perform the role of experts or carry out task that require expertise (Tiwana, 2002). Neural networks are statistically oriented tools that are excellent in using data and in classifying cases into one category or another. Case-based reasoning is a business intelligent technology that assists in knowledge codification (Davenport & Prusak, 1998). It enables one to research on a collection of previous cases and chooses the one closest to the case at hand. Davenport & Prusak, 1998 noted that it has not been successful in legal reasoning most probably because legal reasoning is less standardised than customer service problems.

3.9.5 Learning and professional development systems

These are the tools that assist knowledge workers to learn and use knowledge. They include computer-based training programmes, web-based learning, web-based tools, multimedia applications, presentation support systems, the use of virtual reality and the virtual learning environment (Gottschalk, 2002; du Plessis, 2004). Bookmark and annotation management systems are information technology applications with knowledge management features that assist individuals in making notes and annotations electronically. Knowledge management programmes provide online training opportunities for those individuals who are always under time pressure and may only sign up for training at unusual slots by making it possible for them to choose a particular training without attending a physical session (Staudt, 2003).

The opportunities to support knowledge management with these information technologies are manifold. Generally, the type of knowledge management tool and technology that a firm will adopt will depend on its current level of knowledge management related activity. The next section discusses the role of information communication technology in knowledge management.

3.10 The role of information communication technology in knowledge Management

Information communication technology has generally played a key role in managing knowledge in organisations. It has been used for collecting and codifying knowledge for distribution into decision support systems and explicit systems, keeping track of training and employee development programmes, organisational policies reports, writing manuals and in enhancing expertise (Davenport & Prusak, 1998; Bloodgood & Salisbury, 2001:61; Gottschalk, 2002). In recent times, new technologies and knowledge management systems have been used pervasively to support knowledge management in several ways. Typical examples are: the creation of knowledge repositories; creation, sharing and transfer knowledge; a technical infrastructure for community of practice and knowledge network alliances; finding an expert or recorded source of knowledge; accessing information on past projects and learning about virtual teams (Zack, 1999; Alavi & Leidner, 2001; Bloodgood & Salisbury, 2001:62; Gottschalk, 2002). The subsequent paragraphs elaborate on the role of information communication technology in knowledge management.

Information communication technology provides a seamless pipeline for the flow of explicit knowledge through the different sub stages of knowledge refinery that entails capturing,

organising, searching and presenting the content with sufficient flexibility in order to render it meaningful and applicable. Knowledge management theorists identify the three related stages necessary for the codification of explicit knowledge as internal codification (data warehouse), knowledge refinery and the appropriate technology (Zack, 1999; Choo, 2000; Kesner, 2001; Stover, 2004). Information communication technology such as World Wide Web, Lotus Notes and enterprise information portal offer a potentially useful environment within which to build a multimedia repository of rich explicit knowledge while intelligent tools and databases such as case-based reasoning help to acquire structure, codify and store explicit knowledge (Tiwana, 2002).

Information communication technology also supports the different sub processes of knowledge management by facilitating the capture, codification, transfer, application and protection of knowledge (Zack, 1999; Alavi & Leidner, 2001; Daghfous, 2003). The tools and technologies that support the process of knowledge capture may be referred to as capturing tools and technologies. Examples are: word processing, spread sheets, scanners, and scanning software, email and fax server software, voice dictation, intuitive search tools, practice management systems, automated document assembly, and collaborative and communication technology.

Codification tools and technology support the codification process of knowledge management (Zack, 1999; Alavi & Leidner, 2001). The following are some examples of codification tools: knowledge databases, advanced computer storage techniques; sophisticated retrieval techniques such as query languages, multimedia databases and database management systems. A good thesaurus will connect the researcher's terms with the categoriser's terms and facilitate searches in database. Intelligent tools and technologies such as artificial intelligence, expert systems, neural networks, fuzzy logic, genetic algorithms, case-based reasoning, agents and knowledge discovery database, capture and codify the knowledge of the community. Collaborative and communication technologies and groupware enables organisations to create intra organisational memory in the form of structured and unstructured information that shares memory across time and space.

Communicative and collaborative tools and technologies support the knowledge transfer process (Zack, 1999; Choo, 2000; Stover, 2004). The following are some general examples of communicative and collaborative tools and technologies: cutting edge technologies such as bulletin boards, discussion groups, emails, Lotus Notes, discussion databases portals, internet, intranet, extranet and web based portals, creating a forum that facilitate

contact between people seeking knowledge and those that have knowledge. Taxonomies of organisational knowledge maps enable individuals to locate knowledge (Davenport & Prusak, 1998). Communicative technologies such as telephones, pagers and faxes also support the knowledge transfer process (Egbu & Botterill, 2002).

Application tools and technologies support the application process by codifying, automating and embedding knowledge in the organisational routine (Zack, 1999; Alavi & Leidner, 2001). For example, corporate intranets updates, organisational directives (repair manuals and policy) and decision support systems use knowledge to inform the knowledge systems. Also, intelligent tools and technologies such as expert systems, neural networks, intelligent agents and case-based reasoning may capture and provide access to customer services, problem resolution, legal knowledge, new product development, and well specified organisational procedures (Gottschalk, 2002).

Information communication technology play a crucial role in Nonaka &Takeuchi's (1995) theory of dynamic knowledge creation (socialisation, externalisation, combination and internalisation) examined in section 3.8.2 above. The tools and technologies used in the four interdependent processes are similar to the tools and technologies used to support the knowledge management process of knowledge creation, codification, transfer and application. For example, communication tools and technologies support the socialisation process by connecting people with people (Junnarkar & Brown, 1997; Marwick, 2001). Tools and technologies that support the externalisation process are browsable videos, audio learning methodologies; case-based reasoning; decision support systems and knowledge data mining. Tools and technologies that support the combination process are computer-based technologies, data bases, classification methodologies, web based tools, summarisation, taxonomies, intranet, internet and portals. Finally, visual representation tools, data mining tools and geographical information systems are tools and technologies that support the internalisation process.

Gottschalk (2002) & Khandelwal & Gottschalk (2003:92-93) using the knowledge management technology stage model identified four different stages by which information communication technologies may support knowledge management in the law firm. At the first level, end user tools (basic hardware and software) are made available to all knowledge workers in the firm. At the second level, information on who knows what (knowledge sources such as databases and internet) are made available electronically. At the third level, some information representing knowledge (what knowledge workers know) are stored and

made electronically and at the fourth level, information systems capable of simulating human thinking such as expert databases are applied in the organisation. Considering the role of technology in knowledge management according to stages and processes may however be tricky because knowledge management is a recursive process. Nevertheless, it provides a valuable starting point to identify the current situation and plan for future application of knowledge management in an organisation.

The different stages of knowledge management highlighted by Snowden (2002) & Koenig (2005) illuminate the important role of information communication technology not only in the emergence of knowledge management but also in the knowledge management processes. Snowden (2002) identifies three generations of knowledge management. First, the pre 1995 generation that focused on the computerisation of major business applications leading to the technology-enabled revolution dominated by the concept of process re-engineering. Second, the 1995 generation triggered by the popularisation of the SECI model of Nanoka (section 3.8.2). Finally, the new understanding that emerged beyond the post-1995 period whereby knowledge is no longer managed only as a thing, nor as content but seen paradoxically as a flow focusing more on its context and narrative and requiring diverse management approaches.

On the other hand, Koenig (2005) identifies the following three different stages of knowledge management: initial information technology stage, the human relations stage and the content and retrievability stage. Koenig (2005) suggest the awareness of the importance of knowledge external to the organisation as an emerging fourth stage of knowledge management. Like the first three stages, the fourth stage of knowledge management has also been triggered by advances in information communication technology as the intranet-based knowledge management systems are fast extending to extranet-based knowledge management systems (Koenig, 2005). Figure 3.7 below represents an overview of the role of information communication technologies in the knowledge management discussed above.
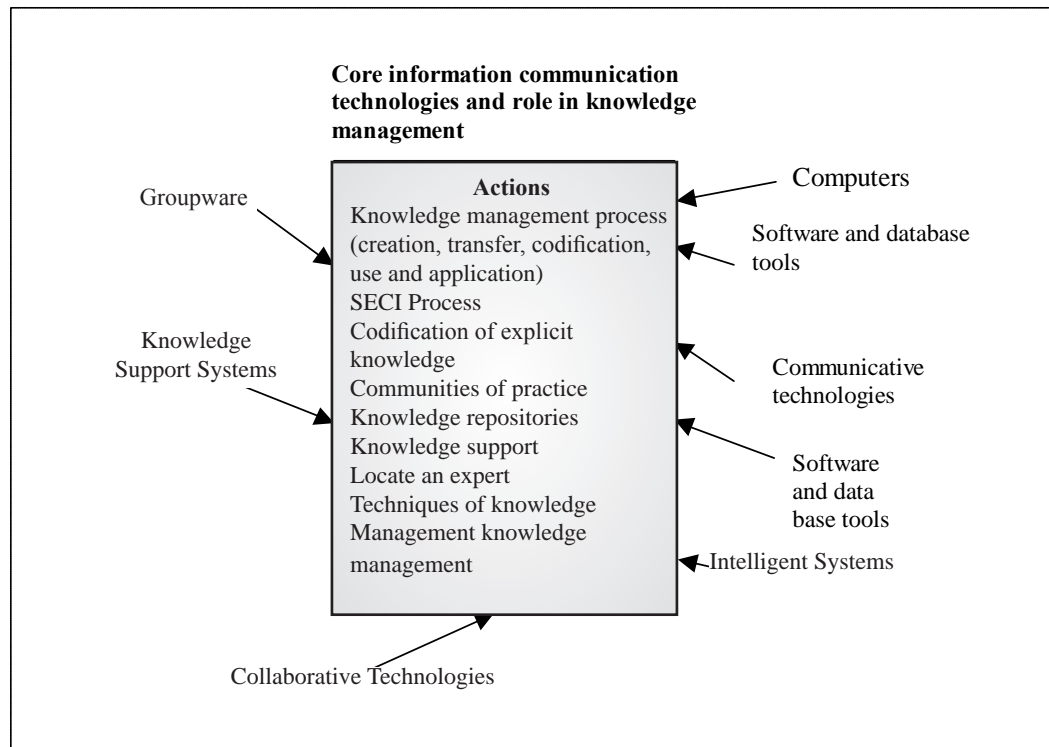
Figure 3.7 Summary of the role of technology in knowledge management

It must be noted that although information technology can help to achieve the above and many more objectives of knowledge management, technologies remains a useful enabler rather than a central tenet. Information technology will only be effective when people in the organisation cooperate and share knowledge with each other. Therefore, the next section considers non-technological factors such as the techniques of knowledge management that need to be in place in order to implement effective knowledge management.

3.11 Techniques of knowledge management

Much has been written about the several techniques in knowledge management (Fahey & Prusak, 1998; Holtham & Courtney, 1998; O'Dell & Grayson, 1998; Baumard, 1999; Alavi & Leidner, 2001; Kofoed, 2002; Skyrme, 2002; Carine, 2003; Stover, 2004, Squier & Snyman, 2004; Rusanow, 2007). These techniques may be formal, informal, personal or personal. While some of these techniques use associated computer tools to facilitate implementation and diffusion throughout the organisation, others do not require the use of technology. Others also employ a mix of technology and non-technological techniques. The most widely recognised technique of knowledge management is community of practice.

3.11.1 Communities of practice

Communities of practice are informal group of people from all levels and functions in the organisation who share a common area of expertise and/or who search for solutions to common problems (Brown & Duguid, 1991; Stewart, 1997; Wenger, 1998; Wenger & Synder, 2000; Smith, 2001; Wenger, 2003). The idea of communities of practice originated in classical Greece as "corporations" of metalworkers and evolved in the middle ages into guilds that maintained standards to protect the interests of its members and has developed through the organisational learning movement. Communities posit that knowledge flows through a network of people who may not be in the same organisation but do have the same work interest. Communities are built on mutual agreement whereby community members share a set of resources like language, routine, artefacts and tools. To build communities of practice, time should be given to organise and attend meetings, create bulletins and sample skill directories. Besides the presentations of information and ideas, communities of practice have a physical or electronic forum that spark collaborative thinking and working. Wenger & Snyder (2000) use examples from the World Bank and a consultancy business to illustrate how communities of practice drive strategy, start new lines of business, facilitate problem solving, transfer best practices, develop professional skills and help organisations recruit and retain talents.

Other fluid and interpenetrating practices similar to communities of practice are knowledge communities, knowledge webs and communities of interest. While communities of practice are directed at immediate concerns on some specific set of work practices as seen above, knowledge communities focus on creating and sharing more generalised knowledge that may have potential future utility. Knowledge webs on the other hand are colleagues from different functional areas or offices of an organisation who assist one another on an "as needed basis" (Skyrme, 1999; Carine, 2003). A community of interest may consist of a group of people scattered over a company who do not meet formally but work together through informal communication and contact on a given project (Smith, 2001).

3.11.2 Conversations by water coolers

These are informal conversations at break time, at hallways and at canteens. Conversations have long been recognised as the most important form of knowledge transfer in the new economy (Webber, 1993). Through conversations knowledge workers discover what they know, share knowledge with colleagues and in the process create new knowledge for the organisation.

The increasing importance and effectiveness of conversation by water coolers has resulted into formalised forms of conversations such as "corporate picnics," "open forums," and "talk rooms" that encourage unpredictable creative blending and exchange of ideas amongst members of the organisation. Many companies in Japan have set up "talk rooms" where members of the organisation are encouraged to meet without a formal agenda to discuss what is in their minds (Nonaka &Takeuchi, 1995).

3.11.3 Knowledge networks

While communities of practice and conversations by water coolers are informal techniques of knowledge transfer within an organisation, knowledge networks consist of formal teams, alliances, groups of colleagues, or partnerships with people from various organisations, positions and spheres of influence brought together by electronic interaction such as chat rooms to hold "best practice" sessions, work on projects, foster learning and solve problems (Powell et al., 1996; Apostolou & Mentzas, 1999:134; Alavi & Leidner, 2001; Carine, 2003). Trust, openness and reputation are necessary to create an innovative environment for effective knowledge network. As organisations become more multifaceted, and the sources of expertise become widely dispersed, organisations are challenged to go beyond developing their internal abilities to identify and utilise existing knowledge in order to become more creative, proactive and innovative. The locus of creativity and innovation is therefore found in organisational networks and alliances rather than in individual firms. However, it must be borne in mind that contribution to a knowledge network may benefit the network without necessarily benefiting the individual contributor.

Knowledge networking can take the form of training with external experts and peers, secondment programmes with other organisations, clients briefing, external conferences or meeting of a professional societies (the Law Society in the case of law firms). Cross-functional teams with people from different disciplines and organisations units are a good way of sharing informal knowledge across normal disciplines and organisational boundaries. Tutoring and mentoring is another technique of knowledge transfer.

3.11.4 Tutoring and mentoring

The term mentor originally alludes to a trusted guide and the mentor-protégé relationship was a long-term intimate relationship with the ultimate aim of making the protégé a more competent, mature and self-sufficient person (Merriam, 1983). The use of the term has evolved over time to refer much more generally to a counsellor, support person, master,

groomer, leader, coach, role model, confidant, nurturer and supervisor. Tutoring may be either formal or informal. Examples of formal tutoring and mentoring are training sessions, teaching, plant tours, quality circles, coaching, and job rotation (Egbu & Botterill, 2002; Skyrme, 2002). Question and answer sessions provide an opportunity for informal tutoring and mentoring (Stover, 2004).

Mentoring and tutoring systems assist new employees by allowing senior employees share their expertise, knowledge, wisdom, specific insights, practice and skill with junior colleagues within a short space of time; provide opportunities for continuous education and preserve individual skills and knowledge from being outdated and counterproductive (Sveiby, 1995). By delegating tasks to junior employees through tutoring and mentoring, senior employees are also able to perform challenging tasks within the firm thus resulting in better decision-making. Tim (1997) observed that in one company, each employee has a learning agenda in which they are given targets for the coming year in terms of personal development. Mentoring and tutoring also preserve the firm's organisational memory in case an individual leaves the firm or dies.

3.11.5 Developing the organisational memory

Organisational or collective memory also referred to as the firms intellectual capital is the knowledge and knowing capability of an organisation. It preserve behaviour, norms, values and mental maps over time that could easily be lost as employees come and go and leadership changes. The literature draws a distinction between individual and organisational memory. Individual memory is developed based on a person's observation, experiences and action while organisational memory on the other hand is organisational knowledge stored and distributed across different retention facilities (individuals, structures, transformation, ecology, values, culture, history of past events and their interpretation and external archives) that can be retrieved, remembered and brought to bear on present decisions (Argyris & Schon 1978; Fiol & Lyles, 1985; Walsh & Ungson, 1991).

In the emerging knowledge-based economy, it is increasingly important for organisations to increase their ability to retrieve their previous experiences as the need arises. Organisations that encourage learning will pay attention to building and developing the collective organisational memory so that knowledge and competences representing the past and present collective learning of employees are transferred across generations of learning. Knowledge management captures the organisation's individual knowledge or team capabilities and transforms it into organisational knowledge, documented processes

and knowledge base thus reducing the risk of knowledge deterioration that may arise when people leave the organisation.

3.11.6 Other core techniques of knowledge management

The following other core techniques of knowledge management were identified in the literature (Tim, 1997; Skyrme, 1999; Hutt et al., 2000; Soliman &Spooner; 2000; Bollinger & Smith, 2001; Alavi & Leidner, 2002; Rusanow, 2004).

- The organisation's newsletter with upcoming community events, recent successes and failures, and newly published best practices and lessons learned;
- Semi structured interviews and skilful dialogues which provide effective ways of gathering and making explicit core knowledge;
- Codification of good practice in the form of methodology relevant to process design the design of work activities, guidelines or workbooks;
- Software development, prototyping and packaging that may be used to embed knowledge in routine activities;
- The design of an organisation in a way that the lay-out provides space for staff to meet, share knowledge and create new ideas;
- Share fairs which are events that combine knowledge providers like research and development (R&D) teams with knowledge users or exploiters (business unit or venture capitalist);
- Effective marketing in the form of articles, conference presentations, brochure and promotion or e-marketing over the internet;
- After Action Review (AAR) which are systematic processes carried out at the end of an assignment or task to distil the lessons learned. It seeks to answer questions such as: What should have happened? What actually did happen? What lessons can be learned from what went wrong and what went right?
- Lessons learned from these big projects may be systematically analysed and stored for access by other
- Story telling is an informal technique of knowledge transfer that makes it more memorable;
- Knowledge centres like library and information centre typically staffed by information professionals act as a conduit between requesters and suppliers of knowledge;
- Information sharing policies used to establish knowledge that can be shared and

knowledge that need not be shared;

▸ Research and development programmes which provide formalised mechanism for research and knowledge generation; and

▸ Transition, time and effort provided at the end of big projects which provide room for effective debriefing, enabling members to learn systematically from the experiences of a project and how the project could be improved in future.

The use of information communication technology for knowledge management and a proper application of the above techniques to facilitate knowledge management may leverage knowledge management in unprecedented ways. The next section identifies some of the benefits that may result from leveraging knowledge management in organisations.

3.12 Benefits of knowledge management

Perceptions of the benefits of knowledge management vary from individual to individual and organisation to organisation. The following recurrent potential benefits of knowledge management have identified in the literature all pointing towards value creation and effective knowledge leveraging and innovation:

▸ Improved ability to sustain competitive advantage of an organisation (Wiig, 1993) ;

▸ Immediate results in solving organisation-wide problems (Skyrme & Amidon, 1997);

▸ Improved organisational productivity in delivering services to client (Nonaka & Konno, 1998; Baumard, 1999);

▸ Development and constant improvement of competitive long-range service and technology strategies (Beijerse, 1999);

▸ Improvements in the quality of an organisation's work force, through capacity building (Liebowitz, 1999);

▸ Stimulation and motivation of employees (Choo, 2000);

▸ Established formalised knowledge transfer system (best practices, lessons learned), (Daghfous, 2003; Stover, 2004);

▸ Improved capture and use of knowledge from sources outside the firm (Stover, 2004);

▸ Improved integration of knowledge within the firm (Beijerse, 1999; Liebowitz, 1999);

▸ Better on-the-job training of employees (Skyrme & Amidon, 1997; Nonaka & Konno, 1998);

▸ Enhanced client relations–better client interaction (Wiig, 1993);

▸ Development of a culture for organisational growth and success (Choo, 2000);

▸ Improved employee retention (Baumard, 1999; Beijerse, 1999);

▸ Enhanced business development and the creation of opportunities for organisations (Liebowitz, 1999);

▸ Improved efficiency (Choo, 2000; Daghfous, 2003; Stover, 2004);

▸ Better decision making (Daghfous, 2003; Stover, 2004);

▸ Improved market position by operating more intelligently on the market (Liebowitz, 1999);

▸ Enhanced profitability of the company (Stover, 2004);

▸ Optimal interaction between product development and marketing improve group competencies (Skyrme & Amidon, 1997);

▸ Enhanced performance and productivity by solving emerging organisational problems (Nonaka & Konno, 1998; Baumard, 1999);

▸ Fostering innovation and services (Choo, 2000; Daghfous, 2003);

▸ Enabling identification of knowledge gaps (Liebowitz, 1999; Choo, 2000);

▸ Identification of knowledge flow (Daghfous, 2003; Stover, 2004) and

▸ Identification of knowledge assets (Nonaka & Konno, 1998).

These benefits of knowledge management although compelling are usually intangible and difficult to quantify. Schick (2001) found that while 91% of companies surveyed agreed that knowledge management practices have helped improve organisational efficiency only five % were able to calculate a return on investment from the knowledge management initiatives. The outcome of a knowledge management initiative may be measured by determining how the above benefits of knowledge management meets the knowledge management objectives and the business needs. The next section therefore identifies and discusses the objectives (drivers) and value proposition of knowledge management that would assist the firm to measure the outcome of its initiatives.

3.13 Drivers of knowledge management

Organisations invariably have different reasons for wanting to achieve best practices and leverage information and knowledge. Knowledge management theorists (Wiig, 1993; Skyrme, 1999; Ndlela & duToit; 2001; Butler, 2003; Mason & Pauleen, 2003) have identified several commonly recurrent drivers of knowledge management in the company. The main ones are: the realisation of the changing role of knowledge, sophisticated

customers, competitors and suppliers, cost avoidance, leveraging of knowledge, value measurement of intangible assets, globalisation of business, international competition, increase in information technology, rapid growth, loss of corporate memory, geographic dispersion, strategic mindset, culture of accountability responsibility, staff turnover, staff retention, loss of intellectual asset and need for knowledge sharing. It is worth noting that the significant driving factors are mostly external. These factors are grouped and discussed under the following three categories: the value proposition of the enterprise base resource, the desire to ensure sustainable competitive advantage and the need to improve knowledge assets.

3.13.1 Determining the value of knowledge management

Though organisations have different reasons for achieving best practices and leveraging its knowledge for competitive gain, the main drive behind most organisations moving forward with knowledge initiatives is the value proposition. This is because it provides the focus and business rationale for the knowledge strategy. The value proposition is determined by the following four factors: value, rareness, imitability and the organisation (Barney, 1995; Bollinger & Smith; 2001; Ndlela & du Toit; 2001; Butler, 2003) which Barney (1995:50) term as the "VRIO framework."

The value factor of enterprises' knowledge resources fall in to three basic categories: operational excellence, product market and customer intimacy (Bollinger & Smith; 2001; Ndlela & du Toit; 2001; Butler, 2003). Operational excellence involves the identification of best practices within an organisation and transferring and sharing critical knowledge from the best performing areas to those who need improvement. The consequences of effective knowledge transfer are the improvement of organisational performance, reduced expenses and increased revenue. Product to market value proposition is the reduction of the time it takes to develop a product and take to the market that may result in enterprises charging premium cost. It is expected that knowledge management should increase revenue and decrease cost. Ndlela & du Toit; (2001) noted that value proposition may be achieved by providing an appropriate mechanism that ensures that new and creative ideas from within the organisation and from the external market are incorporated in the various products, ensuring that lessons learned from previous products and successes and failures are captured and shared through the development of an appropriate process. Butler (2003) observed that customer intimacy is the capturing and sharing of information about an organisations customer. It involves understanding the customers' needs and preferences

and leveraging knowledge to develop new products and services for customers.

It has been noted that the valuable but common characteristic of knowledge management would provide only competitive parity rather than competitive advantage (Ndlela & du Toit, 2001). Generally, in order for a knowledge management programme to attain competitive advantage and become a strategic asset, the rare characteristic of the enterprise needs to be developed (Bollinger & Smith; 2001; Ndlela & du Toit, 2001; Butler, 2003). The rare characteristic of the company often depends on the knowledge and experiences of current and past employees, and is built on specific organisational prior knowledge developed gradually through human exchange and dedicated investment in continuous learning.

The valuable and rare characteristic of knowledge management by themselves may only enhance the enterprises' profit for a short time because other enterprises may imitate these characteristics over time (Ndlela & du Toit; 2001; Butler, 2003). Therefore, it is important to develop and nurture a unique characteristic of knowledge management resource that cannot be imitated by other competitors. Daghfous (2003) refers to this unique and imitable characteristic as the company's core capability. This implies focusing on the unique past history of the organisation's own experiences and accumulated expertise and focusing on a good and unique knowledge infrastructure which would support its business goals.

It is only when an organisation is a learning organisation which exploits its knowledge resource that the valuable, rare and imitable characteristic of its knowledge asset would result in competitive advantage.

3.13.2 Competition

The imperatives of globalisation, international competition, advancement in information technology, peer pressure, sophisticated customers, competitors, suppliers and rapid growth amongst other factors have resulted in unending struggle for companies to differentiate themselves from relentless competitors (Bollinger & Smith; 2001; Butler, 2003). Therefore, in order for firms to remain competitive, they need to be aware of their competitors and compete deeply to leverage and create new knowledge that will favourably position them in their chosen markets. Knowledge management plays a major role in ensuring that knowledge is leveraged for competitive advantage.

3.13.3 Strategic knowledge asset

Researchers such as Prusak (1996), Skyrme (1997), & Ndlela & du Toit (2001), have

emphasised the importance of knowledge as an asset. In order to derive the best value from knowledge and become knowledge-based, organisations need to know what their knowledge assets are and how to manage and make use of these assets. According to Prusak (1996:6) the only thing that gives an organisation a sustainable competitive edge is what it knows, how it uses what it knows and how fast it can learn something new.

Geographical dispersion of workers in search of greener pastures and staff turnover due to employees taking up early retirement, or from the granting of severance packages resulting from challenges to ensure equity in terms of gender or race are the major causes of loss of intellectual assets and institutional memory (Ndlela & du Toit, 2001; Mason & Pauleen, 2003).

Knowledge management is credited with combating the effects of staff turnover; and helps to retain critical knowledge through dedicated capture of knowledge from employees leaving the enterprise and facilitates knowledge transfer between staff. The rationale is that when people are happy and are staying in an organisation, then the company is doing its best in maintaining the knowledge base.

3.14 Barriers to knowledge management

Notwithstanding the benefits and drivers of knowledge management, and the fact that many organisations are gradually embracing knowledge management, there are lots of potential barriers to the successful implementation of knowledge management. In order to establish a conducive environment for knowledge management, it is necessary to identify and tackle the various barriers to knowledge management. Bonfield (1999) identified cultural, technological, and economic and market place barriers to knowledge management. Ndlela & du Toit (2001) considered people-related issues as major barriers to successful implementation of knowledge management. Bollinger & Smith (2001) considered people-related barriers from an individual, group and organisational perspective. Depres & Chauvel, 2000:171-194) identified structural, cultural, managerial, people and cost factors. Syed-Ikhsan & Rowland (2004) identified culture, technology, people, human resources, staff turnover and political directives as barriers to knowledge management. Mason & Pauleen (2003) considered culture, lack of awareness, and poor leadership as barriers to knowledge management; while Squire & Snyman (2004) see technology, structure, culture and costly mistakes as barriers to knowledge management. In this study, these different barriers are grouped into cultural, social, organisational and technological barriers and examined in the subsequent paragraphs.

3 .14.1 Cultural barriers

Several knowledge management theorists have identified cultural barriers as the prevalent challenge to successful implementation of knowledge management in most organisations. A 1998 survey of 431 US and European organisations, identified culture as the biggest barrier to knowledge transfer (Ruggles, 1998). Later studies have also presented culture as a barrier to knowledge management (Soliman & Spooner; 2000; Bollinger & Smith, 2001; Blair, 2002; Butler, 2003; Squire & Snyman, 2004; Syed-Ikhsan & Rowland, 2004). Most organisations do not have the culture that naturally supports the sharing of knowledge. They are trained to use knowledge for their own good and to share it grudgingly. The "knowledge is power" culture enables one to better understand these cultural barriers. This type of culture describes situations where professionals with the highest reputation and monopolies of knowledge perceive knowledge as a source of power. That is, people who have knowledge are more powerful than people who do not have and there is a sense of worth and status to be gained because of expertise. People who are knowledgeable in an organisation believe that their career prospects depend on the ability to keep their unique information and knowledge because it will enable them to reap value from knowing what others do not know (Quinn et al., 1996; Reimus, 1997:10; Andrews, 2001:25). Therefore, sharing of knowledge may result in loss of power, revelation, and uncertainty. As a result, many organisations encourage a knowledge hoarding culture by recognising and rewarding those who have knowledge rather than those who share it. It therefore becomes very difficult when such information hoarders leave the organisation because they go away with the knowledge, leaving the organisation with knowledge gaps.

In addition, at the team level, members may be reluctant and uncertain to share knowledge because they fear criticism from their peers, or recrimination from management (Bollinger & Smith, 2001; Ndlela & du Toit, 2001; Disterer, 2003). Lack of respect and trust will result in subversion of group efforts. Young and inexperienced colleagues may face the challenge of publicly justifying their true belief to others peers. Sharing of knowledge is often regarded as an additional work particularly in organisations where performance is measured by billable hours and reward systems are based on what a person knows.

3.14.2 Social barriers

Knowledge management is a deeply social process therefore the failure to address people-related issues has resulted in many social barriers to effective knowledge management

in organisations. The major social barriers identified in the literature are insufficient communication, lack of employee learning and interaction, performance management, lack of appropriate incentive schemes, ambiguous reward systems, lack of leadership commitment and resource constraints (Ndlela & du Toit, 2001; Mason & Pauleen, 2003).

Other social barriers identified are language, conflict avoidance and the lack of alignment between the personal intention of the individual and the paradigms of the organisation. People may lack a common language to communicate and externalise tacit knowledge hidden in individual paradigms and beliefs (Nonaka 1994:21; Disterer, 2003). In addition, spoken and written language such as English, may involve high-order "literacy" in more technical languages such as blueprints or statistics. Also, conservative habits such as conflict avoidance may prevent the sharing of knowledge. For example, if the leading members of the firm are not willing to take risks and have the "don't rock the boat attitude", new ideas may be covered very easily and different views and perspectives would be hidden. This is why one of the eleven deadliest sins of knowledge management is not to establish, challenge and align a shared context for the members of the organisation (Fahey & Prusak, 1998:268). This shared context requires engagement in open, honest, supportive and critical dialogue to develop different views. The lack of alignment between the personal intention of the individual and the paradigms of the organisation will make it difficult to articulate and justify personal believes that do not fit into the operating paradigms of the organisation. For example, in most organisations the ruling paradigms vision, mission, and strategic issues are made known only to a few employees who have over time gained the confidence of management.

3.14.3 Organisational barriers

The structure of the organisation may be organised in a way that inhibit the flow of information. The bureaucratic and hierarchical structures prevalent in most organisations with formal and administrative procedures prevent cross-functional communication, cooperation and sharing of knowledge and new ideas (Kofoed, 2002; Disterer, 2003).

Knowledge management can be very time-consuming and labour intensive. People are already busy in their day to day activities, and sharing knowledge may mean changing the way they work or adding extra steps to reflect on knowledge management initiatives. Knowledge is constantly changing both at the individual and organisational levels and this has resulted to difficulty in codifying tacit knowledge.

Cost issues may have negative effects on knowledge management (Diakoulakis et al., 2004). In order for a knowledge management strategy to be effectively and gainfully implemented, organisations have to grapple with many cost-related issues such as the cost of investment in information communication technologies, the cost of acquisition of knowledge from external sources, the cost of creating, sharing and using of knowledge, the cost of hiring employees, the cost of redesigning the organisation, and the cost of educating employees amongst other factors.

The size of a firm may have something to do with the willingness of the firm to devote personnel and money to new technologies (section 4.7.6; Curve Consultant Survey Report, 2003). Small firms where people communicate with others easily and pass along information in the hallway may not consider knowledge management a priority. Notwithstanding their inaccessibility to technology, small firms still have the potential to benefit from the flexibilities of knowledge management because as already noted technologies are only enablers to knowledge management.

The political status of knowledge management is yet another barrier. Knowledge is often associated with power, money and success and there is no secret that power related issues are often political issues involving money and the drive for success. It is therefore not surprising that political undertakings such as knowledge hoarding rather than sharing, ambiguous reward systems, lobbying, intrigue and back-room deals are associated with knowledge management (Davenport, 2000; Daghfous, 2003; Diakoulakis et al., 2004).

Insufficient communication may result in the lack of awareness and understanding of the knowledge management vision in an organisation (Mason & Pauleen, 2003). Organisational blindness is yet another barrier to the effective implementation of knowledge management. This arises over time, as knowledge embedded in procedures become stagnant due to the fact that people are making no effort to improve on current practices because of the believe that these practices are the best (Daghfous, 2003).

3.14.4 Technological barriers

Although information communication technology is the cornerstone for the implementation of knowledge management as noted in sections 3.9 and 3.10 above, there are several limitations that may result from the use of information communication technology. First, information communication technology may lead to a flood of information thus diminishing the ability of the employee to make sense of the organisation's knowledge

management. Without an active oversight, technology may just add to the information glut in the organisation (Soliman & Spooner, 2000). Second, by their very nature they may be complex and difficult to use. There are no "one-size-fits-all" technology solutions for knowledge management although some software products are represented in this manner (Daghfous, 2003; Eman, 2003). Third, the unavailability of information communication technology in an organisation is itself an impediment to knowledge sharing since they are major enabler to knowledge management. It is worth noting that the diffusion and effective utilisation of information communication technology has not spread evenly over the world. They are mostly utilised in Western industrialised nations and less in developing nations. It is not uncommon to find small businesses in developing countries with little or no information communication technology tools or with tools that have not been infused into business practices (Okunoye, 2001; Eman, 2003). Finally, resistance is often met in the use of information communication technology particularly amongst the older employees who are often overwhelmed with the ubiquitous presence of information communication technology, and rely on the information communication technology skills of the younger employees.

3.15 Enablers to knowledge management

From the above barriers, it is clear that in order for organisations to reap the benefits of knowledge management there needs to be a significant improvement in the way knowledge is managed. The following section identifies and discusses some of the factors that need to be improved to enable for knowledge management to flourish.

3.15.1 Encouraging a culture of knowledge sharing

There has been general agreement amongst scholars that a psychologically healthy, open, positive, non-secretive, knowledge-sharing, cooperate, organisational culture where ideas are sharply criticised, individuals are respected and staff are encouraged to discuss their mistakes is crucial for knowledge management to flourish (Nonaka & Takeuchi, 1995; Baumard, 1999; Hansen et al., 1999; Dixon, 2000; Maiden, 2000; Soliman & Spooner, 2000; Smith, 2001; Nonaka et al., 2002; Daghfous, 2003; Stover, 2004). Aadne et al., (1996) define a cooperative culture as a horizontal and vertical connection within the firm that shares compatible goals, strive for mutual benefits and acknowledges high level mutual interdependence. A cooperative organisational culture should therefore ensure a cultural shift from the knowledge mantra that reads "knowledge is power, hoard it" to

"knowledge is power, share it to multiply and gain competitive advantage." What follows examines some the ways by which a knowledge sharing culture may be encouraged in an organisation.

An attitude of trust and concern amongst members of the firm is a precondition for knowledge sharing. Trust is the expectation, assumption or belief that a person's future action will be beneficial, favourable or at least not detrimental to one's interest (Robinson, 1996). Trust reduces the fear that others would act opportunistically. Krogh (1998:136) relates trust to care and defines it as, leniency in judgment, courage to voice opinions, the feeling of concern and interest for different view points and experiences within the organisation. Organisations should strive for a culture of accepting mistakes, a climate of experimenting, taking risks, and constructive conflicts that gives members a chance of "falling forward."

Cooperation and sharing would occur when people are recognised for adding to databases or for sharing their special form of knowledge. The provision of personal recognition to an expert or recognition of ownership from peers and superiors when one contributes to a knowledge database or actively participates in knowledge sharing has been successful in enhancing knowledge sharing in many organisations. In the academic world for example, the recognition of ownership has been a major driver for knowledge sharing through publishing. Most academics earn little or no monetary benefits for the contribution of articles in a journal, but good articles or a series of articles published by an individual will earn him/her academic recognition from peers and usually leads to promotion in the academic profession.

A number of instances have been recorded in the literature where recognition of ownership has been used as a means of encouraging knowledge sharing. Brown and Duguid (2000) reported that technicians who contributed to the Xerox database for repairing photocopying machines earned recognition among their peers and built up social capital in the organisation through the quality of their services. Also, Davenport et al. (1998) reported that the knowledge managers at Buckmans Labs judged and rewarded 150 "knowledge sharers" with a lap top and an incentive trip to a resort. According to Hansel et al. (1999), knowledge sharing may be encouraged by massaging the egos of the contributor or by recognising their contribution and paying them for contributing.

Rewards and incentives may also be used as an extrinsic motivation to encourage knowledge sharing. An exploratory study by Bock & Kim (2002) on what actually motivates people

to share knowledge suggests that a positive organisational attitude towards sharing and expectations of benefits from the organisation provide better results than external reward. Similarly, drawing from the expectancy theory, Davenport et al. (1998) reported that the strengths and the willingness to contribute to the knowledge management system depends on the strengths and the expectations that contributing to the system will be followed by a given outcome and the attractiveness of that outcome to the contributor. Reward systems are based on equitable recognition, trust and commitment. For example, an awareness that working with knowledge management will be considered when performance evaluation comes up or in any future career decisions is important. At Ernst &Young, knowledge sharing is part of the employees' performance review and has a major impact on salary (Quinn et al., 1996). Many organisations now incorporate issues of knowledge sharing in their compensation plans and promotional policies. Most of the big consultancy and accounting firms commonly base their personal evaluation on how many contributions are made to data bases, how many new employees have been tutored, and how many training courses have been designed. Using extraordinary recruitment methods to attract, hire and retain the "best" people and providing a pleasant supportive working environment are intrinsic motivational incentives that appeals to a person's sense of belonging and friendship.

Interacting with others rather than isolating oneself is important for knowledge sharing to take place. This could be attained by locating people who normally work together closer to each other; or encouraging people to share their precious knowledge assets with each other in a complementary manner through collaborative relationships, informal conversations and formal information transfer (Nonaka et al., 2001). Interaction may also occur through training, interactive learning, working experiences and dialogue and can also take the form of formal interviews between outside observers and employees on their personal and organisational knowledge base (Baumard, 1999).

A good organisational design will foster collaboration and knowledge sharing within the firm. Organisations may be designed with important lay out of spaces for staff to meet informally to encourage the exchanges of new ideas.

Clearly, the more language employees speak, the better their ability to acquire the knowledge of customers, markets especially in the global market. Therefore, staff with appropriate linguistic backgrounds will support knowledge management activities (Soliman & Spooner; 2000). Also, the availability of a common language to communicate and externalise tacit

knowledge hidden in individual paradigms and beliefs will facilitate knowledge sharing (Nonaka, 1994:21; Haldin-Herrgard, 2000:361).

The transition time and efforts usually provided at the end of bigger projects provides room for effective debriefing and enable others to learn systematically from the experiences of the project. Tim (1997) reported that a consultant company, Mckinsey & Company recognised the need for practical measures such as post-study debriefs during which groups seek to find out what they have learned from a project and how the project could be improved in future. Lessons learned from these bigger projects may be systematically analysed and stored for access by other employees.

Information sharing policies may establish the off-limits of what knowledge can be shared in organisations. Successful alliances for example do manage the flow of knowledge by monitoring information that alliance partners request and receive clearly establishing skills and technologies that are off-limit. Encouraging employees to engage in reflexive practices that is, making employees think and analyse their actions in a critical manner that would improve professional practice will also facilitate knowledge management (Baumard, 1999).

However, effecting a cultural change is often a difficult, time consuming and frustrating process in an organisation, especially when the purposes of the cultural change is not understood or accepted by employees. Therefore, in order to ensure success, cultural changes ought to be carefully nurtured and implemented. However, cultural issues are not the only issues to be attended to in order to facilitate the effective implementation of knowledge management. The leadership of the organisation plays an important role in facilitating the knowledge management initiative.

3.15.2 Leadership commitment

Most knowledge management researchers recognise the important role of top management and leadership commitment to knowledge management. It has been observed that top management and leadership act as peers in providing leading examples of knowledge sharing, identifying specific barriers to knowledge management and sending messages throughout the firm that knowledge management is crucial (Davenport et al., 1998; McDermott & O'Dell, 2001:78). The leadership also funds and supports knowledge management activities, recognise and appreciate members' efforts and achievement in the area of knowledge management, and positively communicate the need to nurture, enhance,

and care for knowledge initiatives (Nonaka & Konno, 1998). If top management sensitise the firm that knowledge management is critical to the future growth of the firm or department, members would start to pay attention to knowledge management. If top management addresses the cultural barriers to knowledge management, members will begin to adopt knowledge management in their daily work practices (McDermott & O'Dell, 2001:78). Before moving into full scale implementation of knowledge management the leadership is responsible for adopting an approach that aligns the firm's business objectives, strategic views, mission, values, goals, and objectives to the knowledge management approach. However, an appropriate knowledge management culture and top leadership commitment by themselves will not result in effective knowledge management without an appropriate information technology infrastructure.

3.15.3 Appropriate information technology infrastructure

Although information communication technology are a cornerstone for knowledge management as observed in sections 3.9 and 3.10 above, it may by its very nature pose some barriers to effective implementation of knowledge management as noted in 3.14.4. Therefore, a thoughtful implementation of information communication technology for knowledge management process in organisations is a way to invigorate a knowledge management initiative. Functional, technical, cultural fit and costs are major variables to consider in the selection of the appropriate technology for each organisation (Smith, 2001). Members in the organisation can no longer afford to be illiterates in information communication technology and hence knowledge management. Short courses in information communication technology should be carried out and every member sensitised on the importance of information communication technology. However, with an appropriate knowledge management culture in place, a solid leadership commitment and the appropriate technology, a knowledge management initiative may not be effective if the organisational structures are not redesigned flexibly in ways that may encourage sharing and collaboration across the organisation.

3.15.4 Organisational structure

An organisational structure that supports knowledge management is critical for knowledge management to flourish. The widely accepted structures in Western organisation are the top-down, bottom-up, and the hypertext organisation also known as the middle-up-down management (Nonaka & Takeuchi, 1995). Top-down management is the traditional

hierarchical model whereby top management pass orders and plans down the pyramid to middle management. The bottom-up management has a flat structure whereby ideas are created and to a large extent controlled from the bottom of the organisation. In the hypertext organisation, knowledge is created by middle managers who are often leaders of teams or task forces. Hypertext organisations are suitable for knowledge management because they enable the different stages of knowledge creation to occur smoothly within the organisation.

3.16 Strategic planning for knowledge management

Implementing knowledge management programmes within the organisation can be very costly especially during the start-up phase. It is therefore important to ensure that organisations have in place a set of carefully developed and discussed strategies before significant investments are made in knowledge management. The following section presents a set of strategies suitable for the implementation of knowledge management in organisations.

3.16.1 Clear and articulated business objectives

In order to enable a firm measure and evaluate the success of the knowledge management initiative, a full scale analysis of the firm's business objective is essential. A business objective is like a vision of where an organisation is, where it wants to go, and the resources that are needed to reach there. An internal and external audit analysis of the firm's business environment will define its business objective, competence, strength, opportunities and weaknesses. Internal analysis involves assessing the function of the business and how the business resources such as human resources, information resources, and technology support these functions, while external analysis determines and understands the conditions, forces and changes in the firm's business environment (Synman & Kruger, 2002). After identifying the firm's business objectives, the next step will be to determine the knowledge management strategy.

3.16.2 The knowledge management strategy must be aligned with the goal of the firm.

There is a direct relationship between an organisation's approach to knowledge management and its ability to achieve its business objectives (Hansen et al 1999; Carlsson, 2001; Ndlela & du Toit; 2001; Synman & Kruger, 2002; Rusanow, 2003; Rusanow, 2004). Knowledge

management initiatives may take several strands. It may involve making formal explicit knowledge more visible and usable; making informal tacit knowledge explicit public and useful; managing the knowledge management process; leveraging implicit knowledge; retaining knowledge of employees as they exit the organisation; the efficient access to knowledge repositories; or the determining suitable technologies and techniques in knowledge management. These strategies vary from organisation to organisation and it is most often influenced by the diverse changing business environment. Wiig (1997) identified five strategies used by organisations to implement knowledge management systems: business strategy, intellectual asset management, personal knowledge asset, knowledge creation strategy and the knowledge transfer strategy. A knowledge-based SWOT (strength, weaknesses, opportunities, and threat) analysis will assist a firm to determine the knowledge initiative that would enable them achieve their business objective.

3.16.3 Knowledge management should be prioritised and implemented in phases

Successful knowledge management initiatives have generally been approached with a selection of priority areas ranging from a discrete high impact pilot programme to mid term phase and then the final phase (Platt, 1998; Maiden, 2000; Kofoed, 2002; Nathanson & Levision, 2002; Rusanow, 2003). The pilot phase is an important, relatively small, cheap and manageable test phase that lays the foundation of knowledge management. Considering that members in an organisation are bound to be apprehensive about the introduction of knowledge management initiatives, showing that the project can be successful within a small area of the organisation through a pilot may be a major incentive to the rest of the organisation. Also, in firms where knowledge management efforts have been tried with unsuccessful results, there is often reluctance to attempt any further knowledge management initiative and the tendency to dismiss and criticise the whole notion of knowledge management rather than analysing where the prior project failed. Pilot projects will assist in the development of more effective new projects. It would enable knowledge managers to educate themselves, learn from their mistakes and raise awareness about the concept and benefits of knowledge management to the rest of the organisation. Buckler (2004), refers to the pilot phase as a period of faith. It is only after a successful pilot project that a successful mid term phase can be implemented. The mid term phase focuses on addressing the fundamental challenges to knowledge management. It is at the final stage that a firm ensures that the knowledge management initiatives are aligned with the business objectives of the firm.

3.16.4 Types of knowledge management strategies for knowledge transfer

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. As noted in section 3.7.4 above, codification and personalisation strategies are the two different types of knowledge management strategies for knowledge transfer in organisations (Sanchez, 1997; Hansen et al., 1999; Butler, 2003; Connell et al., 2003). While firms tend to adopt one strategy in favour of the other, the reality is that a combination of both strategies will result in an optimal maximisation of a firm's knowledge resource (Yu, 1999; Johannessen et al., 2001; Jasimuddin et al., 2005). This is because the knowledge base of an organisation is both tacit and explicit and overemphasising one strategy to the detriment of the other may lead to a situation where the organisation loses its competitive edge.

3.16.5 The scope of knowledge to be managed

Understanding the value of the knowledge used to run a particular business is an important step in ensuring that knowledge management supports the business as well as practice. The different types of knowledge for knowledge management were considered in section 3.4.1 above. For each type of knowledge that a firm creates or seeks to capture there is a corresponding knowledge management initiative. Therefore, organisations need to know what knowledge they possess in order to better manage and derive the best value from it. An information and knowledge audit will unveil the existing knowledge in the firm and detect existing knowledge gaps in the firm's repositories. It will also assist knowledge managers to understand and identify the tacit knowledge that sometimes flows between individuals. The results of the information and knowledge audit will then be mapped to chart how information flows through the firm's various business processes, how knowledge is transferred throughout the firm, identify who knows what in the firm and detail what information and knowledge exists (Bollinger & Smith, 2001; Roberts, 2000:6).

3.16.6 Create a knowledge management team with leadership

The project managers of knowledge management should constitute a team of competent and flexible members derived from a cross section of disciplines such as information technologist, library and information professionals and human resource experts so that the different needs across practice groups can be addressed. Team members should have formidable breath of mind and experience and high level of tolerance and patience. Above all, the knowledge management team should designate a chief knowledge officer with

good communication skills and visionary leadership to develop and drive the knowledge initiative (Soliman & Spooner, 2000; Chauke & Snyman, 2003). This is very important because organisations have recognised that successful knowledge management initiatives depend on the commitment of top management, and the contribution of senior consultants or experts who recognise and support knowledge management as an integral part of the firms' business strategy.

3.16.7 Determine an appropriate knowledge management infrastructure

An appropriate knowledge management infrastructure consists of a mix of technological infrastructure, organisational infrastructure, non-technological techniques and interpersonal skills.

Technological infrastructures are the tools and technologies for knowledge management such as computers, collaborative and communication technologies, intelligent tools, expert systems described in section 3.9 above. These tools and technologies support the various knowledge management activities discussed in section 3.10, such as the capture, codification and dissemination of knowledge. However, if a group of people are not sharing knowledge and interacting with each other, information technology is not likely to create it. Therefore, the use of the non- technological techniques described in section 3.11, such as communities of practice, brainstorming, tutoring and mentoring should be taken into account for knowledge management to succeed.

An appropriate organisational infrastructure comprises of the organisation's culture and values, the role of management and human resource departments, the politics of the organisation and employees' skills. An appropriate culture for knowledge management emphasises that power is not a product of knowledge hoarding but rather a product of knowledge sharing. It is necessary for management to be in front to create an environment that truly values knowledge sharing. The politics of the organisation is crucial because it determines whether the status and power of the firm are for or against knowledge sharing.

Employees' skills and prior knowledge on knowledge management are a key component to the organisational infrastructure given that employees have to be aware of the basic issues of knowledge management before the initiative is undertaken.

3.16.8 Learning organisation

The values in the company should be those that create a learning environment in which

individuals are committed to excellence, and failures and risk-taking tolerated (section 3.7.1.). There must be a continuous process of knowledge creation and sharing to ensure that businesses remain innovative and healthy (Argris & Schon, 1978; Senge, 1990; Cross & Baird, 2000).

3.16.9 Environmental factors

Environmental factors are crucial for the effective implementation of knowledge management in organisations. These are factors that are not directly controlled by the organisation but influences and affect the organisation and vary depending on the type of organisation, firm, or country. Some examples of environmental factors that influence and affect the organisation are competition, fashion, markets, technological edge, and the GEPSE, that is, the governmental, economic, political, social and educational climate (Okunoye, 2001; Diakoulakis, 2004). The environmental influences to knowledge management identified in a study of knowledge management in six research institutes in Sub Saharan Africa are: government commitment, funding level, transport, telecommunication, and electricity (Okunoye, 2001).

3.17 Conclusion

This chapter attempted to answer the research questions for sub problem two of this study by exploring some basic concepts and techniques of knowledge management. It was noted that there is no generally acceptable definition of either knowledge or knowledge management. Nevertheless it was seen that these concepts could be described in a number of ways.

Four different perspectives of knowledge viz, data, information, and knowledge perspective, individual perspective, social perspective, and organisational perspective were identified each suggesting different strategies for managing knowledge and different implications on knowledge management. These perspectives helped to clarify the definitional ambiguity of knowledge management and provide some understanding of the concept. Aspects such as the nature of knowledge, types of knowledge, knowledge levels and properties of knowledge helped in providing a holistic understanding of the concept of knowledge and have influenced theoretical developments in knowledge management. Knowledge management for the purposes of this study was considered to be a set of systematic and disciplined actions that an organisation takes to obtain the greatest value from the knowledge available to it.

Similarly, four different perspectives of knowledge management: the information technology perspective, personal perspective, social perspective and business perspective of knowledge management were discussed. These perspectives helped to clarify the definitional ambiguity of knowledge management and provided some understanding of the concept. Knowledge management for the purposes of this study was considered to be a set of systematic and disciplined actions that an organisation takes to obtain the greatest value from the knowledge available to it.

Drawing from the different definitions and perspectives of knowledge and knowledge management, several frameworks and models for knowledge management were considered pertinent to this study. The different frameworks examined were: organisational learning and learning organisation, process framework, market system, and knowledge management strategies. The three different models considered were: intellectual capital; SECI, ba, and knowledge assets and the Socio technical (diamond trist) model.

It was noted that the roles of information communication technology in knowledge management are manifold. For example, it provides a seamless pipeline for the flow of explicit knowledge; supports the different sub processes of knowledge management that entails the capture, codification, transfer, application and protection of knowledge and various kinds of computer supported collaborative work systems help to create, acquire share, and use knowledge within the community. Examples of information communication technology used for knowledge management were identified to include personal computers, phones, scanners, collaboration and communication technologies, and groupware and knowledge management systems. However, it was pointed out that information communication technology will only be effective when the people in the organisation cooperate and share knowledge with each other. This also called for the use of non-technological techniques of knowledge management such as communities of practice, tutoring and mentoring, collective brainstorming, knowledge networks and project experiences.

Organisations invariably have different reasons for knowledge management. Nevertheless, competition, strategic knowledge asset and the value of knowledge are the driving factors of knowledge management in most organisations. Some common recurrent benefits of knowledge management are improved ability to sustain competitive advantage, immediate results in solving organisation-wide problems, improved organisational productivity, and improvement in the delivery of services to clients, and stimulation and motivation of employees. These benefits of knowledge management although compelling, are intangible

are difficult to quantify. The cultural, organisational, social, technological and political barriers for the successful implementation of knowledge management need to be tackled before a conducive environment for knowledge management can be established.

Notwithstanding the benefits and drivers of knowledge management, several cultural, organisational, social, technological and political barriers for the successful implementation of knowledge management need to be tackled before a conducive environment for knowledge management may be established.

The chapter ends with a strategy for successful implementation of knowledge management. It was observed that before implementing a proper knowledge management strategy in an organisation certain factors needed to be considered. These include, a clear and articulated business objective aligned to the knowledge management objective, types of knowledge management strategies for knowledge transfer, the scope of knowledge to be managed, the appropriate infrastructural requirements, and a learning organisation. Effective knowledge management therefore lies in applying an integrated approach of people, technology, strategies, and processes. The theories and principles of knowledge management discussed in this chapter provide a background for the investigation of knowledge management in law firms. The next chapter therefore focuses on the applicability of these basic concepts and theories of knowledge management within the context of a law firm.

CHAPTER FOUR
KNOWLEDGE MANAGEMENT IN LAW FIRMS

4. 1 Introduction

The preceding chapter examined the general concepts of knowledge and knowledge management. This chapter looks at the key insights of the concepts of knowledge and knowledge management in the context of the law firm. As a result of the consequences of the changing legal information environment in chapter two, law firms are challenged to organise, leverage and manage their knowledge more than ever before as a means of weathering changes, sharpening their competitiveness, providing efficient services, attracting new clients and broadening their influence within the legal industry and the global economy. The writings by practitioners and researchers on the importance of knowledge management in law firms reflect the immense interest of knowledge management in the legal profession (Kofoed, 2002; Lamont, 2002; Leibowitz, 2002; Nathanson & Levision, 2002; Parsons, 2002; Curve Consultant Survey Report, 2003; Gottschalk, 2005; du Plessis & du Toit, 2005; Rusanow, 2007). Law firms, due to the intensity of knowledge work involved in their operations therefore provide a fruitful arena for knowledge management research. In order to develop guidelines for knowledge management in law firms, the discussion in this chapter will be developed around the following research questions centred on sub problem three of the thesis:

- ‣ What are the different types and categories of knowledge existing in the law firms?
- ‣ What approaches do law firms mainly follow in knowledge management?
- ‣ Which tools and technologies are used for knowledge management in law firms?
- ‣ What are some of the techniques of knowledge management in law firms?
- ‣ What are the benefits of knowledge management for law firms?
- ‣ What models and framework exist for knowledge management in law firms?
- ‣ What factors inhibit the success of knowledge management in law firms?
- ‣ What factors are critical to the success of knowledge management in law firms?
- ‣ What are the strategies for knowledge management in law firms?
- ‣ What are the strategies for knowledge management in law firms?

4.2 Types and categories of knowledge in the law firms

Knowledge in the law firm resides in many different places, such as databases, filing cabinets, and print material and the intrinsic skills and experiences of the lawyers and their

staff. An understanding of the different types of knowledge that is managed in the law firms is crucial for the development of any effective knowledge management strategy that will reflect the business value of the firm because each type of knowledge has a different strategic value. It was observed in chapter three (section 3.4.1) that there are several types and categories of knowledge and that the classification depends on the industry. Even within different industries, there are different types and categories. Hence, legal researchers have classified the knowledge in the law firm into different dimensions and types. For example, Rusanow (2003) defines the broad category of knowledge used in the law firm as knowledge of the law, knowledge of the firm, client information, commercial markets and specific industries, staff skills and expertise, past projects, and knowledge about third parties (judges, opposing counsel, or external consultant). According to Kay (2002), knowledge in a law firm includes knowledge of the law, knowledge about clients and their industries, marketing information and financial information. Edwards & Mahling (1997) use a slightly more sophisticated subdivision to categorise the different types of knowledge involved in the practice of law as administrative data, declarative knowledge, procedural knowledge and analytical knowledge; a classification that has also been adopted by Gottschalk (1999, 2002). Drawing from the above categorisations, this study classifies knowledge in the law firm under three broad categories as tacit knowledge, explicit knowledge and knowledge of the business of law. This is because elements of tacit and explicit knowledge runs through the different categorisations of knowledge suggested by the various legal researchers while other knowledge crucial for the practice of law may be conveniently referred to as knowledge of the business of law.

4.2.1 Explicit knowledge

This section draws from the definitions of explicit knowledge in section 3.4.1.1 (Polanyi, 1962; Nonaka &Takeuchi; 1995; Choo, 2002; Jasimuddin et al., 2005) to establish the meaning of explicit knowledge in the law firms. Explicit knowledge in the law firm is knowledge expressed in words, found in documents and embedded in the firms' routines, processes, practice and norms and can be easily codified. According to Gottschalk (2002) explicit knowledge in the law firm includes knowledge acquired through formal education in the law school and can be easily communicated and shared.

It has been reported that explicit knowledge in the law firm may be created either externally or internally (Edward & Mahling 1997; Gottschalk, 2002). Examples of externally created

explicit knowledge are legal and declarative knowledge[6] (substantive principles of law). Law firms typically generate and maintain different types of legal knowledge varying from one legal discipline to another. Legal knowledge exists in the form of legal texts, legislation, case law, legal principles contained in statutes, printed resources, databases, commentary and interpretation, the firms repository of template documents, court opinions, research sources, CD ROM sources and other sources of primary legal authority (Kofoed, 2002; Rusanow, 2004). It is common knowledge that the major sources of legal knowledge are primary sources of law, secondary sources of law and "finding sources" (reference sources). These are highly documented and structured with high standards of completeness, reliability, and authority. Examples of primary sources of legal information are legislation (statutes) and case law. Legislation are laws that may be created by the executive and legislative branches of the government. Legislation derived from Acts of Parliament are codes and ordinances while legislation derived from the executive branch of government are ministerial orders, statutory instruments and regulations. Case law on the other hand emerges from the judiciary. It consists of the law that emerges from cases decided in courts and administrative tribunals. Secondary sources of legal information and knowledge are found in textbooks, law reviews, commentaries and journals. "Finding sources" of knowledge consist of resources traditionally found in legal reference works, digests, indexes to legal periodicals, and legal encyclopaedias.

Examples of internally created explicit knowledge (also referred to as explicit procedural knowledge) are standard forms and best practice documents (Edward & Mahling, 1997; Gottschalk, 2002; Kay, 2002). Standard forms also referred to as precedents[7] are generic documents that a law firm has typically invested in producing, for use in many matters. For example, when dealing with conveyancing, a lawyer does not necessarily have to draft a new agreement but may use one of the existing precedents and apply limited amendments to the present circumstances. Many firms use precedent banks as part of their work product. Staudt (2003) reported that using a document on a firm's approved precedent reduces the time lawyers spend on mundane aspects of document drafting which in turn eliminates duplication, ensures consistency and enhances productivity.

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6   See section 3. 4.1.2 for a discussion on declarative administrative and analytical knowledge.

7   Generally, precedents are reasoned judgement passed in the higher courts that become a source of authority to the lower courts. However, the term precedent may mean different things in different contexts. In this instance, it refers to drafted transaction documents with a range of variables that makes it possible for a lawyer to produce another transaction document by typing an alternative variable that he/she needs without completely changing the format of the original transaction documents.

He also observed that it will serve as a mentoring opportunity to junior colleagues because they may be able to access the knowledge of other lawyers that have attempted similar task within a short space of time.

Generally, best practice documents are specific documents on matters whose quality has been assessed by the firm's committee and identified to be good examples of work products that can be used in similar situations. These include briefs, research memos, pleading, forms and knowledge embodied in the work product of lawyers in the form of transactional documents such as contracts, opinions, reports, letters of advice, legal briefs, deeds and agreements (Edward & Mahling, 1997; Gottschalk, 2002; Kay, 2002). A very unique client's case requiring highly specialised knowledge or one that the solution may be a variation on a well-known theme that is generated and kept by lawyers to serve as useful examples for faster and more efficient handling of related work are examples of best practice documents.

4.2.2 Tacit knowledge

Similar to the preceding section, the definition of tacit knowledge in the law firm is drawn from the different definitions of tacit knowledge by knowledge management theorists in section 3.4.1.1 (Polanyi, 1962; Nonaka &Takeuchi; 1995; Choo, 2002; Jasimuddin et al., 2005). Tacit knowledge in the law firm is the dynamic knowledge that is not easily expressed, not easily codified or shared in the law firm. It enables one to do things unconsciously without being able to articulate it. It is highly personal, hard to formalise and difficult to communicate to others. According to Gottschalk (2002), tacit knowledge is the expertise and experience developed from learning on the job and from training and interaction with the environment. Tacit knowledge in the law firm can be exchanged during transient events, by emails or discussions, at meetings that may not be formally documented, or may just pass between people in question and answer dialogue at in-house seminars or training sessions. Although amorphous, this kind of knowledge is generally higher in value and differentiates the firm in a competitive legal market. Generally, it is not often possible to capture all the tacit knowledge in the law firms and thus, the challenge therefore remains in identifying the elements of tacit knowledge that can be captured and made explicit.

Edward & Mahling (1997) noted that analytical knowledge and implicit procedural knowledge form part of the tacit knowledge base of the law firm. They observed that analytical knowledge is deeply rooted in the intrinsic skills, experiences, ideals, values, minds and emotions of the staff and lawyers and is not easy to express. On the other hand,

they described implicit procedural knowledge as practical knowledge required in enforcing the substantive principles of law. That is, knowledge that is concerned with the skills and expertise described in terms of the results they lead to, but cannot be fully explicit. An example of procedural knowledge is knowledge on the mechanics of complying with a legal requirement in a particular situation such as hints at arguing motions. Generally, after acquiring declarative knowledge of the law, lawyers still need a corresponding deep understanding of procedural knowledge in order to apply the skills that cannot be articulated. Edwards & Mahling (1997) also noted that while explicit knowledge is meant to be publicly and readily accessible to all, tacit knowledge (analytical and procedural knowledge) within the firm can raise issues of confidentiality and security. This is because lawyers in the firm have professional ethical obligations to their clients to maintain the confidentiality of information furnished by the clients.

4.2.3 Knowledge of the business of the law firm

This is non legal knowledge, administrative data[8]and knowledge of the firm's market position and business strategy that makes it possible for any one to find and access the firm's procedures and policies. Legal researchers such as Edward & Mahling (1997); Kay (2002) and Rusanow (2003) consider the following as knowledge of the business of law: knowledge of clients and their industry, marketing information, knowledge about third parties, knowledge about the firms' relative market strengths and weakness, its competitors, industry trend, financial position, financial news, expert information, knowledge about judges, opposing counsel, consultant business, scientific and scholarly information on subjects such as medicine, science, statistics, and also demographic information.

Client information is information generated in the firm's day-to-day business (Kay, 2002). Lawyers who monitor client information may be able to make informed decisions about necessary action that would lead to client satisfaction. Client's personal details, billing data, clients' names and matters, staff payroll data, and client invoice data are examples of client formation (Rodriguez et al., 2002). Marketing information include information about cases, awards, articles, initiatives, and acquisitions of the firm (Edward & Mahling, 1997). Multiple financial matters are available in the firm that range from tracking the number of hours spent on administrative data of a particular matter to billing a lawyer, recovery and office expenses.

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8   Administrative data includes all the information about the firm's operations such as hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data.

An overview of the different classification of knowledge into tacit, explicit and business of law is presented in figure 4.1 below.

THE KNOWLEDGE BASE OF THE LAW FIRM

Tacit Knowledge

Examples
Skill and expertise of lawyers
Skill and expertise of staff
Lesson learned from past matters
Water cooler conversation
Tips on drafting
Analytical knowledge
Knowledge to structure transactions
Implicit procedural knowledge

Explicit

Internally Created

Examples
Procedural best
Practices
Precedents
Model documents
Checklist
Methodologies
Policies
Letter of advice
Transactional deeds
Explicit procedural knowledge

Externally Created

Examples
Legal text
Legislation
Case law
Printed sources
Court decisions,
Research sources
Electronic sources
Standard documents
Declarative knowledge

Business of law

Examples
Financial information
Third party information (outside counsel, experts witnesses)
Marketing information
Client information
Business and industry
Administrative data

Figure 4.1 Categories of knowledge in the law firm

4.2.4 Levels of knowledge in the law firm

Tacit knowledge, explicit knowledge and knowledge of the business of law as categorised in the preceding section may exist at three basic levels in the law firm, namely core knowledge, advanced knowledge and innovative knowledge (Gottschalk, 1999; Gottschalk, 2002; Rusanow, 2003). This study draws from Gottschalk (2002) Rusanow (2003) and du Plessis (2004) to present the different levels of knowledge in the law firm in a form of a pyramid in figure 4.2 below, with each category of knowledge (tacit ,explicit and business of law) existing at different levels of knowledge sophistication.
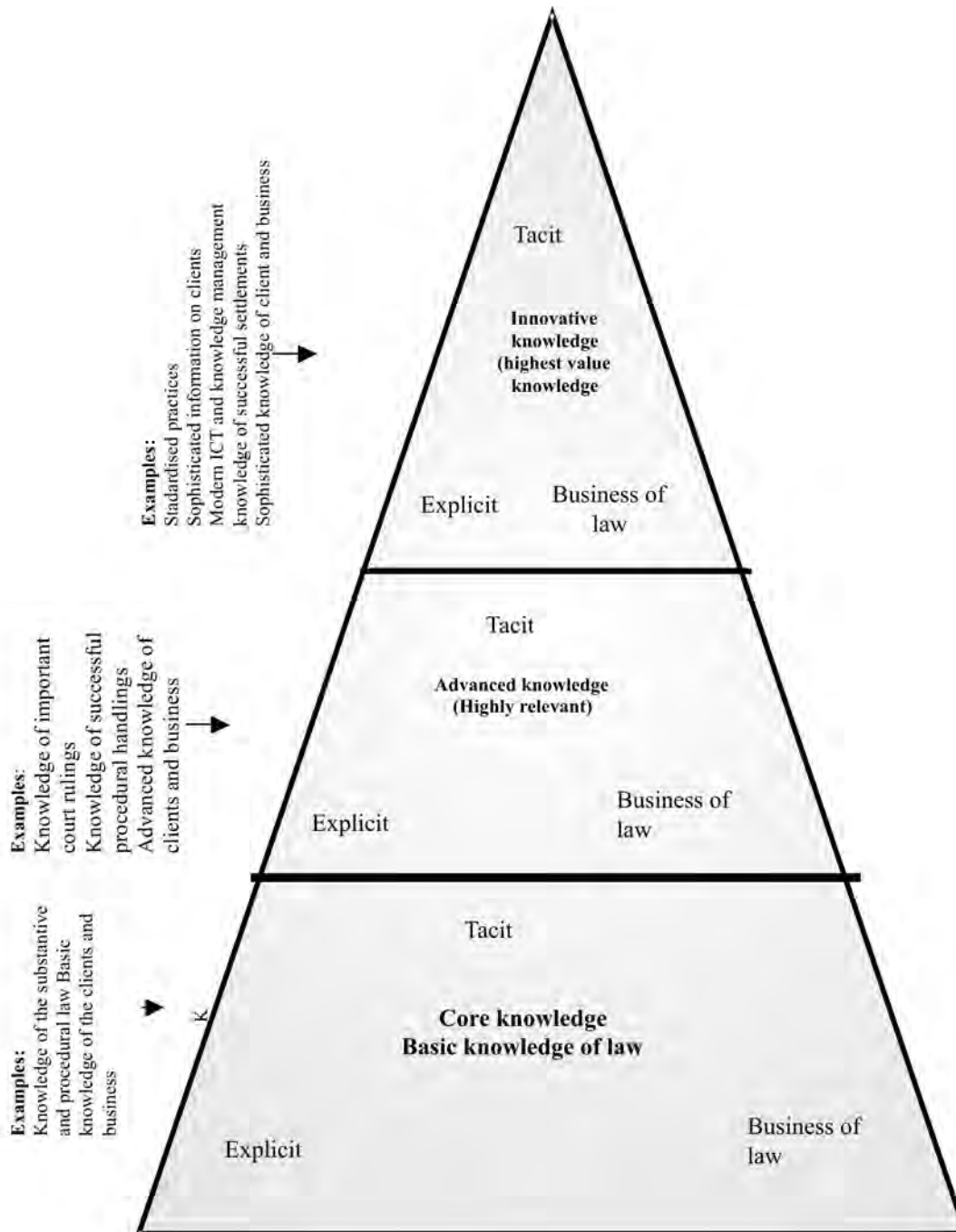
Figure 4.2 A suggested pyramid representing the different levels of knowledge and the categories of knowledge (adapted and modified from Rusanow 2001:9-11)

Core knowledge is the basic knowledge required for the daily operations of the firm that provides no competitive advantage (Gottschalk, 2002; Rusanow, 2003; du Plessis, 2004). It consists of the general data, information and knowledge of the law firm. For example, administrative data, knowledge of the law knowledge of procedures, knowledge of clients, and basic marketing information.

Advanced knowledge in the law firm is knowledge that makes a firm competitively visible and active to distinguish its products and services from that of other competitors through the application of valuable rare and superior knowledge (Gottschalk, 2002). Examples are important court rulings and knowledge of successful legal procedures.

Innovative knowledge is the unique knowledge of the law firm that enables it to lead its entire industry, differentiates the firm from other competitors, intensifies its business objectives and introduces new business practices (Rusanow, 2003). Knowledge of standardised repetitive legal cases and knowledge of information technology are examples of this category of knowledge.

4.3 Law firm's approach to knowledge management

The different perspectives to knowledge management, namely the information technology, personal, social, organisational and business perspective were examined in chapter 3 (section 3.6). From the varied sources of knowledge available in the law firm observed in section 4.2 above, one may assume that law firms will embrace a holistic approach to knowledge management. This is however not the case. Most studies on knowledge management in law firms tend to adopt a technological approach to knowledge management overlooking the other perspectives (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; 0pp, 2004, Gottschalk 2005). For example, considerable emphasis has been placed on the use of knowledge-based systems in creating, sharing and utilising collective knowledge, tools and techniques for knowledge representation, the capturing and storing of explicit knowledge in the work product repository, knowledge repository, and on intranet and extranet projects.

In a study of knowledge management in Scottish law firms, it was concluded that all the five firms sampled limited their knowledge management initiatives to technology. These firms used information communication technology as a tool for the repository of codified knowledge (Hunter et al., 2002). A Canadian firm established a full text repository of work

product on substantive law and precedent model (Chester, 2002). Another study showed that large United Kingdom firms have developed extranet "pay-per-view" websites that offers users access to value added legal information regulations with commentary produced by specialists (Susskind, 2003). Kay (2002) observed that one Australia's largest and leading international firms, Blake Dawson Waldron, has invested significantly in knowledge management technologies and developed software products that facilitate knowledge management such as virtual deal room, electronic discovery of files and emails, and virtual lawyer systems. Most of Gottschalk's empirical studies on knowledge management in the law firm adopt the technological dimension (Gottschalk, 1999; Gottschalk, 2000; Gottschalk, 2002). For example, the 1999 study on the use of knowledge management in Norwegian law firms revealed that the extent to which law firms in Norway use information technology to support knowledge management is significantly influenced by the extent to which firms generally use information technology. The 2000 study on the use of information technology to support inter-organisational knowledge management on Norwegian law firms indicates a significant positive relationship between the extent of information communication technology use and the extent of co-operation and knowledge co-operation among law firms.

Due to the fact that most of the studies in knowledge management in law firms have focused mostly on a one dimensional approach to knowledge management, one is inclined to think that knowledge management in law firms begins and ends with building of information systems. This is however not always the case. The mere existence of technology or the use of technology will not turn a knowledge hoarding organisation to a knowledge sharing one. Notwithstanding this, the fact that law firms tend to adopt the technological route to knowledge management is an indication that that information communication technologies are enablers that may play a crucial role in knowledge management in law firms.

There are however few studies worth noting where knowledge management in law firms has not focused only on the technological approach. Recently, it was reported that a leading Australian firm in knowledge management has, unlike most of its rivals, focused its management initiatives on managing knowledge relating to the business of law and the existing and prospective client information and business position (Rusanow, 2007). Khandelwal & Gottschalk (2003), in a survey of knowledge management in Australian law firms adopted both an information technology and business approach. Drawing from the information technology perspective, they used the knowledge management technology stage model to identify four different stages by which information communication technology

may support knowledge management activities in the law firm. These authors also adopted the knowledge-based view of the firm that establishes itself as an important perspective in strategic management to develop a framework for comparing the knowledge management approach in individual law firms. Similarly, Carine (2003) developed a framework for comparing the knowledge management approach at individual law firms and law firm alliances, while Kofoed (2002) carried out a case study on two law firms; Bech Brun Dragsted and Allen & Overy in the United Kingdom to identify the factors critical to the success of knowledge management in law firms. Forstenlechner (2006) carried out a case study on the effect of knowledge management on law firm performance.

Nevertheless, the adoption of a one dimensional technological approach to knowledge management by most researchers of knowledge management in law firms confirms the view that most lawyers still consider knowledge management as a narrow theoretical concept. Nathanson & Levison (2002) reported that while knowledge management in 500 global companies had achieved significant successes, for many other law firms, knowledge management had failed. Kofoed (2002) reported that, only very few law firms have managed to establish a really well-functioning system. There has been little acknowledgement from lawyers of the importance of managing the knowledge about clients, the skill and expertise of staff, or knowledge about the third party. There has also been little attention paid to the identification and sharing of tacit knowledge and very little research on the knowledge management process. Therefore, the major challenges to law firms in terms of knowledge management are to be able to make the knowledge that rests with the individual members of the organisation available to the entire organisation, find ways of not reinventing the wheel, capturing knowledge and history about the past dealings with people and sharing knowledge amongst members in the firm.

In addition, most knowledge management initiatives in law firms have also focused solely on large firms. In a study of knowledge management in Virginia law firms, it was found that most Virginia law firms were waiting to see how the large firms fared before adopting knowledge management (Gonzalez, 2002). A 2003 global law firm knowledge management survey report revealed that knowledge management organisation of leading law firms in the United States, United Kingdom and Australia recognised knowledge management as a key business driver even though many of the participant firms had embryonic knowledge management organisations (Curve Consultant Survey Report, 2003). The present leading law firm in knowledge management appears to be one of Australia's largest firms, Allens Arthur Robinson (AAR, aar.com.au), with 800 lawyers (including 190 partners) and

approximately 700 non-legal staff (Rusanow, 2007). Though large firms may be seen as logical users of sophisticated knowledge management systems, small firms possess the flexibility to take advantage of many of the knowledge management intiatives that exist today and may have placed this initiative in the back seat due to financial cost.

In sum, it is quite clear that literatures abound from legal practitioners and scholars as to the enormous potential for knowledge management in law firms and the importance of knowledge tools and techniques for knowledge representation and knowledge transfer without much empirical evidence (Terret, 1998; Leibowitz, 2001; Campbell, 2002; Nathason & Levison, 2002; Platt, 2003; Rusanow, 2003; Staudt, 2003; Rusanow, 2004). There is still little or no writing on knowledge management in law firms in Africa not to talk of Botswana. This study hopes to provide an empirical understanding of some of the theoretical concepts of knowledge management that would be useful to the law firms within an African context.

4.3.1 Tools and technologies for knowledge management in law firms

The tendency of law firms to adopt a one dimensional technological approach for knowledge management as observed in the preceding section is an indication that technology is a crucial tool for knowledge management in law firms. It is therefore necessary to consider some of the tools and technologies used to leverage knowledge management in law firms. Drawing from the tools and technologies for knowledge management in section 3.9, typical tools and technologies for knowledge management in law firms are: networked computers, emails, telephones, repetitive automated document assembly, internet and intranet technologies. Other sophisticated technologies may include databases and software tools, collaborative technologies, enterprise information portals, expert systems and business and artificial intelligence tools. In this section, the tools and technologies for knowledge management in law firms are considered under the following six categories: preliminary tools and technologies, software and databases tools, collaborative technologies, technologies for knowledge transfer, technologies for content management and technologies to support and augment the lawyer's work.

4.3.1.1 Preliminary tools and technologies of knowledge management

Technologies such as telephones and personal networked computers with standardised productivity tools (word processing, spreadsheets, legal databases and presentation software), collaborative and communicative technologies (intranet portals and internet)

,and groupware (emails, video conferencing, calendaring, group scheduling and task list) are the initial tools and technologies required for knowledge management in the law firm. They facilitate the transfer of tacit knowledge and the exchange of documents and convert lawyers from information consumers to consumers of knowledge. Collaborative and communicative technologies foster knowledge exchange amongst communities of practice (Gottschalk, 2002; Khandelwal & Gottschalk, 2003). These tools technologies for knowledge management are similar to what Gottschalk in the knowledge management technology stage model refers to as the end-user tools.

4.3 1.2 Software and databases tools

A major database technology for knowledge management in law firms is a repository of work product database of documents, substantive law and precedent that is fully searchable, profiled and made accessible to members of the firm across task levels and entities (Chester, 2002; Kofoed, 2002; Lamont, 2002; Staudt, 2003). A repository of work product data base may also store the firm's "best practices" such as briefs, pleadings, research memoranda, transactional documents and other forms of agreement thus reducing the time lawyers spent in research and drafting. As noted in section 3.9.3, above, knowledge repositories typically contain specific types of knowledge for particular business functions such as client matters and financial information, best practices, knowledge, lessons learned in projects, learning histories, competitive intelligence, document management, legislative developments, assignments, and market development (Davenport & Prusak, 1998). New systems allow searchable online document repositories to manage the millions of documents that firms need. For example, Susskind (2003:41 42) reported that Case Central Inc is a secured searchable online document repository that had 80 million pages under management in the year 2000 and a customer base that grew at almost 300 per cent in twelve months time. Access to the firm's knowledge repository is facilitated by the firm's intranet, extranet and web-based portal technology. Once created, the contents of the repository continue to expand and needs to be managed and reorganised from time to time.

It has been noted that document management systems and content management systems are very important tools for managing the vast contents of the knowledge repository (Staudt, 2003). Document management facilitates the secretarial function of the law firm making it easy to save and retrieve work in progress. It captures stores and sometimes archives and retrieves documents that mainly contain texts such as records in documents file. A number of commercially available document management products such as soft solutions

and file net focus on recording, processing, standardisation and development of knowledge management systems such that if correctly implemented, it can prevent computer network anarchy (Staudt, 2003). A content management system on the other hand, manages highly dynamic contents and focuses on the publication of content. Both content management and document management systems facilitate legal research, maintain a history of file content, expedite the retrieval and processing of documents, enhances the quality of information, maintain control over the security and access to documents, log access to files, and integrate information and knowledge from multiple locations (Thompson, 2003; du Plessis, 2004).

Model documents (forms drafted and sanctioned by the practice group) and precedent databases (documents from actual deals) exist in law firms as fully indexed and searchable databases (Chester, 2002). Model documents reduce the time lawyers spend in mundane drafting while precedents make it easy for lawyers to be able to access the knowledge of other lawyers who have attempted a similar task.

Work process tools allow firms to track records and enhance work processes (Delphi, 2001; Chester, 2002). They enable any request for work by practice groups to be accepted and referred online where progress may be monitored over the Intranet. Work flow tools also organise the research activities of lawyers by assisting in the selection of relevant documents, creating new workflow paths, utilising current template paths or describing and implementing the research stages required (Thompson, 2003).

Automated document assembly tools restructure the method lawyers use for repetitive drafting tasks like routine complaints in divorce cases or documents prepared in uncomplicated legal estate cases and complicated transactions, provided the text does not require large amounts of customised drafting (Staudt, 2003).

Case management, practice management and matter management systems are inter related software tools. Case management systems organise and control the administrative, legal and factual information on cases and provide lawyers with information on the case they are working on. It integrates with time, billing and calendar systems to provide contact management, transaction management, matter management, docketing, access to documents generated and time and billing reports (Platt, 1998). In essence, case management systems are used to organise case billing and research activities. In legal practice, a case management system allows lawyers to access information in or out of the office and if necessary, a synchronised electronic time billing feature to facilitate time recording.

Practice management systems on the other hand, gather best practices and trigger reminders

to lawyers on the next step to complete with proposed forms and documents. Automated billing document assembly and automatic reminders of due date and deadlines are examples of practice management activities. The LexisNexis version of time matters, is a practice management system that begins with data entry and data retrieval forms, and changes depending on what the lawyer wish to accomplish be it a contact or an appointment (Staudt, 2003).

Both practice and case management systems assist in establishing a better understanding of the client needs, establish client trust, leverage client-lawyer relationship, facilitate tracking of new business efforts and provide orientation in terms of conflict of interest (Evans 2001; Jackson, 2001; du Plessis, 2004).

Intuitive search tools extract knowledge and information from unstructured data like e-mail repositories. For example, LexisNexis e-Discovery solution, help lawyers to search organise, and tag electronic documents so that they can easily access relevant ones (Staudt, 2003).

Other software and database tools are marketing information, contact management database, conflict management systems and record management database (Lamont, 2002; Platt, 2003). Platt (2003) notes that marketing information database includes access to expert list, calendar of events, firm's newsletter, links to client site and links to marketing articles. It markets the entire market base of the firm through the intranet and manages the marketing process. He posits that contact management databases tract the contact information and other bits of data for expert witnesses, litigation support services and conferences. Conflict management systems run conflict checks and maintain a database of clients. Record management database track documents and data from cases making it easier for a researcher to find case information (Lamont, 2002).

4.3.1.3 Tools and technologies for knowledge transfer

Collaborative technologies (internet/intranet, extranet, world wide web, enterprise information portals); groupware (emails, Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafes) and other basic tools of knowledge management (telephone and personal networked computers) are very effective in enabling the transfer of tacit knowledge in the law firm (Carine, 2003; Staudt, 2003; Buckler, 2004).

In recent years, web-based portals have become extremely popular in addressing knowledge

management initiatives in law firms (Staudt, 2003; Buckler, 2004). Besides the ability to serve as a single point of entry to the web, portals generally capture information and knowledge residing in the databases, enhances knowledge sharing, and fosters communication and the development of new communities of practice through broader publication right and content management. Staudt (2003) notes that client information, existing work product, new developments in the firm and breaking news, can be gathered and shared through a web browser using a portal technology like LexisNexis portal powered by plum tree.

4.3 1.4 Tools and technologies for knowledge sharing

Collaborative technologies (internet/intranet, extranet, World Wide Web, enterprise information portals.), groupware (Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafes) and the preliminary tools for knowledge management (telephones and personal networked computers) are also crucial for sharing knowledge within the law firm (Carine, 2003). Generally, it has been observed that appointing knowledge managers and knowledge units that are responsible for leading the implementation and facilitation of knowledge management activities, knowledge distribution mechanism to ensure that knowledge is pushed to relevant people, training with internal and external experts and encouraging networking through secondment programmes with clients are common tools for sharing knowledge (Apostolou & Menzas; 1999 & Elder, 2002). These tools may also be used to share knowledge in law firms. Other knowledge management tools that support the sharing of knowledge in the law firm are knowledge network or teams of colleagues brought together to work on a project, knowledge centers and knowledge webs were colleagues from different functional areas or offices assist one another on a needs basis (Carine, 2003).

4.3.1.5 Tools and technologies for organising the content of knowledge management

One of the major challenges to a knowledge management system is to be able to determine the quality of knowledge that is available in the system and how to search for that knowledge. Carine (2003) considered knowledge process databases and collaborative technologies (internet/intranet, extranet, World Wide Web, enterprise information portals) as relevant tools for managing the content of a knowledge management system in law firms.

Knowledge management researchers have identified several tools and techniques for organising the content of knowledge management that may also be applicable for law firms. For example, Apostolou & Menzas (1999) noted that document and content management

systems as relevant tools in managing the content of a knowledge management system; while indexing tools organise and cross-reference material by subject and practice area, making it easy to locate. Also, expert skill directories generally assist colleagues to locate colleagues that may assist with advice and exchange of ideas; while knowledge mapping tools locate and evaluate knowledge resources that are available to the firm (Skyrme, 1999).

4.3 1.6 Tools and technologies to augment the lawyer's knowledge

Although the tools and technologies considered in the preceding section is crucial in leveraging the day to day activities of the lawyer and the law firm staff, they do not leverage or augment the lawyer's knowledge. The improvements of a lawyer's productivity lies in the creation of specific practical knowledge and information systems that capture, search, retrieve, sort and manage information related to their specific areas, as well as support legal research, enabling lawyers to evaluate and separate relevant information from irrelevant information. These include legal information systems, expert systems and expert databases, artificial intelligence and decision tree analysis and data mining.

Legal information systems for example assist lawyers in legal research. It is common knowledge that there are vast amounts of commercial legal databases, available over the Internet that lawyers could subscribe too such as LexisNexis, Butterworths, Justastat, Westlaw, Thomas and Dialog. Law firms may even develop their own in-house database or access legal material from databases that are freely available on the Internet. The shift towards electronic libraries has enabled lawyers to carry vast amount of primary and secondary sources of information in a portable form. Lawyers are also using a number of tools to help in electronic discovery, filing, court presentation and analysis.

Expert systems are designed to carry out tasks that require expertise. They capture the knowledge of experts and imitate the logic or reasoning of human experts transformed in automatic or programmed reasoning and is usually limited to specific areas of law with the ability to reason within a defined scope (Chester, 2002; Gottschalk, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003). Experts systems are similar to what Khandelwal & Gottschalk (2003) in knowledge management technology stage model refer to as information from lawyers stored and made available to colleagues. Capturing expert knowledge enables the law firm to retain its possession of expertise even after an expert retires or leaves the firm. Though it may seem difficult to capture human expertise, expert systems provide the feasibility of describing the expert behaviour of an individual in a particular circumstance

in a way that others can access and learn from the expert (Kay, 2002). Susskind (2003) identified six kinds of expert systems that play an important role in law firms as diagnostic systems, planning systems, procedural guides, intelligent checklist, document modelling and argument generation systems.

Expert databases on the other hand are databases of the contact details of experts in the law firm that provide directories categorised by practice area and specialty indicating the expert's specific skill and competencies. A good example of the expert database is the expert skill directories called, "Yellow Pages" containing curriculum vitae competency profiles, and research interest; and acts as electronic intermediaries connecting knowledge seekers to knowledgeable people (see section 3.9.3 above). Another example of skills and experience databases is a knowledge vault. This a skill and experience database that collects information on the experience, skills and other proficiencies of lawyers at all levels known to posses the key explicit and tacit knowledge in the law firm (Chester, 2002). Expert systems and expert databases are therefore different but related tools that augment the knowledge base of the lawyer, save time and enhance litigation through enhanced knowledge acquisition, organisation, retrieval analysis and disclosure.

Artificial intelligence is similar to what Gottschalk (2002) and Khandelwal & Gottschalk (2003) refer to as information solving problems made available to the lawyer. Artificial intelligence will be very beneficial to lawyers because these technologies support advanced information searching and retrieval, user profiling and profile matching, case analyses and data or web mining. For example, data mining aims at identifying useful patterns in a knowledge base suggesting investigations or the use of information relationship to address business problems thus saving time in similar future cases. Vast repositories of court filing and current docket databases can be mined for connection between judges, clients and the work of the lawyers. For example, LexisNexis Court link allows legal professionals to use court records in new ways to support the development of litigation strategies as well as perform due diligence to support business decisions (Staudt 2003).

Case analysis technology is an artificial intelligence technology that assists lawyers to look at cases from different angles enabling them to analyse the relationship between the facts and the law. For example, case map is a recent database application that enables lawyers to work with the knowledge that they acquire during the preparation of a case. It allows lawyers to organise, manage, analyse and process knowledge about a case and the development of a trial strategy (Lamont, 2002; Dubin, 2005). Case-based reasoning is

another case analysis technology that involves the extraction of knowledge from a series of narratives or cases about a problem. However, Davenport & Prusak (1998) noted that this technology has not been very successful in dealing with legal matters. This may be because legal reasoning is less standardised than customer service problems.

4.3.1 7 Tools and technologies used for the different levels of knowledge

The knowledge management literature indicates that the initial stages[9] of knowledge management have been driven primarily by information communication technology. For example, Snowden (2002) reported that the first stage of knowledge management was characterised by the computerisation of many business applications leading to the technology-enabled revolution dominated by the perceived efficiencies of process engineering. Similarly, Koenig (2005:4) described the first stage of knowledge management metaphorically as "the internet out of intellectual capital." He noted that when the internet emerged, organisations realised that the intranet flavour of the internet was a God given tool to accomplish knowledge coordination and sharing.

Khahdelwal & Gottschalk (2003) in the knowledge management technology stage of growth model identified four different stages by which information communication technology may support knowledge management in the law firm. At the first stage the end user tools are made available to knowledge workers; at the second stage, information about who knows what, is made available to all people in the firm; at the third stage, information from knowledge workers is stored and made available to all people in the firm whilst the final stage deals with information systems solving knowledge made available to knowledge workers.

Gottschalk (2002) and Khahdelwal & Gottschalk (2003) adopted the knowledge management technology stage of growth model to examine the role of technology in law firms by identifying the different tools and technologies that can be used to manage the administrative, declarative, procedural, and analytical category of knowledge. They identified technologies that support the core administrative knowledge in the law firms as accounting systems, client billing and word possessing systems. On the other hand, technologies that support declarative knowledge are library systems, electronic legal resources, document management and legal databases.

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9   See section 3.10 for a description of the different stages of knowledge management

In addition, technologies that support procedural knowledge are case collection, procedural standards and publishing systems. Also, they considered technologies crucial for innovative and analytical knowledge as law interpretation, case interpretation, expert registration and summation.

Although the above technologies present exciting potential for knowledge management in law firms, they are just enablers to knowledge management. Knowledge management requires the use of proper techniques, individual participation, commitment and culture. It is easier to develop good knowledge management initiatives with passionate and committed people and sub-standard information communication technology tools than the other way round. Just as there are several technologies of knowledge management, there are several techniques of knowledge management because the threads of information communication technology run through most of these techniques. It is therefore worthwhile to examine some of the techniques of knowledge management in law firms.

4.4 Techniques of knowledge management in law firms

Some of what is now called knowledge management has been with lawyers since the time of the manual typewriter (Buckler, 2004). Lambe (2003) posits that from the Code of Hammurabi, almost four thousand years ago, to modern law reports and LexisNexis, the practice of law has been a practice of knowledge requiring accurate, effective, and objective use of information. Almost all departments in the law firm require and carry out some form of knowledge management even on *ad hoc* bases. Examples of knowledge management that have always existed in law firms though not necessarily under the banner of knowledge management are precedents, "form libraries," "work product," "brief banks," professional development programmes, legal research, mentoring programmes, partners training associates, hiring and training young lawyers and conversations by water coolers (Edward & Mahling, 1997; Abell & Oxbrow, 2001; Staudt, 2003; Rusanow, 2004). Legal research is a form of knowledge management in law firms in which lawyers seek the written work of judges, law professors and other lawyers to build on legal information and make suggestions about changes and new dimensions in the law. The use of work product repositories and precedents on their own has certain limitations. The general assumption while using a precedent system or work product repository is that, the lawyer knows what he/she is looking for. In reality, most of those in dire need of the firm's prior work products and precedents are inexperienced lawyers who may not be familiar with the knowledge of the process of managing a project. Besides this, the product repository documents represent only part of the knowledge and experience of the lawyer. Lawyers do not just

draft documents in the vacuum but need to listen to clients and interpret the law in the context of the client's specific circumstances.

What is new and exciting about knowledge management in the law firm is the fact that significant pressures faced by the legal industry in recent years (chapter 2) have compelled law firms to acquire and leverage knowledge effectively within the firms in order to become more adaptive, innovative and competitive. Hence, law firms have started formally adopting knowledge management programmes by considering knowledge management business imperatives and taking initiatives to extend knowledge management programmes beyond work product repositories and precedents.

Many attempts are being made to increase the range of knowledge management initiatives. A variety of approaches to in-house know-how and info-bank systems have been attempted and adopted by several firms with varying degree of success. Leading firms in United States, United Kingdom and Australia have well-developed know-how systems and info-banks that include, firms precedents, information on foreign lawyers, curriculum vitae of counsel and opinions and court transcripts maintained by full time professional support lawyers who are senior lawyers and experts in their field.

In 2001, one of the largest international law firms in the United Kingdom, Linklaters, introduced a formal mechanism for knowledge sharing and know-how that includes a know-how index (letters of advice, opinion, documentation and experience on points of law); a transaction index (to determine previous transactions done); precedents (with drafting note against each clause); internal publications (means of sharing short and concise information); and the existence of formal group of lawyers with a common interest (Abell & Oxbrow, 2001:197-198). Linklaters also helped to develop a know-how product called "blue flag" sold over the internet; targeting clients by keeping them up to date about legislation that apply in different countries on a specific practice area. Another firm implemented a technique known as "power tool" that consists basically of the template of legal documents and memorandum dealing with various legal issues and collection of court rulings (Kofoed, 2002). Recently, one of the leading Australian knowledge management firms, Allen Arthur Robinson (AAR), introduced several measures including a skills and expertise locator, clause library, professional development programme, client relationship management system, know-how files, and a third-party contact database (Rusanow, 2007). This firm is now leading other law firms in implementing debriefing, managing knowledge relating to internal processes, and collecting and sharing lessons learned from past projects.

Litigation strategy, client relation management, conflict checking, delivery of client service and record management are recent knowledge management techniques that may be given careful consideration in law firms (Opp, 2004; Dubin, 2005). A litigation strategy allows a lawyer to pull information that may otherwise be hidden in legal pads, banks and boxes or in the memory of lawyers, into formats that allow lawyers to organise and analyse facts in a helpful manner. Through simple tagging of information, lawyers may use this technique to find answers to difficult questions. For example, a lawyer preparing a summary judgment motion can, in a matter of seconds, retrieve a list of all undisputed facts in the case relating to the issue. Client relation management is a method of gathering, associating and using in an efficient manner, information about customers. Lawyers can easily make mistakes when information about clients is not available. This technique promotes the cross selling of business to existing clients and has a spill over effect in the area of conflict checking. Conflict checking maintains a database of clients detailing corporate relationship. This is a tricky area in law firms as the number of clients increase and combinations of companies enter into joint ventures. The delivery of legal services to clients with the use of knowledge management systems and artificial intelligent tools in what is sometimes referred to as "latent market for legal services" (Susskind, 2003) is an exciting technique of knowledge management. With regard to managing information overload, lawyers through the use of knowledge management tools such as creating daily electronic newspapers, personalised resources, and personal knowledge management tools, make it easy to manage the flow of information (Rusanow, 2003).

In essence, given a collaborative learning environment and the availability of intranet and other collaborative technologies, a typical knowledge management initiative in the law firm would consist of the following: best practices (a lawyer's work product that includes briefs, research memos, pleading, transactional documents); resumes (a system where resume for the lawyer and staff are maintained that allows others to identify expertise that would otherwise not be known); office directory (staff telephone numbers and e-mail addresses); calendar of events (important dates to remember in the firm); office newsletters (information and current developments in the firm, access to marketing articles); client information and matter (news about client, information on cases, time and billing efforts and maintaining competitive intelligence) and variety of systems depending on needs of the firm (expert witness databases, artificial intelligence, litigation support services, directory and many other databases that are created and maintained in-house, purchased from vendors or accessed freely over the internet).

Knowledge management researchers (Maiden, 2000; Buckler, 2004; Wesemann, 2006) have identified the following as other techniques of knowledge management in law firms:

▸ Creating a knowledge concierge. A knowledge concierge is an individual who keeps track of the lawyer working on a particular issue such that a lawyer seeking guidance on a client issue may be referred to the lawyer having the best applicable knowledge and experience at hand.

▸ Weekly learning report in which each lawyer distributes a weekly report out lining the most important things he/she did in the past week and what he/she learned in the process.

▸ Informal conversations on the hallways, firm gossip, communities of practice including professional associations such as bar associations or law societies, written newsletters and updates, and briefs filed in relevant litigation.

▸ Regular in-house seminars, presentations or training sessions led by lawyers or professional managers provide ample opportunity to interact, discuss or learn about key issues or new developments relevant to practice areas.

▸ The discussion of major projects after conclusion and recording of key lessons learned after which the information is put into a project summary and made available over the internet.

▸ Online forums like intranet news groups or email distribution list exist whereby lawyers subscribe to forums dealing with their particular interest and post messages containing information they think might help colleagues. Technologically advanced lawyers use listserv on the internet or subscription services such as Counsel Connect on the World Wide Web to share knowledge.

▸ An excellent knowledge centre staffed by highly qualified and experienced knowledge management staff will be very useful. Lawyers may subscribe for most services (local and international case law, legislation, intelligent services, library catalogues, know how and client referral bases) to be delivered on a virtual library.

It is worth noting that the implementation of a particular technique depends on the needs of the law firm and the policy in the office that permit the exchange of knowledge. Having examined the tools, technologies and techniques of knowledge management in law firms, it is now worth finding out the benefits that may results from adopting form knowledge management.

4.5 Potential benefits of knowledge management in law firms

The successful implementation of knowledge management in the law firm would result in the delivery of better quality product to the clients, professional satisfaction to the lawyer, increase profitability in the law firm and an enhancement of teamwork. Lamont (2002) has even gone as far as asserting that very few professions could benefit more from knowledge management than the legal profession. The major benefits that may accrue from a successful implementation of a solid knowledge management strategy in the law firm are summarised under the ten points discussed in this section (Maister, 1993; Terret, 1998; Chester, 2002; Kofoed, 2002; Wesemann, 2006).

4.5.1 Knowledge management improves the provision of services to client

Considering that there is a lot of pressure on law firms from clients (section 2.4.10) it is likely that knowledge management would result in the provision of high quality legal services to the client. Chester (2002) observed that timely billing, the ability to respond to the unexpected, the ability to create innovative solutions for blue sky thinking, and the ability to curb legal cost are likely benefits to the client that may result from the use of knowledge management. Knowledge management will enable clients to access cost effective services from a talented lawyer with unique knowledge on the particular issue of concern (Susskind, 2003). Clients would rather pay a higher premium rate knowing that they are paying money for unique value and knowledge rather than paying a lower rate to a lesser qualified lawyer who would produce inferior results. It has been noted that law firms in Canada, United States, United Kingdom and Australia are considering knowledge management as a necessity for meeting emerging client demand for efficiency, accountability, and controlled legal cost (Chester, 2002; Nathanson & Levison, 2002; Wesemann, 2006; Rusanow, 2007). Dubin (2005) reported that with knowledge management in place, less time will be devoted to routine tasks many of which are non-billable and more time devoted to planning a strategy with regards to the challenging and substantive aspect of the client request.

4.5.2 Knowledge management enhances economic profitability

The consequences of the delivering of high quality legal services to satisfied clients as observed in the preceding paragraph is more business generated, hence resulting in better economic performance. Generally, the cost implications of knowledge management seem minimal. Many studies have shown that the knowledge management efforts from the largest leading firms involve just the part time effort of a few people (Kofoed, 2002; Wesemann,

2006; Ruanow, 2007). Though one may argue that with knowledge management in place, firms would have less billing time, resulting in poor economic performance, the truth is that the fast delivery of high quality services results in satisfied clients and therefore more business is generated. Besides, law firms are gradually drifting away from the time-based traditional billing model. An emerging trend in knowledge management is for clients to ask for fix rate agreements and electronic connections to the firm. According to Onwusah (1997), the client's perception of "value" is driving the move away from the traditional cost-plus basis of billing to a perceived value added service. Other emerging ways of billing clients are based on services provided rather than time taken. Kofoed (2002) notes that some firms are offering, "no win no fee service." Rusanow (2003) advocates billing by transaction.

4.5.3 Knowledge management provides professional satisfaction

It has been reported that knowledge management contributes to the professional satisfaction of lawyers by exposing lawyers with special experience and expertise to work on projects in their area such that they attain professional excellence, equip themselves with advanced skills and provide exceptional services to clients at a higher rate (Chester, 2002; Rodriguez, 2002; Rusanow, 2003; Wesemann, 2006; Rusanow, 2007). It was also observed in section 2.2 that law firms are learning organisations where professionals continue to crave for new skills and desire to gain specialised knowledge in particular areas of law and legal practice. Therefore, knowledge management will likely provide lawyers with an environment that allows them to fully develop their skills, rapidly increase their knowledge and achieve professional excellence.

Knowledge management initiatives such as precedent documents, repositories of prior work product and project methodologies enhances the lawyer's competence by reducing the time that he/she would take to draft documents and conduct research (Staudt, 2003). Knowledge management programmes also provide online training opportunities for lawyers that enable them to become more efficient and effective in computer literacy skills (Martin, 2002).

Buckler (2004) reported that knowledge management is particularly beneficial to young lawyer who rather than having to acquire knowledge through years of experience would be able to acquire relevant information within a short space of time on what is already done in other departments. It ensures that lawyers do not repeat the firm's past errors but rather learn from the firm's past successes.

Knowledge management initiatives may also assist with the integration of new lawyers to the firm while focusing on improving the skills of junior and senior lawyers (Chester, 2002; Kay, 2002; Staudt, 2003). Hence, knowledge management will clearly accelerate the learning curve of young lawyers with new expectations and demands.

4.5.4 Knowledge management improves retention rate

Bearing in mind that lawyers are becoming highly mobile (section 2.4.13), the improvement of retention rate would likely result in professional satisfaction and thus reduce labour mobility. Buckler (2004) observed that knowledge management programme for professional development provides lawyers with opportunities for on-going intellectual stimulation thus avoiding the boredom and frustration that may result in a lawyer deciding to leave a firm because he/she is tired of repeating the same type of work every day. Leibowitz (2004) noted that in situations where lawyers decide to leave the firm, knowledge management ensures that there is continuity of knowledge. He posits that it also helps capture and effortlessly share senior lawyers' knowledge before retirement amongst everyone in the firm. Rusanow (2003) notes that knowledge management enables law firms to immediately share and use knowledge acquired when new members join the firm or when existing members do something new. It has been observed that tutoring and mentoring techniques enable senior lawyers to transfer their knowledge, wisdom, specific insights, practice and skill to the junior lawyers within a short space of time so that when the lawyer leaves the firm or dies, the firm's substantive practice, knowledge, history, stories and culture is preserved (Rusanow; 2004; Dubin, 2005). It therefore seems clear from the above that knowledge management initiatives will enable firms to attract and retain talented lawyers and also their clients. Developing the firms organisational memory may improve as the retention rate of the firm increases.

4.5.5 Knowledge management and organisational memory

Organisational memory is the collective tacit and explicit knowledge (processes and products) within the organisation stored and distributed across different retention facilities which may be retrieved, shared, preserved, remembered and brought to bear on present decisions and for later re-use (Foil & Lyles, 1985; Walsh & Ungson, 1991). The following have been identified as retention channels that preserve and facilitate organisational memory: individuals, structures, transformation, ecology, values, culture, history of past events and their interpretation and external archives. Organisational memories generally

preserves behaviour, norms, values, and mental maps over time and this could easily be lost as employees come and go and leadership changes. du Plessis (2004) reported that knowledge management will capture the organisation's individual knowledge or team capabilities and transform it into organisational knowledge, documented processes and knowledge base thus reducing the risk of knowledge deterioration that may arise when people leave the organisation.

4.5.6 Knowledge management supports and encourage a learning culture

As noted in chapter three (section 3.7.3), one of the foundations of knowledge management is the power of learning. Dubin (2005) observed that knowledge management initiatives may support and promote a learning culture that may foster growth and career development in the firm, and thus improve on the retention rate. An organisation with a learning culture will favour the building and development of the collective organisational memory so that knowledge and competencies representing the past and present collective learning of employees are transferred to new members across generations of learning (Pedler et al., 1989; Garvin, 1993).

4.5.7 Knowledge management promotes team work and the culture of knowledge sharing

Although increased competition in the legal market (section 2.5) has compelled law firms to share their knowledge more than ever before, it is evident that a knowledge sharing culture runs counter to the culture law firms instil on the lawyers. It has been observed that generally, law firms are noted for their star, expert, secretive, exclusivist, personal and individualistic culture that emphasises high-level individual creativity (Handy, 1985; Terrett, 1998:68; Hunter et al., 2002; Maiden, 2002; Carine, 2003:3; Lambe, 2003). Lawyers tend to hoard knowledge believing that the monopoly on particular information will lead to personal indispensability, job security, influence, and professional respect within the firm, while sharing this knowledge on the other hand may result in a loss of the value and rareness of the monopolised knowledge.

The knowledge management mantra holds that indiscriminate knowledge sharing is good (Lambe, 2003). It empowers the receiver of the knowledge and still remains with the person who is sharing the knowledge. Knowledge management promotes a culture of knowledge sharing that extends beyond the access to knowledge in the hallways, at the water cooler and at lunch time, to communication, collaboration, trust and teamwork (Kofoed, 2002). Knowledge management fuelled by advanced technology such as collaborative work spaces,

groupware, intranet, extranet, virtual deal room, knowledge maps, knowledge repositories together with techniques such as community of practice, knowledge concierge, tutoring and mentoring, apprenticeship, talk rooms, storytelling and knowledge fairs creates a culture of shared knowledge that foster team work, trust, collaboration and communication (Chester, 2002; Carine, 2003; Wesemann, 2006). Collaboration enables colleagues learn form each other, exchange ideas and generate new knowledge. When there is trust there is an increased awareness of the depth of knowledge of other members in the firm resulting in respect and commitment that in turn results in the provision of quality service to clients.

4.5.8 Knowledge management is an important approach for law firms to gain competitive advantage

The competitive strength of a law firm comes from its knowledge. Therefore, at a time when law firms are increasingly faced with challenges from competition in the legal market, the drive to specialisation and the need to operate globally (section 2.4.6, 2.4.8; 2.4.9) knowledge management may provide a competitive edge. It will enable law firms to build up market trends and develop business strategies directed at meeting the needs of both existing and potential clients (Jackson, 2001:33; Gottschalk, 2002; Kay, 2002; Curve Consulting, 2003; Rusanow, 2003; Rusanow, 2007).

4.5.9 Knowledge management will provide lawyers with the knowledge they need and when they need it

Knowledge management may help solve the problem of information overload (section 2.4.5). Knowledge management applications and tools such as intelligent agents, artificial techniques, meta-data portals, mark-up languages and user interfaces (Bookman, 1999:44; Marwick, 2001 Lamont, 2002; Heckman, 2003) may provide the ability for lawyers to research and organise irrelevant information on the web. Meta-data stored by portals and visualisation techniques like themescape and visual net may be used to draw visualisations of large amounts of information that may assist a user understand the available information more easily, and also facilitate subject-based browsing and navigation (Marwick, 2001). Indexing tools such as taxonomies organise and cross-reference material by subject area and other criteria making it easy to find information when needed (Buckler, 2004). Marwick (2001) reported that knowledge management techniques such as summarisation allows users to avoid reading a document not relevant to their current tasks thus reducing the time an individual attempts to find the right documents to use in a particular task.

4.5.10 Knowledge management meets the information and knowledge needs of the lawyer

A law firm's knowledge management initiative may focus on understanding the different types of information and knowledge that lawyers need at the different stages of their professional development. It may also support and integrate the individual lawyer's needs and the firm's needs. Staudt (2003) classifies lawyer's professional development into three stages: grinders of information (junior lawyer at the early years of their career); minders of information (senior lawyers at the middle of their career); and finders of information (senior lawyers at the last stage of their career). Bearing this categorisation in mind, it is obvious that the professional demands of junior lawyers will differ from those of senior lawyers.

4.6 Frameworks and models of knowledge management

In order to provide a theoretical foundation for understanding of knowledge management in law firms some frameworks and models of knowledge management in organisations were examined in chapter 3 (section 3.7 and 3.8). These frameworks and models are based on experiences and studies in Western industrialised nations that are already knowledge economies. A lot still needs to be done in the form of empirically extending and refining these frameworks and models by focusing on how they can be applicable in the context of a Third World country (Botswana) and within specific organisations (the law firm). The applicability of these frameworks and models within the context of a law firm is likely to be different because law firms are knowledge organisations that do not go through an iterative cycle to refine its physical products. It is therefore necessary to test the applicability of these frameworks and models within context of the law firms in Botswana.

4.6.1 Framework for knowledge management

The four different frameworks for knowledge management examined in chapter 3 (section 3.7) are the learning organisation, knowledge markets, knowledge management process and the knowledge management strategy. Each of these frameworks will be now discussed within the context of the law firm.

4.6.1.1 The learning organisation framework

The learning organisation framework is particularly apt for law firms which are essentially

learning organisations conducive for knowledge management because their legal service market is knowledge and knowledge management is about leveraging this knowledge for the benefit of the law firm. Lawyers crave for new skills and greater expertise throughout their career. Leading law firms encourage their lawyers to become experts in their practice area by investing heavily in lawyer's training and mentoring programmes (Rusanow, 2003). Knowledge management encourages staff to acquire and share knowledge with others. In addition, law is constantly changing and lawyers need to keep up with these frequent changes and regulations in their practice area by constantly learning (Best 2003). Hence, within the context of the law firm, this framework does provide an understanding on how to encourage communication, offer learning opportunities and promote the sharing of knowledge within the firm.

4.6.1.2 Knowledge markets

An organisation is a knowledge market when knowledge is exchanged for reward or other valuable things such as money, respect, promotion, other knowledge, or just the feeling of satisfaction from assisting others (Brown & Duguid, 1998; Davenport & Prusak, 1998). Law firms are not market systems as such because lawyers are noted for their culture of individuality and the "knowledge is power" mentality inhibits knowledge sharing. However, knowledge management may assist law firms to demonstrate their value in knowledge sharing by ensuring that the reward system of a firm provides clear incentives and motivation for contributing to the dynamics of an efficient knowledge market in several ways. Some law firms are drifting away from assessing fee earners (associates or professional assistants) based on improved billable work to assessments based on their willingness and ability to participate in knowledge management systems. Prizes may be offered to top contributors of knowledge management over a period (Kofoed, 2002). In law firms where knowledge is the key working tool, recognition of ownership from colleagues and partners is a natural device to contribute to the knowledge management system. The basic idea is that the person contributing to the knowledge management system receives acknowledgement from peers and from superiors for his or her contribution to knowledge management. Lawyers may also be encouraged to share knowledge by changing the performance objectives and appraisal systems to formally recognise knowledge sharing (Schmidt, 2001).

4.6.1.3 Knowledge management processes

Knowledge management processes offer an understanding of the manner in which organisations create new knowledge, maintain existing knowledge and discard "old" knowledge. The knowledge management processes adopted for this study is the creation, codification, transfer, utilisation and protection processes (section 3.7.3).

The knowledge creation process is oriented towards acquiring and developing knowledge or replacing existing knowledge within the organisational tacit and knowledge base. A vast amount of knowledge is generated within the law firm and from external sources on a daily bases.

The knowledge codification process is based on managing the firm's internal and external knowledge and the conversion of this knowledge to an accessible and usable form using information technology and information management skills. This includes all processes in the law firm that deal with the content management of knowledge such as conversion, editing, review, approval or rejection, storage, organisation, maintenance, cataloguing, classification, retrieval, reservation and disposal of knowledge in a form that will be easily accessible to those that need it.

Knowledge transfer is the movement of knowledge from its point of creation or codification to the point of use. It refers to ways and means to distribute knowledge in a firm such that it will be easily accessible to those that need it. Law firms are noted for their individualistic and secretive culture. Therefore, knowledge management would result in adopting ways and means to distribute knowledge and encourage colleagues to share and re-use knowledge within the firm.

Knowledge utilisation is oriented towards the actual use of knowledge. It refers to the integration of acquired knowledge into the products, processes, and services of the law firm in order to sustain its competitive advantage.

Knowledge protection processes will protect the knowledge within the law firm from illegal or inappropriate use or theft. This process is apt for law firms because lawyers are very sensitive to ethical issues of client confidentiality and security of information and would therefore employ all necessary techniques to ensure the protection and security of the different categories of knowledge in the law firm.

4.6.1.4 Codification and personalisation

Codification and personalisation are two basic strategies of knowledge management (Sanchez, 1997; Hansen et al. 1999; Butler, 2003, Connell et al., 2003; section 3.7.4). Codification focuses on explicit knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts. Both strategies may have positive and negative impact regardless of which is central to the organisation. Because most law firms have limited their knowledge management approach to information technology, the dominant strategy in law firms seems to be the codification strategy. However, the challenge in the law firm is to make explicit knowledge available as well as also ensure that tacit knowledge is shared through personal interaction thus implying that neither personalisation nor codification strategy alone will be sufficient to manage the knowledge of the law firm. Both approaches need to be integrated so that the benefits of both tacit and explicit knowledge can be gained. A successful symbiosis strategy is one that takes advantage of the positive features of both personalisation and codification strategies.

4.6.2 Models of knowledge management

The different models of knowledge management (section 3.8) whose application may be adopted within the context of the law firm are the intellectual capital model, the SECI, knowledge asset and "ba" model and the Leavitt's diamond organisational model (Diamond Trist) as modified by Galbraith (1997) and Pan & Scarbrough (1999). The following subsections examine these models within the context of a law firm.

4.6.2.1 Intellectual capital model

Several authors have recognised that the competitive strength of law firms is in its intellectual capital (Chester, 2002; Gottschalk, 2002; Kofoed, 2003). The growth and recognition of intellectual capital in organisations in recent years has challenged law firms to better manage their collective knowledge as an asset. Terret (1998) adopted this model as one of the bases of understanding the different categories of knowledge in the law firm. He considers knowledge management in the law firm as a renewable, reusable and accumulating resource of value to the firm when applied in the production of legal services. The model categorises knowledge into human and structural capital. Human capital within the context of the law firm is the knowledge of the lawyers and the employees in the law

firm. This may be equated to the tacit knowledge base of the firm. Structural capital on the other hand, is the intellectual capital that remains in law firms when the employees and staff go home at night together with all other knowledge embedded in the processes, culture, print resources, electronic assets, information about the firm's operations, hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data. Explicit knowledge (declarative knowledge, explicit procedural knowledge and knowledge of the business of law) are examples of the structured capital of the law firm's knowledge.

The extent of the application of this model within the law firm is limited because unlike manufacturing companies which are listed on the stock exchange with assigned monetary value to their intellectual capital, law firms are knowledge- based companies that are not listed on the stock exchange making it difficult to assign monetary value to their intellectual capital. Besides, law firms place more value on the human capital (particularly, the individual lawyers expertise) than on the structured capital.

4.6.2.2 SECI, knowledge asset and "ba" model in the law firm

While the intellectual capital model provides a basis for understanding the different categories of knowledge in the law firm, the SECI, knowledge asset and "ba" model (Nonaka et al., 2002; section 3.8.2) may be adopted as the basis for understanding the dynamic process of tacit and explicit knowledge creation, generation and storage within the law firm.

Socialisation, externalisation, combination and internalisation are components of the SECI process (Nonaka & Takeuchi, 1995; section 3.8.2). Socialisation in the law firm is the transfer of tacit to tacit knowledge through the sharing and exchanging of experiences by observation, imitation and practice to create new knowledge within the firm. It generally occurs through workshops, apprenticeships, conversations in the hall ways, seminars, and conferences, newsletters, as well as at the water coolers. Typical examples of tacit knowledge transfer within the law firm are tutoring and mentoring opportunities where senior lawyers train and equip junior lawyers, and junior lawyers learn from senior lawyers by imitation, observation and practice. Externalisation is the process of articulating tacit knowledge into explicit knowledge through concepts and analogies. An example of when tacit knowledge is transferred to explicit knowledge within the context of a law firm is when a lawyer develops a new approach to a legal matter based on his tacit knowledge,

judgment, experience and understanding. This knowledge may then be transferred to explicit knowledge in the form of precedents and work products documents, briefs or knowledge banks where it may be shared by other members of the firm. Another way is by a lawyer capturing what he/she learned at a workshop into explicit form such as written report.

Combination within the context of the law firm is the explicit to explicit knowledge transfer. This is due to the fact that most knowledge management initiatives in law firms has focused on a one dimensional perspective of information technology (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004, Rusanow, 2007; section 4.3). It therefore stands to reason that combination in the form of document management and document centralisation in info-banks is the dominant approach of knowledge management. However, as noted in the literature, the knowledge management process in the law firms is not limited just to combination. An example of combination approach in the law firm is when a lawyer puts together information collected from different sources in the firm to write up a judgment, or a research paper. Combination of knowledge between lawyers may occur through the telephone, informal conversations, exchange of document, meetings and computerised networks. Law firm know-how projects establish or capture legal knowledge in the form of legal documents.

Internalisation is explicit to tacit knowledge transfer within the law firm. This is the process of experiencing knowledge through an explicit source. For example, one can combine the experience of reading the workshop report with previous experiences in order to form an opinion on an issue. Another example is a lawyer adopting a similar solution to a legal matter that has been used by others in the firm.

Knowledge assets refer to firm-specific resources that are indispensable to create, save, use and transfer knowledge. The lawyers are the main knowledge asset within the law firm. The top management (managing partner) is a crucial knowledge asset because knowledge creation may be facilitated by the consistent, reliable and plausible behaviour of top management.

Ba is the Japanese word for place or space and it is the shared context for knowledge creation. It is the social context within the organisation including its culture, work practices and business strategies where the transfer of knowledge takes place. The law firm provides the knowledge space for the creation of knowledge.

4.6.2.3 Leavitt's diamond organisational model (Diamond Trist) as modified by Edward & Mahling (1997); Galbraith (1997) and Pan & Scarbrough (1999)

Leavitt's (1965) model adopted and modified by Galbraith (1997) and Pan & Scarbrough (1999) to include other variables such as culture and rewards provide the basis for the understanding of knowledge management within a typical law firm environment in terms of task, structure, people and technology, rewards and culture. Edward & Mahling (1997) adopted this model to provide a framework for the evaluation of the knowledge management needs within the large law firms.

Tasks are the production of goods and services that the organisation exists to perform. The major legal tasks performed in the law firms are the provision of legal services to clients and attending court sessions. These tasks are generally aimed at adapting the law to the needs of a specific case. Other sub-tasks are legal research, giving legal advice to clients and the analysis of the law and the facts as they appear in a particular client's situation. These different tasks performed in the law firm are linked to the structure, culture, techniques, people and technology of the law firm.

Structure is the system of communication, authority and work flow within the organisation. For knowledge management to be successful, law firms must adapt its structure (Buckler, 2004). Law firms are professional bureaucracies, where lawyers enjoy a relatively high degree of professional autonomy (Mintzberg, 1989; Davenport et al., 1998). The managing partners play a less intrusive role in the day-to-day activities of the lawyers. However, despite the unobtrusive role of top management, a managing director in the firm will usually consult with the committee of partners in providing the overall direction of the firm. He/she is responsible for developing and encouraging knowledge management in the law firm and in shaping the overall knowledge management activities in the firm.

Besides the organisation and work flow, it is also crucial to understand the structural organisation of the law firm. The Leavitt (1965) model considers the people in the organisation as a component of the knowledge management team. A small firm consists of a sole proprietor and the administrative staff, while a typical large law firm's structure consist of the managing partner, the partners, lawyers, associates and non legal professional staff (legal assistance, legal information professionals, clerical and administrative staff, information system staff, marketing staff and financial and business support staff).

Technology is an important aspect in Leavitt's (1965) model. There is no doubt from the

literature examined in this study (section 4.4.7) that information communication technology forms a cornerstone to knowledge management. In a study of the adoption and use patterns of knowledge management in law firms in Botswana it was found that law firms in Botswana were are the initial stages of the adoption of information communication technologies and were yet to adopt technologies for knowledge management (Fombad, 2002).

It is worth noting that there is no standard model or framework for knowledge management in legal practice because as already observed, no two law firms are exactly the same. Each firm has its unique knowledge management needs. Therefore, the frameworks and models of knowledge management examined so far provide just guidelines for understanding of knowledge management in law firms.

4.7 Barriers to knowledge management in law firms

It has been observed from studies in knowledge management in law firms that in spite of the enormous potential for the use of knowledge management, knowledge management remains a narrow theoretical concept to many lawyers as very few law firms seem to have managed to establish a really well-functioning system. Therefore, a general assumption that because law firms have more sources of knowledge, they are expected to have more knowledge at their disposal does not necessarily hold. The discussion in this section focuses on a number of barriers to knowledge management to law firms that must be addressed to enable the full benefits of knowledge management to be enjoyed.

4.7.1 Cultural Barriers

As in many organisations, several legal researchers have identified cultural barrier as the most prevalent challenge to successful implementation of knowledge management in law firms (Terret, 1998; Kofoed, 2002; Curve Consultant Survey Report, 2003; Rusanow, 2003; Rusanow, 2007). The individualistic culture and the time-based billing model are the prevalent cultural impediments to knowledge management in the law firm.

4.7.1.1 Individualistic culture

Law firms are noted for their personal and individualistic culture that emphasises high-level individual creativity (Handy, 1985; Terrett, 1998:68; Hunter et al., 2002; Maiden, 2002; Carine, 2003:3; Rusanow, 2003; Rusanow, 2007). Underscoring this view, researchers have referred to law firms' culture as star, expert, and secretive or exclusivist (Maiden, 2002; Lambe, 2003). This may be because lawyers compete directly with each other for

the same clients through their special knowledge, gifts and talents, and are under the urge to build a unique individual expertise in a certain areas. Also, because of the general prohibition against advertising in the legal profession, a client's choice of a firm most often has depended on the star, reputation or expertise of a particular lawyer.

The "knowledge is power" culture enables one to better understand this individualistic culture. Because knowledge is regarded as power, people try to make a secret of it. This type of mentality describes situations where professionals with the highest reputation and monopolies of knowledge believe that their career prospects depend on the ability to keep their unique information and knowledge to themselves (Reimus, 1997:10; Andrews, 2001:25). The "knowledge is power" culture is typical of law firms because lawyers are often not willing to share their expertise, believing that monopoly of particular information will lead to personal indispensability, job security, influence, and professional respect within the firm. A large part of their value to the firm and the client is the information they have acquired over years of practice and carried around in their heads. Therefore, sharing this information and knowledge may result in a loss of the value, and rareness of the monopolised knowledge. Also, lawyers are comfortable in hoarding information than sharing it with colleagues who may want to outsmart them (Rodwell & Humphries; 1998; Wesemann; 2006). It is common to find colleagues who may want to outsmart the contributor of knowledge by judging the peer's work as inferior and hastily pointing out improvements just to emphasise their own expertise. Lawyers may sometimes hoard information because of the feeling that many pieces of information about the firm should not be made available to those colleagues involved in management.

The knowledge management mantra that holds that knowledge sharing is good and power comes from transmitting information to make it productive, not from hiding, is essential to overcome a culture of knowledge hoarding in the legal profession. For knowledge management to be effective, lawyers need to be rewarded and feel appreciated for sharing and contributing their expertise to the firm as much as they are for possessing it in the first place. There is a need for lawyers and employees to have some sort of self-motivational creativity and sense of why knowledge sharing is important.

4.7.1.2 Time-based billing model

The time-based billing model and the partner-compensation model where the partner is compensated based on revenue generated, and revenue is generated based on hours billed, have been identified as probably the greatest barrier to knowledge management in law firms

(Terret, 1998; Kofoed, 2002; Rusanow, 2003; Rusanow, 2007). The traditional culture of the law firm associates the main source of income of the lawyer on the time he/she spends in deploying knowledge to the services of clients, and not on other internal efficiencies. This implies that, the time spent on knowledge sharing, capturing or coding is non-billable and will not measure performance. Therefore, if knowledge management is not officially recognised as a requirement of the job, there will be little motivation from lawyers who are already under time pressure to produce billable hours, to engage in knowledge management activities because it will be considered as some additional work and a waste of time. Hence, lawyers need incentives to devote time on knowledge management initiatives. Kofoed (2002) noted that the new way of billing clients based on services provided rather than time taken is expected to encourage knowledge management as fees may be allocated for the use of knowledge management systems.

4.7.2 Technological issues

Perhaps one of the greatest difficulties in the implementation of knowledge management in law firms is the fact that knowledge management is perceived as a technology-related initiative (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004, Rusanow, 2007). In many respects, information communication technology contribute to making the sharing of knowledge between people more effective although knowledge management is not all about technology. However, it must be borne in mind that the implementation and use of information communication technologies alone will not guarantee success. Rather it is the innovative creation and effective sharing of knowledge that matters. This is because knowledge is still a human issue and the information technology department should be the last place for knowledge management to reside.

It is still very common to find lawyers who are reluctant to use new technologies. This resistance is high, particularly amongst the older lawyers who are overwhelmed with the ubiquitous presence of information communication technology and often rely on the research skills of the younger lawyers (Dubin, 2005). It is curious that some lawyers will balk at the notion of using information communication technology for knowledge management when the legal profession is one that shows a demonstrated ability to learn completely new areas of knowledge in preparing cases and representing clients. The reason for this may be due to the legal mindset. Lawyers generally seek to apply high standards in terms of authenticity, quality, security and integrity of information and knowledge on which they base their

arguments and serve their clients (Gottschalk, 2000:73). These same standards are used in assessing the use of information communication technology and any tool that fails in any significant detail to meet these standards may encounter distrust from the lawyers. Thus, information communication technology used for knowledge management should be up to date, secure and fully accurate so as to avoid any chances of distrust from the lawyer. The reluctance to use information communication technologies can translate into the unwillingness to assist in knowledge transfer techniques that will involve the use of information communication technology.

4.7.3 Inability to enforce knowledge management

A knowledge management system would only have value when lawyers routinely input their work product and consult the systems when performing their work (Wesemann 2006). Therefore, firms that have problems requesting their lawyers to submit the time sheets and legal briefs and other forms of knowledge promptly to the knowledge system will find it difficult to comply with knowledge management expectations.

4.7.4 Conflict avoidance

Fahey & Prusak (1998:268) noted that the attitude of conflict avoidance and some conservative habits may prevent the sharing of knowledge within an organisation. This is why one of the eleven deadliest sins of knowledge management is not to establish, challenge and align a shared context for the members of the organisation. This shared context requires engagement in open, honest, supportive and critical dialogue to develop different views. Therefore, in law firms if the leading members of the firm are not willing to take risks and have the "don't rock the boat attitude," new ideas may be covered up very easily and knowledge not culturally legitimated may be suppressed.

4.7.5 Bureaucracy and hierarchy

The organisational structure of law firms is professional bureaucracies. Professional bureaucracies are structures where the operating core (lawyers) enjoy a high degree of professional autonomy and top management play a less intrusive role in the day-to-day activities of the lawyers (Mintzberg, 1989). In spite of the professional autonomy, it is not uncommon for professional bureaucracies to have formal and administrative procedures that prevent cross-functional communication, cooperation and the sharing of knowledge and new ideas.

Therefore, top management still has an important part to play in shaping the overall direction in which knowledge is created and disseminated.

4.7.6 Size of a firm

Arguably, the size of the firm may have a bearing on the willingness of a firm to implement knowledge management. In considering the size of the firm, it is important to make a distinction between large firms on the one hand, and small firms on the other hand, often referred to as small and medium size firms. Generally, there has been no single, distinct and uniformly acceptable definition of a small firm appropriate in every case, and different definitions may differ according to the sector being studied (Amboise & Muldowney, 1988; Storey, 1994). Newbould &Wilson (1977) cited in Egbu (1994) state that the choice of measure is flexible and it does not matter much in practice which measure is adopted, for most measures are highly correlated with each other. The European Union (Commission of the European Communities, 1996) and Small Business Service (2004) consider small firms as organisations which employ less than 250 employees. In relation to law firms, Schoenberger (1995) in section 2.3 of this study outlines the following four organisational modes for legal practice: the mega-firm having more than 1000 lawyers, medium size firms with 10 to 200 lawyers, small firms with 2 to 10 lawyers and the sole practitioner. Using the above distinctions as a rule of the thumb, all the law firms in Botswana are mainly small size firms because they have less than nine lawyers or less (section 2.3 table; 6.13, 48.5% agreed).

Most studies on knowledge management reveal a considerable insight into knowledge management strategies adopted by large firms (section 4.3; Nathanson & Levison, 2002; Curve Consultant Survey Report, 2003). There is very little writing on knowledge management in small and medium size enterprises generally and there is hardly any writing on knowledge management in small law firms. One may argue that this situation has prevailed because large firms generally have more knowledge assets and intangibles to be managed and hence, a predominant focus on them seems appropriate. In addition, most large corporations comprise of many different business units, which can be scattered across different countries and locations and thus, they need to implement knowledge management to facilitate the sharing and transfer of knowledge across their various sites. Also, large firms tend to have larger budgets for consulting and technology (Campbell, 2002). Besides, there is a feeling that small and medium size enterprises tend to be regionally or locally focused with a narrower scope of business and pay less attention to other issues.

In order to appreciate the concept of knowledge management in small law firms, this study draws on the limited literature of knowledge management in small and medium size enterprises from other organisations. Most of these publications on knowledge management in small and medium size enterprises are case studies conducted to examine their perception towards knowledge management and their practices and developments in the area. This study adopts a triangulation of qualitative and quantitative methodology and draws from the few studies that have been carried out on knowledge management in small and medium size enterprises to establish guidelines for knowledge management in small law firms in Botswana. McAdam & Reid (2001) compared the perception of knowledge management in both large organisations and small and medium size enterprises. The main finding from their study suggests that while knowledge management understanding and implementation was developing in large organisations, small and medium size firms suffered from certain drawbacks. They point out that small and medium size firms appeared to have a more mechanistic view and a limited vocabulary of knowledge, less systematic approaches for embodying and sharing knowledge and their perceived benefits of knowledge management were targeted towards the market rather than towards the improvement of internal efficiency.

In another study case study of three small businesses operating in Singapore and Australia, Lim & Klobas (2000) investigated the extent to which six factors drawn from the theory and practice of knowledge management can be applied in small organisations. These factors are: balance between need and cost of knowledge acquisition; the extent to which knowledge originates in the external environment; internal knowledge processing; internal knowledge storage; use and deployment of knowledge within the organisation; and attention to human resources. They concluded that differences were apparent in the value placed by small and large organisations on systematic knowledge management practices, especially in the adoption of computer-based knowledge storage systems. Hence, they felt that the greatest need for small businesses was to build an effective knowledge repository.

A longitudinal case study of organisational learning in the small business sector of the United Kingdom economy was conducted by Matlay (2000). In essence, he found that the frequency of formal learning in these firms increased in direct proportion to their size. Learning was incidental and occurred sporadically throughout routine tasks. Knowledge management in terms of acquiring, transferring and using learning-based new information did not feature high on the agenda of most of the small businesses.

Egbu et al. (2005) case study presents and discusses the challenges and benefits of knowledge management for sustainable competitiveness in a small and medium size enterprise in a knowledge intensive construction company using semi-structured interviews. The paper concludes that managing knowledge assets in small and medium size firms is an integrated and complex social process which has culture, people, finance, technology and organisational structures at its core.

A qualitative study to explore the knowledge management features of small and medium size firms was carried out by Sparrow (2001). He underscored the need to recognise the different "mental models" of individuals and to share their personal understanding in the development of knowledge management processes. He also noted that the development of a knowledge-based system in smaller businesses should be based on the fundamental understanding of its role and basic principles.

An overview of the literature of knowledge management in small and medium size enterprises in the preceding paragraphs indicates that knowledge management issues in small businesses are not simply scaled-down version of large firms' experiences simply because most knowledge management studies have focused on large firms. Or as Sparrow (2001) aptly puts it, small businesses are more than "little large businesses." The size, distinct characteristics, ideals and experiences of small firms all combine to present several unique challenges for knowledge management. For example, small firms are constrained by their resource scarcity in terms of finance, time, capital, labour, equipment and physical commodities (Lim & Klobas, 2000; Sparrow, 2001; Yewwong, & Aspinwall, 2004; Egbu et al., 2005). Due to lack of resources these firms are often weak in terms of financing, planning, training and the use and exploitation of advanced information technology (Egbu & Botterill, 2002). They often lack time or resources to identify and use important external sources of scientific and technological expertise (Egbu et al., 2005). Most of these organisations either cannot afford, nor do they want to commit themselves to the expensive consultancy services used by larger firms, and in hiring dedicated information professionals or staff (Yewwong & Aspinwall, 2004).

For the most part, small businesses lacked an understanding of knowledge management processes and are just beginning to understand how knowledge management might assist them. Most of the activities and operations in small firms are governed by informal rules and procedures (Ghobadian & Gallear, 1997; Egbu & Botterill, 2002). Hence, small firms are likely to inhibit the implementation of formal, prescriptive and comprehensive

knowledge management systems and programmes. Employees may be reluctant to capture and store their knowledge formally and knowledge sharing programmes may be conducted haphazardly. In addition, the lack of formal procedures may hinder the efficient working of a knowledge management system or programme, even when it is implemented (Yewwong & Aspinwall, 2004). Learning is at best informal, incidental, and reactive (Matlay, 2000). These firms cannot afford or are unwilling to commit resources to conduct research, acquire knowledge from environmental scanning and cannot afford time for trial and error activities since their investments are largely targeted on their core operational processes (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). For these very reasons, these firms lack the capacity to maintain a knowledge repository of the same depth and breadth as large organisations (Lim & Klobas, 2000; Egbu et al., 2005).

Apparently, small firms do not have knowledge identification, capture, mapping, dissemination and knowledge creation processes well thought out or embedded in daily practices. Egbu et al. (2005) observes that elements of knowledge management in the small construction firm are practiced in an *ad hoc* fashion. Furthermore, a very small percentage of small firms are using the intranet to share knowledge and informal face to face social interaction was the most frequent form of communication. McAdam & Reid (2001) noted that the creation of new knowledge in small and medium size enterprises is less advanced than in larger firms. In addition, small firms possess considerable weaknesses in their knowledge management storage process. The documentation of key knowledge is rare and it is normally not properly stored in a readily retrievable format due to their less formal working systems and procedures (Egbu et al., 2005). One other reason why knowledge tends to passed on without any associated records or documentation is that the communication culture in small firms is usually verbal informal and "in the corridor" (Yewwong & Aspinwall, 2004).

The owners and partners are often managers of small firms. They oversee the decision-making process in every aspect of their business and are frequently constrained by time to take care of every aspect of their business (Lim & Klobas 2001; Yewwong & Aspinwall, 2004; Egbu et al., 2005). This is unlike large firms, where top management has more time to think and be involved in knowledge management because some of its roles and responsibilities can be distributed to lower level managers. There is little wonder that most owner-managers lack a proper understanding of knowledge management and its potential, and are often slow in adopting formal and systematic knowledge management practices.

McAdam & Reid (2001) asserts that knowledge management does not feature highly as an important agenda in most small and medium size firms.

The owner-manager's personality can also become a main obstacle in the accomplishment of knowledge management in small firms since they have a strong dominance in the firm. An owner-manager who is dictatorial can be problematic when implementing new initiatives (Matlay, 2000; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004). Yewwong & Aspinwall, (2004) point out that, an owner-manager with a personality that hoards knowledge, controls every aspect of his/her business, and punishes mistakes may well impede the building of a knowledge friendly environment. Sparrow (2001) opines that owner-managers may tend to limit the sharing of knowledge for fear of losing control. They may resist providing knowledge by deliberately avoiding training and development opportunities for employees in certain areas pertinent to their own personal expertise. The experience and judgment of owner-managers may play an important role in the process of using knowledge. For example, many managers started at the bottom and have worked upwards the "hard way," usually through learning-by-doing and so, believed strongly in their own experience and opinion (Yewwong & Aspinwall; 2004). As a result of this, they will usually depend on their personal experience, opinion and "own world view" when it comes to making key decisions and utilising knowledge.

Another problem that may confront small firms is the low degree of employees' specialisation in their jobs (Yusof & Aspinwall, 2000). Small firms tend to have mainly generalists performing a variety of tasks who may be termed, according to the old adage, "Jack of all trade and a master of none." Generally, low specialisation tends to result in lack of a thorough comprehension of a specific task.

The lack of human resources is a stumbling block to implementing knowledge management in small law firms. Staffing constraints mean that the appointment of multiple new roles and positions is less practical since these firms may lack highly educated and experienced employees or expert professionals to initiate such a programme (Yewwong & Aspinwall, 2004; Egbu et al., 2005).

Notwithstanding the above limitations of knowledge management in small and medium size enterprises, these firms still have the potential to benefit from the flexibility of knowledge management. Several arguments have been put forward as to why small firms can benefit so much from knowledge management. It has been observed that managing the knowledge assets and intangibles in small firms is vital because it provides a way for them to leverage

most, if not all of the benefits of knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004).

In contrast to the bureaucratic structure in large firms, the structure in small firms is simple, less hierarchical with fewer levels of bureaucracy in the vertical that puts them at an advantage over large firms when it comes to implementing knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). Functional integration both horizontally and vertically makes it easy for small firms to facilitate initiatives for change across the organisation. Egbu et al. (2005) noted that small and medium size enterprises have efficient and informal communication networks. They also point out that they have shorter and direct communication lines thus allowing for a faster discourse on knowledge management issues within the organisation.

A unified and fluid culture with fewer interest groups and a corporate mindset that emphasises the company as a single entity rather than a department is more salient in smaller firms (Ghobadian & Gallear, 1997). Arguably, with an organic and fluid culture, it will be easier to achieve cultural change in the small business environment.

Small firms are at the advantage when it comes to implementing new initiatives because they have simple systems and less red tape in place (Ghobadian & Gallear, 1997; Yewwong & Aspinwall, 2004). Their systems are in the main, people-dominated and their processes are often more flexible and adaptable to the changes taking place around them. The fact that small firms comprise of fewer employees than their larger counterparts certainly gives them a distinct advantage. Yewwong & Aspinwall (2004) observed that in small firms, employees normally know each other more intimately and have face-to-face contact with one another, and it is thus easier to get all the employees together to initiate and implement a change. This is unlike larger firms that often have to cope with complex systems and processes, which makes them more rigid and slower when it comes to abandoning them.

Small firms are in a better position in terms of acquiring customers' knowledge because their managers and employees tend to have close and direct contact with customers and other organisations (Yewwong & Aspinwall, 2004; Egbu et al. 2005). In fact some managers and employees may even know the customers socially and personally. Yewwong & Aspinwall (2004) assert that a close contact between firm and customers will enable a more direct and faster knowledge flow. They suggest that it will allow them to obtain information such as competitors' actions and behaviour, market trends and other developments. In contrast, large firms tend to have indirect contact with customers as they mostly rely on large-scale

surveys and consulting firms to provide them with relevant customers' knowledge.

The considerable amount of tacit knowledge generated in small and medium size enterprises remains the most important form of knowledge for organisational success (Lim & Klobas, 2000; Egbu et al., 2005). Yewwong & Aspinwall (2004) feels that it is simpler for small firms to organise tacit knowledge (profiling employees or setting up a corporate listing of employees who are knowledgeable in a particular area), because they have fewer employees and most of them know each other and have a better idea of the level of expertise and know-how of their colleagues, and who to consult if they need certain information.

However, the fact that small and medium size firms are highly susceptible to the loss of employee's knowledge underscores the need for organisational sustainability in small firms and the importance of capturing individual knowledge. A Small Business Service (2004) statistics reveals that only 64% of businesses registered in 1998 were still going three years after registration. The implication is that 36 % perished after three years for a variety of reasons such as, business ceased to be lucrative, the death or retirement of the proprietor and changes in the personal motivation and aspirations of the owner. Lim & Klobas (2000) also suggest that small and medium size firms are highly susceptible to the loss of employees seeking better compensation packages and higher prestige associated with larger firms.

From the discussions in this section one can conclude that although most studies on knowledge management have focused on large firms, small and medium size firms still have the flexibility to benefit from knowledge management. In addition, these firms are facing unique challenges underscoring the need and importance for knowledge management. However an awareness, understanding and sensitivity to their size, ideals and characteristics is crucial in order to ensure effective implementation of knowledge management. Clearly, small businesses could ill afford such an all out approach to knowledge management. Knowledge management in small firms should be implemented at a rate that is commensurate with their level of resources and their capacity. It suffices to say that be it large or small, all firms that wish to stay competitive have to develop their ability to maintain, improve, organise, use and reuse the employees' knowledge.

4.7.7 Language

Generally, knowledge management theorists suggest the need for a common language to communicate analogies and metaphors and to externalise tacit knowledge hidden in

individual mental models, viewpoints, paradigms and beliefs (Nonaka, 1994 & Haldin-Herrgard, 2000:361& 21). Law firms may lack a common language to communicate and externalise tacit knowledge hidden in individual paradigms and beliefs.

The next section explores the different measures for overcoming the barriers of knowledge management in the law firm that would result in the effective implementation of knowledge management.

4.8 Factors critical to the success of knowledge management in law firms

One of the key challenges to knowledge management in the law firm is not so much that of finding the knowledge, but rather overcoming the main obstacles to capturing, mobilising, and effectively facilitating or enabling the timely exchange and transfer of knowledge. Although lawyers are supposed to be sophisticated managers of knowledge, the state of the art of knowledge management and the challenges to knowledge management in law firms examined above, indicates that several factors need to be considered to ensure the effective management of knowledge in law firms. The following sub section identifies some of the factors critical to the success of knowledge management in the law firms.

4.8 1 Encouraging a culture of knowledge sharing

An open, non-secretive, and cooperative culture is necessary for knowledge management to flourish (Maiden, 2002). Aadne et al. (1996) define cooperative culture as a horizontal and vertical connection within the firm that shares compatible goals, strives for mutual benefits and acknowledges high level of mutual interdependence. A major cultural shift from "individual knowledge is power" to "collective knowledge is competitive advantage", where the benefits of sharing information and knowledge are seen as real, is required. Though financial incentives and other initiatives may change the lawyer's attitude and behaviour, without a culture of knowledge-sharing, the expectations to create the spirit and willingness to share information and knowledge may still be low. Law firms need to address cultural barriers in their business processes such as compensation systems, career progression model and budgeting system. Kofoed (2002) noted that firms have now started introducing fixed contracts as opposed to hourly rates, while other firms are offering "no win no fee services" and some clients are asking for electronic connections to the firm. Risk-based premiums, contingency fees and equity in lieu of fee arrangement are other ways of generating income. Nahapiet & Ghoshal (1998) observed that the success of the American law firm, Wachtell, Lipton, Rosen and Katz is largely due to the emphasis on

cooperation, on open disclosure of information and the building of loyalty to the firm. Amidst increasing competition within law firms and the need to improve the quality and productivity of work, working together without holding back or protecting vital pieces of knowledge will result in more productivity and innovation than any one could reach individually. The next section examines the different ways of encouraging a culture of knowledge sharing in law firms.

4.8.1.1 Rewards and incentives as a means of encouraging a culture of knowledge sharing

Rewards and incentives may be used as an extrinsic motivation to lawyers to encourage knowledge sharing. An exploratory study by Bock & Kim (2002) on what actually motivates people to share knowledge suggests that a positive organisational attitude towards sharing and expectations of benefits from the organisation provide better results than external reward. Drawing from the expectancy theory, Davenport et al. (1998) reported that, the strength of the willingness to contribute to the knowledge management systems depends on the strength of an expectation that contributing to the system will be followed by a given outcome and on the attractiveness of that outcome to the contributor. One type of incentive in the law firm is for the staff performance evaluation to include a review as to how well a lawyer participates and supports the knowledge management process (Leibowitz, 2002; Platt, 2003). An awareness that working with knowledge management will be considered when performance evaluation comes up or in any future career decisions is important in law firms where traditionally, performance management have been based solely on the ability to produce billable work, and few firms have so far rewarded individuals based on how well they shared their knowledge. It has been observed that assigning billing codes to lawyers for productive non-billable hours such as writing articles, or submitting an important piece of know-how to the database, is an important way of encouraging knowledge sharing in firms (Maiden, 2002; Leibowitz, 2002). By so doing, lawyers will feel acknowledged that they have somewhere to record the time invested in knowledge management, and will therefore feel encouraged to share more knowledge. Kofoed (2002) observed that the challenges in terms of incentives is bigger in a law firm than in any other type of organisation because an expert with knowledge in a particular area may not want to share his/her knowledge with colleagues because he wants to make himself /herself indispensable to the firm by enhancing his /her bargaining power when remuneration and possibilities of partnership are discussed.

4.8 1.2 Recognition of ownership

The provision of personal recognition of ownership from peers and from superiors when one contributes to a knowledge database or actively participates in knowledge sharing has been successful in enhancing knowledge sharing in many organisations (Kofoed, 2002; Disterer, 2003). Generally in the academic world for example, the recognition of ownership has been a major driver for knowledge sharing through publishing. Most academics earn little or no monetary benefits for the contribution of articles in a journal, but good articles or a series of articles from an individual will earn him/her academic recognition from peers and may even lead to promotion in the academic profession. Therefore, if lawyers are personally recognised for sharing their knowledge, they get the message that their knowledge is valuable and valued, build up a reputation and fame, thus sending a message to other colleagues for positive working habits.

4.8.1.3 Trust and concern

Generally, trust reduces the fear that others would act opportunistically. Krogh (1998:136) refers to trust as "care" and defines it as, leniency in judgment, courage to voice opinions, the feeling of concern and interest for different view points and experiences within the organisation. An attitude of trust and concern amongst members of the firm is a precondition for knowledge sharing (Chester, 2002). Law firms need to strive for a culture of accepting mistakes and a climate of constructive conflicts that gives members a chance of "falling forward" and of experimenting and taking risks. A lawyer should also develop the ability to trust the information he/she receives through enabling technologies. Such information is considered as second hand information and in most cases is not perceived to be as reliable as that which is received face to face (Ellis, 2001). Face to face access to knowledge or real time equivalents such as chat rooms allows for dynamic and responsive searching while access to data base is static and tend to be one sided.

4 8.2 Knowledge management needs a solid technological platform

It was observed in section 3.10 that although technology is not a panacea for knowledge management, technology has generally played a key role in managing knowledge in organisation (Davenport & Prusak, 1998; Bloodgood & Salisbury, 2001:61; Gottschalk, 2002). Therefore, a thoughtful implementation of information communication technology for the knowledge management process in a law firm is a great way to invigorate a knowledge management initiative. Functional, technical, cultural fit and costs are major variables to

consider in the selection of the appropriate technology for each law firm. Lawyers can no longer afford to be illiterates in the use of information communication technology. Short courses on the use of information technologies for knowledge management should be carried out and every member sensitised on the importance of information communication technologies. It is also crucial for law firms to consider offering short courses on knowledge management to lawyers in order to promote the adoption process of knowledge management in law firms.

4.8.3 Knowledge management initiatives should extend beyond information communication technology

Quite clearly, good technological tools are expected to make big strides in achieving knowledge management by providing the means to create, share, and use knowledge more effectively. However, if a group of people are not sharing knowledge and interacting with each other, information technology is not likely to create it. Knowledge management requires a mix of technical, organisational and interpersonal skills.

4.8.4 Management must be in front of and behind knowledge management

Generally, top management commitment towards a project in an organisation is an efficient lever to the success of the project (McDermott & O'Dell, 2001:78). It therefore stands to reason that if a managing partner in the law firm sensitise the firm that knowledge management is critical to the future growth of the firm lawyers would start to pay attention to knowledge management. If the managing partner addresses the cultural barriers to knowledge management, lawyers will begin to adopt knowledge management in their daily work practices. Generally organisational slack permits and allows time for individuals in an organisation to network (Wiig, 1997; Krogh, 1998). The managing partner in the law firm should provide time for communication and make it possible for members in the firm to network with each other. They should fund and support knowledge management activities, recognise and appreciate lawyers' efforts and achievement in the area of knowledge management and positively communicate the importance of the need to nurture, enhance, and care for knowledge initiatives.

4. 8. 5. Organisational structure

Knowledge management theorists suggest flexible and non-hierarchical structures as the most suitable for encouraging sharing and collaboration across the organisation (Gold et

al., 2001; Disterer, 2003). Law firms may seem very suitable for knowledge management because they are professional bureaucracies where the lawyers enjoy a high degree of professional autonomy with less stringent regulations and hierarchies (Kofoed, 2002). Nevertheless, in order for knowledge management to thrive in law firms, the commitment of top management as well as the involvement of all members in the firm is crucial in shaping the overall direction of the firm.

A good organisational design will likely foster inter-organisational collaboration and knowledge sharing within a firm. The knowledge management literature reveals that in order to reduce formal communication and bureaucracy, modern offices and layouts should be designed in such a way that the offices of professionals and executives are close to each other (Soliman & Spooner, 2000; Disterer, 2003). Skyrme (2002) reported that Scandinavian architects have shown the importance of good office design that takes account of people flows and provide informal areas for knowledge exchange. Therefore, it is important that modern law offices are designed with open space and layout that reduces the distance between law offices and management. Such a layout will foster *ad hoc* informal and face-to-face communication between lawyers, reduce bureaucratic tendencies and ensures easy accessibility to law firms by employees and clients.

4.9 Knowledge management strategy in law firms

Given the technologies for knowledge management, the available techniques, and the awareness of the potential benefits of knowledge management, firms may tend to indulge in knowledge management without adequate preparation and thinking on the basis that knowledge management is useful. In order to increase the chances of the successful implementation of a knowledge management strategy in the firms the following subsection examines some of the factors that must be considered in the project plan.

4.9.1 Clear and articulated business objectives

In response to the challenges to the changing legal environment in chapter 2, the practice of law is becoming more business-oriented. Therefore, to enable a firm measure and evaluate the success of the knowledge management initiative, a clear and articulated business objective of the law firm is essential. A law firm should have a vision of where it is, and where it wants to go, and the resources that are needed to reach there. In defining a firm's business objective, an audit analysis of the internal and external business environment of the firm is essential to determine the firm's competence, strength, opportunities and weaknesses.

An internal analysis involves assessing the function of the business and how business resources such as human resources, information resources, and technology support these functions, while external analysis determines and understands the conditions, forces and changes in the firm's business environment (Synman & Kruger, 2002). No two firms respond to the uncertainties of the delivery of legal information in the same way. Therefore, a firm's business objective is unique and cannot be implemented by looking at what a competitor is doing. After identifying the firm's business objectives, the next step will be to identify the firm's knowledge strategy.

4.9.2 Defining the knowledge management strategy

Generally, for knowledge management to be successful, the knowledge management strategy should be defined, and integrated into the clearly articulated business objectives of the firm (Apistola & Oskamp, 2001; Nathanson & Levison 2002; Rusanow, 2003; Leibowitz, 2004). Therefore, the value of knowledge management in the law firms should be aligned with the business strategy. If a knowledge management strategy is not linked to the business strategy, the knowledge management initiative will not likely accomplish the anticipated goals. A knowledge management strategy provides a framework within which an organisation manages new initiatives aimed at leveraging the intangible assets of the organisation. It also outlines the processes, techniques and technology required for knowledge to flow effectively (Snyman & Kruger, 2002).

4.9.3 Types of knowledge management strategies for knowledge transfer

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. In section 3.7.3 codification and personalization were identified as the two types of knowledge management strategies often used (Sanchez, 1997; Hansen et al., 1999; Butler, 2003). These two different business strategies grounded on the nature of knowledge, address cultural issues differently. Codification focuses on explicit knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts. Personalisation and codification approaches in the law firm therefore need to be integrated so that the benefits of both tacit and explicit knowledge can be gained.

4.9.4 Knowledge management should be prioritised and implemented in phases

Successful knowledge management initiatives in the law firm have generally been approached with a selection of priority areas from a discrete high impact pilot programme to a mid term phase and then the final phase (Platt, 1998; Maiden, 2000; Nathanson & Levision, 2002; Rusanow, 2003). The pilot phase is a relatively small, cheap, and manageable programme aimed at laying down the foundation of knowledge management. Most often, in firms where knowledge management efforts have been tried with unsuccessful results, there is often reluctance to try again and the tendency to dismiss and criticise the whole notion of knowledge management rather than analysing where the prior project failed in order to develop more effective new projects. The pilot phase would enable knowledge managers to educate themselves, learn from their mistakes and raise awareness about the concept and benefits of knowledge management to the rest of the organisation. This is probably the most difficult period and Buckler (2004), refers to the pilot phase as a period of faith. If the pilot phase is successful, the mid term phase will focus on addressing the fundamental challenges to knowledge management. At the final stage, the knowledge management organisation directs the firm to specific knowledge management initiatives aligned with the business objectives of the firm.

4.9.5 Knowledge management requires the right staff

It has been observed that the knowledge management team should constitute a team of competent and flexible members with formidable breath of mind and experience and high level of tolerance and patience for long-term sustainable transformation into knowledge management organisations (Soliman & Spooner, 2000; Chauke & Snyman, 2003). Similar to other organisations, the composition of the knowledge management team in the law firm should be derived from a cross section of disciplines such as information technologist, library and information professionals, lawyers and human resource experts so that the differing needs across practice groups can be addressed. Above all, a senior executive with title of "chief knowledge officer" should be chosen to provide central leadership in the direction and implementation of the knowledge management strategy.

4.9.6 The scope of knowledge to be managed

Understanding the value of the knowledge the lawyer uses to run a practice is an important step in ensuring that knowledge management supports the business as well as practice. For each type of knowledge a firm creates or seeks to capture there is a corresponding

knowledge management initiative. As already stated in section 4.2, tacit knowledge, explicit knowledge and knowledge of the business of law are the different types of knowledge in the law firm. Knowledge resides in many different places from databases and filing cabinets to print material to the lawyer's mind. Law firms need to know what knowledge they possess in order to better mange it and derive the best value from it. An information and knowledge audit will unveil the existing knowledge in the firm and detect existing knowledge gaps in the firm's repositories. It will also assist knowledge managers to understand and identify the tacit knowledge that sometimes flows between individuals. The results of the information and knowledge audit will then be mapped to chart how information flow's through the firms various business processes, how knowledge is transferred throughout the firm, identify who knows what in the firm and detail what information and knowledge exists (Roberts, 2000:6). According to Skyrme (1997), the first main thrust of creating a knowledge-base organisation is to "know what you know" and then to share and leverage it throughout the organisation. A successful knowledge solution will pull all the knowledge resources together in a way that would improve productivity, make the lawyers' work easier and result in greater job satisfaction for the lawyer engaged in transactional work.

4.9.7 Information and knowledge need of lawyers

A critical analysis of the information and knowledge needs of the legal practitioner and the law firm is important because it will reflect in the different types of knowledge management initiatives, tools and supporting architecture used by a lawyer and the firm. It will also enable the firm to decide on the type of information and knowledge to categorise and prioritise for the knowledge management project. The information and knowledge needs of a lawyer are the knowledge that a lawyer desires and demands to enhance his/her performance in legal practice and meet the legal needs of the clients.

Lawyers' needs are diverse, constantly changing, and not amenable to generalisation and are most often reflected by the needs of a particular client and the kind of work a lawyer does. It may not reflect the information and knowledge need of the wider law firm because all lawyers and law practices are not the same. Leckie et al. (1996) observe that within the universe of potentially relevant information, what is required by a particular lawyer would vary and individual demographics such as age, specialisation, professional development, frequency of need, importance of the issue at hand, and complexity of the problem will also influence the needs of the lawyers. The needs of a litigation lawyer are different from those of an office-based lawyer such as a draftsman or commercial lawyer.

Office-based legal work such as drafting, commercial agreements, deeds and wills, do not involve serious legal research. Litigation matters for trial before the High Court and Court of Appeal require a lot of reading and adequate preparation because a lot is often at stake (Otike & Mathews, 2000; Kuhlthau & Tama, 2001). The issues before the High Court and Court of Appeal often involve highly sensitive matters, sometimes concerning a life at risk, such as the penalty for a capital offence. It may require a considerable amount of money and sometimes may involve media coverage. It may present lawyers with opportunities to market their services because winning cases in the superior court may accord lawyers with considerable publicity such that they might not need to scout for business.

Cohen (1969) identified three reasons why lawyers need information and knowledge. First, as counsellor to determine what the law is on a particular problem or how the court would act if the problem before it were ever litigated in order to advise his/her client on some proposed course of conduct. Second, as an advocate, he/she needs information to support an already determined position in order to persuade the court of what the law should be; what law is to be applied and how the law should be applied. Third, lawyers need information to support the client's position or a legal rationale for a proposed plan of action. Feliciano (1984) observed that lawyers sought information in order to provide specific information needed for work in progress and to provide introductory information needed for work in progress. Studies have revealed that lawyers expressed the desire for keeping abreast with recent developments in the law, the latest decisions in the superior court, and to acquire and apply legal know-how, as their greatest information need (Kidd, 1981; Haruna & Mabawonku; 2001). Lawyers may need information to keep up to date with the law because of the complexity and dynamism of the legal literature. Lawyers may keep up to date with changes in the law through attendance at lectures, seminars, and workshops, reading current legal periodicals and through conversations and discussions with colleagues within and out of their establishment.

Similarly, lawyers will not have the same type of knowledge management needs throughout their career. Staudt (2003) classifies lawyers' activities into three stages of professional development as grinders, minders and finders of information. Grinders are lawyers who conduct research and dig up information on new issues that crop up in the firm, draft contracts, handle deposition and argue the motion in court. These activities are predominant in the early years of the lawyers' career. This is because senior lawyers in most law firms tend to delegate these tasks to the junior colleagues with the intention of making them self reliant at an earlier stage so that they will be able to sell their knowledge out to clients at

a rate that would yield profit to the firm. Minders are lawyers that manage clients' matters and maintain relationship with current clients. Management responsibilities in the firm are often entrusted to senior lawyers at the middle of their career. The information needs of minders would be drawn from a variety of internal sources like time and billing systems, document management systems, and external sources like LexisNexis, news reports, web updates and stock market reports. Finders are lawyers who bring in new clients. This activity dominates the third phase of the lawyers' career. When acting as a finder, a lawyer needs information and knowledge on the work process of a particular client. A client centred-portal view is more effective in meeting the information and knowledge needs of these lawyers. While this type of categorisation may be possible in large and corporate firms where each lawyers can specialise in the different functions as finders, minders, and grinders, in most small firms and in particular a one person firm, an individual lawyer does the finding, grinding and minding activities.

In the light if the above, an inventory of a lawyer's information brochure, research, objectives and transaction databases will enable project managers to choose, categorise, and prioritise information and knowledge according to its importance. An information and knowledge management audit should be able to anticipate and detect the overlapping needs of the individual lawyer and the firm so that the law firm's knowledge management initiative should be able to support and integrate the individual lawyer's needs and the firm's needs.

4.10 Conclusion

By focusing on the research questions for sub problem three, this chapter examined the basic concepts and principles of knowledge management within the context of the law firm. Law firms due to the intensity of knowledge work involved in their operations provide a fruitful arena for knowledge management research. A number of conclusions are drawn.

First, tacit knowledge, explicit knowledge and knowledge of the business of law are the three broad categories of knowledge in the law firm. The classification of knowledge in the law firm as tacit, explicit and business of law is due to the fact that elements of tacit and explicit knowledge and the notions of the business of law seem to run through all the other categorisations of knowledge suggested by knowledge management researchers. The key to implementing effective knowledge management in law firm is to pull all these different categories of knowledge together in ways that would improve the organisations performance.

Second most of the literature on knowledge management in law firms revealed that law firms tend to adopt a one dimensional technological approach to knowledge management with considerable emphasis on the use of knowledge-based systems in creating, sharing, and utilising collective knowledge. Besides, the adoption of knowledge management has been limited mostly to large firms.

Third, the tools and technologies for knowledge management ranged from networked computers, emails, telephones, repetitive automated document assembly, Internet and intranet technologies to more sophisticated technologies such as databases and software tools, collaborative technologies, enterprise information portals, expert systems and business and artificial intelligence tools.

Fourth, the main techniques of knowledge management in law firms were identified. These included "form libraries", work product repositories, "brief banks", professional development programmes, and legal research and mentoring programmes, and these have existed from time immemorial in the law firms though not under the banner of knowledge management. What is new and exciting about knowledge management is that as a result of the changing legal information environment, law firms are formally adopting knowledge management. Typical techniques for knowledge management adopted in recent years are in-house know-how and info-bank systems, best practices, client information, conflict management, record management, expertise locator, clause library, professional development programme, client relationship management system, third-party contact database; litigation strategy, client relation management, and conflict checking.

Fifth, it was seen that the different frameworks and models of knowledge management provided guidelines for the understanding of knowledge management in law firms. The four different frameworks for knowledge management considered were, learning organisation, knowledge markets, knowledge management process and the knowledge management strategy. The different models of knowledge management discussed are the intellectual capital model, the SECI ba and knowledge asset model and the Leavitt's diamond organisational model (Diamond Trist) as modified by Edward & Mahling, (1997); Galbraith (1997); and Pan & Scarbrough (1999).

Sixth, it was noted that the successful implementation of knowledge management would improve the overall organisational performance of the law firm by delivering good quality services to the clients, providing professional satisfaction to the lawyers, enhance the economic profitability of the law firm and promote team work. Despite its potential benefits

knowledge management knowledge management still remains a narrow theoretical concept to many lawyers and law firms seem to be having a tough time implementing effective knowledge management. This is due to several cultural, organisational, social, technological and political barriers that need to be tackled before a conducive environment for knowledge management could be established. However, encouraging a culture of knowledge sharing, establishing a solid technological platform, extending knowledge management initiatives beyond technology, developing a common language for communication, adopting a good organisational design, a proper organisational structure and the supportive role of top management are some of the factors that can help to facilitate the successful implementation of knowledge management in law firm. The chapter ends with strategies that may enhance the effective implementation of knowledge management in law firms.

In sum, this chapter provides a knowledge management road map for law firms and by so doing provides a theoretical foundation for empirical findings on the applicability of the concepts of knowledge management within the context of law firms in Botswana. The next chapter therefore locates the methodological framework of the thesis.

CHAPTER FIVE
RESEARCH METHODOLOGY

5.1 Introduction

The overall aim of this study is to empirically[10] determine the guidelines of knowledge management in law firms in Botswana in the light of the changing legal information environment. Although the literature examined in chapters 3 and 4 revealed the enormous potential for knowledge management in law firms, it was also evident that research in knowledge management seems fragmented with extensive theoretical discussions but little empirical evidence. In fact, very little empirical study has been carried out on knowledge management in general and less still on knowledge management in law firms. This leaves a lot to be done in the form of extending, refining, and empirically validating the models and developing the theories and concepts of knowledge management across specific contexts and locations. The body of research on knowledge management may be established and advanced with confidence only by the rigorous application of appropriate methodologies and methods of research.

This chapter establishes the methodological[11] framework of the study. It begins with the philosophical underpinnings governing the different research methods. It then considers the different research methods and the research design chosen for the study. It identifies the target population, discusses the different data collection instruments, validity and reliability issues, ethical considerations and the pilot study. The chapter ends with the techniques of analysis and validation of the empirical data to determine the guidelines of knowledge management in law firms in Botswana.

5.2 Research philosophies

Several long standing epistemological debates such as post-positivism, positivism, interpretive science, critical theory, traditional modernity, post modernism, and behaviourism have engaged methodologists on how best to conduct research or the appropriate research method (Guba & Lincoln; 1994; Myers, 1997; Mwanje, 2001). The research methods

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10 Empirical research is research derived from or relating to experimentation and observation rather than theory. It is research whereby data is gathered to explore and observe rather than to prove or disprove something (Mouton, 2001:144-147).

11 Methodology is the application of scientific procedures towards acquiring answers to a wide variety of research questions (Adam & Schraveldt, 1995).

chosen for this study are centred on the relative value of two fundamentally different and competing schools of thought: positivism (classical), and naturalistic (contextual interpretive school). In order to appreciate the different research methods used, it is crucial to understand these main research paradigms.

Positivists generally assume that reality is external, objective, simple and positive. They describe measurable properties that are independent of the observer. According to the positivists, the truth and reality in nature is that the behaviour of human beings are determined by their social world and are subject to patterns that are empirically observable. Positivist studies focus on facts and generally test theories in an attempt to understanding a phenomenon. Positivism searches for casual explanation and fundamental laws and generally reduces the whole to its simplest possible elements to facilitate analysis. It uses quantitative and experimental methods to test hypothetical-deductive generalisations (Easter by-Smith, 1991; Myers, 1997; Remenyi; 1998 Mwanje, 2001; Amaratunga et al., 2002).

Naturalistic paradigm on the other hand, hold that realities are multiple rather than single, objectivity is a myth, action arises from interactions in circumscribed situations and that meanings ascribed to the words are imperfectly shared at best. They use qualitative approaches to inductively and holistically understand the human experience in the context of specific settings. This approach attempts to understand and explain a phenomenon rather than search for fundamental laws. Naturalistic researchers start out with the assumption that access to reality is only through social construction such as language consciousness and shared meanings. These researchers mostly contribute to hypothesis and theory generation (Easterby-Smith, 1991; Myers, 1997; Remenyi; 1998; Mwanje, 2001; Amaratunga et.al., 2002).

The positivist and naturalistic school of thought seem philosophically different in the sense that whilst the positivists rely on the quantitative research methodology, the naturalistic school of thought uses the qualitative approach to research. However, these distinctions are merely technical in practice. Most often, the choice of a specific method depends more on the underlying philosophical assumptions of the researcher, the purpose of the study, the questions being investigated and the resources available rather than on the underlying philosophical position adopted. Hence, the word qualitative is not synonymous to naturalism nor is positivism synonymous to quantitative. Qualitative and quantitative research may sometimes be both positivist and naturalistic. For example, the research methodology in

this study is informed by both the naturalistic and positivist schools of thought. In order to appreciate the reason behind the philosophical perspectives adopted in this study, it is necessary to understand the different research methods.

5.3 Research methods

A research method is a strategy of inquiry that moves from the underlying philosophical assumption to research and data collection (Myers, 1997). The choice of a research method will influence the way a researcher would collect his/her data and the research skills, assumptions and practices that he/she will adopt. The literature is replete with debate on the qualitative and quantitative research methods.

5.3.1 Qualitative and quantitative research methodology

Quantitative methodology originally developed in the natural science to study natural phenomena is anchored on the positivist philosophy. Amongst the theoretical principles that underlie quantitative research methodologies is the fact that there is only one reality and truth in nature; that reality is objective, simple, and positive, and reflects the fact that human beings are influenced by their social world subject to fixed patterns that are socially observable. Examples of quantitative research methods are survey methods, documentary methods, observations, laboratory experiments, formal methods (econometrics), spatial analytical methods, and numerical methods such as mathematical modelling. Qualitative research methodology on the other hand, developed in the social science to enable researchers study social and cultural phenomenons are informed by the interpretative philosophy. The basic qualitative research principles are openness, communication and the process-nature of the research. Examples of qualitative research are action research, phenomenological study, case study, ethnography and grounded theory (Mwanje, 2001; Powell & Silipigni, 2004). Examples of qualitative research methods are observation, texts interviews, audio and video tapes, participant observation, questionnaires, documents and text analysis, field work, archival research, mechanical recording, photography and researcher's impressions and reaction. A quantitative study investigates the social or human problems based on testing a theory composed of variables measured with numbers and analysed with statistical procedures in order to determine whether the predictive generalisation of the theory holds true. On the other hand, a qualitative study is an inquiry process of understanding a social, cultural or human problem based on building a complex holistic picture formed with words reporting detailed views of informants and conducted in a natural setting (Creswell, 1994).

A number of other distinctions have been drawn between qualitative and quantitative approaches to research which are worth noting. Qualitative approaches are personal and exploratory while quantitative approaches are anonymous and definitive. A qualitative approach provides in-depth understanding and allows insight into behaviour and trends while quantitative approaches measure the level of occurrence and the level of trends and action. Qualitative approaches ask "why" questions, while quantitative studies ask questions such as "how many" and "how often." Qualitative approaches study motivation while quantitative studies examine action. Qualitative approaches enables discovery while quantitative approaches provide proof (Mwanje, 2001:22).

Quantitative research analysis relies on quantitative techniques revolving around the notions of quantities in numeric form. These techniques add precision to measurement; facilitate economy of description, validate statements, enhance accuracy in predictions and objectivity in social research and are suitable for the decision-making process in society. Examples of quantitative techniques are statistical techniques, programming techniques, descriptive statistical methods, probability theory, univariate analysis and multivariate analysis. Qualitative research analysis on the other hand, focuses on qualitative techniques characterised by modes of gathering data in non numeric character. These techniques enable the researcher to obtain in-depth responses about what people think, do, and feel, gain insight into attitudes, beliefs and motives of the target population, and provide an overall better understanding of the situation.

It is worth noting that qualitative and quantitative research methods tend to overlap. For example, interviews, and questionnaires are techniques for gathering data for both qualitative and quantitative studies. Often, researchers have to make a choice between qualitative and quantitative approach to research. Most often the choice of methodology depends on the insight to be gained in a particular study. However, establishing a clear cut distinction between qualitative and quantitative research methods is often debatable. This is because in some studies, quantitative and qualitative research approaches may be complementary of each other in such a way that the researcher may move towards a middle ground that bridges between the two approaches by developing a different research method and technique in the same study. This technique is known as triangulation- the approach adopted in this study.

5.3.2 Triangulation

Triangulation is the combination of qualitative and quantitative methodologies in the study of the same phenomenon. The effectiveness of triangulation rests on the premise that the weakness in a single method would be compensated for by the counter-balancing strength of the other (Easterby-Smith et al., 1991; Yin, 1994). While qualitative and quantitative research methods have different strength and weaknesses, triangulation provides a bridge between the two. Four different types of triangulation have been identified viz; data triangulation where data is collected at different times and from different sources; investigator triangulation where different investigators independently collect data; methodological triangulation where both qualitative and quantitative technique are employed and; triangulation of theories where theory is taken from one discipline and used to explain a phenomenon in another discipline. When triangulation occurs, the study achieves both depth and generalisation.

5.3.3 Dominant research methodologies in knowledge management studies

Most empirical researches in knowledge management have adopted a qualitative research approach with case study and surveys as research designs. For example, Squier & Snyman (2004) adopted a qualitative case study approach in a study of knowledge management in three financial institutions in South Africa. Questionnaires and interviews were used as methods of data collection. Okunoye & Karsten (2001) in a study of the relationship between information technology infrastructure and knowledge management, adopted an exploratory case study approach. Semi-structured interviews complemented with short term on-site observations, survey with quantified responses, and the analyses of organisational documents were used as methods of data gathering. Ndela & du Toit (2001) conducted an empirical survey in the Eskom Transmission Group Johannesburg, South Africa to investigate an understanding of knowledge management concepts amongst business leaders. In a study of knowledge management and knowledge transfer in the public sector at the Ministry of Entrepreneur Development of Malaysia, a case study qualitative approach was adopted and questionnaires were the sole method of data collection (Syed-Ikhan & Rowland 2004). Forstenlechner (2006) used a case study approach with questionnaires and semi structured-interviews in a study on the effect of knowledge management on law firm performance. Hunter et al. (2002) also adopted a case study approach with sem-structured interviews in a study on knowledge management practices in five Scottish law firms.

Qualitative methods have mostly been adopted in unstudied or under-studied areas due to

the need to expand on the knowledge in those specific areas, generate new theories and gain new insights. The dominance of this approach in knowledge management studies may seem appropriate because it confirms the need to explore and generate new theories in knowledge management. In spite of the fact that the concept of knowledge management has been around as long as one's memory could go, research on knowledge management is fairly new and fragmented with divergent literature and theories across different contexts and locations.

Nonetheless, quantitative research methods and combined methodological approaches are not uncommon in knowledge management studies. Gottschalk in his studies on knowledge management in the law firms adopted a quantitative research approach (Gottschalk, 1999; Gottschalk, 2000; Gottschalk, 2002; Khandelwal & Gottschalk, 2003). Similarly, Okunye & Karsten (2001) in a study of information technology infrastructure and knowledge management in Sub-Saharan Africa adopted a quantitative approach. Also, du Plessis & du Toit (2005) conducted a quantitative survey of knowledge management in South African law firms using questionnaires as a method of data collection.

Beccera-Fernadez et al. (2004) calls for a blending of both quantitative and qualitative research approaches in knowledge management in order to get the most complete picture. They consider qualitative knowledge management assessment most suitable during the early stages of the knowledge management initiative when experience levels are generally low but recommend quantitative assessment measures when a company gains more experience and greater relevance. Grossman & McCarthy (2005) posit that since the intellectual capital of organisations are inherently intangible and influenced by a complex web, the benefits of using a blended approach are obvious due to socio-political and cultural factors. The researcher's choice of methodology therefore seems consistent with the on-going research need for blending qualitative and quantitative methodologies in knowledge management studies.

5.3.4 Justification of methodology adopted for the study

This study builds on the aforementioned methodologies in knowledge management studies, by adopting the triangulation of qualitative and quantitative methods of data collection (descriptive and exploratory surveys, and qualitative interviews) and data analysis (descriptive statistics and content analysis). This is due to the nature of the problem under consideration, the nature of data to be collected and the questions to be addressed. It has been reported that if the questions are related to "how often", then quantitative methodologies

are preferable but if the questions are "why" and "how" questions, then there is the need for qualitative methods (Mwanje, 2001; Babbie, 2003; Powell & Silipigni, 2004). The structure and content of the research questions in this study seek to find answers to both the "how" and "why" questions. Also, the objectives set out in this study (determining the guidelines of knowledge management in law firms in the light of the changing legal information environment) dictates the need for a complementary research method that will provide various dimensions and facet to the problem.

By combining qualitative techniques along with quantitative techniques this study focuses on their relevant strengths in an interrelated and complementary manner. The quantitative data helps with the qualitative side of the study during design by finding representative samples and locating deviant samples while complementing the qualitative data results obtained from analysis based on words and phrases. On the other hand, the qualitative data assist with quantitative side of the study during design by aiding with conceptual development and instrumentation. Both forms of data are integrated in a complementary manner to provide a holistic picture of knowledge management pattern in law firms.

Triangulation provides a considerable practical advantage in the study of new and understudied areas because rich insight would be generated (Amaratunga et al., 2002). It has been observed that knowledge management is a young discipline from which neither a codified universally accepted framework nor standard methodology have been established (Grover & Davenport, 2001; Rubenstein-Montano et al., 2001; Grossman & McCarthy, 2005). Very little or no research has been carried out on knowledge management in law firms in Botswana and it is hoped that the triangulation technique will generate in-depth knowledge, provide valuable insight on guidelines for knowledge management and validate the findings of the knowledge management patterns in the law firms in general.

5.4 Research design

Having decided on the general approach of the research, the next step was to identify one or more specific research designs that will be adopted to obtain the necessary data. A research design is a logical sequence that connects empirical data to a study's initial research questions and ultimately to its conclusions. In a sense, the research design is the blueprint of research dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyse the results (Yin, 1994). Typical examples of research designs that may be employed to gather data are survey research, experimental research, historical research, operational research, system analysis,

Delphi study, content analysis, bibliometric and case study. This study adopts the positivist and naturalistic paradigms and advances the survey research.

A survey research in this case called an environmental scan, is a research strategy where one collects data from all or part of the population to assess the relative incidence, distribution and interrelation of naturally occurring variables (Hafner, 1998; Powell & Silipigni, 2004). It is a data collection technique that is employed to gather data from people by means of interviews and questionnaire after which the results are quantified and amenable to statistical treatment.

The survey research design is considered the most appropriate research design because it is fast and straight forward compared to any other method and tends to be relatively inexpensive. Another key strength of the survey research design is that if properly done, it would enable one to generalise from a small group to the large group from which the subgroup has been selected. Also, surveys have been applied in most knowledge management studies. For example, a review of research in knowledge management identified 59 surveys conducted between 1997 and 2001 (Chauvel & Despres, 2002), with knowledge management turning around six dichotomous dimensions.

Surveys may be explorative, descriptive or explanatory though quite often, most studies have elements of these three (Babbie, 2001). Exploratory surveys, often conducted as qualitative research, are adopted when the subject is fairly new with the aim of developing new insight, increasing the researcher's familiarity with the phenomenon in question, or just out of curiosity. It does not seek to test hypothesis but rather provide answers to the research questions and concepts, provide solutions and formulate problems for more precise investigation (Powell, 1997). Descriptive survey on the other hand, observes and describes a situation, while explanatory survey seeks to answer the "why" questions. This study is mainly an exploratory survey design with traces of descriptive and explanatory survey. The study is descriptive in that it seeks to determine how knowledge management is manifested in law firms in Botswana. An element of explanatory survey emerges as the study examines why knowledge management is crucial for law firms.

One fundamental guideline of a survey research method is to develop the research questions that would form the basis of the inquiry. Considering that this study does not intend to test any hypothesis but rather seeks to provide comprehensive answers to the research questions. The empirical findings of this study are focused on answering the research questions of sub problem four and five.

5.5 Research questions

The main research questions that give direction to the empirical findings are

- ▸ What are the different categories of knowledge existing in the law firms in Botswana?
- ▸ What factors would motivate the adoption of knowledge management in your firm?
- ▸ What are the tools and techniques used for knowledge management in law firms in Botswana?
- ▸ How do law firms in Botswana approach knowledge management?
- ▸ What factors are critical to the success of knowledge management in law firms in Botswana?
- ▸ What factors inhibit the success of knowledge management in law firms in Botswana?
- ▸ What are the benefits of knowledge management for law firms in Botswana?
- ▸ What role do other agents and institutions play in knowledge management in law firms in Botswana?
- ▸ How can knowledge management be implemented successfully in law firms in Botswana?

5.6 Population

Population is an important factor for consideration in survey studies. Population is the group or aggregate that the researcher is dealing with from which one wishes to generalise the results of the research study. The population for this study is lawyers in law firms in Botswana. The other branches of the legal profession in Botswana such as Judges and magistrates, legal academics at the university of Botswana and legal practitioners in the Attorney General's Chambers do not constitute part of the target population. This is because the objective of the study is to determine the knowledge management strategies in law firms that is, private legal practitioners in Botswana. The survey population is the target group of people who participate in the study. The target population of this study is the latest sampling frame[12] requested and obtained from the Botswana Law Society consisting of a list of registered law firms and private practitioners as at 15 October 2007. According to the sampling frame, there are currently 115 registered law firms in Botswana and a total of 217 lawyers represented in the table below.

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12 The sample frame used interchangeably with the population list is the actual list or unit in the population from which the sample or some part of the sample is selected (Hafner, 1998; Powell, 2004).

The table reveals a high concentration of law firms in Gaborone as compared to other parts of the country.

Location	Total Number of Firms	Total number of Lawyers
Gaborone	84	171
Francistown	15	23
Lobatse	2	4
Maun	7	10
Selebi Phikwe	2	2
Palapye	3	4
Jwaneng	2	3
Total	115	217

Source: *Law Society of Botswana, October 2007*

Table 5.1 Distribution of law firms in Botswana

However, as part of the exploratory study; judges, magistrates, law librarians, the Law Society, legal consultants and legal academics were interviewed because they work hand in hand with the law firms and were considered important stakeholders to knowledge management function in law firms.

5.7 Sampling plan or design

The sampling plan design is the plan for selecting a sample from the population. The objective of any sampling plan is to secure a sample which would represent the characteristics of the population. A sample is a selection of units from the total population to be studied that represents a portion of all the elements in a population (Hafner, 1998; Powell & Silipigni, 2004). Generally, two basic types of sampling designs are used namely, non probability sampling and probability sampling. Probability sampling is more scientific and useful. Although non-probability samplings are much cheaper and easier to use, it is often difficult to state the probability of a specific element of the population represented in the sample (Powell & Silipigni, 2004). Examples of probability sampling are simple random sampling, systematic random sampling, stratified sampling and cluster sampling. Examples of non probability sampling are convenience, haphazard, purposive, self-selected, incomplete and quota sampling (Hafner, 1998; Powell & Silipigni, 2004).

The general rule of the thumb when determining a sample size in quantitative studies is that the larger the better and in most cases probability samples less than 100 are considered unlikely to represent the entire population (Babbie, 2001; Hafner, 1998; Powell & Silipigni, 2004). It must however be noted that an unnecessarily large sample size in this case of an exploratory study, may be time consuming and expensive. With regards to qualitative studies, what is critical is the depth of richness and complexity of the data as no formula provides the "correct" sample size. One method in qualitative studies is to gather data until the critical elements of the study have become saturated (Powell & Silipigni; 2004). Be it a qualitative or a quantitative study, there is generally no guarantee that a sample will result in an unbiased representation. Besides, the assumption that the findings of a sample would be replicated in the population is not good enough (Hafner, 1998). Bearing these facts in mind, and the fact that this study has adopted the triangulation technique, and also considering the desire to provide all lawyers a chance to participate in the study coupled with the fact that the sample frame of lawyers in law firms in Botswana is not very large (217 lawyers), a census[13] of the total population was adopted for the questionnaire survey. By adopting a census one is sure of the representative nature of the population and that the objectives of the study would be attained.

Interviews were held to complement the census. The researcher adopted the purposive sampling technique and limited the interviews to law firms in Gaborone. The researcher deliberately chose Gaborone to administer the interviews because of accessibility and proximity and the fact that a majority of the lawyers are based in Gaborone (table 5.1 and 5.2). According to Taylor & Bogdan (1998), an ideal research setting is one where the observer has easy access, is able to establish immediate rapport with informants and can gather data that is directly related to the research interests. Carrying out studies in law firms require a lot of collaboration, communication and co-ordination because lawyers are always pressed for time. Another reason is the feeling that the law firms in Gaborone are relatively bigger and exposed to more entities and opportunities for knowledge management practices than law firms in other towns. Law firms in Gaborone are a representative sample (tables 5.1 and 5.2) of law firms' nation-wide and could provide information on a great deal of issues of central importance to the purpose of the research.

Purposive sampling ensures maximum variation within the context of the research question. According to McNeill (1992), purposive sampling occurs when a researcher chooses a particular group or place to study because it is known to be the type that is wanted.

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13 A census is a count or survey of all the elements in the population (Powell, 2004:93).

According to Powell & Silipigni (2004), purposive sampling is based on one's knowledge of the population and the objectives of the research. The researcher also used the purposive sampling technique in the selection of 15 lawyers who were interviewed. The choice of a lawyer to be interviewed depended on the willingness of the lawyer to participate and other insights that had to be gained. Lawyers knowledgeable in knowledge management in the firm were the preferred lawyers of choice because of the assumption that these lawyers are knowledge-rich individuals who understand knowledge management concepts and may provide some additional insights that may not be gained from the questionnaire. To be suitable for interview, the lawyer must have worked in the law firm for a maximum of at least one year. The one year eligibility criteria is due to the assumption that within this period they would have familiarised themselves with the knowledge management activities in the firm.

No. of lawyers	No. of firms in Gaborone	No. of firms in Francistown	No. of firms in Lobatse	No. of firms in Maun	No. of firms in Selebi-Phikwe	No. of firms in Palapye	No. of firms in Jwaneng
Sole practitioners	46	9		4	2	2	2
2 lawyers	17	5	2	3		1	
3 lawyers	10						
4 lawyers	7	1					
5 lawyers	1						
7 lawyers	1						
8 lawyers	1						
12 lawyers	1						
Total number of firms	84	15	2	7	2	3	2

Source: *The Law Society of Botswana October 2007*

Table 5.2 Distribution of law firms in Botswana according to number of lawyers

The above table shows the high concentration of law firms in Gaborone from the sole practitioners to the firms with the highest number of lawyers thus justifying the researchers' selection of this site for administering the interviews. Gaborone alone has 46 sole practitioners, while the rest of the country (Francistown, Selebi Phikwe, Lobatse,

Mahalapye. Maun, Jwaneng, and Palapye), have just 19. Out of 28 firms in the country with 2 partners, Gaborone has 17. All the firms with three lawyers are based in Gaborone. 7 out of 8 firms in the country with 4 lawyers are based in Gaborone. The only firms with five lawyers are based in Gaborone. It can be seen from the above table that what can be termed as the "relatively big size firms" in Botswana, that is, firms having 7 to 12 lawyers are also based in Gaborone.

5.8 Data collection instruments

The instruments for data collection in this study were literature on the subject and a combination of data sources (data triangulation) such as open and closed-ended questionnaires, and semi-structured interviews. As already noted, the combination of these two instruments will enable the strengths of one method to counteract the weaknesses of the other and it will also help to check the validity of the findings and generate a rich profile on knowledge strategies for the law firms.

The literature on the subject provided secondary data that was supportive of the empirical research conducted in this study (Powell & Silipigni, 2004). Chapters 2, 3, and 4 of this study provide a comprehensive literature review on the changing legal information environment and knowledge management theories and principles. This review shows that most of the research studies originate in the United States, United Kingdom and Canada. Besides a few studies in Nigeria and South Africa there have been no serious studies of knowledge management in other African countries. This study based on the findings of a survey of law firms in Botswana is an attempt to provide insight into knowledge management in an African context. The questionnaires and the interviews were used in the collection and validation of empirical data in order to explore the strategies for knowledge management in law firms.

The questionnaire was constructed with advice and input sought from the researcher's promoter, expert opinion and colleagues who are knowledgeable in this area. Bearing in mind that the subjects under study are lawyers who are always hard pressed for time and who are usually very sensitive to issues of confidentiality and the security of information, the questions were designed in a way that complete anonymity and confidentiality of the lawyers was ensured. The researcher also ensured that the questions were not unnecessarily long and boring and could be completed within a maximum of ten minutes.

The questionnaire consists of four parts. The first part contains general questions that

determine the demographic information and other necessary information for creating the respondent's profile. The second part was questions on the organisational characteristics of the firm. The third part poses questions that allow the participants to provide information on knowledge management patterns in law firm. The final part of the research questionnaire was to identify the different stakeholder of knowledge management in law firms and their role in facilitating knowledge management in the law firms.

The questions are structured in three different ways. First there are questions that consist of a check list of items where the subject has to respond by indicating a "Yes" or "No," by choosing the best answer or by choosing a particular sub division or category. Second, a majority of the questions are closed ended questions that seek to find the opinion, feelings, experiences, and views of lawyers towards knowledge management. In order to avoid mechanical responses, the questions are stated in alternate forms. The final category of questions are designed as open ended questions known as the "other" category with the intention of allowing the participants to reply freely and share any observations, remarks or elaborate on the knowledge management survey without having to select one of the several fixed responses. The effect of the open and closed ended questions is to enrich the information that can be obtained from the respondents.

Literature abounds with the benefits of questionnaires and interviews as survey instruments (Busher & Harter, 1980; Babbie, 2003; Powell & Silipigni, 2004). The advantages of using the questionnaire as a survey instrument for this study are that it facilitates wider geographic contact. Logistic expediency, and time constraints, necessitates the use of this method. It maintains anonymity and ensures uniformity of measurement from one unit of measurement to another thus also enhancing reliability. The quantitative data obtained from the closed-ended questionnaires are appropriate to assess the behavioural and descriptive components and therefore serve as an opportunity for the respondents to provide frank and honest answers and enhances reliability. On the other hand, the qualitative data from semi-structured interviews and open-end questionnaires generate a range of qualitative data that enables the researcher to develop an in-depth understanding of the situation and complement the results of the quantitative data obtained from the closed ended questions.

The semi-structured interview is a highly flexile qualitative research method for collecting in depth data in an interactive manner. Kvale (1996) describes qualitative research interview as an interview in which the purpose is to gather description of the words of the respondents with respect to interpretations of the meaning of the described phenomena.

The semi-structured interview aims at establishing a conversational partnership between the researcher and the respondent and provides the opportunity for the researcher to follow up on probes provided by the respondents thus enabling the acquisition of additional information not disclosed in the questionnaire. Considering that lawyers are often under time constraints and may not settle down to complete a questionnaire or may even complete it mechanically, interactive discussions from interviews may offer more substantive input. The response rate of interviews is said to be higher than that of a questionnaire (Powell, 1997). Normally it is 100%.

5.9 Construction of instrument

For the most part, the questionnaire (appendix 2) was constructed with modification from extensive review of literature and previously used instruments in order to enhance its reliability. Some of the instruments that have been developed over the years to assess knowledge management and organisational effectiveness are: the knowledge management assessment tool by the American productivity and quality centre; expedient knowledge inventory by strategy 1st, the organisational effectiveness index by human synergistic, and Liebowitz & Chen's (2001) knowledge sharing effectiveness inventory developed in laboratory of knowledge management at the University of Maryland Baltimore (Liebowitz & Chen 2003). A majority of the closed-ended questions consisted of a five point structured pre-coded[14] Likert-type ordinal/ interval scale represented as follows:

(a) Strongly agree

(b) Agree

(c) Neutral

(d) Disagree

(e) Strongly disagree

A major strength of the above five point pre-coded Likert scaling is that during analysis, the researcher was able to compile the group of participants with the highest score on the total pool of items (strongly agree, and agree) with respondents with the lowest score (disagree and strongly disagree) while eliminating the middle group (neutral) whose attitude may be inconsistent or unclear. Likert pre-coded scaling was adopted because it has been widely used in instruments measuring opinions, beliefs and attitude and it facilitates the analysis of data referred to as direct data entry.

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14 Numerical scale assigned to recoded responses (Busher & Harter,1980).

The interview schedule was divided into different sections with relevant questions provided in each section as seen in table 5.3 below.

Section I: Role and responsibility of the lawyer to the firm	What position do you have in the firm? Are you a sole proprietor, associate lawyer, partner or managing partner?
Section 2: The changing legal information environment	May you indicate some of the changes that you have been experiencing in the legal information environment from when you started practising until present? What are some the factors that have brought about these changes? What are the consequences of these changes to your law firm?
Section 3 Knowledge management in law firms in Botswana	What are the types and categories of knowledge in your firm? What do you understand by knowledge management? Have your firm adopted knowledge management as one of its initiatives? If no, why? What are some of the tools and techniques of knowledge management in your firm? What are some of the knowledge management practices in your firm? What are some of the benefit of knowledge management that you have observed in your firm?
Section 4: Investigating the enablers and barriers to knowledge management in the law firms in Botswana	What are some of the factors that are instrumental to knowledge management in your firm? What do you think are the major barriers to sharing knowledge in your firm?
Section 5: How can knowledge management be implemented effectively in the law firms in Botswana?	What are some of strategies for effective knowledge sharing in your firm? Do you encourage tutoring and mentoring? Are there rewards and other incentives for sharing knowledge in your firm?
Section 6: The role of other agents and institutions in facilitating knowledge management initiatives in law firms in Botswana	What are the different agents and institutions that may assist in facilitating knowledge management in your firm? How do these agents and institutions assist you in knowledge management?

Table 5.3 Semi-structured interview guide

5.10 Validity and reliability issues.

Research is said to be valid when conclusions are true. It determines how good an answer is provided by the research. On the other hand, reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions (Then, 1996; Powell, & Silipigni, 2004). Reliability is essentially repeatability. It deals with the data collection process to ensure consistency of results. The goal of reliability is to minimise the errors and biases in a study and ensure that if a later investigator follows exactly the same procedure, the same findings and conclusions would be attained. It is worth noting that the

population may change as well as knowledge management in law firm may change within the course of the study. So answers are valid and reliable for a short time. However, it provides enough exploratory information for identifying strategies which are the ultimate goal of the study.

The perspective of validity differs within the context of qualitative and quantitative research methodology. In quantitative methodology, the measure of validity is often considered under internal validity, external validity or constructs validity (Gill & Johnson, 1991; Yin, 1994; Powell & Silipigni, 2004). Internal validity refers to whether or not what are identified as the causes actually produce what has been interpreted as the "effect" or "responses" and checks whether the right cause-and-effect relationships have been established. Thus, internal validity focuses more on the way results support conclusion. External validity is the extent to which any research findings can be generalised beyond the immediate research sample or setting in which the research took place. Construct validity which is similar to face validity and content validity is the extent to which an instrument measures the construct or concept it intends to measure. This validity of measurement is often based on logical judgment and external criteria such as expert opinion. Preliminary interviews to lawyers were conducted after which the questionnaire was critically reviewed to ensure that there is some similarity and complementarities between the interview questions and those in the questionnaire. The questionnaire was modified taking into account the feedback and suggestions from the promoter; and opinion was sought from experts in knowledge management research to evaluate the instrument with regard to comments on language, structure and general presentation and content and any methodological flaws of the instrument before a formal pre-test of the instrument.

While the concepts of internal and external validity and reliability have been very crucial in quantitative studies, qualitative researchers have distanced themselves from the quantitative paradigm by developing the following four criteria in ensuring trustworthiness in qualitative studies: credibility (in preference to internal validity); transferability (in preference to external validity and generalabilty); dependability (in preference to reliability) and conformability (in preference to objectivity), (Guba,1981; Easterby-Smith,1991; Yin,1994). Some of the strategies that need to be considered in order to meet the above criteria and therefore ensure trustworthiness in qualitative studies are triangulation, interactive questioning with the use of probes, rephrasing of questions to test if the respondent is honest, opportunities to scrutinise the instrument by the promoter and peers, frequent debriefing session between student and promoter to widen the researchers vision, and an in-depth methodological

description provided in the study and examination of previous findings (Shenton, 2004).

Bearing in mind that this study adopted the qualitative and quantitative research methods the above measures were considered in this study in order to ensure the internal and external validity of the quantitative data and the credibility, transferability dependability and conformability of the qualitative data.

5.11 Ethical considerations

Social science researchers have emphasised the importance of observing the necessary ethical principles when dealing with human subjects (Powell, 1997; Mwanje, 2001; Powell & Silipigni, 2004). The responsibility to observe the ethical principles is particularly important in this study because the subjects under considerations are lawyers who by the nature of their profession are very sensitive about the security and confidentiality of information. Therefore, the researcher is compelled to create a "win-win" relationship with the research population by ensuring that the subjects are pleased to participate candidly while convincing the community at large that the conclusions to the study will be constructive.

The following ethical principles were observed. In keeping with the Botswana Government research requirement that permission to conduct research be obtained from the Office of the President, the researcher applied for and obtained a research permit on December 2007 (appendix 5). A covering letter enclosed in the questionnaire and the opening statement for the interview clearly explained the nature and purpose of the study informing the subjects that their participation was voluntary and that the anonymity and confidentiality of every participant was going to be respected. The participants were informed that the results of the findings would be made available to the Botswana Law Society and the University of Botswana library and to each firm on demand so that the subjects could relate with the findings. Finally, upon completion of the research all confidential data such as interview transcripts and list of subject names will be destroyed.

5.12 Pilot study

A pilot study was conducted in preparation for the study. Bell (cited in Naoum, 1998:87) describes a pilot study as getting the bugs out of the instrument so that the subjects in the main study would experience no difficulty in completing the instrument and so that one can carry out preliminary analysis to see if the wording and format of the questions would present any difficulty when the main data is analysed. The pilot study validates

the research method and research approach. It provided a trial run for the questionnaire which involves testing the wording of the questions and identifying ambiguous questions and testing the technique that would be used collect the data. The pilot study provided the researcher a preview of the type of responses to be anticipated and determined the optimum length of time in answering the questionnaire. It also enhances the structure and the interviewing skill of the researcher and assisted in the development of a preliminary protocol for analysing interviews. It also helped to refine the data collection plans with respect to both content and the procedure that was followed.

The piloting procedure involved the administration of the questionnaires and interview to six legal practitioners known to the researcher. Three are legal academics who are practising lawyers while the other three are from three different law firms. The responses to the questions and the various comments were used to improve on the final survey instrument. This process went through a number of stages until the questionnaire and interview was deemed suitable for the research.

5.13 Data collection procedure

Data was collected in three simultaneous phases. The first phase involved the distribution and collection of the questionnaire and the second involved the face-to-face semi- structured interview and telephone interviews with the lawyers in the law firm. A third phase was interviews conducted with other stakeholders of knowledge management in law firms such as the law librarian, legal academics, Law Society, legal consultants and some magistrates and judges.

The letter of introduction to the participants included an explanation of the purpose of the study. The questionnaire was accompanied by a covering letter which described the objectives of the survey, assured the participants of confidentiality of the information, and requested for returns to be forwarded by a deadline. The terms were defined in the covering letter of the questionnaire to provide minimum deviation in participants understanding of the terminologies used. The informed consent of the lawyers was solicited for the interviews; however, the terms were deliberately not defined during the interviews because it intended to explore the subjects' understanding of knowledge management without being influenced by others' ideas.

A copy of the questionnaire was emailed through the Law Society as an official email to all the lawyers in Botswana. The researcher also emailed the questionnaire to all the lawyers

in Botswana. As a follow up to the emailed questionnaires, the researcher personally administered the questionnaires to all the lawyers in Gaborone eliciting their co-operation in completing and returning them. Follow up questionnaires were mailed by post to the lawyers in other parts of the country with a self-addressed and stamped envelope provided for return of completed questionnaire. There was no attempt to coerce participants but rather, the researcher ensured that informed consent was obtained. The researcher paid regular visits at the law firms to remind the lawyers and follow up telephone calls were made and emails resent reminding the lawyers to complete and return the questionnaires.

At the same time that the questionnaires were delivered, the researcher conducted interviews with the aid of a semi-structured interview guides to fifteen lawyers in different law firms in Gaborone firms. The interview was designed to find out the participants understanding of knowledge management and tried to uncover variations in their understanding of the different concepts in the questionnaire. As already noted, the precise number of the interviewees and the choice of the lawyers interviewed were influenced by the specific knowledge management insight to be gained. The researcher gathered data from these lawyers until the critical elements of the study were understood. Field notes were written-up soon after the interviews. Interviews were also conducted with the following stake holders of knowledge management in law firms: the law librarian, legal academics at the Department of law at the University of Botswana, legal consultants and some magistrates and judges. The distribution and collection of questionnaires and interviews took place over a period of three months from 7 December 2007 to 20 March 2008. After the collection, the data was checked for completeness, comprehensibility, consistency and reliability. This is a step referred to as "cleaning" the data in order to eliminate numerous problems that may arise during data analysis (Powell & Silipigni, 2004). This involved reading the results, looking out for surprise responses and verifying the coding of data, after which data analysis was undertaken.

5.14 Data analysis

The main purpose of the data analysis method used was to sum up observations in a way that would provide answers to research questions. The qualitative and quantitative data analysis technique was used to analyse data. The Statistical Package for Social Scientists (SPSS) version 15.0 was used for the analysis of the data collected from the close-ended questionnaires. This software package was chosen because it offers the most comprehensive solution for reporting, modelling and analysis of data (Powell & Silipigni,

2004). It also offers a variety of data formats and programmes that make it easy to edit and transfer data from one programme to another. It is user friendly and easily accessible to the user. Descriptive statistics was used to represent quantitative data. The data was put in spreadsheets and statistical graphics for visual presentation of the results.

On the other hand, qualitative data derived from the open-ended questions and the interviews were coded using thematic content analyses. Content analysis is a systematic, objective, qualitative analysis of the occurrence of words, phrases and concepts in books, journals, videos, and other kinds of materials (Powell, 1997). Qualitative data analysis consists of three concurrent, interactive and cyclical flow of activity known as data reduction (process of selecting, focusing, simplifying, abstracting and transforming data in written-up field notes or transcriptions); data display and conclusion drawing, and verification that feeds back into the research design up to the last moment of data gathering (Miles & Huberman, 1994; Powell & Silipigni, 2004).

Qualitative data may be analysed by pattern matching, explanation building or by time series analysis (Yin, 1994; Amaratunga et al., 2002). The pattern matching logic techniques was adopted for analysing qualitative data. It is known to be one of the most desirable methods for qualitative data analysis. This method uses an a priori theory for analysis by enabling a comparison between empirically-based patterns with the predicted pattern. If similar results occur the evidence is said to describe the same phenomenon and it is known as "literal replication," if on the other hand, the qualitative analysis produce different results from the theory, it is known as "theoretical replication". This has the advantage of controlling deviations that occur in the analysis of quantitative and qualitative data. The results of the qualitative and quantitative analysis were summarised, consolidated and presented as the survey findings.

5.15 Problems encountered during data collection

It was not easy to obtain the cooperation of lawyers to fill the questionnaire because they are often very busy and felt that the time spent on completing the questionnaire was wasted time. This was complicated by the fact that data collection started by the end of the year (December 2007), a time when lawyers are under pressure to meet with deadlines and round up files and extended into the beginning of a new year a time when they are trying to settle in. Hence, data collection was extended to a period of three months instead of the initial two month planned.

Some law firms moved offices during this period and the researcher was faced not only with the challenge of tracing these offices but also having to deliver another questionnaire because previous questionnaire were usually misplaced in the course of moving offices.

Notwithstanding the above limitations, the researcher did manage to obtain some useful data from the willing participants that enabled the objectives of the study to be realised.

5.16 Conclusion

This chapter established the methodological framework of the study. The two major schools of thought that anchored the different research methods are classical school (positivist) for quantitative research methods and naturalistic school (interpretive) for qualitative research methods. While positivist belief that the world is external, objective, focuses on facts, and opt for large samples in research, the interpretivist on the other hand, consider the world as socially constructed and opt for small samples that are investigated in depth over time and the researcher is part of what is observed. Nevertheless, the choice of a specific method most often depended more on the philosophical assumptions of the researcher given the research questions, and the resources available rather than uniformly adhering to prescribed canons of positivism or phenomenology. To this effect, this study was informed by both the positivist and naturalistic school of thought.

It was shown that this study is mainly an exploratory survey design having elements of descriptive and explanatory survey. The study advances the use of triangulation in knowledge management studies whereby both quantitative and qualitative research approaches are considered complementary of each other with a dominantly qualitative and less dominantly quantitative emphasis. The nature of data to be collected and the research questions influenced the choice of this research method.

The main population of the study are lawyers in firms in Botswana while the target population consisted of the sampling frame of 217 lawyers obtained from the Botswana Law Society. In order to ensure the representative nature of the population and meet the objectives of the study, a census of the sampling frame was considered as the survey sample. The researcher purposively limited the interviews to lawyers in law firms in Gaborone and also used the purposive sampling technique in determining the lawyers to be interviewed. The law librarian, legal Consultants, some judges and magistrates, legal academics at the Department of Law at the University of Botswana and some members of the Law Society were also interviewed.

The instruments used for data collection were literature review, open and closed-ended questionnaires and semi structured interviews. The questionnaire was constructed with modification from the extensive review of literature and previously used scales.

The following measures were taken to ensure trustworthiness in the study: expert advice, with regard to comments structure and general presentation of the research instrument, positive criticism from peers, triangulation, interactive questioning during interviews with the use of probes. The frequent debriefing sessions between the promoter and the researcher widen the researcher's vision.

To ensure that ethical principles were observed, the anonymity and confidentiality of the respondent was respected and on completion of the study, all confidential data was to be destroyed. The informed consent of the lawyers was solicited for the interviews.

A pilot study conducted before the study validated the research method and approach and provided a trial run for the questionnaire. The questionnaire was only considered suitable for data collection after the questions and comments from the pilot study were integrated into the revised instrument.

Data was collected simultaneously in the following three phases: the distribution and collection of questionnaires, face to face interviews with lawyers in the law firm, and interviews with other stakeholders of knowledge management.

The Statistical Package for Social Scientist (SPSS) version 15.0 was used for analysing data collected from the closed- ended questionnaires. On the other hand, qualitative data such as the open-ended questions and the interviews were coded using thematic content analyses and data was analysed by adopting the pattern matching logic technique. The findings of the qualitative and quantitative data on knowledge management in law firms in Botswana were analysed and summarised and formed the basis for discussions in the next chapter.

CHAPTER SIX
DATA ANALYSIS AND RESULTS OF THE STUDY

6.1 Introduction

Having established the methodological framework for data analysis in the preceding chapter, the purpose of this chapter is to present the analysis of the empirical data that has been collected by the use of survey questionnaires and semi-structured interviews in order to explore the current situation with regards to knowledge management in law firms in Botswana. To avoid the bias and omission inherent in closed-ended questionnaires, the questionnaire had open-ended questions and an "other" category. Though not many of the participants completed the "other" category, the few who responded provided some useful answers that revealed valuable insights into the strategies of knowledge management in law firms in the country. The qualitative data from open ended questions and semi-structured interviews were carefully recorded, analysed and utilised. Out of total 217 questionnaires distributed to the lawyers, 140 completed questionnaires were returned, giving a return rate of 64.5%. Semi-structured interviews were conducted with 15 lawyers from different firms in Gaborone. All the quantitative data was coded and analysed using the Statistical Package for social scientist (SPSS) version 15.0. This statistical package provides the most comprehensive solution for reporting, modelling and analysis of data. Range,[15] mean,[16] frequencies and percentages were used for the analysis and charts and tables were used to present data. Semi-structured interviews were also conducted with lawyers in Gaborone to complement and provide a comprehensive overview on knowledge management in law firms. The data collection instruments were designed to answer the following research questions of sub problem four of the study:

▸ What are the different categories of knowledge existing in the law firms in Botswana?

▸ What are the tools and techniques used for knowledge management in law firms in Botswana?

▸ How do law firms in Botswana approach knowledge management?

▸ What factors are critical to the success of knowledge management in law firms in Botswana?

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15   It indicates the smallest and greatest value of the response that assist in understanding the diversity of responses.

16   The average count or response calculated by adding all the responses and dividing it by the number of responses.

‣ What are the perceived benefits of knowledge management to law firms in Botswana?

‣ What factors inhibit the success of knowledge management in law firms in Botswana?

‣ What is the role of other institutions and agencies in knowledge management in law firms in Botswana?

The results are presented in the same order that the questions were asked in the questionnaire and the semi-structured interviews. The questionnaire consisted of 20 questions divided into four sections as follows: 1) personal profile 2) organisational characteristics of the firm 3) knowledge management practices and 4) the role of knowledge institutions and agents in the creation, sharing and capturing of knowledge in law firms (appendix 2). The semi-structured interview on the other hand, consisted of 6 sections that complemented the finding of the research questionnaire (appendix 3). Because of the legal context of this study those who participated in the survey are referred to as "participants" rather than "respondents" to avoid confusing the word respondents with respondents (defendants) in legal suits. The purpose of the first section of the survey questionnaire and interview was to analyse the personal profile of the participants.

6.2 Personal profile

This section presents information on the educational background and the longevity of service of participant lawyers. In question 1 of the research questionnaire, participants were asked to tick their level of education in the appropriate box. The frequency distribution of participants as to their level of education revealed that a majority, 116 (83%) have a bachelors degree and 24 (17.1%) have a masters degree (chart 6.1 below). Furthermore, from the results of the "other" category and the interviews, other professional qualifications that participants have are executive masters in sports organisation, post graduate diploma in international law, and diploma in trial advocacy.

Level of education

Masters of Law
17%

Bachelor of Law
83%

- Bachelor of Law
- Masters of Law
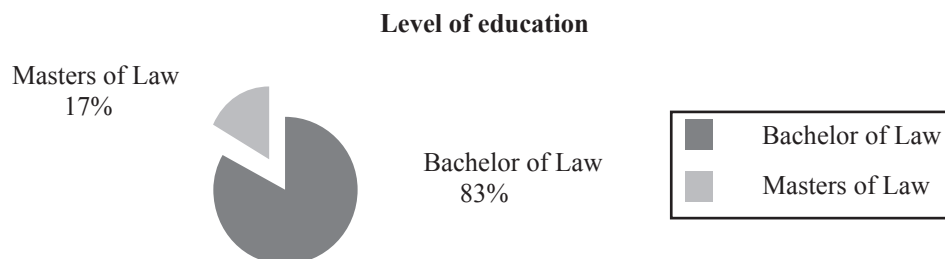
Chart 6.1 Level of education (N=140)

The purpose of question 2 was to establish how long participants have practiced. Chart 6.2 below reveals that the length of practice of participants ranges from 1 to 33 years. The mean number of years of the participant lawyers' practice is 6 years.

How long have you practiced as a lawyer?

How long have you practiced as a lawyer?
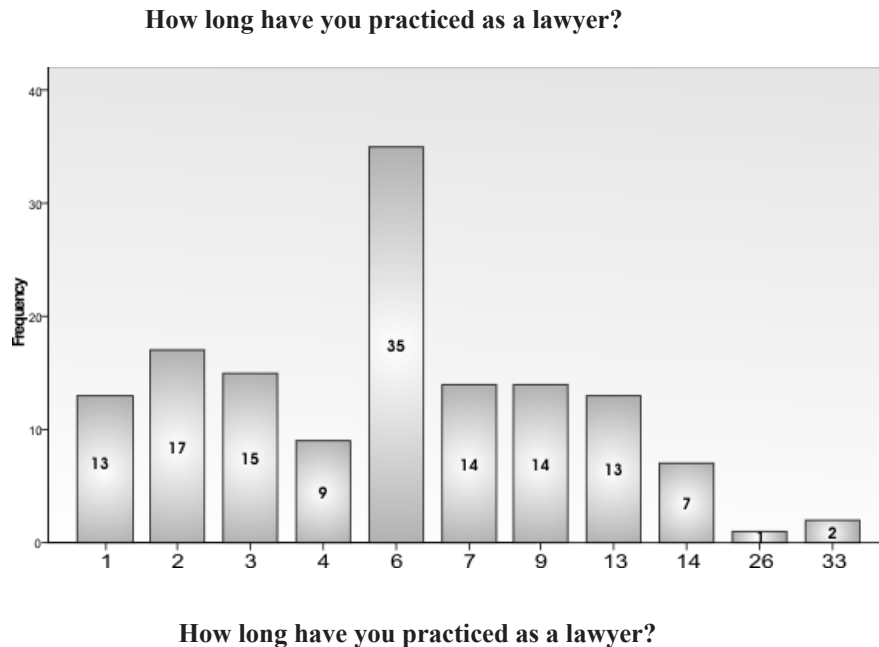
Chart 6.2 Longevity of practice as a lawyer (N=140)

The longevity of service of the participant lawyers is represented as follows: 13 (9.3 %) have practiced for 1 year, 17 (12.0%) for 2 years, 15 (10.7%) for 3 years, 9 (6.4%) for 4 years, 35 (25%) for 6 years, 14 (10.0%) for 7 years, another 14 (10.0%) for 9 years, 13 (9.3%) for 13 years, 7 (5.0%) for 14 years, 1 (0.7%) for 26 years and 2 for 33 years.

6.3 Organisational characteristics of the firm

Questions 3, 4, 5 and 6 of the research questionnaire were on data on the organisational characteristic of the law firms. These were collected to determine the total number of lawyers in each law firm, establish the most strategic resource in the firm, assess whether participants have knowledge management systems in place and identify the person responsible for knowledge management. The questions also sought to establish whether the firms have any policy and budget for knowledge management.

In question 3 of the research questionnaire, lawyers were asked to indicate the total number of lawyers in the participants firms. The results are presented in chart 6.3 below.
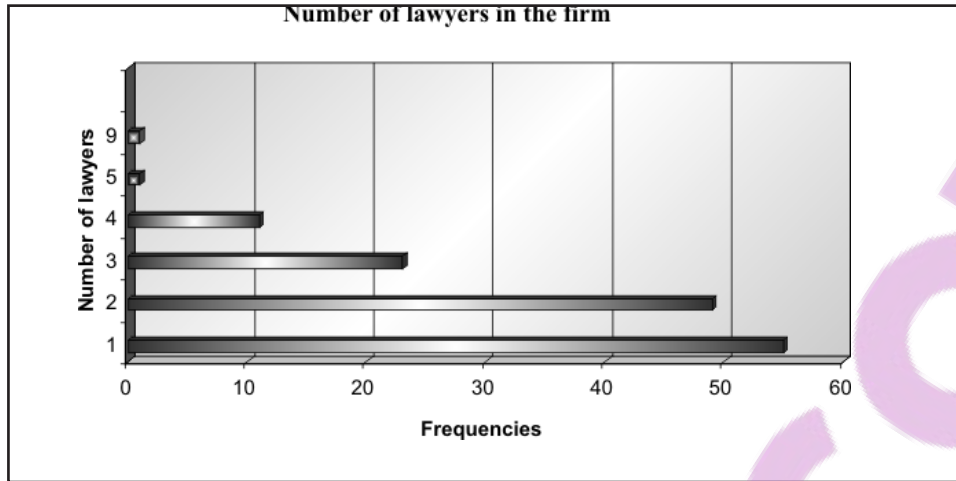
Chart 6.3 Number of lawyers in the firm (N=140)

It shows that 55 participants (39.3%) are sole proprietors, 49 (35.0%) had 2 lawyers, 23 (16.4%) had 3 lawyers 11 (7.9%) had 4 lawyers, 1 (0.7%) had 5 lawyers and another 1 (0.7%) had 9 lawyers. The mean number of lawyers in the firm is 2. It emerged from the interview (appendix 3) that law firms in Botswana continue to stay small with an average of two partners due to the fact that every lawyer wants to become a partner rather that just working as a professional assistant because partners get a share of the profit rather than just a fixed salary. As a result there is constant splitting up from firms by lawyers to start off as sole proprietors or to form small partnerships.

The purpose of question 4 of the research questionnaire was to find out whether lawyers appreciate the fact that knowledge was a strategic resource in the law firm. Participants were asked to indicate by ticking from the list of resources provided what they considered as the most strategic resource in the law firm (See chart 6.4 below).
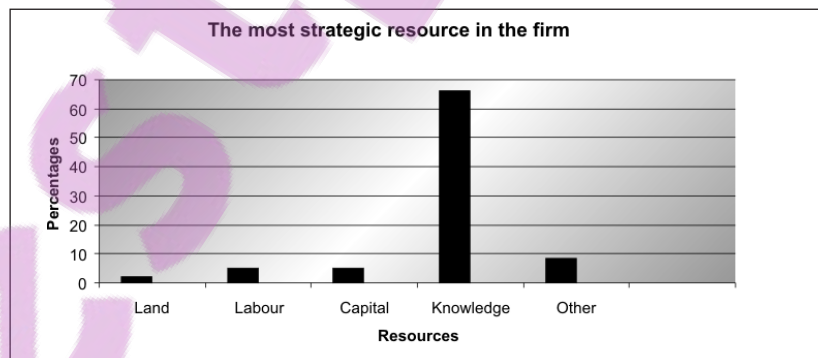
Chart 6.4 The most strategic resource in the firm (N=140)

Over half of the participants (66.4%) considered knowledge as the most strategic resource of the firm. 12 (8.6%) indicated others, 7 (5.0%) considered labour, another 7 (5.0%) felt it was capital while 3 (2.1%) felt it was land. Eighteen (12.9%) did not respond to this question. Law is a knowledge intensive profession and therefore one would have thought that the participants would unanimously agree that knowledge is the most strategic resource.

From the responses given by the interviewees (appendix 3) and from the "other" category in the research questionnaire, it emerges that some lawyers considered the quality of clients, client base, and time rather than knowledge as the most strategic resource. An interviewee lamented the fact that today in legal practice the pursuit of knowledge has been sacrificed for the pursuit of money and profit. One noted, "lawyers are just too busy, every one is trying to make money and have very little time to create knowledge." Another interviewee said that "time is the most important resource because of the feeling that knowledge without time is like having a car with no fuel."

The purpose of question 5 of the research questionnaire was to establish whether law firms in Botswana had knowledge management in place or had plans to introduce this, and whether these firms had any policy and budget for knowledge management. Participants were asked to indicate by either ticking a "Yes" or "No" to the series of the questions asked. The results are presented in table 6.1 below. With regards to the question referring to whether participants had a knowledge management policy, most of the participants (72.9%) did not have a formal knowledge management programme. Only 38 (27.1%) participants indicated that they had a formal knowledge management programme. As to whether firms had plans to introduce a knowledge management policy, 27.1% planned to introduce this, while 40.0% had no plans and 32.9% did not respond. A question was asked to determine whether the firms have a knowledge officer or any person in similar position, specifically dedicated to gathering, distributing or leveraging the firm's knowledge. Most of the respondents, 76.4% did not have a knowledge management officer. Only 9.3% of the participants indicated that they had a knowledge management officer, and 20 (14.3%) did not respond. With regards to a knowledge management policy, a majority, (78.6%) did not have, while only 10 (7.1%) indicated that they have a policy for knowledge management and 20 (14.3%) did not respond. As to whether the firm has knowledge management budget, 101 (72.1%) indicated that their firms did not have any knowledge management budget and only 25 (17.9%) had a knowledge management budget while 14 (10.0%) did not respond.

	Yes in %	NO in %	Non response in %
Does your firm have a formal knowledge management programme in place	27.1	72.9	
If no, do you plan to introduce one?	27.1	40.0	32.9
If your answer is in the affirmative, does your firm have a knowledge officer or any person in similar position specifically dedicated to gathering, distributing or leveraging the firm's knowledge?	99.3	76.4	14.3
Does your firm have a written knowledge management policy?	77.1	78.6	14.3
Does the knowledge management programme in your firm have a dedicated budget?	17.9	72.1	10.0

Table 6.1 Organisational characteristic of the firm (N=140)

In question 6 of the research questionnaire, it was expected that the participants who had previously indicated in question five that they had a knowledge officer or any person in similar position specifically dedicated to gathering, distributing or leveraging the firm's knowledge should indicate in the appropriate box the person responsible for knowledge management in their firm, or make a suggestion in "other" category. This is shown in chart 6.5 below.
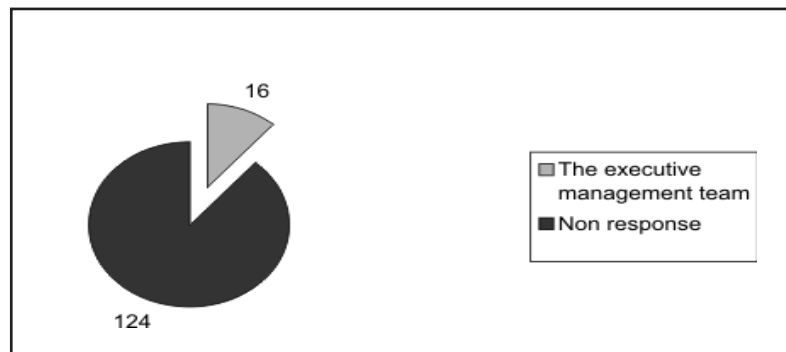
Chart 6.5 Who is responsible for knowledge management in your firm? (N=140)

Sixteen (11.4%) of the participants indicated that the management team was responsible for managing knowledge in the firm while the rest, 124 (88.6%) did not respond to the question. The fact that they did not respond may be interpreted to mean that there was no knowledge management in these firm or they did not understand what knowledge management was about. The results of interviewees (appendix 3) indicated that the managing partner is usually in charge of the overall decisions in the firm and therefore will be the ones to make any decisions concerning knowledge management.

Having established the organisational characteristics of the firm, the subsequent sections focused on answering the different research questions. The first research question seeks to determine the different categories of knowledge that exist in the law firms.

6.4 The different categories of knowledge existing in the law firms in Botswana

One of the objectives of this study was to identify the different types of knowledge that are used in law firms in Botswana. The purpose of question 7 of the research questionnaire and part of section 3 of the research interview was to meet this objective. In this question there is a list of the different types of knowledge identified in the literature as existing in the law firms. Participants were asked to indicate in the appropriate column how frequently these different types of knowledge are used in their firms. The results of the frequency of use give an indication of the different categories of knowledge that exist in law firms in the country. These are presented as percentages in table 6.2 below. For ease of interpretation and analysis of the data, the results of "frequently" and "very frequently" were merged and interpreted as very frequently.

	1 Very Frequently	2 Frequently in %	3 Not at all in %	4 Not Frequently in %	5 Non response in %
Skill and expertise of lawyers and staff	80.7	17.9		1.4	
Lessons learned from past projects	69.3	17.9		11.4	1.4
Analytical knowledge	51.4	23.6	2.9	17.1	5.0
Tips on drafting	38.6	38.6	3.6	14.2	5.0
Procedural knowledge	47.9	47.1	0.7	4..3	
Conversation by the hallways	31.4	29.3	7.9	26.4	5.0
Knowledge of the law	59.3	30.7	5.0	5.0	
Expert opinion	16.4	27.1	7.9	46.3	4.3
Legal text	40.7	39.3	5.0	10.0	5.0
Legislation and case law	57.1	32.9	5.0	5.0	
Standard documents	50.7	44.3		5.0	
Knowledge from judges	13.6	45.0	15.7	25.7	
Court decisions	68.6	19.3		12.1	
Financial information	7.9	30.7	17.1	44.3	
Marketing information	9.3	13.6	33.6	38.6	5.0
Client information	27.1	39.3	12.1	21.4	

Table 6.2 Categories of knowledge in the law firm (N=140)

The following types of knowledge were frequently used in the law firms: skill and expertise of lawyers and staff (98.6%); standard documents (95.8%); procedural knowledge (95.0%); legislation and case law (90.0%); knowledge of the law (90%); court decisions (87.9%); lessons learned from passed projects (86.2%); legal text (80.0%); tips on drafting (hints on creating legal documents), (77.2 %); and analytical knowledge (78.9%).

The following categories of knowledge fell within 50% to 70% range of usage in the law firms: client information (66.4%), conversation by the hall ways (60.7%) and knowledge from the judges (58.6%).

Expert opinion, financial information, marketing information and analytical knowledge were the least used knowledge in the law firms. Sixty one (43.5%) participants used expert opinion frequently, 62 (46.3%) did not use this frequently and 11 (7.9%) did not use it at all. Fifty four (38.8%) use financial information frequently, 62 (44.3%) do not use it frequently and, 24 (17.1%) do not use it at all. Only 32 (22.9%) use marketing information very frequently; 54 (38.6%) do not use it frequently, and 47 (33.6%) do not use it at all.

Other knowledge used in the law firms identified from the findings of the interviews and results from the "other" category (appendix 3) are print text, the general knowledge of the firm and its workers, the general knowledge and attitude of the clients and internet sourced knowledge.

6.5 Factors that would motivate the adoption of knowledge management in lawfirms (N=140)

Against the background of some of the changes in the legal information environment discussed in chapter 2 of this study, question 8 of the research questionnaire listed the possible factors that may motivate a firm to adopt knowledge management. The participants were asked to rate these factors in a five point scale of "neutral," "disagree" and strongly "disagree". An "other" option category was provided for participants to indicate any other factors that may motivate the adoption of knowledge management. Section 2 of the research interview (appendix 3) required the interviewees to identify some of the changes they are experiencing in the legal environment. For purposes of analysis, the responses for "strongly agree" and "agree" were considered as "agree," favourable or positive, while the results of "strongly disagree" and "disagree" were considered as "disagree' or negative. The results from the research questionnaire are presented in table 6.3 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %
Advances in information communication technologies	74.3	23.6	2.1		
The shift from paper-based to electronic sources of information	67.9	26.4	5.7		
The Internet	65.7*	30.0*	3.6*	0.7*	
Electronic publishing	67.1	27.9			
Globalisation of legal services	37.1*	28.6*	19.3*	6.4*	3.6*
Competition amongst firms	33.6	36.4	25.7	4.3	
Pressure from clients	20.7	34.3	29.3	15.7	
Information overload	17.9*	23.6*	32.9*	15.7*	
Loss of key personnel and their knowledge	21.4	32.9	15.7	17.9	12.1
The use of knowledge management tools and practices by other competitors	36.4	52.1	3.6	7.9	
An increase in the mobility of lawyers	20.7	25.7	26.4	13.6	13.6
The need to identify and protect strategic knowledge in the firm	50.0	33.6	8.6	6.4	1.4
The desire to promote professional satisfaction	65.0	29.3	5.7		
The desire to support and encourage a learning culture	63.6	31.4	5.0		
The desire to promote team work	65.0	25.7	9.3		
The desire to meet the information and knowledge needs of the lawyer	65.7	30.0	4.3		
Pressure from other professional service firms	25.7	27.9	27.1	14. 3	5.0

*Percentages do not add up due to non response

Table 6.3 What would motivate the adoption of knowledge management in your firm? (N=140)

Lawyers generally responded positively and in some cases were neutral as to the factors that would motivate them to adopt knowledge management. It could be that indeed participants were very conscious that the legal environment in Botswana is experiencing changes or that they just felt it was easy concurring to the question by ticking the first three options. These findings were complemented with the findings from the interview which revealed

that lawyers are indeed overwhelmed by several changes in the legal environment and are looking for alternative ways of improving their practices and were therefore excited to learn more about the concept of knowledge management from the researcher. The results of the findings are discussed in the subsequent paragraphs.

As table 6.3 above shows, the following are the major motivating factors in the adoption of knowledge management in the law firms ranked in order of highest percentage scores: information communication technologies (97.9%); the internet (95.7%); meeting the information and knowledge needs of the lawyer (95.7%); electronic publishing (95.0%); the desire to support and encourage a learning culture (95.0%); the desire to promote professional satisfaction (94.3%); shift from paper-based to electronic source (94.3%); and promoting team work (90.7%). The above factors recorded high percentage score of 90% and above.

The following are other motivating factors to the adoption of knowledge management that recorded a percentage score within the 70 to 80.9 % ranking: the use of knowledge management tools and practices by other competitors (88.5%); the need to identify and protect the knowledge in the firm (83.6%) and competition amongst firms (70.0%). Four items viz, globalisation of legal practice (65.7%); pressure from clients (55.0%); loss of key personnel (54.3 %) and pressure from other professional service firms (53.6% agree); recorded a percentage score within 50%-69 % range.

On the other hand, factors that were regarded as not having a serious motivating influence to knowledge management in law firms included information overload and increases in lawyers' mobility. With regard to increases in lawyers' mobility 65 (46.4%) agreed, 37 (26.4%) were neutral and 38 (27%) disagree. As regards information overload, 58 (41.5 %) agreed, 46 (32.9%) were neutral, 22 (15.7%) disagreed and 14 (10.0%) did not respond.

From the results of the interview (appendix 3) and the "other" category, the following were identified as other factors that may motivate the adoption of knowledge management in a firm: technological changes, the desire to attract new clientele; desire to standardise knowledge; standard set by Law Society the regulating body of the firms, networking with other lawyers within and without the country; pressure from international affiliated law firms to do so; recent technological innovations that require process to be carried out electronically and the desire to standardise knowledge and work emanating there of.

The overall responses show that lawyers acknowledged the need for knowledge management in their firms.

The next research question was designed to identify the tools and techniques for knowledge management in law firms.

6.6 Tools and technologies for knowledge management in law firms in Botswana

In order to establish the tools used for knowledge management in law firms in Botswana it was crucial to first identify the information communication technologies that exist in the law firms. In question 9 of the research questionnaire, a list of information communication technologies was presented to the participants and they were asked to indicate by ticking "Yes" or "No" whether a particular technology is used in their firms. Responses were also sought from the "other" category and through interviews (appendix 3). The results from the research questionnaire are presented in table 6.4 below.

	Yes in %	No in %		Yes in %	No in %
1. Telephones	100	-			
2. Computers	100	-	15. Enterprise information portals (EIP)	-	100
3. Personal networked computer	81.4*	17.9*	16. Calendaring, group scheduling and task list software	16.4*	77.9*
4. Intranet	20.0*	72.1*	17. Artificial intelligence systems	-	100
5. Extranet	9.3*	85.7*	18. Expert systems	-	100
6. Internet	69.3	30.7	19. Content management systems	2.1	97.9
7. Emails	71.4	28.6	20. Publishing systems	13.6*	86.4*
8. Video and text-based conferencing technology	7.1	92.9			
9. Lotus Notes	-	100	21. Data base tools	-	100
10. Electronic Bulletin boards	5.7*	93.6*	22. Record management systems	16.4*	79.3*
11. Legal information systems	40.0*	59.3*	23. Indexing tools	7.1*	92.7*
12. Document management systems	16.4*	82.9*	24. World Wide Web	15.7	84.3
13. Practice management systems	15.0	85.0	25. Case map		100
14. Case management systems	59.3	40.7	26. Automated billing document assembly system	10.7	89.3

*Percentages do not add up due to non response

Table 6.4 Information communication technologies in law firms in Botswana (N=140)

From the above table, the most common information communication technologies used in law firms ranked according to the highest percentage scores are telephones and computers (100%), personal networked computers (81.4%), email (71.4%), the internet (69.3%), case management systems (59.3%) and legal information systems (40.0%). Not many participants had intranet (20.0%). Only 16.4% of the participants had calendaring group scheduling and task list, software, record management systems and documents management system, 15.0 % use practice management systems, 15.7% use the world wide web, 13.6% use publishing systems and 10.7% use automated billing assembly.

Very few participants had video and text based video conferencing and indexing tools (7.1%), electronic bulletin boards (5.7%), and content management systems (2.1%). Enterprise information portals, expert systems data base tools, Lotus Notes and case maps were not used. Other technologies in law firms obtained from the "other" category and from the results of the interview (appendix 3) are electronic package for the firms' accounts such as law plan and quick book and telephone management systems.

Against the background of the information technologies used in the law firm, the next step was to establish the information technologies used for knowledge management in law firms. The different ways by which technologies are used for knowledge management identified in the literature review were listed in question 10 of the research questionnaire and participants were asked to indicate in the appropriate column whether they "strongly agree," "agree," "disagree," "strongly disagree" or were "neutral" as to how information communication technology was used for knowledge management in their firms. An "other" option category was provided for participants to indicate any other way ways by which technologies are used for knowledge management. The responses for "strongly agree" and "agree" are considered as "agree" while the results of "strongly disagree" and "disagree" are considered as "disagree" The results are presented in table 6.5 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Dis agree in %	5 Strongly disagree in %	Non response in %
Lawyers subscribe to online forums, Intranet news groups or email distribution lists	10.0	15.7	18.6	33.6	12.9	9.3
My firm uses communicative tools and technologies such as Lotus Notes to support the knowledge transfer process and to encourage the sharing of ideas and projects	-	-	34.3	33.6	20.7	11.4
My firm uses the Internet/Intranet, Extranet and World Wide Web, for gathering knowledge so that it can be used through out the firm	32.9	22.1	11.4	5.0	28.6	-
My firm uses legal information systems such as LexisNexis, Justastat, Westlaw, and Thomas and Dialog to facilitate legal research	35.7	21.4	12.9	16.4	13.6	
My firm uses "Yellow Pages" containing CVs, competency profiles, and research interest of experts	12.9	13.6	40.7	26.4	2.1	4.3
My firm has knowledge maps that act as electronic intermediaries connecting knowledge seekers to knowledgeable people.	1.4		31.4	40.0	17.9	9.3
My firm uses document and content management systems in managing the content of knowledge	4.3	24.3	33.6	17.9	15.7	4.3
My firm uses indexing tools to organise and cross-reference material by subject and practice area	13.6	7.1	37.9	20.7	14.3	6.4
My firm has an expert system that captures the knowledge of experts		5.0	38.6	28.6	22.1	5.7
My firm uses artificial intelligence to support advanced information searching and retrieval			27.1	38.6	30.0	4.3

Table 6.5 The ways information communication technologies are used for knowledge management in law firms (N=140)

Most responses on the ways information communication technologies are used for knowledge management in law firms from the above batches of questions either fell below a 30% range or were neutral. This may be because as observed from the preceding question, most of the information communication technologies for knowledge management identified have not been adopted in the law firms or because law firms are not aware of these technologies. It

was evident from the findings of the interviews (appendix 3) that participants were excited about the potentials of the technologies for knowledge management in law firms although they were not quite sure as to how information technologies were used for knowledge management.

The only two major ways by which information technologies are used for knowledge management in law firms that recorded a 50% score range are the use of external legal information systems such as Lexis/Nexis, Justastat, Westlaw, and Thomas and Dialog to facilitate legal research (57.1%), and the use of the internet/intranet, extranet and world wide web, for gathering knowledge that can be used throughout the firm (55.0%).

Information communication technologies that were not commonly used for knowledge management arranged in descending order of percentage included: document and content management systems in managing the content of knowledge (28.6%); subscription to online forums; intranet news groups or email distribution lists (25.7%); "Yellow Pages" containing curriculum vitaes, competency profiles, and research interest of experts (26.5%); and indexing tools to organise and cross-reference material by subject and practice area (20.7%).

The following are a number of information communication technologies for knowledge management that were not used at all in law firms listed in the order of disagreement expressed by participants: artificial intelligence to support advanced information searching and retrieval (68.6%); expert system that captures the knowledge of experts (55.7%); and Lotus Notes to support the knowledge transfer process and to encourage the sharing of ideas and projects (54.3%). Two (1.4%) participants acknowledged that their firm uses knowledge maps that act as electronic intermediaries connecting knowledge seekers to knowledgeable people.

6.7 Techniques for knowledge management in law firms in Botswana

Like the tools for knowledge management, several techniques for knowledge management were identified in the literature review. Question 11 of the research questionnaire listed several techniques of knowledge management and participants were requested to indicate by ticking a "Yes" or "No" as to the different techniques of knowledge management applicable in his/her firm. Responses were also sought from the "other" category and from the interviews. The results from the research questionnaire are presented in table 6.6 below.

	2 Yes in %	1 No in %		2 Yes in %	1No in%
1. Precedents	100		13. Office directory and office news letters	47.1	50.0
2. Work product repositories	19.3	80.7	14. Client information and matter	11.4	82.9
3. Professional development programmes	26.4	73.6	15. Know-how systems and info-banks	22.1	77.9
4. Brief banks	12.1	85.0	16. Yellow pages	46.4	53.6
5. Legal research	80.0	20.0	17. Meeting of lawyers with a common interest	46.4	53.6
6. Hiring and training young lawyers	61. 4	38.6	18. Litigation strategy	35.0	65.0
7. Best practices	39.3	57.1	19. Client relation management	28.6	71.4
8. Record management	69.3	30.7	20. Conflict checking,	12.9	87. 1
9. An excellent staffed knowledge centre	27.9	70.7	21. Knowledge concierge.	1.4	98.6
10. Presentations	15.7	84.3	22. Regular in-house seminars	41.4	58.6
11. Internal publications	5.0	95.0	23. The discussion of major projects with other lawyers after conclusion	21. 4	78.6
12. Know-how index	11.4	-	24. Weekly learning report	71.2	29.9
			25. Skills and expertise locator	7.1	-

Table 6.6 The different techniques of knowledge management applicable to the law firms (N=140)

The results reveal that the entire group of participants in the study is using precedents (100%). Other common techniques of knowledge management used by majority of the participants were legal research and development (80.0%), hiring and training of young lawyers (61.4%), record management (69.3%) and weekly learning report (72.1%). Slightly below half of the participants used the following techniques: office directory and office newsletters (47.1%), meeting of lawyers with a common interest (46.4%); regular in-house seminars (41.4%) and Yellow Pages (46.4%). It is worth noting that in the preceding table (table 6.5) on technologies used for knowledge management, only 26.5% acknowledged the use of Yellow Pages. Techniques that are not frequently used are litigation strategy (35%), best practice (39.3%), client relation management (28.6%), professional development programmes (26.4%), discussion of major projects with other lawyers after conclusion (21.4%), brief banks (21.1%), excellent staffed knowledge centre

(27.9%), and know-how systems and info-banks (22.1%). The least used techniques are work product repositories (19.3%), presentations (15.7%), conflict checking (12.9%) , know-how index (11.4%), client information and matter (11.4%), skills and expertise locator (7.1%), internal publications (5.0%), and knowledge concierge (individual who keeps track of the lawyer working on a particular issue 1.4%).

Other techniques of knowledge management obtained from the "other" and from analysing the interviews (appendix 3) are: personal information banked by each attorney; research from University of Botswana library for electronic resources; access of Law Reports on CD such as South African Law Reports, and Online Law Report and judgments such as the Canadian Supreme court judgments and the Australian court judgements.

6.8 The manifestation knowledge management in law firms in Botswana

Having identified the information technologies used for knowledge management and the techniques for knowledge management, the purpose of research questions 12 to 15 was to establish the existing state of the art of knowledge management in law firms. Responses were also sought from the "other" category and from the interviews. Before establishing the state of the art of knowledge management it was necessary to find out from the interviews whether the participants fully understand what knowledge management is all about.

6.8.1 Law firms understanding of knowledge management

The above question was addressed in the semi-structured interview to the interviewees (appendix 3). From the analysis of the responses from the interviews, it emerged that although knowledge management functions are carried out in the law firms, lawyers are yet to fully understand and appreciate the term "knowledge management." They are not fully informed as to what knowledge management is all about although they are excited about the prospects of knowledge management. Most interviewees defined knowledge management as information management. Their views on the definition of knowledge management included statements such as "how lawyers store information they receive and how they protect information," "knowledge management is all about file management," "knowledge management is about trade secrets and the protection of information," "it is how law firms use information for strategic management" and "knowledge management is the management of information using information communication technologies"

6.8.2 Knowledge generation process in law firms

To fully appreciate the state of the art of knowledge management it was also considered necessary to first investigate how knowledge is generated in the law firms. Question 12 of the research questionnaire consisted of a list of the different ways identified in the literature in which knowledge may be generated in the law firms. Participants were asked to rate how knowledge is generated in their firms in a five point scale of "strongly agree", "agree", "neutral", "disagree" and "strongly disagree." An "other" option category was provided for participants to indicate other ways by which knowledge is generated in their firms. For ease of interpretation and better appreciation of the significance of the results, the responses for "strongly agree" and "agree" are considered as "agreed", the result of "strongly disagree" and "disagree" are considered as "disagree". Responses were also sought from the "other" category and from the interviews. The results are presented in table 6.7 below.

	1Strongly agree in %	2Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %	Non response in %
Capturing and using knowledge obtained from clients, competitors and suppliers	31.4	37.9	15.0	13.6	-	3
Capturing Knowledge from research institutions and Universities	17.9	34.3	32.9	15.0	-	-
Encouraging lawyers to participate in project teams with other experts	4.3	37.1	55.7	2.9-	-	-
Accessing knowledge from the Internet	32.9	48.6	18.5	-	-	-
Attending conferences	18.6	66.4	6.4	8.6	-	-
Attending workshops	15.0	65.0	10.0	5.0	-	5.0
Writing internal reports	7.9	22.1	33.6	22.9	7.1	6.4
Accessing legal databases	9.3	52.1	14.3	6.4	7.9	10.0

Table 6.7 The different ways by which knowledge is generated in the law firms (N=140)

From the table above it is clear that the most important ways in which knowledge is generated in law firms in Botswana are: attending conferences (85.0% agreed), attending workshops (80% agreed), accessing knowledge from the internet (81.5% agreed), and obtaining knowledge from clients, competitors and suppliers (69.3% agreed). Accessing legal databases (61.4% agreed) and capturing knowledge from research institutions and universities (52.2%) were other ways of generating knowledge in law firms. Not many participants felt that knowledge is created in law firms by encouraging lawyers to participate in project teams (41.4%), and by writing internal reports (30.0%).

From the "other" category and from research interviews (appendix 3) other ways in which knowledge is generated for the law firm are: informal queries directed at external attorneys, reasoned judgments by the judges, subscription to law journals, judgments from superior courts and brainstorming. The interviews further revealed that lawyers attend seminars and workshops on an individual basis. For example, some interviewees indicated that they were members of the International Bar Association of Law Societies across the world, while others were members of the Senior Lawyers' Association of the Untied States. Lawyers indicated that from time to time they take part in refresher courses organised by these associations.

6.8.3 Knowledge transfer process in the law firms

An understanding of how knowledge is transferred in the law firm would also enable one to appreciate the state of the art of knowledge management in law firms in Botswana. Several techniques of knowledge transfer identified in the literature were listed in question thirteen of the research questionnaire and participants were asked to indicate whether they "strongly agreed," "agreed," "disagreed," strongly disagree" or were neutral to the different ways by which knowledge is transferred in their firm. An "other" option category was provided for participants to indicate other ways by which knowledge is generated in their firms. For convenience of analysis, the responses for "strongly agree" and "agree" are considered as "agree," and the result of "strongly disagree" and "disagree" are considered as "disagree". The results are presented in table 6.8 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %	Non response in %
Through team work	29.3	43.6	16.4	0.7	-	10.0
Through discussions of major projects after conclusion (debriefing)	20.0	48.6	28.6	2.9	-	-
Informal social net working of lawyers to exchange views	10.0	55.7	31.4	0.7	-	2.1
Organising formal meetings	7.1	19.3	48.6	8.6	14.3	2.1
The Intranet	10.4	21.4	18.6	28.6	17.9	3.6
Alliances with professional associations	25.0		48.6	19.3	5.0	2.1

Table 6.8 The different ways by which knowledge is transferred in the firms (N=140)

A majority of the participants either agreed or were neutral to the different way in which knowledge is transferred in the law firms. The most significant way by which knowledge is transferred in the law firms in Botswana ranking from the highest to the lowest percentage score are: team work (72.9% agreed), discussions of major projects after conclusion (debriefing), (68.6%) and informal social networking of lawyers (65.7% agreed). Other ways by which knowledge is transferred within the firm are: intranet (31.8% agreed), organising formal meetings (26.4% agreed) and alliances with professional associations (25.0%) agreed.

From the "other" category and an analysis of the interview (appendix 3) the following were identified as other ways by which knowledge is transferred in the firms: availing materials for other attorneys by fax; instructions given verbally by partners to staff and to junior attorney with clear explanation as to why it is vital to carry out such instructions; face to face discussions; informal chatting at the boardroom; meetings every Tuesdays in the boardroom for debriefing; informal consultation and discussions with other lawyers; discussion with international firms affiliated with local firms and Law Society; and consultation with legal academics or legal consultants.

6.8.4 Knowledge sharing culture in the law firms

Another crucial aspect on the state of the art of knowledge management in law firms is the knowledge sharing culture. The purpose of question 14 of the research questionnaire was to establish if there is a culture of knowledge sharing in law firms in Botswana. The results of the analysis from a list of factors identified in the literature that determines a knowledge sharing culture in law firms was measured in a five point coded scale as "strongly agree"

"agree," "disagree," "strongly disagree," and "neutral" as explained on section 6.8 above are presented in the table 6.9 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %
We have a knowledge sharing culture in the firm	41.4	37.1	16.4	-	5.0
My firm conducts events and provides time in which ideas and experiences may be shared	13.6*	17.1*	42.1*	19.3*	2.9*
Colleagues from different areas or offices assist one another on a need basis	27.9	57.1	10.0	5.0	-
I have time to chat informally with other colleagues	29.3	56.4	14.3	-	-
The firm's lay out and organisational design is conducive for discussing with colleagues	42.9*	31.4*	17.1*	-	-
My firm uses Intranet sites to share knowledge	12.1	5.0	26.4	30.7	25.7
My firm provides opportunities for regular meetings	14.3	22.9	42.9	6.45	13.6
My firm provides opportunities for formal and informal social networking of lawyers	14.3	15.7	52.1	5.0	12.9

Table 6.9 The knowledge sharing culture in the law firms in Botswana (N=140)
   *Percentages do not add up due to non response

Similar to the previous table, most participants' responses were affirmative or neutral. Most participants (78.5%) agreed they had a knowledge sharing culture. The highest ranking knowledge sharing attribute on the above table is participants agreeing that they have time to chat informally with colleagues (85.7% strongly agree). The second ranking factor is participants' agreement that colleagues from different areas or offices assist one another on a need basis (85.0% agreed). The firm's layout and organisational design considered conducive for discussing with colleagues was the third ranking attribute of knowledge sharing (74.3% agreed).

The following knowledge sharing attributes were not widely applicable in the law firms with percentage scores ranging from 17.0% to 37.2%: the use of intranet sites to share

knowledge (17.1% agreed), opportunities for formal and informal networking of lawyers (30.0% agreed), firms conduct events and provides time in which ideas and experiences could be shared (30.7% agreed) and opportunities for regular meeting (37.2% agreed).

The responses from the interviewees (appendix 3) and from the "other" category as to whether law firms have a knowledge sharing culture shed further light in understanding the type of knowledge culture in the law firms. It emerged that there is lot of individualism in law firms. The overall observation was that lawyers share knowledge about the general knowledge and principles of the law and exchange but when it comes to very scarce knowledge, knowledge of the clients and any knowledge that would give the lawyer a particular edge over the other, lawyers become very secretive about sharing such knowledge. The transfer of knowledge from firm to firm is rare unless there is a personal relationship between lawyers in these firms or perhaps they were former classmates. It was, however, positive to note that law firms would not share knowledge that could cause them to lose their clients to the other firm or cause the other firm to have a competitive edge over them. A firm that is reputable for listing companies on a stock exchange or in criminal matters would not want to share information that could cause it to lose its dominant position.

6.8.5 The tutoring and mentoring opportunities in the firms

The nature of tutoring and mentoring in the law firms also provide an indication of the state of the art of knowledge management in these firms. Question 15 of the research questionnaire consisted of a series of questions designed to understand the state of tutoring and mentoring in law firms in Botswana. As in the previous sections, the responses for "strongly agree" and "agree" were considered as "agree", while that for "disagree" and "strongly disagree" considered as "disagree". The responses are presented in the table 6.10 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %
Encouraging employees to continue their education	19.3*	40.7*	25.0*	6.4*	7.1*
Encouraging partners to train associates	23.6	43.6	22.1	7.9	2.9
Providing professional development programmes	9.3	20.7	63.6	6.4	-
Hiring and training of young lawyers	22.9	41.4	26.4	9.3	-

Table 6.10 Tutoring and mentoring opportunities in the law firms (N=140)

Percentage does not add up due to non response

Although the overall results reveal that law firms provide tutoring and mentoring opportunities, the percentage scores on each item with regards to participants' agreement to the provision of tutoring and mentoring opportunities in the table above did not exceed 67.2% and a considerable number of participants were neutral. The most popular tutoring and mentoring attribute was the training of associates by partners (67.2% agreed), followed by hiring and training of young lawyers (64.3% agreed) and the firm encouraging employees to continue their education (60% agreed). Most of the participants were neutral (63.6% were neutral) with regards to the provision of professional development programmes in their firms.

Other tutoring and mentoring opportunities in the firm identified from the "other" category and the interview (appendix 3) are retaining students to internship and shadowing attorneys. It was observed that while some firms boast and pride in mentoring pupils there are others who are not interested in mentoring or do not have the time to tutor and mentor young lawyers. The latter do accept students in their firms just as an attachment formality because it is provided for under the Legal Practitioners Act. Sections 18-28 of the Legal Practitioners Act clearly envisage a twelve months professional training period after the law degree. One interviewee, a young pupil undergoing pupilage commented: "you are expected to be a lawyer on the very first day in the firm."

In spite of the conclusions drawn from the questionnaire, during the interviews, the researcher was frequently told that many of the law firms do not really encourage employees to go for further studies because of the feeling that time taken to make money for the firm is being wasted. In fact, many do not think it is even necessary to acquire any further education. As one interviewee opined: "the bachelor's degree is a license to a Mercedes Benz." Those who therefore undertake to study do so on their own time and mostly after working hours or even have to resign their positions to do so.

6. 8.6 The factors that may facilitate knowledge management in the firms

In order to further understand the state of the art of knowledge management, it was necessary to also establish whether the law firms in Botswana function in conditions that facilitate knowledge management. A list of possible factors identified in the literature was presented in question 16 of the research questionnaire. As in previous questions, participants were asked to tick the category on the column that best described the degree of agreement or disagreement with respect to the factors that may encourage knowledge management in the firm. An "other" option category was provided for participants to indicate any other

ways by which knowledge management may be encouraged in the firm. In the analysis the responses for "strongly agree" and "agree" were considered as "agree" and that for "disagree" and "strongly disagree" as "disagree." The results are presented in table 6.11 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %
There is monetary and non-monetary rewards for sharing knowledge	11.4	41.4	30.7	7.9	8.6
Promotions are based on the ability to share knowledge	5.7	-	52.9	35.7	5.7
There is special recognition of staff for the time spent in knowledge creation sharing and distribution	6.4	24.3	40.0	18.6	10.7
Mutual respect, trust, care and concern amongst lawyers	22.1	56.4	21.4	-	-

Table 6.11 Factors that facilitate knowledge management in the firms (N=140)

Participants' responses on the factors that promote knowledge management in the law firm were mostly negative and neutral. Most participants were not certain that promotion in the law firm was based on the ability to share knowledge (52.9% were neutral, and 41.4% disagreed) and very few acknowledge that there is special recognition of staff for the time spent in knowledge creation, sharing and distribution (30.7% agreed, 40.0% were neutral and 29.3% disagreed). The only overwhelming positive response was participants' acknowledgement that there is mutual respect, trust, care and concern amongst individuals where 78.5% agreed and 21.4% were neutral. This was followed a 52.8% acknowledgment that there is monetary and non-monetary rewards for sharing knowledge.

6.9 The perceived benefits of knowledge management for the law firms

The purpose of question 17 was to determine whether lawyers perceive any benefits from knowledge management. The question listed some of the perceived benefits of knowledge management examined in the literature. Each list was ranked in the usual five point coded scale used in the study. The responses for "strongly agree," and "agree" would be considered as "agree" or "favourable", while the result of "strongly disagree," and "disagree" are considered as "disagree" or "unfavourable." The results are presented in table 6.12 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral in %	4 Disagree in %	5 Strongly disagree in %
Improve knowledge sharing	60.7	39.3	-	-	-
Improve lawyers efficiency and productivity	63.6	31.4	5.0	-	-
Improve lawyers' relationship vis-à-vis clients and customers	57.1	27.9	15.0	-	-
Prevent duplication in research	60.0	31.4	8.6	-	-
Increase flexibility amongst lawyers	51.4	35.7	7.1	5.7	-
Protect the firm's loss of knowledge	70.0	22.9	7.1	-	-
Result in competitive advantage	52.9	26.4	20.7	-	-
Integrate knowledge within the firm	60.7	31.4	6.4	-	1.4
Improve retention rate of lawyers in the firm	46.4	28.6	20.	5.0	-
Improve the sharing and transfer of knowledge with partners and strategic alliances	58.6	31.4	10.0	-	-
Enhance economic profitability	60.7	29.3	10.0		

Table 6.12 The perceived benefits of knowledge management in law firms in Botswana (N=140)

The participants generally recognised the potential benefits of knowledge management in the law firms with 75%-100% agreement. The following are percentage ranking of the different perceived benefits of knowledge management from highest to the lowest: improve knowledge sharing (100%); improve lawyers' efficiency and productivity (95.0%) helps to integrate knowledge within the firm (92.1%), enhances economic profitability (90.0%), improves the sharing and transfer of knowledge with partners and strategic alliances (90.0%), improve the lawyers' relationship vis-à-vis clients and customers (85.0%), increases flexibility amongst lawyers (87.1%), provides competitive advantage (79.3%), and improves the retention rate of lawyers (75.0%).

Responses from the "other" category and from the interviews indicated that the perceived benefits of knowledge management in law firms would result in general and overall efficiency, improvement of quality of output and improvement in the quality of the clients. In a nutshell, almost all the participants acknowledged the importance of knowledge management to their firms.

6.10 Factors that inhibit knowledge management in the law firms

The purpose of question 18 of the research questionnaire was to investigate the factors that may inhibit knowledge management in the law firms. It consisted of a list of the different possible factors that inhibit knowledge management in law firms identified in the literature. These were ranked into the usual five point coded scale. The participants were asked to tick the category of the column that best described their degree of agreement or disagreement with the factors that inhibit knowledge sharing in their firm. An "other" option category was provided for participants. The responses for "strongly agree" and " agree" are considered as "agree" or "positive", while the results of "strongly disagree" and "disagree" are considered as "disagree" or "negative" The results are presented in the table 6.13 below.

	1 Strongly agree in %	2 Agree in %	3 Neutral%	4 Disagree%	5 Strongly disagree in %-	Non response in %
Lawyers' view of knowledge as a source of power	5.7	15.0	23.6	31.4	22.1	2.1
The perception that knowledge management is an additional workload	12.9	23.6	42.9	17.1	1.4	2.1
The feeling that it puts pressure on billable hours	14.3	20.7	40.0	20.7		4.3
The feeling that the firm size is too small	23.6	22.9	26.4	22.9	-	4.3
Limited financial resources	21.4	33.6	40.0	5.0	-	-
Inadequate technological infrastructure	24.3	42.9	27.8	5.0	-	-
The inability of the firm's leadership to enforce knowledge management	11.4	23.6	53.6	7.1	-	4.3

Table 6.13 The factors that inhibit knowledge management in law firms in Botswana (N=140)

There were some differences amongst the participants with respect to their views on the factors that were considered to inhibit knowledge management. Whilst a majority considered technological infrastructure (67.2% agreed) and limited financial resources (55.0% agreed) as inhibiting knowledge management, there was less than 50% agreement on the other factors identified in the literature as being inhibitors to knowledge management. The

only other item which scored close to 50% was the size of the firm (46.5% agreed). Most participants did not view knowledge as a source of power (53.5% disagreed).

It was interesting to note that participants did not perceive knowledge management as an additional work load (42.9% were neutral, 35.0% agreed, 18.5% disagreed and 2.1% did not respond), or feel that knowledge management puts pressure on billable hours (40.0% were neutral, 35.0% agreed, 20.7% disagreed and 4.3% did not respond) or that there was an inability of the firm's leadership to implement knowledge management (53.6% were neutral, 35.0% agreed, 7.1% disagreed and 4.3% did not respond). However, the results of the interviews (appendix 3) contradicted these findings. First, it revealed that lack of initiative and perception of the value of knowledge management by management and managing partners was a major barrier to knowledge management. Interviewees commented that managing partners or leadership do not take any initiatives on knowledge management nor do they seem to appreciate the benefit of knowledge management. An interviewee said that "management does not delegate any one to take care of knowledge management."

Second, although participants did not feel that knowledge management will put pressure on billable hours (40.0% were neutral, 35.0% agreed, 20.7% disagreed and 4.3% did not respond), interviewees considered work pressure and the pressure to meet targets as major barriers to knowledge management. Lawyers refer to work pressure as the urge to finish and bill a client on a particular matter and attend to the next. Interviewees reported that time spent on any other activity other than trying to generate profit for the firm is considered as time wasted. Meeting targets refers to different ways of generating income in the firm. It was revealed that the different ways by which revenue is generated in law firms in Botswana put the law firms under pressure to generate income. In some firms, lawyers work according to departments, for example, conveyancing department, corporate law department, and family law department, and the lawyers' revenue depends strictly on the department in which he/she belongs in the firm. The fact that income generated by each department in a firm, the conveyancing department for example, would be shared only by lawyers in that department puts every lawyer in such firms under the pressure to generate money for his/her department and will therefore have little time for knowledge management.

The interviews also revealed that professional assistants are often under considerable pressure to meet targets by bringing in additional profit to the firm in order to earn a bonus salary. Professional assistants are trained lawyers employed on a fixed salary and

are entitled to a certain commission above their fixed salary if they bring in a certain percentage of profits into the firm (meet a target). As a result, these professional assistants have no time for any other activity but are under pressure to meet the target of bringing additional profit to the firm. Technological infrastructure, firm size and limited financial sources were identified as other inhibiting factors to knowledge management.

6.11 The role of knowledge institutions and agents in the creation, sharing and capturing of knowledge in law firms

As a result of the multidisciplinary nature of knowledge management, the effective knowledge management can only result from collaboration across multiple streams, expertise, agents and institutions. The purpose of the last research question of the study was to identify these agents and institutions responsible for facilitating knowledge management in the law firms in Botswana. A list of the different possible agents were identified and participants were asked to tick from the different categories of responses ranked as "strongly agree", "agree", "neutral" ,"disagree" and "strongly disagree" the column that best described their degree of agreement as to whether these institutions and agents actually facilitate knowledge management in their firms. An "other" option category was provided for participants to indicate any other institutions that may facilitate the sharing of knowledge. As in previous sections, the responses for "strongly agree" and " agree" are considered as "agree" while the response of "strongly disagree" and "disagree" are considered as disagree. The results are presented in table 6.14 below.

	1 Strongly agree%	2 Agree%	3 Neutral%	4 Disagree in %	5 Strongly disagree %	Non response %
Legal secretaries	22.1	54.3	19.3			4.3
Law librarians	14.3	22.9	45.7	7.9		9.3
The Courts	15.7	52.9	27.1			4.3
Legal academics at the Law Faculty	9.3	55.7	30.7			4.3
Law Society	18.6	50.0	16.4	7.9	2.9	4.3
Professional Associations	10.0	37.1	25.7	22.9		4.3

Table 6.14 Agents and institutions responsible for knowledge management in law firms in Botswana. (N=140)

Most participants see the legal secretaries as the most important agent of knowledge management in the law firms (76.4 %). It could be because in the law firms in Botswana the legal secretaries and the lawyers work very closely together. Interestingly the Law Society (68.6 % agreed) and the courts (68.6 % agreed) were both rated second. One does not doubt this response because the Law Society oversees all the affairs of the law firms in the country while the courts are the next most important institution outside the law office where the lawyers spend most of their time. Participants also acknowledged that legal academics were essential in knowledge management in the law firms (65.0% agreed). Legal academics are responsible for educating the lawyers and thus imparting legal knowledge. It is not surprisingly that many participants did not significantly appreciate the role of the law librarian in the knowledge management (37.2% agreed, and 45.7% were neutral). This is because law firms do not have established libraries that require the services of the law librarian.

Other agents and institutions for knowledge management identified from the results of the interviews (appendix 4) and responses from the "other" category include: other colleagues, legal consultants, legal academics at the law faculty, professional book shops, information technology consultants, Land tribunal and other quasi judicial bodies like labour arbitrator, International firms affiliated with local firms, and publishers like Juta and LexisNexis.

6.12 Conclusion

In this chapter the questionnaire and semi-structure interviews were analysed to present the results of the empirical study of the state of the art of knowledge management in law firms in Botswana. The methods used for analysis are the descriptive statistics from the Statistical Package for Social Scientist and the content analysis of the interview and the secondary research from the literature review.

Relevant information on the profile of the participants and the organisational characteristics of the firm was obtained from the analysis. The different categories of knowledge existing in law firm and the tools and technologies for knowledge management in lawfirms in Botswana were identified. The analyses revealed the different the different ways by which knowledge management is manifested in law firms in Botswana. It identified the factors critical to the success of knowledge management, the tools and techniques for knowledge management, its perceived benefits as well as some barriers to knowledge management. It also identified and examined the role of other agents and institutions in facilitating

knowledge management in the law firms. The results of the analysis in this chapter provide an empirical overview of knowledge management in law firms in Botswana, and hence the background for the discussions in the next chapter.

CHAPTER SEVEN
FINDINGS AND DISCUSSION

7.1 Introduction

In the preceding chapter, data of the results of the research analysis from the research questionnaire and the semi-structured interviews were presented. This chapter provides a general discussion and reflection on the research findings by relating the findings from the analysis with the findings from previous chapters in order to be able to provide a better understanding of the basis for the suggested guidelines for a successful knowledge management in law firms in Botswana. The chapter has three parts, the first part summarises and discusses the results obtained from the personal profile of the participants, the second part summarises and discusses the organisational characteristics of the law firm, and the last part presents the results of the different research questions.

7.2 Personal profile of the respondents

Section one of the questionnaire dealing with the personal profile of the participants revealed that a majority (83%) of them had only a bachelor's degree. Other additional qualifications noted from the interviews are "conveyancer," Post graduate diploma in international law," "Master's in law," and Master's in sports executive management. One reason why most lawyers have just a bachelor's degree may be that lawyers in Botswana are too busy and have no time to pursue further studies (appendix 3, section 6.10). It may also be that most lawyers do not see any need for an additional degree because a bachelor's degree in law is the basic qualification required to practice, and many do excel in legal practice only with this. One interviewee remarked: "a bachelor's degree in law is what I need to make a name for myself." Another noted that, "anything outside the bachelors of law is a waste of valuable time that I do not have." Another interviewee said that "with a bachelors' degree I can afford a mercedez benz." Section 4 of the Botswana Legal Practitioners Act, 1996, stipulates that to qualify for practice, the person must satisfy the court that he/she has obtained by examination the bachelor's in law degree (LL.B.) together with such additional qualifications if any, as may be prescribed. Although the bachelor of law degree is the basic degree for legal practice, an additional qualification, particularly in the lawyer's area of practice or specialisation, will surely provide an added advantage to the lawyer. This is because law is a learned profession where lawyers are obliged to develop their intellectual capabilities, reasoning and textual analysis in order to be able to analyse and solve legal

problems as well as apply specialised knowledge to clients' unique problems (Leckie et al., 1996; Best, 2003). Besides, law is not static; the continuous developments and changes in the law should be a very good reason for lawyers to continue to crave for and acquire new knowledge.

A majority of the lawyers who participated in the study have practiced for ten years or less (chart 6.2). Most of the lawyers were those who had practiced for six years (25%), followed by those who had practiced for two years (12.0%), three years (10.7%), and seven and nine years (10.0%). A majority of those who participated in the research were therefore relatively young lawyers. There were two (1.4%) long serving lawyers who have practiced for thirty three years, one (0.7%) for twenty six years and seven (5.0%) for fourteen years. However, this factor did not affect the quality of the responses provided. It may be, as Staudt (2003) observed, that younger lawyers are the ones who conduct research, dig up information on new issues that crop up in the firm, draft the contracts, handle depositions and argue motions in court; whilst older lawyers tend to delegate tasks to younger lawyers in the firms with the intention of making them self-reliant at an early stage.

7.3 Organisational characteristics of the firm

Data on the organisational characteristics of the firm revealed that law firms in Botswana are mainly small firms with the number of lawyers in the firms ranging from one to nine and the mean number of lawyers being two (see chart 6.3). Lawyers acknowledged that the firm sizes are small (table 6.13, 48.5% agreed). The interviews also confirmed this pattern. An interviewee opined: "we are small firms and we only focus on making profit." Another pointed out that, "most law firms are sole proprietors and partnerships because there is a desire by lawyers to work independently and be their own bosses." An interviewee further suggested that, "law firms in Botswana will likely continue to remain small with an average of two lawyers because these firms tend to operate as complete business entities where every lawyer wants to become a partner rather than just working as a professional assistant." Another interviewee opined that "there is constant splitting up of firms by lawyers to start off as sole proprietors or to form partnerships because lawyers want to get a share of the profit rather than just a salary." Schoenberger (1995) outlines four organisational modes for legal practice: mega-firms, medium size firms, small firm with 2-10 practitioners; and the sole practitioner. Using these distinctions as a rule of the thumb, law firms in Botswana could be classified as small because they have nine lawyers or less. These firms therefore fall within the definition of small and meduin size enterprises (European Union; 1996;

Small Business Service, 2004). It is worth noting that although the statistics from the Law Society as of October 2007 indicated that the maximum number of lawyers in the law firms were twelve (section 5.2), only one (0.7%) firm in the country has up to nine lawyers (see chart 6.3). This may be explained by the fact that there is constant mobility within the law firms. Although knowledge management may likely not be a priority in small firms due to their size, these firms still have the potential to benefit from the flexibility of knowledge management.

It is no surprise that the findings from the questionnaire revealed knowledge as the most strategic resource of the firm (chart 6.4) because law is recognised as a knowledge intensive profession (section 2.2). It emerged from the interviews and the responses given to the "other" category, that some lawyers considered the quality of clients and time as the most strategic resource. One interviewee commented: "time is the most important resource because knowledge without time is like a vehicle without fuel." Another said that, "without the client there is no firm." Although the main basis of income is the lawyers' time, knowledge, however, remains the main sustainable resource in the law firms because the lawyer's time is spent in deploying knowledge at the service of clients. Many experts on knowledge management are agreed that the competitive strength of law firms comes from its knowledge (Gottschalk, 2002; Hunter et al., 2002; Rusanow, 2003; Gottschalk et al., 2005; Rusanow, 2007). Knowledge is the product lawyers offer their clients in return for a fee. If a lawyer has all the time without knowledge, he/she would not be able to provide precise, unbiased and expert advice to the client or present the client's case convincingly and confidently.

The study shows that most of the participants (72.9%) did not have a formal knowledge management programme and very few (27.1%) were planning to introduce one; most (76.4%) did not have a knowledge management officer, a majority, (78.6%) did not have a knowledge management policy, and very few firms (17.9%) had a knowledge management budget (table 6.1). The implications of these findings are that although all law firms in Botswana are unconsciously practicing some a*d hoc* form of knowledge management (table 6.6), they have not yet adopted formal knowledge management programmes. One of the reasons may be that a majority of the firms are sole proprietors (39.3%, chart 6.3) and two lawyer firms (35.0%, chart 6.3) who lack the personnel to man formal knowledge management programmes and therefore consider knowledge management as a concept for large firms only. Lawyers acknowledged in table 6.13 (48.5% agreed) that the size of the firm is a barrier to knowledge management. It is also evident from the empirical findings

of studies in small and medium size firms that these firms have been slow in adopting formal, comprehensive and systematic knowledge management practices because they lack an understanding of knowledge management and their activities and operations are governed by informal rules and procedures (Ghobadian & Gallear, 1997; Lim & Klobas, 2000; Sparrow, 2001; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004; Egbu et al., 2005). However, small law firms like other small firms have unique potential to benefit more from knowledge management than larger firms and should tailor their knowledge management objectives to the needs of their firms. Hunter et al. (2002) in a study of knowledge management in Scottish law firms revealed that the 3 firms that were genuinely pursuing an active knowledge management policy were the large firms while the two smaller firms were still grappling with knowledge management and it's potential.

It became obvious from the interviews that most law firms in Botswana are not aware of the concept of knowledge management (section 6.8.1) and therefore did not consider it as one of their strategic objectives that may necessitate a policy. The following responses from the interviewees about the meaning of knowledge management revealed that lawyers were still grappling with the concept of knowledge management: "knowledge management is trade secrets;" "knowledge management is a client's affair;" "knowledge management is difficult because clients are not sufficiently rich to pay for same." This is not surprising because several empirical studies have shown that most small businesses lack an understanding of knowledge management processes and are just beginning to understand how knowledge management might assist them (Lim & Klobas; 2000; Egbu & Botterill, 2002; Egbu et al., 2005).

7.4 The different categories of knowledge in law firms in Botswana

The findings on the different categories of knowledge in the law firms confirms the views of researchers (Gottschalk, 2002; Hunter et al., 2002; Kay, 2002; Rusanow, 2003) that knowledge in the law firm resides in the head, skills and experiences of lawyers and staff; embedded in organisational routines and administrative procedures; is codified in the form of manuals, legal texts, statutes, precedents, judgements specialised databases or acquired from external sources. Also, drawing from the different categorisations of knowledge (Edwards & Mahling, 1997; Gottschalk, 1999, 2002; Kay, 2002; Rusanow; 2003), this study classifies knowledge in the law firm in Botswana under three broad categories: tacit knowledge, explicit knowledge and knowledge of the business of law (section 4.2). This is because elements of tacit and explicit knowledge run through the different categorisations of knowledge suggested by the various researchers.

Tacit knowledge in the law firms is knowledge on how to do something without thinking about it, like arguing a case in court or drafting a summons. The different types of tacit knowledge in the law firms are ranked in table 6.2. as follows: skill and expertise of lawyers and staff (98.6%), procedural knowledge (95.0%), lessons learned from past projects (82.6%), analytical knowledge (78.9%), tips on drafting (hints on creating legal documents, 77.2%) and conversation by the hall ways (60.7%). The ranking of skills and expertise of lawyer and staff (98.8%) in the first place reflects the fact that most of the knowledge in the law firm is from the head and experiences of the lawyer and staff in the firm (Edwards & Mahling, 1997; Kay, 2002).

Explicit knowledge in the law firm is the kind of knowledge that is easy to put down on paper and is directly accessible to those who wish to transfer it. Examples of explicit knowledge (table 6.2) identified in the law firms in order of significance are standard documents (95.0%), legislation and case law (90.0%), knowledge of the law (90%), court decisions (87.9%), legal texts (80.0%), knowledge from judges (58.6%) and expert opinion (43.5%). The literature also reveals that standard documents, legislation and case law, and knowledge of the law constitute the major types of explicit knowledge in the production and management of legal work (Kay, 2002; Rusanow, 2003; du Plessis, 2004). Standard documents are required in the day to day legal operations to ensure consistency and enhance productivity. On the other hand, every legal issue in the law firm requires the knowledge of the law and the application of case law and legislation (Gottschalk, 2002; Rusanow, 2003). Lawyers spend five years in the law school in Botswana acquiring explicit knowledge of the law. The least important form of explicit knowledge is expert opinion. It may be that law firms do not resort to expert knowledge unless it is unavoidable because engaging the services of an expert is usually costly to the firm. A lawyer remarked that "the legal experts' fee is often very high and so my firm engages a legal expert only when it is absolutely necessary." Another opined: "due to the high cost of engaging legal consultants we often informally consult the legal academics at the University of Botswana for most challenging tasks and will only request the services of a consultant if the client is ready to pay for it."

The knowledge of the business of law or non-legal knowledge consist of administrative data[17] and knowledge of the firm's market position and business strategy that makes it possible for any one to find and access the firm's procedures and policies (Kay, 2002;

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17 Administrative data includes all the information about the firm's operations such as hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data.

Rodriguez et al., 2002; Rusanow; 2003). Examples of knowledge of the business of law identified in table 6.2 are: client information (66.4%), financial information (38.8%), and marketing information (22.9%). Knowledge of the business of law was the least used type of knowledge in the law firm even though the practice of law is a business where lawyers seek to maximise profits. This may be because a law firm depends almost entirely on the legal knowledge, the skills and experience of the lawyer and staff in providing services to the clients rather than knowledge of the business of law. Ethical concerns may explain the low rating of marketing information (22.9%, table 6.2). Legal ethics requires lawyers to serve clients rather than seek an active quest for pecuniary gain by solicitation of prospective clients (Blades & Vermylen; 2004; Schnell, 2005). Marketing the firm's information may be seen as advertising the firm for active search of clients, whereas lawyers in Botswana as in most countries in the world are prohibited according to Section 53(2) of the Legal Practitioners Act, from advertising.

Clients' details and financial information such as financial news, data, clients' names and matters, staff payroll data, and clients' invoice data are administrative information generated in the firm's day-to-day business and are often handled by support staff in the firm (Rusanow, 2003). Lim & Klobas (2000) noted that small and meduim size firms appear to be in an advantageous position in terms of acquiring customers' knowledge because the managers and employees tend to have close and direct contact with customers and other organisations and some may know them socially and personally. Therefore, the relatively high rating of the use of client information (66.4%) may imply that lawyers are in close contact with their clients and monitor client information in order to make informed decisions about necessary action that could lead to client satisfaction.

7.5 Factors that would motivate the adoption of knowledge management in law firms in Botswana

Several changes in the legal environment were identified in chapter two (section 2.4) that provide compelling reasons for law firms to rethink their structures, roles, mission and the manner in which they carry their business. Against this background, law firms in Botswana were investigated in order to establish if they were also experiencing similar changes that are driving law firms around the world, compelling them to adopt knowledge management even though they are still grappling with the concept. Interestingly, even though law firms in Botswana have not formally adopted knowledge management, the analysis of question 8 of the research questionnaire (table 6.3, section 6.5) and the interviews show that lawyers

acknowledged almost all the different items that will motivate knowledge management in law firms.

The following are some responses from the interviewees with regards to the factors that may motivate the adoption of knowledge management: "lawyers do not stay in one firm they are moving from firm to firm;" "lawyers are constantly splitting up in the law firms to start off as sole proprietors or to form partnerships;" "we are under pressure to attract new clientele;" "it will be good to network with other lawyers;" "if only knowledge can be standardised;" "there is a lot of competition out there as to who owns the best knowledge;" "we have to keep up with the changes around us in the international law firms;" "the internet, computers, observation from other lawyers and networking with other lawyers are a challenge to our firm. "

The responses from the questionnaires indicate that advances in information communication technology (97.9%, table 6.3) were the most important motivating factor. Similarly, several knowledge management researchers have indicated that advances in information communication technology, is a major reason for current interests in knowledge management (Gottschalk, 2000; Susskind, 2003; Rusanow; 2003; Forstenlechner, 2006). Generally, advances in information communication technology have dramatically changed the method used by lawyers for processing knowledge and delivering legal services to clients. Nowadays, the adoption and use of information communication technology is moving beyond the automation of existing practices to innovative concepts and applications such as the internet, internet deal rooms, extranet, document and content management, online depositions, real time chat, portals, groupware, expert systems and knowledge management (Hopkins & Reynolds, 2003; Reach, 2006).

Other motivating factors such as the internet (95.7%, table 6.3), electronic publishing (95.0%) and shift from paper-based to electronic sources (94.3%, table 6.3) have also been triggered by advances in information and communication technology. As the internet technologies become more sophisticated, it is likely going to trigger more changes in the way law is practiced and delivered. The internet provides almost every resource necessary for legal researchers, lawyers and paralegals to locate materials and resources (Esqlawtech, 2002; Staudt, 2003; du Plessis, 2004). With the advent of the internet, knowledge management is becoming a necessity to firms of all sizes because it is a technology that firms can acquire to share valuable information without undue expense. In a 1999 study, Nye predicted that by the year 2025, the internet would change everything about the practice of law. With

regards to electronic publishing, (95.0%, table 6.3) legal publishers are reshaping their markets by using web technologies to provide lawyers with ready access to vast amounts of current as well as retrospective legal information resources (Paliwala et al., 1997; Perton, 1998; Hoover, 1999). The shift from paper-based to electronic sources (94.3%, table 6.3) coincides with the findings that legal practice which has been built around law books and print technology (Armitage, 1997; Berring, 1997; Brenells et al., 1997) is changing, albeit gradually since the first computers came to the law office. The internet is challenging most of the paper and print paradigm that supported the practice of law. Lawyers are now able to carry electronic libraries around with light, easy-to-use portable computers and it is becoming increasingly easy to find specific information that used to take lawyers and paralegals hours to locate.

Other equally important motivating factors identified are: meeting the information and knowledge needs of the lawyer (95.7%), the desire to support and encourage a learning culture (95.0%), the desire to promote professional satisfaction (94.3%) and the desire to promote team work (90%). Law firms in Botswana like law firms elsewhere acknowledge that they are under pressure to meet the information and knowledge needs of the lawyer (95.7%). This is because lawyers' needs are diverse and constantly changing. Leckie et al. (1996) observes that within the universe of potentially relevant information, what is required by a particular lawyer would vary and individual demographics such as age, specialisation, professional development, frequency of need, importance of the issue at hand, and complexity of the problem will influence the needs of the lawyers. As the legal information environment is changing, so are law firms challenged to fully identify and leverage the different information and knowledge needs of junior and senior lawyers.

The desire to promote professional satisfaction (94.3%) coincides with the view that law firms are professional service firms and like other professional service firms, their basic mission is to deliver outstanding client service, provide fulfilling careers and professional satisfaction and achieve financial success and growth (Miaster, 1993:46; Hunter et al., 2002).

Although the responses from the questionnaire suggests that the desire to support and encourage a learning culture is a highly motivating factor, by constrast the responses from the interviews however revealed that law firms do not encourage lawyers to crave and acquire new knowledge because of the feeling that time spent in learning is time they are supposed to bring in more money to the firm. The following are the notable responses from

the interviews: "if I want to learn I will have to create time out of business hours because it is my private affair;" "there is no time at all for any learning in my firm;" "learning in my firm is an individual's business;" "my boss does not support learning because it will interrupt the business of the firm." These views correspond with the findings of Matlay's (2000) qualitative and quantitative longitudinal study of organisational learning in the small business sector of the United Kingdom that learning in small firms was mostly incidental and sporadic through routine tasks. In essence, he found that the frequency of formal learning in these firms increased in direct proportion to their size. The fact that very few lawyers (17.1% as seen in chart 6.1) have additional qualification over the basic bachelor of law degree further reinforces the view that learning is not encouraged in law firms in Botswana. This is a matter of concern because law firms are learning organisations (section 2.3) where professionals are expected to crave for new skills and desire to gain specialised knowledge on particular areas of law and legal procedure. Besides, the law is constantly changing and lawyers need to keep up with these frequent changes and regulations in their practice area by constantly learning.

Interestingly, 90.7% (table 6.3) of lawyers indicated that the desire to promote team work may motivate them to adopt knowledge management even though generally, lawyers have been noted for their individualistic and personal culture that emphasises high level of creativity (Terrett, 1998; Hunter et al., 2002; Rusanow, 2003). It could be that most lawyers together with sole proprietors who are not in a position to work in teams (39.3%, chart 6.3) have started appreciating the importance of team work. It however emerged during the interviews that the team work they had in mind was limited to sharing basic knowledge such as precedents or inquiries about basic issues of the law amongst friends and former classmates. This did not extend to sharing knowledge about clients or some particular knowledge which will affect the lawyers' competitive edge over the other lawyers. The following are some of the responses from the interviews: "members in my firm do not have the time to engage in team work;" "we work alone in our firm and do consult each other informally only when we are not sure about a particular law;" "knowledge about my clients are personal to me;" "there is no team work in my firm;" "my clients and all my legal issues are personal to me but as colleagues we are cordial to each other;" "we share basic precedents and do inquire about basic issues of the law from one another but do not discuss in detail clients' issues because it is personal and there is a fear of losing clients." The views from the interviews that the desire to promote team work is not encouraged in the law firms is supported by the empirical findings from predominantly large law firms

in Australia (Khandelwal & Gottschallk; 2003) and Scotland (Hunter et al.; 2002) where only 32% and 14% of the participants in the Australian and Scottish law firms respectively, agreed that teamwork is fully recognised.

The recognition of competition amongst firms (70.0%, table 6.3), competition with other professional service firms (80.7%) and the use of knowledge management tools and practices by other competitors (88.5%) as motivating the adoption of knowledge management confirms the view that the desire to maintain a competitive edge is a driving motivation behind knowledge management (section 3.13.2). It has been observed that one of the major ways by which small and medium size firms acquire knowledge is by informal scanning of the external environment (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). It is therefore likely that law firms may be encouraged into adopting knowledge management by the different influences and pressures from the environment. Research reveals that the continuous rise in the number of lawyers and law firms leading to a situation where the supply of lawyers far exceeds the demand for their services has put pressure on law firms to maintain a competitive edge against each other for clients (Susskind, 2003). Also, professional service firms like accountants, financial planners, consultants, trust officers, mediators and a host of other professional service providers are pirating the work traditionally done by law firms such as tax work, employee benefits, management consulting and litigation support (Susskind, 2001). Thus, clients would not bother to seek the services of lawyers when professional service providers are acting as intermediaries and performing the traditional legal services previously done by lawyers at a much cheaper rate. Law firms are therefore under threat from these professional service firms to expand their services.

Lawyers identified the desire to protect the knowledge in the firm (83.6% table 6.3) and the desire to protect the loss of personnel (54.3 %) as major motivating factors in adopting knowledge management. It is also evident from the empirical findings of studies on small and medium size firms that there is need for organisational sustainability and the capturing of individual knowledge due to the fact that these firms are highly susceptible to the loss of employee's knowledge (Lim & Klobas, 2000; Egbu et al., 2005). A Small Business Service (2004) statistics reveals that 36 % of small firms perished three years after registration because the business ceases to be lucrative or because of the death or retirement of the proprietor or due to changes in the personal motivation and aspirations of the owner. An interviewee remarked: "I only know that the firm's knowledge and expertise is gone when a lawyer leaves and I have to handle a file that he/she was handling."

Another remarked: "there is a lot of loss of knowledge in my firm as lawyers come and go."

The increase in lawyers' mobility (46.4%) does not appear to be a significant motivating factor to the adoption of knowledge management (table 6.3); yet research reveals that one of the major reasons for the loss of knowledge in the law firms is mobility of labour (Morris & Pinnington. 1998; Hunter et al., 2002; Rusanow, 2003; Sinotte, 2004; Dubin, 2005). Hunter et al. (2002) in their study of knowledge management in predominantly large Scottish law firms revealed that these firms had a major problem retaining experienced staff. Lim & Klobas (2000) & Yewwong & Aspinwall (2004) also reported that small and medium size firms are highly susceptible to the loss of knowledge due to the mobility of employees seeking better compensation packages and higher prestige associated with larger firms. The findings from the interviews therefore confirm the view that mobility of labour may be a motivating factor to knowledge management in law firms in Botswana. The following are some of the responses from the interviews: "as a professional assistant, I am constantly moving from one firm to another in search of greener pastures and when I leave I persuade my clients to come along;" "this is the third law firm I am working in within a period of five years;" "I am looking for bucks and good working conditions;" "I will not stay in the firm and do all the work for the partners with little pay;" "I want to have my own firm where I can also be the boss;" "I suddenly realise that there is a knowledge gap in my firm when a professional assistant leaves and the file he/she is handling has to be handled by another lawyer" Clearly, there is an urgent need to protect the loss of knowledge in the law firms in Botswana due to mobility of lawyers.

It is surprising that not up to half of the participants (41.5%, table 6.3) considered information overload as a motivating factor to knowledge management, yet it is common knowledge that the proliferation of many types of information and communication technology (97.9%), internet (96.4%), electronic publishing (95.0%) and shift from paper-based to electronic source (94.3%) (all the different factors acknowledged by lawyers as motivating the adoption of knowledge management in table 6.3) have seriously raised the risk of information overload. An interviewee remarked: "there is a lot of information and one has to be very vigilant as to what to take and what not to take." Another opined: "I am more confused with the legal information on my desk today than was five years ago." One also said: "I prefer to rely only on the print resources because I do not know how to search and use the excessive information available in the electronic resources." The production and dissemination of information has become so cheap that lawyers are

challenged with the ability to process relevant documents or information in a timely fashion. In an empirical study on information and knowledge management in South African Law firms by du Plessis, & du Toit (2005), 95% of the participants agreed that the major research skills of lawyers is the ability to know where and how to find and keep up with new and relevant information. Parsons (2002) noted that in the "knowledge economy," the explosion of content and the increasing demands for speed in the provision of legal services has ironically led to information anxiety and attention deficit amongst lawyers. Egbu's et al., (2005) empirical survey on small and medium size surveying practices shows that, information overload and time were the two main constraints for knowledge creation for the organisations that participated in the pilot study. Consequently, tracking relevant information and knowledge amongst lawyers within the firm may be very time consuming as lawyers spend time in duplicating research that has already been carried out elsewhere, or creating new agreements and documents when models of such agreements already exist; often resulting in frustration.

The fact that globalisation of legal practice was not considered by a significant majority of participants as a motivating factor (only 69.2% agreed, table 6.3) may be due to the fact that law firms in Botswana are small firms (section 5.2, chart 6.3) and their clients and practice base therefore has not grown beyond the local market. Not many of them cooperate with international firms or even participate in international conferences (table 6.14). Generally, advances in information and communication technology and the decline of centralisation has resulted in globalisation of business practices that have broken geographical boundaries, leading to an increase in international collaborative legal practice worldwide compelling firms to differentiate themselves from their competitors and develop business strategies to manage knowledge about their market position, competitors, and key clients (Jackson, 2001:33; Rusanow, 2003). However, unlike most Western firms that are growing beyond their traditional local markets to global markets with large corporate firms having offices or federation of national firms in many countries, law firms in Botswana do not yet face significant pressure from multiple competitors.

On average, only 55.0% (table 6.3) of the participants considered pressure from clients as a factor that may motivate the adoption of knowledge management. Yet, one of the major characteristics of small and medium size firms are that they have close and direct contact with customers and may know them socially and personally (Lim & Klobas, 2000). Besides, the emerging trend in legal practice is that clients are becoming more sophisticated consumers of legal services and are putting constant pressure on the law firms to provide

efficient, proactive, more generic advice and commercially-focused legal services at a lower cost (section 2.4.10). They are eager to access the firm's knowledge base and are seeking their lawyers' services with a new fee structure that is not based on time billing (Bradlow, 1988; Nye, 1999; Kofoed, 2002; Susskind, 2003; Rusanow, 2004; Dubin, 2005). However, it may be assumed that most of the clients in Botswana are mostly local individuals or local organisations who may not understand what knowledge management is all about. Also, it could be that clients are more concerned with the effective delivery of the legal matter rather than the quality of legal services received. The overall conclusion from the above responses is that lawyers in Botswana recognised the need for knowledge management in their firms. The next section identifies the tools and techniques for knowledge management used in these law firms.

7.6 The tools and technologies for knowledge management in law firms in Botswana

The first task was to identify the tools and technologies in law firms. The analysis in table 6.4 identified the following information and communication technology arranged in order of importance as most frequently used in law firms: telephones 100%, computers 100%, personal networked computers (81.4%), email (71.4 %) internet (69.3%), case management systems (59.3%) and legal information systems (40.0%). The interviewees confirmed the use of the following information communication technology in the law firms: telephones, personal computers, internet, intranet, law plan and quick books for accounts management systems, telephone management systems and legal information systems. There is an indication that the use of information technology in law firms in Botswana is extending towards improving the efficiency of lawyers and staff and also in facilitating communication amongst lawyers. This indicates that, there is an improvement from a Fombad (2002) study on the adoption and use patterns of information and communication technology in law firms in Botswana which found that information communication technologies in the law firms was limited only to front office operations (telephones, word processing and accounting systems). It also reveals that a reasonable number of lawyers are responding to the changes in the legal environment (Susskind, 2003; Reach, 2006) by moving away from print sources to electronic sources of information for legal research. However, law firms are yet to acquire some of the crucial technologies for knowledge management. Although 81.4% indicated they have networked computers, only 71.4 % had email and 69.3% had the internet. It may be that some firms had network systems that limit the lawyer's access only to emails and not to the internet, or just to the internal communication within the firm,

without an internet or email. Nevertheless, the fact that the gap between those who have network computers, internet and emails is not that wide is indicative that an above average percentage of law firms in Botswana have emails, and are connected to the internet.

It was not surprising that only 20.0% used the intranet because most of the law firms consist of one or two lawyers (table 5.2, and chart 6.3) and may not require an intranet because the intranet technology is used mostly in large firms to facilitate the sharing and communication of information and knowledge within the firm. It is likely that a lawyer who is in a firm alone may not need an intranet because there is no other lawyer to communicate with. Firms with two lawyers may not also consider an intranet as a priority because they are often together in the firm and may communicate often by chatting, face to face discussions or through an internal telephone system. The view that larger firms are likely to use the intranet more is confirmed in a survey by du Plessis & du Toit (2005) on information and knowledge management in South Africa law firms where a majority of the participants (47%) were large firms, against 11% small firms. From du Plessis & du Toit's (2005) findings, 77% indicated that their law firms had intranets and most of the participants indicated that their firms are using information technology applications and knowledge management systems for managing information and knowledge.

Understandably, technologies such as artificial intelligence, enterprise information portals, expert systems, data base tools, Lotus Notes and case maps are not used because they are expensive and even most large law firms that have already adopted knowledge management are yet to acquire these technologies. A multiple regression analysis from a survey of the use of information communication technology for knowledge management in 250 Norwegian law firms by Gottschalk (1999) indicates that the growing use of information communication technology to support knowledge management grows with the firm size. In addition, Gottschalk (1999) posits that the use of information technology to support knowledge management is significantly influenced by the extent to which law firms used information communication technology in general.

The next task after identifying the information technologies used in the law firm in question 9, was to establish the information technologies used for knowledge management in law firms in question 10. The assumption that knowledge management requires computer-based technology pervades the field (Terret, 1998; Gottschalk, 1999; Campbell, 2002; Elder, 2002; Hunter et al., 2002; Kofoed, 2002; Carine, 2003; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004; Gottschalk, 2005; Rusanow 2007). The acknowledgement

of information and communication technologies as the major motivating factor in the adoption of knowledge management technologies (97.9%) in (table 6.3) reiterates the importance of information and communication technologies in knowledge management in law firms.

However, only two main ways in which information technologies used for knowledge management were identified (table 6.5). The first is the use of legal information systems for legal research and the second is the use of intranets, internet, extranet, and World Wide Web by the firm to gather knowledge so that it can be used in the firm. It is interesting to note that while 57.1% (table 6.5) acknowledged that legal information systems such as LexisNexis Butterworths, Justastat, Westlaw, and Thomas and Dialog are used to facilitate legal research, only 40% (table 6.4) had indicated that they use legal information systems. It may be that even though lawyers did not have or use these systems, they still appreciated the benefits of legal information systems. The interviews confirmed that the internet and external legal information systems are the major information communication technologies used for knowledge management in the law firms. Interviewees also indicated that file and account management systems are used for knowledge management in the law firms. An interviewee commented that, "my firm is small; therefore affording any other technology other than the email; internet and Lexis Nexis will kill and drain all the firms' resources."

The second major use of technology for knowledge management in the law firms from the questionnaire results show that 55.0% use intranets, internet, extranet and World Wide Web to gather knowledge so that it can be used in the firm (table 6.5). The fact that only 55.0% in table 6.5 agreed when in table 6.4, 69.3% had internet is an indication that not all the firms with the internet were using it for the purpose of gathering and sharing knowledge. It thus confirms the view in the preceding paragraphs that most law firms are small firms (chart 6.3) and may not need an intranet or consider it as a means of sharing knowledge because knowledge sharing may take other forms such as face to face communication. Similarly, Egbu et al.'s (2005) study on knowledge management for sustainable competitiveness in small and medium size surveying practices revealed that only 3 out of the 11 pilot organisations were using the intranet for knowledge management and only half of the interviewees claimed to use e-mail for knowledge transfer.

Only two (1.4%) participants acknowledged that their firms use knowledge maps that act as electronic intermediaries connecting knowledge seekers to knowledgeable people, while 26.5% agreed that they use Yellow Pages containing curricula vitae, competency

profiles, and research interest of experts (table 6.5), yet Yellow Pages are an example of knowledge maps. It may be that firms are using Yellow Pages containing curricula vitae, competency profiles, and research interest of experts but are not aware that it is a knowledge management tool, because they are not familiar with knowledge management technologies and concepts. Nonetheless, it is significant that 26.5 % of the participants agreed that they are using Yellow Pages, 28.6% agreed that document and content management systems are used in managing the content of knowledge, 25.7% agreed that lawyers subscribe to intranet news groups or email distribution lists and 20.7% agreed that they use indexing tools to organise and cross-reference material by subject and practice area (table 6.5).

Nonetheless, the fact that law firms are using some technologies for knowledge management confirms the view in the subsequent sections (sections 7.7, 7.8.1, 7.8.2, 7.8.3) that informal knowledge management existed in law firms even though not under the banner of knowledge management. Also, the fact that the percentage scores on the use of technologies for knowledge management (table 6.5) are above the percentage scores on technologies available in the law firms (table 6.4) may suggest that lawyers were excited about the potential uses of some of these information technologies for knowledge management from reading the questionnaire. Besides technologies, there are several formal and informal techniques for knowledge management in the law firms which are worth examining.

7.7 Techniques for knowledge management in law firms in Botswana

The results from the analysis of the techniques of knowledge management in law firms in question 11 of the research questionnaire (table 6.6) and the interviews revealed that although there is no formal structure of knowledge management as such in law firms in Botswana, several techniques of knowledge management are nevertheless carried out in the firms even though lawyers may not be aware that they are performing knowledge management functions. This further confirms the view that every law firm carries out some form of knowledge management even on an *ad hoc* basis (Lambe, 2003; Buckler, 2004),

There is no doubt that precedents (100%), legal research (80.0%) and hiring and training of young lawyers (61.4%) are the most frequently used techniques in law firms. Like in any legal practice, precedents in the form of reasoned judgements or standard forms are indispensable in the day to day operations of any law firm. The following are some notable responses from the interviews with regards to techniques of knowledge management: "Precedents are the foundation of legal practice;" "I often call my former classmate to inquire about a challenging legal issue;" "1 have to read the laws on a particular case and

the binding decisions before I decide on any legal issue;" "In my firm each lawyer has a series of files containing the different matters they attend to which they often refer to in subsequent matters;" "legal research on law reports is the way, but my firm cannot afford the law reports and so we rely mostly on the University of Botswana library;" "Our firm always welcomes students on internship and currently we have one;" "I have different files that are alphabetically arranged according to the different legal issues;" "we are compelled by the Legal Practitioners Act to admit students for pupilage. " The hiring and training of young lawyers is a requirement for all law firms. Sections 18-28 of the Legal Practitioners Act clearly envisages a twelve month professional training period after the law degree.

The findings from the interviews therefore confirm the importance of precedents and legal research as the major techniques for knowledge management in law firms in Botswana, while also highlighting personal information banked by each attorney as another important technique for knowledge. Interviewees indicated that they carry out research at the University of Botswana law library where registered users have access to electronic resources, law reports and judgments on CD ROMS, such as South African Law Reports, and other online law reports and judgments such as the Canadian Supreme Court judgments and the Australian High Court judgments. One of the major tasks of a lawyer is to carry out legal research. It is only after a solid legal research that lawyers can present information in court or provide a client with valuable advice. In du Plessis (2004) study on the use of information and knowledge management in support of legal research in the digital environment in South African law firms, it was evident that the ability for lawyers to conduct fast and efficient research was crucial in the changing legal environment.

Table 6.6 also suggests a relatively high use of certain techniques such as record management (72.1%), weekly learning reports (72.1%), office directory and office newsletters (47.1%), and meeting of lawyers with common interest (46.4%), Yellow Pages (46.4%) and regular-in house seminars (47.1%). This could not possibly accurately reflect what actually obtains in practice because the use of these techniques was not captured in the interviews. Also, most of these techniques require technologies to support them and there is no evidence in the findings in table 6.4 that many law firms have adopted these technologies. For example, Yellow Pages (46.4%) requires technology to support them yet in the findings of the use of information technologies for knowledge management in table 6.4, only 27.7% had Yellow Pages and not a single firm indicated that it had a database knowledge management tool. Furthermore, only 11.4% indicated they use skills and expertise locator even though skill and expert locator was an alternative name for Yellow Pages.

Not many law firms indicated that they are using some of what may be considered as preliminary techniques of knowledge management, such as best practice (39.3%), brief banks (21.1%) and work product repositories (19.3%), discussion of major projects with other lawyers after their completion (21.4%), professional development programmes (26.4%) and presentations (15.7%). Yet, some indicated that they have adopted some of the more sophisticated techniques such as litigation strategy (35%), client relation management (28.6%), conflict checking (12.9%), know-how index (11.4%), know-how systems and info-banks (22.1%), excellent staff knowledge centre (27.9%), client information and matter (11.4%), skills and expertise locator (7.1%), knowledge concierge (1.4%) and internal publications (5.0%). The accuracy of the above responses is in doubt for law firms that are yet to adopt most of the initial techniques of knowledge management. It has been reported that litigation strategy, client relation management, conflict checking, know-how index and info-banks are knowledge management techniques that require careful consideration in law firms (Karen, 2004; Dubin, 2005). In addition, these techniques require technology to support them and from the findings of the use of technologies for knowledge management in table 6.4, the adoption of technologies used for knowledge management in law firms is still at the initial stages. Besides, there was no indication that such techniques are being used in the law firms from the interviews. The feeling is that either the participants did not understand these techniques, were excited about the prospects of these techniques, or may have inadvertently ticked the boxes.

In the same way, it may have been an oversight by the two (1.4%) participants who indicated the availability of techniques such as knowledge concierge. This is because from the explorative interviews, it was seen that there was no knowledge concierge in law firms in Botswana. With regards to an excellent staff knowledge centre, the results of the interview (appendix 3) and personal observation by the researcher when visiting the law firms during the administration of the questionnaires revealed that law firms do not have excellent staff knowledge centres. Most of the libraries in the law firms in Botswana are nothing more than small rooms in the firm with a couple of books, mostly law reports in print, not manned by any staff. The only staffed knowledge centre of particular importance to the lawyers was the University of Botswana Library.

7.8 How knowledge management is manifested in law firms in Botswana

The purpose of questions 12 to 15 of the questionnaire was to establish the existing state of the art of knowledge management in law firms. To put this issue in its proper perspective,

an overview of what lawyers understand by knowledge management was considered, followed by an examination of the knowledge generated in law firms, how this knowledge is transferred, and the knowledge sharing culture, tutoring and mentoring opportunities, and the other factors that may encourage knowledge management in the firm.

7.8.1 Lawyers' definition of knowledge management

The findings on how lawyers approach knowledge management were obtained from the interviews. The overall notable responses were as follows: "knowledge management is how you manage information in your firm such that the knowledge is kept away from lawyers in other firms;" "knowledge management is the use of information and communication technology to manage knowledge;" "knowledge management means utilising the information in the firm;" "knowledge management is the management of the files;" knowledge management is managing the information we have;" "knowledge management is information management;" "knowledge management is about protecting trade secrets;" "knowledge management is a client's affair;" "I am hearing that term for the first time. " The responses however confirmed that like many lawyers elsewhere, especially in Africa, lawyers in Botswana are still grappling with the meaning and concept of knowledge management. For example, du Plessis & du Toit's (2005) survey of information and knowledge management in South African law firms concludes, the relatively high percentages of lawyers responding as "being unsure" might indicate a lack of knowledge or awareness with regard to knowledge management systems or could be an indication that these systems are currently not used in South African law firms.

It is however interesting to note that lawyers could at least define knowledge management as information management, file management, and the use of information and communication technology to manage knowledge, because information management is an aspect of knowledge management that is most often associated with explicit knowledge. Besides this, several studies in knowledge management have adopted the information technology approach (section 3.6.1; Earl, 1996, Sveiby, 1996; Carayannis, 1999; Alavi & Leidner, 2001; Gottschalk 2002; Sinotte, 2004). Unfortunately, by focusing mostly on a one dimensional approach to knowledge management, one is inclined to think that knowledge management in law firms begins and ends with building of information systems when this is not so. However, participants in the qualitative findings from a sample of 109 by Alavi & Leidner (1999) and a sample of 256 law firms by Gottschalk (1999) defined and classified knowledge management is into three different perspectives as: information-based perspective, a technology-based perspective and a culture-based perspective.

There are also indications from the preceding section (7.6 and 7.7) and tables (6.5 and 6.6) and in the subsequent sections (7.8.2, 7.8.3, and 7.8.4) and tables (6.7, 6.8 and 6.9) that knowledge management is practiced in law firms in Botswana informally though not under the banner of knowledge management. For example, knowledge management initiatives such as precedents (100%, table 6.6), legal research and development (80.0%, table 6.6), accessing online electronic resources for legal research (57.1%, table 6.5), hiring and training of young lawyers (61.4%, table 6.6) exist in law firms. Also, personal information banked by each attorney, accessing law reports and managing and storing knowledge in files are examples of informal knowledge management techniques presently common to all law firms (appendix 3). Although the findings in table 6.6 indicated several other advanced techniques of knowledge management used in the law firms, the reality is that most of the knowledge management initiatives that exist in law firms are basic and there are indications that lawyers are ignorant about most of the tools and techniques of knowledge management (appendix 3). It may be that lawyers were just ticking the questions, or that they appreciated the prospects and benefits of knowledge management initiatives. An understanding of the way knowledge is generated (created) in law firms provides further insights into knowledge management in Botswana.

7.8.2 How Knowledge is generated in law firms in Botswana

The knowledge creation process is oriented towards acquiring and developing knowledge, or adding value to previous knowledge through innovation (Carine, 2003; Daghfous, 2003). The discussion in this section is based on an examination of the different ways in which knowledge is generated in the law firms in Botswana from the findings in table 6.7 and the results from the interview. The two major ways by which knowledge is created in the firms from the responses in the questionnaire are by attending conferences (85.0%) and attending workshops respectively (80.0%). The fact that attending conferences and attending workshops are two interrelated methods of knowledge creation may be an indication that lawyers appreciate these methods of knowledge creation. Whether lawyers do indeed find time to attend conferences and participate in workshops is not certain. It is difficult to reconcile this with the fact that only 41.4% of lawyers (table 6.6) considered organising in-house seminars as a technique of knowledge management.

Further, the results from the interview (appendix 3) suggest that the only conferences, retreats and workshops that lawyers attend are those organised by the Law Society of Botswana and the Administration of Justice from time to time where members meet and

generate ideas and share ideas; but these conferences are not very regular. For example, the Southern African Development Community (SADC) Lawyers' Forum Conference organised by the Law Society is an annual event. There is also the annual judicial conference organised by the High Court where members of the legal profession meet and exchange ideas. It also emerged from the interviews that only the few lawyers who are members of international associations such as the International Bar Association of Law Societies across the World, and the Senior Lawyers' Association of the United States, take part from time to time in refresher programmes and attend seminars and workshops organised by these associations. Interviewees further put forward their thoughts with regards to knowledge creation as follows: "I know knowledge creation is the essence of a law firm but I am still in the learning curve;" "knowledge creation is a necessity and a challenge in my firm due to time; " "It is very essential to create and generate new knowledge in the law firm but we do not have time to acquire new knowledge;" "we do not have meetings in the firm but we do attend conferences organised by the Law Society;" "I get lots of information from clients;" "the internet is my major source of information and knowledge and I also use the internet for research;" "1 create knowledge through informal queries directed at external lawyers whom I know;" "I often learn something when I brainstorm legal issues with other lawyers in my firm or with colleagues in other firms with whom I share a common interest. "

The literature from empirical studies reveals that 4 out of 12 (33%) interviewees in Egbu et al. (2005) study on knowledge management for sustainable competitiveness in small and medium surveying practices noted that knowledge creation is a challenge for the individual, as well as the organisation due to lack of resources. It has been noted that the creation of new knowledge in small and medium size enterprises is less advanced than in large companies (McAdam & Reid 2001). It has also been observed that most small firms cannot afford or are unwilling to commit resources to conduct research, acquire knowledge from environmental scanning and can not afford time for trial and error activities since their investments are largely targeted on their core operational processes (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004).

The internet was considered as the third major way of knowledge creation in law firms (81.5% agreed). The internet as a medium of knowledge creation is understandable because 69.3% have internet in their firms (table 6.4), and 55.0% (table 6.5) consider the internet as one of the two major ways by which information communication technologies are used for knowledge management in the law firm. The fact that the percentage of those who considered the internet as a major way of knowledge creation (81.8%) is higher than

those who have internet 69.3% (table 6.4), and also higher than those who use internet for knowledge management 55% (table 6.5) is an indication that law firms appreciate the role of the internet in knowledge generation even though they do not have internet or may not be using it to generate knowledge. This view is confirmed by the fact that 96.4% (table 6.3) recognised the internet as a major motivating factor to knowledge management. There is no doubt that the internet provides access to a lot of resources necessary for legal research. Legal databases such as Westlaw, LexisNexis, Jutastat and Shepard, previously based on propriety software legislation, now have sites on the internet where an attorney can log on from any computer and do research (McCauley, 2005). It is, however, surprising that in spite of the advances in information and communication technologies and the changes in the legal knowledge environment, not all the lawyers in Botswana (63.9%) are connected to the internet. It could be that as small firms they do not have the resources or that they have not yet fully appreciated the importance of the internet.

There is no doubt that law firms generate knowledge by obtaining it from clients, competitors and suppliers (69.3%). This is because it has been observed that small and medium size firms have close and direct contact with customers and may know them socially and personally (Lim & Klobas, 2000). Also, in table 6.2, 66.4% of lawyers considered client information as one of the categories of knowledge in the law firm. In addition, Yewwong, & Aspinwall (2004) observed that it is likely that small and medium size firms who lack the ability and capacity to develop themselves will obtain knowledge by scanning from the external environment.

Surprisingly, accessing legal databases (61.4% agreed), capturing knowledge from research institutions and universities (52.2% agreed), and writing internal reports (30.0% agreed) were rather ranked low as ways of generating knowledge in law firms. One will have expected these methods to be ranked higher as means of knowledge creation particularly because they all involve elements of legal research, and legal research (80.0%, table 6.6) is one of the major techniques of knowledge management in law firms. Another reason why one will have considered legal research to rank as the highest method of knowledge creation in the law firms is because it was confirmed during the interviews that reasoned judgments by judges, subscription to law journals and judgments from the superior courts (all elements of legal research) were important techniques of knowledge creation in the firms (appendix 3). In this regard, Yewwong, & Aspinwall (2004) reported that small and medium size firms tend to have severe limitations when it comes to generating knowledge through research because too often, they do not have a research and development department, dedicated

research personnel, or may be too involved in performing the core business of the firm. It is worth noting that subscription alone to law journals would not generate knowledge. It is only when these journals are actually read and analysed by the lawyers that knowledge is generated.

The creation of knowledge through project teams was not a significant method of knowledge creation in the law firm (41.4% agreed, 55.7% were neutral, table 6.7), yet most lawyers (78.5% agreed, table 6.9) acknowledged that they have a knowledge sharing culture, and that knowledge may be transferred through teamwork (72.9.0%, table 6.8). The reality is that most of the law firms in Botswana are owned by sole proprietors (39.3%, chart 6.3) who do not work in teams because they are alone in their firms. Also, lawyers are not noted for working in teams. For example, Hunter et al. (2002) & Khandelwal & Gottschalk (2003) reported that knowledge is not generally created through project teams. Only 46% of the participants in a survey of Scottish law firms by Hunter et al. (2002) and 13% of the participants in the survey of knowledge management in Australian law firms by Khandelwal & Gottschalk (2003) agreed that there is an expectation that lawyers or their teams will have to take a regular turn to provide a reflection on learning experiences.

Several other findings in this study affirm that lawyers are individualistic and do not have a culture of working in teams. For example, in table 6.6, only 21.4 % acknowledged that there is discussion of major projects with other lawyers after their conclusion, 41.4% acknowledge that lawyers organise in-house seminars and 46.4% acknowledged that lawyers with common interest meet regularly. Also in table 6.5, only 25.7% subscribe to online forums and internet news groups (a forum for discussions and interaction). Nevertheless, the fact that an overwhelming majority (90.7% agreed, table 6.3) acknowledged that the desire to promote teamwork is a motivating factor to knowledge management may be an indication that lawyers appreciate the benefits that may result from team work even though most are not working in teams.

7.8.3 The transfer of knowledge in the law firms

Besides generating knowledge, another aspect of knowledge management is the transfer of knowledge. Knowledge transfer refers to the means and ways of distributing knowledge in a firm in a manner that will ensure that it is easily accessible to those who need it. The possible techniques of knowledge transfer were identified in question 13 of the research questionnaire.

The findings presented in table 6.8 show the different methods of knowledge transfer in law firms in Botswana.

It is worth noting that the most significant way by which knowledge is transferred from the findings in table 6.8 is by teamwork (72.9% agreed), even though creating knowledge through project teams in table 6.7 was one of the least important ways of knowledge creation in law firms (41.4%). One therefore doubts the accuracy of the response because it is difficult to comprehend how lawyers who do not usually work in teams to create knowledge, work in teams to transfer knowledge. Furthermore, from the findings on the techniques of knowledge management in law firms in table 6.6, not up to half of the participants showed the tendency to work in teams; only 21.4% acknowledged that their firms discuss major projects with other lawyers after their completion, 41.4% acknowledged that lawyers organise in-house seminars and 46.4% acknowledged that there are meetings of lawyers with common interest. In a case study of knowledge management in three small firms, Lim & Klobas (2000) reported that, generally knowledge held and obtained by senior managers in the firm are "operationalised" or translated into descriptions of tasks for the employees to execute. They opined that only one out of the three firms in the case study had an opportunity for substantial knowledge transfer among individual members of staff. Similarly, only 14% in Hunter et al. (2002) survey of Scottish law firms and 32% in Khandalwal & Gottschalk (2003) survey of knowledge management in Australian law firms reported that teamwork is fully recognised and rewarded.

From the analysis of the interview (appendix 3), it became clear that the transfer of knowledge by working as a team within the law firm just like the creation of knowledge in the preceding paragraph, is limited to promoting the general interest of the firm or in discussing the general principles of the law provided such knowledge would not result in a loss of the lawyer's client base or competitiveness. An interviewee expressed his thoughts with regards to knowledge creation in the firm as follows: "there is no time for knowledge transfer in my firm; every one is busy to meet his/her target; but however I may call and inquire or brainstorm on challenging legal issues with a colleague with whom I have a personal relationship." Another interviewee opined: "there is no formal process of knowledge transfer as such in my firm; I just give strict instructions to my staff on what to do." Furthermore, an interviewee expressed his thoughts as follows: "I may only call, chat or discuss informally with other colleagues within the firm on issues based on the general principles of law, and not knowledge or information that gives me a competitive edge over my colleagues within and out of the firm." It was again noted by another interviewee that:

"I often call and informally brainstorm on challenging legal issues with former lecturers at the University of Botswana." The interviewees' responses strengthen the view that knowledge management initiatives have existed informally in law firms (sections 7.6, 7.7, 7.8.1, 7.8.2, and 7.8.4 below and tables 6.5, 6.6, 6.7, 6.8 and 6.9).

The discussion of major projects after conclusion was the second rated item (68.6%, table 6.8) again suggesting that law firms transfer knowledge by discussing projects in teams because an individual cannot discuss a project alone. However, as has been noted above, a discussion in project teams is not typical in small and medium size firms (Lim & Klobas, 2000) and in law firms in general (Hunter et al., 2002; Khandelwal & Kottschalk, 2003). Discussions of major projects after their conclusion (section 3.11.6) is a formal process where lawyers come together to brainstorm on a major project after its completion for purposes of recording the key lessons learned after which the information is put into a project summary and made available over the internet (Maiden, 2000; Buckler, 2004; Wesemann, 2006). However, similar to the preceding paragraph, several findings in the study contradict the view that discussions of major project are a major way of knowledge transfer in the law firms. First, the findings on techniques of knowledge management show that only 21.4% (table 6.6) of the firms discuss major projects after conclusion. Second, as observed in the preceding paragraph, the creation of knowledge through project teams was one of the least important ways of knowledge creation in law firms (41.4%, table 6.7). Third, it has been noted that most lawyers are sole proprietors (39.3%, chart 6.3; Section 5.2) and therefore have no team members to discuss projects with. One may therefore infer that law firms do appreciate the benefits of transferring knowledge by discussing major projects in the firm. Results of the interviews (appendix 3) indicates that discussion of projects in law firms in Botswana is at best informal thus confirming the view that knowledge management in law firms is currently practiced informally (section 7.8.1 and 7.8.2). An interviewee opined: "I do not have time for any discussions, but if it is really an urgent issue I may just discuss informally with my colleague by walking into his /her office or by a simple phone call." Another reported that, "team projects are unheard of in my firm because every lawyer keeps his cards close to his chest."

The third rated means of knowledge transfer in law firms was informal social networking of lawyers (65.7%, table 6.8). Although in table 6.6 only 46.4% considered the meeting of lawyers with common interest as an important technique of knowledge management, the results of the "other" category and the interviews (appendix 3) confirms that informal exchanges of knowledge through chatting by the hallways, at the board rooms, telephone

chats, face to face discussions and brainstorming were the main methods of knowledge transfer in the law firm. This strengthens the view that lawyers are practicing informal knowledge management initiatives (section 7.8.1 and 7.8.2). However, as already observed in the preceding paragraphs, lawyers exchange knowledge only amongst those whom they know such as colleagues in the same firm, friends and former classmates in other firms; and such knowledge is often based on the interest to be gained from either side. Informal social networking is similar to what is referred to in the literature (section 3.11.2) as conversation by water coolers. Conversations have long been recognised as an important form of knowledge transfer in a new economy. Through conversations, knowledge workers discover what they know, share knowledge with colleagues and in the process create new knowledge for the organisation (Webber, 1993). A more formalised type social networking is communities of practice (section 3.11.1). Communities of practice are informal group of people from all levels and functions in the organisation who share a common area of expertise and/or search for solutions to common problems (Brown & Duguid, 1991; Stewart, 1997; Smith, 2001; Wenger, 2003). However, large law firms in Botswana are yet to reach that level where they would appreciate the need to invest their time and the necessary collaborative information technology for communities of practice.

It was not surprising that most participants did not consider the intranet as a means of knowledge transfer (31.8%, table 6.8) because, as already observed, only 20.0% (table 6.4) of the lawyers indicated that they had the intranet. Although the intranet is a cutting edge communicative and collaborative technology that supports the transfer of knowledge amongst members, most law firms may not consider it necessary at the moment. This may be because as already observed (section 7.6) law firms in Botswana are predominantly one (39.3%, chart 6.3) and two lawyer firms (35.0% chart 6.3). In a one lawyer firm there is no other lawyer to share information with, while in the two lawyer firm, there are other simpler and cheaper ways to transfer knowledge such as telephones, mobile phones and informal face to face meetings. This corresponds with Egbu et al. (2005) empirical findings that tacit knowledge is mostly transferred in small and medium size firms through chatting, phone calls, face to face discussions, brainstorming and mentoring schemes.

Lawyers did not consider organising formal meetings as an important method of knowledge transfer (26.4%, table 6.8) and also in table 6.6 only 21.4% considered organising in-house seminars as techniques of knowledge management. This response is not surprising because one does not expect formal meetings in a firm where there is only one lawyer, and also lawyers in a two lawyer firm may not need formal meetings because discussions

may takes place at any time and on a day to day basis. Lawyers also acknowledged from the findings of the "other" category questions and the interviews that they do not organise formal meetings because they do not have the time. In fact, one participant commented: "there is no time for formal meetings; actually in principle, we are supposed to meet every Tuesday in the boardroom for debriefing; but these meetings do not take place because the lawyers do not have the time." Another commented: "we do not have formal meetings and every one is very busy and involved with his /her matter; I may make a phone call to my colleague for inquiries about a general principle of law provided he/she is not busy at that moment to attend to me." It does appear that lawyers in Botswana do not fully appreciate the fact that such meetings provide ample opportunity for them to interact, discuss and learn about key issues or new developments relevant to practice in areas that would in turn improve productivity.

From the survey, links with professional associations (25.0%, table 6.8,) was the least rated method of knowledge transfer. The fact that most of the responses were neutral (48.6%) is indicative that not many lawyers are members of professional associations besides the Law Society and therefore do not appreciate the benefits of belonging to professional associations. This view was confirmed from the "other" category and the results of the interviews (appendix 3), where very few lawyers indicated that they are members of professional associations such as the International Bar Association of Law Societies, Senior Lawyers' Association of the Untied States and the Network of Lawyers and Accountants in Texas; and very few appreciated the important role of professional associations in the creation and transfer of knowledge in their firms. Professional associations are examples of knowledge networks that provide avenues for sharing and exchange of knowledge and enable firms to be more creative reactive and innovative (Alavi & Leidner; 2001; Carine, 2003). In this regard, the empirical survey by Egbu et al. (2005) confirms that getting the appropriate knowledge in small and medium size enterprises is best done through informal networks yet; these firms lack the time or resources to identify and use important external sources.

7.8.4 The knowledge sharing culture in the law firms in Botswana

A knowledge sharing culture is crucial for knowledge management to flourish. The discussions on the knowledge sharing culture of the law firm would enable us to appreciate the state of the art of knowledge management in law firms. The findings from analysing question 14 of the research questionnaire relating to the culture of knowledge sharing were presented in table 6.9.

Most participants (78.5%) agreed that their firms had a knowledge sharing culture (table 6.9). Although this response is similar to the responses in table 6.8 where team work (72.9%) was ranked as the highest attribute of knowledge transfer in the firms, several contrasting findings emerged from the same table on the different attributes of knowledge sharing that did not portray law firms as having a knowledge sharing culture. For example, a firm cannot have a knowledge sharing culture and yet only 30.7% agreed while 42.1% were neutral (table 6.9) about the firm conducting events and providing time in which ideas and experiences could be shared. The 42.1% who were neutral could be those who are apprehensive about law firms providing time off their tight schedule for knowledge sharing. Also, as already noted above (section 7.6, 7.8.2 and 7.8.3) most law firms are sole proprietors (chart 6.3) who are working alone and therefore do not need to share knowledge. It should also be noted that regular meetings are supposed to be opportunities for knowledge sharing in a firm with a knowledge sharing culture, yet only 37.2% agreed, and 42.9% were neutral while 20% disagreed (table 6.9) that their firms provide opportunities for regular meetings. The 42.9% neutral response could be that participants were unsure about their firms providing opportunities for regular meetings because such initiatives are not common to the law firms. This is confirmed by the fact that in table 6.8 only 26.4 % felt organising formal meetings was a method of knowledge transfer. One would expect firms with a knowledge sharing culture to provide opportunities for formal and informal networking, yet only 30% (table 6.9) indicated that their firms provide opportunities for formal and informal networking while 52.1% were neutral, and 17.9% disagreed.

The results of the interviews, the "other" category questions, and the findings in the preceding sections (sections 7.8.2 and 7.8.3) further confirmed the view that knowledge sharing amongst lawyers is an exception rather than the norm. The following are some of the responses from the interviews and the "other" category: "my firm does not have the tradition of sharing knowledge, I work alone and may consult a colleague informally by phone or chat with him /her at tea time to inquire on a principle of law;" "I believe I am known and respected by my colleagues and clients because of the knowledge I have and so I am reluctant to share with my colleagues anything that may make my position in the firm vulnerable;" "the only knowledge we share together are precedents and knowledge on the general principles of law;" "we are all busy, the only time members in my firm may have the time to share knowledge is when chatting informally;" "we all want to be seen as the best, therefore I am reluctant in sharing my knowledge because it is like making what was unique to me common to all;" "I am alone in my firm and do not share my

knowledge with anyone and I prefer it this way; however from time to time I may consult my formal classmates from other firms to talk about legal issues of common interest. " The above responses reveal that lawyers do manifest a knowledge sharing culture only insofar as discussions on the general principles of the law are concerned or where there is something to be gained, such as exchanging precedents, or knowledge of the law. One may therefore attribute the positive response by the participants to the question on knowledge sharing culture to the fact that, as in previous observations lawyers may well recognise and appreciate the benefits of knowledge sharing even though they are cautious about the knowledge sharing culture.

Several reviewed literature on knowledge management acknowledge the importance of cultivating trust and organisational culture as pre-conditions for effective transfer and sharing of knowledge (Dixon, 2000; Godvinarajan & Gupta, 2001; Nonaka et al., 2002; Daghfous, 2003). Apparently, small firms are expected to have a unified and fluid culture with fewer interest groups and a corporate mindset that emphasises the company as a single entity making it easier to share knowledge in these firms (Ghobadian & Gallear, 1997). However, the reality is that small firms like large firms still face the challenge of knowledge hoarding. In a survey by Egbu et al. (2005) on knowledge management for sustainable competitiveness in small and medium firms surveying practices, 50 % of those interviewed agreed that knowledge sharing in small firms is a challenge to knowledge management. They highlighted trust, time, lack of communication skills and rapid change in information and communication technologies as some of the main concerns for knowledge sharing. Also, only 34% of the participants in Hunter et al.'s (2002) survey of knowledge management in Scottish law firms and 21% of the participants in Khandelwal & Gottschalk's (2003) survey of knowledge management agreed that sharing knowledge systematically is part of the firm's culture. An interviewee in Forstenlechner (2006) empirical study on knowledge management and law firm performance reported that, "the main barrier to knowledge management in the law firm is culture, not technology. Technology is a necessary, readily available, but not remotely sufficient, tool. If the firm's culture is not collaborative, collegial, and sharing by nature, pursuing knowledge management will be an exercise in frustration." Also, an Australian leading law firm in knowledge management recognises culture as a major impediment to knowledge management (Rusanow 2007).

There was a clear indication that colleagues from different areas had time to chat informally with other colleagues (85.7% agreed), which was also reflected in the large response that colleagues from different areas or offices assist one another on a needs basis (85.0%

agreed). This confirms the existence of informal knowledge management initiatives in law firms (sections 7.6, 7.7, 7.8.1, 7.8.2 and 7.8.3 and tables 6.5, 6.6, 6.7 and 6.8). Interviewees noted that they do chat with each other in the following different ways: "conversations at tea time;" "at the boardrooms;" "telephone chats;" "face to face discussions"; and "consultation and discussions with other lawyers." These different methods of chatting are referred to in the knowledge management literature as "conversation by the water coolers" (Webber, 1993; Nonaka & Takeuchi, 1995).

Participants acknowledged that the firm's layout and organisational design is conducive for discussing with colleagues (74.3% agreed). This confirms the finding from the knowledge management literature that in order to reduce formal communication and bureaucracy modern offices are layouts should be design in such a way that the offices of professionals and executives are close to each other (Soliman & Spooner, 2000; Disterer, 2003; section 4.8.5). Such a layout foster *ad hoc* informal and face-to-face communication between lawyers and ensures easy accessibility to law firms by employees and clients.

7.8.5 Tutoring and mentoring opportunities in the firm

The tutoring and mentoring opportunities in the law firms throw more light on how knowledge is manifested in law firms in Botswana. The responses to the batch of questions designed to understand the state of tutoring and mentoring in law firms in question 15 of the research questionnaire are presented in table 6.10. Although the overall results reveal that law firms provide tutoring and mentoring opportunities, the percentage on each item with regards to participants agreement to the provision of tutoring and mentoring opportunities did not exceed 67.2% and responses from a considerable number of participants was neutral.

First, 60 % agreed, and 25% were neutral (table 6.10) that firms encourage employees to continue their education. The findings from the interview revealed that lawyers were not very confident of the tutoring and mentoring opportunities in the firms or that there were any formal tutoring and mentoring programmes in the law firms. The following are notable responses form the interviewees: "my firm does not provide opportunities for further education because of the feeling that time taken to make money for the firm is being wasted on studies when the bachelor's degree in law is all the lawyer needs." Another remarked: "we are not encouraged to further our education, if you want to study you have to find the time because business has to be done and you are expected to meet your targets." Another opined: "the bachelor's degree is good enough for a lawyer, if you

want to continue with your studies, you must look for the time out of business hours." Furthermore, an interviewee commented: "I am faced with the choice of closing down my firm and furthering my education." It is clear from the results of these interviews that those who study do so at their own time, mostly after working hours while lawyers in the one (39.3%, chart 6.3) and two lawyer firms (35.0%, chart 6.3) are reluctant in furthering their education because it may imply closing down the firm. This therefore may explain why a majority of the lawyers 83% (chart 6.1) had just a bachelor's degree, the minimum requirement for legal practice stipulated in Section 4 of the Legal Practitioners Act, 1996. The fact that a lawyer may still be an excellent and successful lawyer with just the first degree makes most lawyers to consider post graduate studies as a luxury unless it is a specialised area that is needed in the firm.

With regards encouraging partners to train associates, 67.2% agreed 10.8% disagree and 22.1% were neutral, while with regards to hiring and training of young lawyers 64.3% agreed, 26.0% were neutral and 9.3% disagreed. The participants who indicated a neutral response to these questions are most likely those who did not show any interest in training professional assistants or in hiring and training young lawyers. The following are some of the responses from the interviews and the "other" category questions in this regard: "my firm takes pride in tutoring and mentoring; currently we have two pupils in the firm;" "when I came to this firm, I had a rough time because I was expected to be a lawyer on the first day, so most of my experience and understanding of legal practice has happened by learning informally from colleagues and older school mates;" "we do engage professional assistants and students on internship but there is no time to provide formal tutoring and mentoring as such; we do expect them to learn fast on the job;" "there is no formal tutoring and mentoring programme in my firm;" "there is no spoon feeding here, I learned the very hard way;" "we do engage students on internship but the reality is that time taken off for tutoring and mentoring is waste of valuable time that could have been spent making profit for the firm." These findings reveal that while some firms pride in mentoring pupils, accepting students to do internship and shadowing attorneys, there are many other firms who are not interested in mentoring. It is likely that such firms do accept pupils only to formally comply with Sections 18-28 of the Legal Practitioners Act that envisages a twelve months professional training period after the law degree. Generally, tutoring and mentoring systems assist new employees by allowing senior employees share their expertise, knowledge, wisdom, specific insights, practice and skill with junior colleagues within a short space of time; provide opportunities for continuous education and thus preserve individual skills

and knowledge from being outdated and counter-productive (Sveiby, 1995). By delegating tasks to junior employees through tutoring and mentoring, senior employees will be able to perform challenging tasks within the firm thus resulting in better decision-making.

A majority of the participants were neutral (63.6%) with regards to the provision of professional development programmes in law firms (see table 6.10). The neutral response could be because, as already observed in the preceding paragraphs (table 6.6, 26.4%, and the interviews), most lawyers do not bother much about professional development or in furthering their education. This view was confirmed in Matlay's (2000) longitudinal case study of organisational learning in the small business sector of the United Kingdom. He revealed that acquiring, transferring and using learning-based new information did not feature high on the agenda of most of the small businesses; and that learning in these firms is incidental and occurs sporadically throughout routine tasks. Learning and professional development systems are the tools that assist knowledge workers to learn and use knowledge. Knowledge management programmes for professional development provides lawyers with opportunities for on-going intellectual stimulation thus avoiding the boredom and frustration that may result in a lawyer deciding to leave a firm because he/she is tired of repeating the same type of work every day (Buckler, 2004; Leibowitz, 2004).

7.8.6 Factors critical to the success of knowledge management in law firms in Botswana

The discussion on the state of the art of knowledge management in law firms in Botswana cannot be complete without considering whether the law firms operate under conditions that are favourable for knowledge management. The responses from question 16 presented in tables 6.11 determine whether there were sufficient factors to facilitate knowledge management in law firms in Botswana. The responses were mainly negative or neutral. Only one item recorded a positive response of 52.8%. The findings from the interviews indicates that lawyer were not quite sure of an operating environment for knowledge management. An interviewee stated that, "I think I like knowledge management and the potential it can offer from your explanations but I am not quite sure of how my firm can encourage knowledge management when we are all under pressure to meet targets." Another commented that, "if knowledge management is recognised as one of the targets it will encourage lawyers to devote time on it." It was further said that, "if my firm invests in information communication technology it may promote knowledge management." The following were other notable responses from the interviewees: "we need time for

knowledge management;" "partnership should take up knowledge management as an important issue;" "knowledge management sounds good but only if the partners may tell us what to do about knowledge management."

Most participants did not agree that promotion in the law firm is based on the ability to share knowledge (5.7% agreed, 52.9% were neutral, and 41.4% disagreed; table 6.11). It may be that participants do not know that sharing knowledge is one of the ways they may be recognised in the firm. It may also confirm the views in the preceding sections (sections 7.8.2, 7.8.3, 7.8.4 and appendix 3) that knowledge sharing culture is contrary to the norms of the law firm. Another reason may be that lawyers are used to the traditional methods of rewards in the law firm whereby a lawyer is recognised due to his/her effective delivery of legal services rather than in sharing knowledge. For example, 72% of the participants in Khandelwal & Gottschalk (2003) survey on knowledge management in Australian law firms agreed that promotion in the law firm was based on the ability on how well he/she does his or her work. It could also be that since most law firms were one-lawyer firms they did not need to share knowledge in the first place.

Also, very few lawyers (table 6.11) acknowledged that there is special recognition of staff for the time spent in knowledge creation, sharing and distribution (30.7% agreed, fifty six 40 0% are neutral and 29.3% disagreed). This therefore confirms the findings earlier observed (sections 7.8.2, 7.8.3, 7.8.4 appendix 3) that law firms are individualistic and do not have a culture of knowledge sharing claimed in table 6.9 (78.5%). In Forstenlechner (2006) case study on the impact of knowledge management in law firms' performance, 59% agreed that peer recognition and respect are a motivation for knowledge sharing. In the same light, the literature reveals that rewards such as promotions, incentives, and special recognition are important extrinsic motivation for encouraging the knowledge creation and sharing amongst lawyers (Platt, 1998; Kofoed, 2002; Leibowitz, 2002). It may be that lawyers in Botswana are not aware that they may be given special recognition for creating and sharing knowledge, or be promoted or recognised for sharing and creating knowledge in the firms because it is not regarded as one of the ways of generating incomes in the firm.

It is interesting that lawyers acknowledged that there is monetary and non-monetary rewards for sharing knowledge (52.8% agreed) when they did not consider promotion (which often comes with a monetary reward) as a reward for knowledge sharing and creation in the firm (52.9% were neutral, and 41.4% disagreed; table 6.11) and very few (40.0% are neutral and 29.3% disagreed) also acknowledged that there was special recognition (a non

monetary reward) for knowledge sharing and creation. In contrast, Disterer (2005) had a 70% positive response rate on "lack of incentives" as a barrier for knowledge management. Also, Gottschalk (2005) recommends that non monetary rewards for sharing knowledge such as feedback, either personally or publicly will make lawyers feel more valued, and will send out signals that knowledge sharing is a core corporate value.

Most participants acknowledge that there is mutual respect, trust, care and concern amongst individuals (78.5% agreed, table 6.11). This contradicts the findings on the knowledge sharing culture of the law firm in section 7.8.4 where lack of trust featured as one of the major barriers to knowledge sharing. Also, it has been noted that although small firms are expected to have a unified and fluid culture with a corporate mindset that emphasises a single entity cultivating trust amongst team memberships the most important and most difficult task is in building effective teams to share knowledge amongst members (Ghobadian & Gallear, 1997; Godvinarajan & Gupta, 2001). In a survey by Egbu et al. (2005) on knowledge management for sustainable competitiveness in small and medium size firm surveying practices, 50 % of those interviewed highlighted trust, time, lack of communication skills and rapid change in information and communication technology as some of the main concerns for knowledge sharing.

7.9 Perceived benefits of knowledge management for law firms in Botswana

Having established the state of the art of knowledge management in the preceding sections, it is crucial to establish whether lawyers in Botswana perceive any benefits from knowledge management. The different items on perceived benefits of knowledge management listed in question 17 of the research questionnaire were presented in table 6.12. The overall observations from the questionnaire and the interviews and "other" category are that although lawyers have not formalised knowledge management, they recognised and appreciated the potential benefits of knowledge management to law firms. Similarly, in du Plessis & du Toit (2005) empirical survey of information and knowledge management in South African law firms, special notice was taken of lawyers' positive attitude towards the potential applications of information and knowledge management systems even though they appeared to be unsure of how these systems operate. Participants in du Plessis & du Toit (2005) study appreciated the importance of knowledge management systems in performing the following: awareness of current knowledge (97%); ability to distribute, share, capture and apply knowledge (94%); ability to work independent of time and location (93%); ability to collect information created by colleagues (92%); ability to learn new information

technology skills (90%); ability to reduce the dependence on an individual's knowledge (89%); ability to be part of the development of new knowledge (89%); ability to distribute information to colleagues (85%); and to partake in discussions within a community of practice (66%).

The following are notable responses from the interview in this study with regards to the perceived benefits of knowledge management in law firms in Botswana: "it is encouraging to know that I can almost always get what I need within the time frame available for it, because currently I spend a lot of time sought of re-inventing the wheel;" "it seems to be the trend and an essential function in today's law firm environment;" "as a fairly young legal practitioner it is heartening to know that with knowledge management in place there will be some where to inquire information about what you do not know because it is presently difficult working without any prior experience and with no one willing to assist you;" "I appreciate its potential to improve the overall efficiency of the firm;" "the thought that it will make my work easy;" "it will improve the quality of clients;" "it will provide the ability to network with other lawyers within and out of the country."

The participants in the questionnaire all agreed (100%) that a good knowledge management attitude would improve knowledge sharing in the firm, and also improve the sharing and transfer of knowledge with partners and strategic alliances (90.0%). This is similar to the positive response in table 6.9 where most lawyers (78.5%) indicated that they have a knowledge sharing culture even though other findings suggests the contrary. The above responses indicate that law firms in Botswana recognise the importance of sharing knowledge even though their knowledge sharing culture is presently limited only to the sharing of basic knowledge of the firm or matters of general interest to both parties. The literature reveals that knowledge management promotes a culture of knowledge sharing that extends beyond the access to knowledge in the hallways, at the water cooler and at lunch time, to communication, collaboration, trust and teamwork (Lambe, 2003; Forstenlechner, 2006; Rusanow, 2007).

Lawyers acknowledged the fact that knowledge management would prevent duplication in research (91.4% agreed). However, in the responses to the factors that would motivate firms to adopt knowledge management in table 6.3, information overload (one of the main causes of duplication in research) was amongst the least rated items that was considered as motivating knowledge management in law firms (46.0 % agreed). It could be that lawyers are not aware that duplication of research is one of the effects of information overload.

Or, it may as well be that information overload is not the major cause of duplication of legal research in law firms. In du Plessis & du Toit (2005) study, it was observed that being a competent legal researcher in the changing digital environment entails knowing how to find competent information (95%), where to find this information (95%) and how to manage this information (95%). Knowledge management initiatives such as precedent documents, repositories of prior work product and project methodologies will enhance the lawyers' competence by reducing the time that he/she would take to draft documents and conduct research, thus preventing duplication.

The participants were agreed that knowledge management would protect the firms' loss of knowledge (92.9%), improve the retention rate of lawyers (75.0%) and integrate knowledge within the firm (92.1%). Although the loss of key personnel (54.3%) and an increase in lawyers' mobility (46.4%) were amongst the least rated items that would motivate the adoption of knowledge management in the firm (table 6.3), a different finding emerged from the interviews and the "other" category. It emerged that one of the reasons why law firms in Botswana remain small is because law firms keep splitting up as lawyers keep moving from firm to firm in search of bigger incomes. The literature also shows that mobility of labour, staff turnover, and employees' retirements are the major causes of loss of intellectual assets and institutional memory (Ndlela & du Toit, 2001; Mason & Pauleen, 2003). Knowledge management will capture the organisation's individual knowledge or team capabilities and transform it into organisational knowledge, documented processes and knowledge base, thus reducing the risk of knowledge deterioration that may arise when people leave the organisation. Knowledge management initiatives enable firms to attract and retain talented lawyers as well as their clients.

Although many lawyers acknowledged that knowledge management would improve the lawyers' relationship with their clients (85.0%), only 66.4% (table 6.2) were frequently using clients' information while 55.0% (table 6.3) considered client information as a motivating factor for knowledge management. It therefore seems that lawyers recognise the benefits of improving their relationship with their client. It is evident that small and medium size firms have the advantage of direct client contact (Lim & Klobas, 2000).

The participants acknowledged that knowledge management would improve the lawyer's efficiency, productivity (95.0%) and also flexibility (87.1%). It is likely that improvement in efficiency and productively will enhance a lawyer's flexibility thus resulting in professional satisfaction. These findings confirm the literature on the topic which shows that knowledge

management would expose lawyers with special experience and expertise to work on projects in their area such that they attain professional excellence, equip themselves with advanced skills and provide exceptional services to clients (Chester, 2002; Rodriguez, 2002; Rusanow, 2003; Rusanow, 2007; Wesemann, 2006).

Most of the participants agreed that knowledge management would enhance economic profitability (90.0%). Knowledge management results in the fast delivery of high quality services resulting in satisfied clients and as a result more business is generated (Kofoed, 2002; Wesemann, 2006; Rusanow, 2007). Participants (97.3%, table 6.12) also acknowledged that knowledge management will provide law firms with competitive edge over their rivals, and competition amongst firms in table 6.3 was seen by 70% as a motivating factor for the adoption of knowledge management. Because of the small population of the country it is certain that there is intense competition amongst the law firms. Therefore, law firms in Botswana like law firms elsewhere (Gottschalk, 2002; Kay, 2002; Curve Consulting, 2003; Rusanow, 2003; Rusanow, 2007) are challenged to build up market trends and develop business strategies directed at meeting the needs of both existing and desired clients and other lawyers.

7.10 Factors inhibiting knowledge management in the law firms

It was crucial to identify the factors that inhibit knowledge management in law firms in order to suggest a meaningful strategy for knowledge management. The findings on the several items in question 18 of the research questionnaire were presented in table 6.13. The major obstacles to knowledge management are inadequate technological infrastructure and limited financial resources. It may be that because many lawyers have not formally adopted knowledge management, they were not able to fully appreciate many of the other factors that may inhibit knowledge management.

It is no surprise that technological infrastructure was considered as a major obstacle to knowledge management in law firms (67.2% agreed, 27.9% were neutral and only seven 5.0% disagreed) because the findings on table 6.4 revealed that law firms are still at the initial stages in the adoption of information and communication technologies for knowledge management. The information and communication technologies mostly used in law firms in this study (table 6.4) are telephones (100%), computers (100%), personal networked computers (81.4%), email (71.4%), internet (69.3%) and case management systems (59.3%). Generally, resistance to technology has been observed as one of the major barrier to the use of knowledge management practices in law firms (Dubin, 2005). It is also likely that the

little use of information technology for knowledge management in law firms may be due to the size of the firms. It is evident from studies in small and medium size enterprises that these firms do not undertake adequate planning for their use and operation of information communication technology and have not fully exploited the potential benefits of information technology for knowledge management (Bergeron & Raymond, 1992; Ghobadian & Gallear, 1997; Lim & Klobas, 2000; Sparrow, 2001; Egbu & Botterill, 2002; Yewwong, & Aspinwall, 2004; Egbu et al., 2005). Egbu et al. (2005) empirical findings revealed that information communication technology used for knowledge management in the 11 small pilot organisations were mainly phones, emails, faxes, intranet and internet. He posits that without management support, leadership and a committed effort to make tacit knowledge explicit, information communication technology use for effective knowledge management will remain less fully exploited in small and medium size construction firms in the next five years. The reality is that information technology can be used as a strategic weapon by small firms to maintain their competitiveness and attain a favorable position within the sector of activity. The fact that advances in information communication technology was considered as the most important factor that may motivate knowledge management in law firms (97.9%, table 6.3) in this study may be an indication that lawyers do recognise the importance of technology in knowledge management notwithstanding that technology is a major obstacle to knowledge management in law firms.

Limited financial resources were rated as the second barrier to knowledge management in law firms (55.0% agreed, 40.0% were neutral and 5.0% disagreed). Law firms in Botswana are small firms (chart 6.3) and may therefore lack the necessary financial resources required to invest in knowledge management. Empirical findings on knowledge management in small and meduim size firms have revealed that small firms face unique challenges with knowledge management such as resource scarcity in terms of finance, time, capital, labour, equipment and physical commodities and therefore consider the cost of investing in information technologies as too high (Lim & Klobas, 2000; Egbu et al., 2005). The following responses from the interviews were noted: "information technologies are too expensive;" "we lack the funds to invest in information technology, not to talk of knowledge management;" "my firm lacks the money to afford such a luxury;" "we are a small firm, I think knowledge management is for the big firms that have money." In general terms, it can be very expensive to purchase and implement some of the typical law firm technologies for knowledge management such as automated document management systems, document, content and practice management systems, advanced technologies

like intranets and portals and other knowledge sharing initiatives. Therefore, in order for knowledge management strategy to be effectively and gainfully implemented, law firms often have to grapple with many cost-related issues. However, the fact that a majority of the responses were neutral may reflect the fact that lawyers do not appreciate the full financial implications of knowledge management.

It is important to note that lawyers recognised the size of the firm as an inhibiting factor to knowledge management (46.5% agreed, 22.9% disagreed, 26.4% were neutral and 4.3% did not respond). Also, from the different findings in the study (section 7.6, 7.8.2.7.8.3, and 7.8.4), it is apparent that the size of the firm is one of the reasons why law firms have not adopted knowledge management. It was observed in the section 5.2 and in chart 6.3 that law firms in Botswana are small firms. Studies have also shown that small firms do not usually consider knowledge management as a priority and that the size of a firm has something to do with the willingness of the firm to devote personnel and money to new technologies (Curve Consultant Survey Report, 2001; Campbell, 2002; Nathanson & Levison, 2002). McAdam & Reid (2001) suggests that while knowledge management understanding and implementation was developing in large organisations, small and medium size firms suffered from certain drawbacks and have more mechanistic views and less systematic approaches for embodying and sharing knowledge. Sparrow (2001) noted that the size, distinct characteristics, ideals and experiences of small firms all combine to present several unique challenges for knowledge management. Egbu et al. (2005) concludes that managing knowledge assets in small and medium size firms is an integrated and complex social process which has culture, people, finance, technology and organisational structures at its core. Although most of the firms that have adopted knowledge management initiatives are large firms, small firms still have the potential to benefit from the flexibility of knowledge management. It has been observed that managing the knowledge assets and intangibles in small firms is vital because it provides a way for them to leverage most, if not all of the benefits of knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). For example, in small firms, people communicate with others easily and pass along information easily by the hallway.

Most participants did not view knowledge as a source of power (53.5% disagreed, and 23.6% were neutral) whereas several findings in the study (7.8.2, 7.8.3, 7.8.4 as well as the results from the "other" category, and the interview indicates that the knowledge is power culture applies to lawyers in Botswana since they are individualistic. The following responses were obtained from the interviews: "we work alone and keep our matters to

ourselves;" "1 only consult a colleague when I am not sure of a general principle of law;" "my legal matters are personal to me;" "I am concerned that I may be outsmarted by my colleague so I prefer to keep my cards close to my chest;" "I am only ready to share my knowledge when I know that my colleague has some knowledge to share with me, but even then I will not share every thing;" "I am respected because of the knowledge I have and I want to stay competitive;" "I am reluctant to share my knowledge because there are colleagues who think they know it all and every thing you say the will want to ridicule and prove that you do not know anything." It was therefore clear that lawyers do manifest a team spirit or knowledge sharing culture only insofar as discussions on the general principles of the law are concerned or where there is some interest to be gained. Lawyers believe that monopoly of particular information will lead to personal indispensability, job security, influence, and professional respect within the firm. As already observed in the preceding sections, it has also been reported in the literature that the knowledge is power culture is a major barrier to knowledge management in law firms (Handy, 1985; Terret, 1998:68; Hunter et al., 2002; Maiden, 2002; Carine, 2003:3; Rusanow, 2003; Rusanow 2007). Forstenlechner (2006) observed that culture rather than technology is a major impediment to knowledge management in law firms. A major cultural shift is needed for law firms in Botswana to move from the concept of "individual knowledge is power" to "collective knowledge is competitive advantage" where the benefit of sharing information and knowledge is seen as real.

Participants appeared indifferent to the perception that knowledge management is an additional workload (42.9% were neutral, 36.5% agreed and 18.5% disagreed) and to the fact that knowledge management was putting pressure on billable hours (40.0% were neutral, 35.0 % agreed, 20.7% disagreed and 4.3 did not respond), yet the findings of the "other" category and the interviews confirmed the view that knowledge management is considered as an additional work load. The responses from the interviews were as follows: "due to the work pressure and the pressure of meeting targets knowledge management no matter how good it is should be shelved at this moment in time;" "we are always under the pressure to finish and bill clients on a particular matter and attend to the next matter within the shortest period of time so there is no time for knowledge management;" "we make business and cash when we meet our targets therefore concepts like knowledge management that will not yield us immediate profit is not our priority for now;" "knowledge management does not directly generate profit in the firm; therefore time spent on knowledge management is time wasted;" "I have no intention to invest in non-billable hours and the time spent on knowledge management is time taken off from billing clients."

The concept of meeting targets emerges from the time billing method of revenue generation, which is one of the different methods of compensation noted in section 6.10 (department-based reward, earning bonuses, and remuneration based on the amount of revenue generated to the firm) that puts lawyers under pressure to generate income. The time-based billing method and the partner-compensation method where partners are compensated based on revenue generated, and revenue is generated based on hours billed, have been identified as probably the greatest barrier to knowledge management in law firms (Terret, 1998; Kofoed, 2002; Rusanow, 2003; Forstenlechner, 2006; Rusanow, 2007). Kofoed (2002) observed that one of the biggest law firms in Scandinavia is now trying to move away from the time billing model by introducing a system where lawyers are assessed not only on their ability but their willingness to participate in knowledge management activities and other kinds of work that do not result in a bill being sent to a client.

Most of participants did not consider the inability of the firm's leadership to implement knowledge management as a barrier to knowledge management initiatives in the firms. The fact that 53.6% participants were neutral could be that most of the firms are small firms (section 5.2, chart 6.3) and one may therefore not be talking of leadership because a single lawyer mans the firm. It may also be that lawyers in firms with more than one lawyer were being cautious to say anything about management or did not understand the implication of the role of leadership in knowledge management because they are still grappling with the concept. However, contradictory findings emerged from the "other" category and interviews where lawyers acknowledged the lack of initiative and the negative perception of the value of knowledge management on the part of management and managing partners as a major barrier to knowledge management. Interviewees commented that managing partners or leadership do not take any initiatives on knowledge management nor do they seem to appreciate the benefit of knowledge management. An interviewee reported that, "management had not assigned anyone to take care of knowledge management." Another interviewee opined: "management does not know about knowledge management and so we do not want to rock the boat." An interviewee also noted, "If the management is not providing a leading example then there is nothing we can do." Generally, lack of leadership commitment has been observed as a major obstacle to knowledge management (McDermott & O'Dell, 2001:78; Ndlela & du Toit, 2001; Mason & Pauleen, 2003). Knowledge management like any other management programme in an organisation requires leadership commitment to create an environment within which people are able to share knowledge and are allowed to assimilate, as well as practise the knowledge gained.

To this effect, 33% of those interviewed in Egbu et al. (2005) study on knowledge management in small construction companies acknowledged that leadership commitment is vital.

7.11 Institutions and agents for knowledge management

This section discusses the findings of question 19 and 20 on the agents and institutions responsible for facilitating knowledge management in the law firms in Botswana presented in table 6.14 and the major findings from the "other" category as well as the interviews with some agents of knowledge management in the law firm. The different agents and institutions that emerged from the study are: legal secretaries, the Law Society, the courts, the law librarians, legal consultants, legal academics at the law faculty, professional assistants, professional book shops, Land Tribunal and other quasi judicial bodies like labour arbitrator, International firms affiliated with local firms, and law publishers like Juta and LexisNexis.

The legal secretaries (76.4 % agreed, table 6.14) are considered the most important agents of knowledge management in law firms. This is because as Apistola & Oskamp 2001 noted, they work closely with lawyers in the firm and have the basic knowledge required for the day to day running of the firm. He/she usually makes the first contact with clients and advises them accordingly. They are responsible for providing all the necessary administrative support in the firm. Documents and materials required in the day to day operation of the firm are stored by the secretary either in the filing cabinet or on the computer. They organise and cross-reference files by subject and practice area, making it easy for lawyers to locate legal files.

The Law Society (table 6.14) is also another important agent of knowledge management in law firms (68.8 % agreed). This is understandable because the Law Society is responsible for regulating the affairs of law firms, who in turn look up to the Law Society to initiate and educate members on the benefits of knowledge management initiatives. The Law Society was created on 2 August 1996 under the Legal Practitioners Act, 1996 to regulate the activities of Law firms in Botswana. Membership of the Law Society is compulsory for practitioners who hold practicing certificates; those in the Attorney General's Chambers and those employed by the Government or statutory corporations (Section 56 of the Legal Practitioners Act). Before 1996, lawyers in Botswana were almost a law unto themselves and there was no supervisory professional body to oversee the conduct of lawyers in their professional work (Quansah, 2001).

The Law Society provides a platform to lawyers for sharing experiences and concerns and links members to other international professional and regional bodies. It also organises retreats and conferences where lawyers meet and share ideas. An example of such conferences is the Southern African Development Community Lawyers' forum. There is also the Young Lawyers' Forum association organised by the Law Society consisting of lawyers who have practiced for seven years and below, who meet and exchange ideas. It has recently undertaken to establish a law forum over the internet. The Law Society also provides opportunities for professional development by running mini studies on different aspects of the law. An example is a six weeks commercial law part-time study programme organised in 2007.

The different courts in the country are considered as agents for knowledge management in the law firms (66.8% agreed). A lawyers' profession is such that he/she is required to shuttle between the law firm and the courts for litigation. Besides, the courts are important institutions for knowledge creation; for example, judges generate knowledge for lawyers that are compiled in law reports and used by lawyers as precedents. Also, the High Court organises annual judicial conferences that provide a forum for knowledge sharing. The Industrial Courts also assists in knowledge transfer by photocopying, scanning, and posting judgments to subscribed lawyers.

The legal academics are essential in knowledge management in the law firms (65.0% agreed). One may say the legal academics at the department of law at the University of Botswana "made most of the lawyers" because most of the practicing lawyers are former students at the University of Botswana Law department. Legal academics transfer knowledge to lawyers by providing a five year training programme to law students during which they acquire the knowledge of the law (declarative knowledge). At the end of the five years, students graduate with a law degree (LL.B). Legal academics also generate knowledge in the law firm through research and publications made available to lawyers as resource materials that may be used in legal research. The department of law at the University of Botswana is currently running a University of Botswana Law Journal and lawyers are encouraged to create and share knowledge by contributing articles and subscribing to the journal. Legal academics also assist attorneys to carry out research in challenging matters where lawyers do not have the expertise, and then present it to lawyers in the form of legal opinions.

It was not surprising that many participants did not appreciate the role of the law librarian

in the creation of knowledge (only 37.2% agreed and 45.7% were neutral). This is because most law firms do not have law librarians (appendix 3) and therefore may not appreciate the role of a law librarian in knowledge management. A law librarian is very important in the law firm as an information professional because he/she has a good understanding of legal knowledge and is professionally trained to assist legal researchers in various legal settings. An information professional without legal knowledge would have difficulties identifying and managing legal knowledge. Most law firms have just a small room in their organisation for a library with a collection of law reports in print, a few in electronic form and are managed by the lawyers themselves. The only law librarian in the country is at the University of Botswana law library. Most lawyers benefited from the services provided by the law librarian during their studies in the University of Botswana law school, and still continue to benefit informally from these services as legal practitioners. However, since most lawyers are not registered members of the University of Botswana Library they cannot benefit from the services offered by the law librarian.

Legal consultants facilitate knowledge creation in law firms. They assist lawyers to carry out research in challenging matters where lawyers do not have the expertise and then present it to lawyers in the form of a legal opinion. They also play a major role in facilitating the tutoring and mentoring of young graduates in cases where lawyers are very busy or not interested in training junior attorneys as observed in section 6.8.5 above. In this regard, they also assist young lawyers with drafting court documents and agreements. One legal consultant reported "I take students during the long vacation and expose them to legal practice."

Professional assistants are trained lawyers who are employed in the firm on a fixed salary and earn an additional commission when a particular target is met. Partners rely very much on professional assistants to conduct legal research thus creating knowledge in the firm. One interviewee remarked: "we do all the donkey work in the firm." A second one said: "I can say I bring in all the money to the firm but get just a percentage of it as my salary." A third noted: "you are better off as a partner because you are really under no pressure to meet the targets." The fourth interviewee said that, "I know some firms that collapsed because the professional assistants left." It could thus be inferred that professional assistants also have ambitions to be partners in order to share in the profits of the firm and other benefits that go with it. As a result, once they acquire enough capital to start off on their own, they usually leave the firm to start a partnership and by so doing they move on carrying away a lot of experience and knowledge from the previous firm.

7.12 Conclusion

In this chapter the findings from the questionnaire and semi-structured interviews were analysed and discussed. First, the results obtained from the personal profile of the respondents were analysed and discussed followed by an analysis and discussion of the organisational characteristics of the law firm and the different research questions. The findings revealed that a majority of the participants had only a bachelor's degree and that most law firms in Botswana are mainly small firms with the number of lawyers ranging form one to nine. Most of the law firms in Botswana were yet to fully understand the concept of knowledge management. They did not have knowledge management programmes and very few were planning to introduce one.

The most prevalent tacit knowledge in law firms was the skill and expertise of lawyers and staff, procedural knowledge and knowledge learned from past experience and project. Examples of explicit knowledge identified in the law firms are standard documents, legislation and case law, knowledge of the law and court decisions. Client information, financial information and marketing information are examples of knowledge of the business of law identified in the law firms.

With regard to the knowledge management processes, attending conferences, workshops and the internet were the main methods of knowledge creation. Knowledge is transferred in the law firms through teamwork, discussion of major projects after conclusion and by informal social networks. Although most of the participants accepted that they had a knowledge sharing culture, knowledge in the law firms in Botswana appear to be an exception rather than a norm. For example, tutoring and mentoring opportunities that normally provide opportunities for knowledge sharing are either informal or not available.

Law firms did not consider any of the factors identified as critical to the success of knowledge management in law firms. For example, participants did not feel that promotion in the law firms was based on the individual's ability to share knowledge. Also, there was no special recognition to staff for time spent in sharing knowledge.

It is significant that although lawyers are yet to fully grasp the concept of knowledge management, they all unanimously acknowledged several perceived benefits of knowledge management. They all agreed that a good knowledge management attitude will improve knowledge sharing while 95% agreed that it will improve lawyers efficiency and productivity.

Inadequate technological infrastructure, limited financial resources and the size of the firm were the major obstacles to knowledge management in law firms. Although the findings from the questionnaire revealed that lawyers did not view knowledge as a source of power, there were all indications from the interviews that lawyers are individualistic and that the knowledge is power culture is typical to law firms in Botswana.

Several agents and institutions for knowledge management emerged from the study. The legal secretaries were the most important agents for knowledge management in the firms, followed by the Law Society and the legal academics respectively. It is worth noting that although law librarians are expected to play an important role in knowledge management, many participants in the study did not appreciate the role of a law librarian. This is probably because none of the law firms had a law librarian.

In the light of the analysis in chapter six and discussions of the findings in this chapter, several features pertinent to small law firms in Botswana emerged. The next chapter presents guidelines for knowledge management implementation in law firms in Botswana.

CHAPTER EIGHT
GUIDELINES FOR KNOWLEDGE MANAGEMENT IMPLEMENTATION IN LAW FIRMS IN BOTSWANA

8.1 Introduction

This chapter draws from the literature in chapters 2, 3 and 4, and the analysis and findings of the results of the empirical study in chapters 6 and 7 to provide guidelines for knowledge management in law firms in Botswana, a developing country where little or no previous study on knowledge management in law firms has been carried out. Guided by elements from the studies, frameworks and models of Western industrialised countries which are already becoming knowledge economies, these guidelines presents the opportunity to verify the applicability and contextual relevance of Western studies and models to a diverse socio-cultural environment in Africa (Edwards & Mahling, 1997; Campbell, 2002, Kofoed, 2002; Khandelwal & Gottschalk, 2003; Rusanow, 2003; Rusanow, 2007).

Previous empirical studies carried out in knowledge management in law firms have focused on large law firms and have adopted different perspectives such as, information system or business perspective (Gottschalk, 1999; Khandelwal & Gottschalk, 2003); applying knowledge management in law firm alliances (Carine, 2003); information and knowledge management in support of legal research in a digital environment (du Plessis, 2004); a survey of information and knowledge management in South African law firms (du Plessis & du Toit, 2005) and knowledge management on law firm performance (Forstenlechner, 2006). The guidelines proposed in this chapter draws from the multiple definitions and perspectives of knowledge management (information technology, personal, social, organisational and business perspective); several frameworks (organisational learning and learning organisation, process framework and knowledge markets); models (the intellectual capital, Edvinsson (1997); Nonaka & Takeuchi's (1995) SECI; and Leavitt model (1965) of classic analysis of industrial organisations) and literature on small and medium size firms (section 4.7.6) to complement and contribute to the body of knowledge management research and theory.

These guidelines suggest how lawyers should pull their organisational variables, techniques and supportive institutions into optimum use with the support of information and communication technologies in a way that would leverage the knowledge process and resources of the firm giving it a competitive edge over other firms in the changing legal environment.

In formulating these guidelines account has been taken of the fact that Botswana is a sparsely populated country[18] and that the law firms are generally small.[19] These firms fall under the definition of small and medium size enterprises (Small Business Service United Kingdom, 2004). Within these small firms a distinction has been made between sole proprietors and partnerships[20] on the one hand, and firms with 3 to 9 lawyers on the other hand.

In presenting the guidelines for knowledge management in law firms, this chapter is addressing the following research questions contained in the last sub problem of the study:

▸ What are the guidelines for successful knowledge management in law firms in Botswana?

▸ How can knowledge management be effectively implemented in law firms in Botswana?

8.2 Presentation of guidelines for knowledge management in law firms in Botswana

It is clear from the findings (table 6.3; appendix 3) that law firms in Botswana like most law firms elsewhere (section 2.4) are overwhelmed by changes in the legal environment. These firms have been practicing knowledge management informally even though they are mostly unaware of the concept of knowledge management. Examples of informal knowledge management practices in law firm in Botswana are precedents (100%, table 6.6), legal research and development (80.0%, table 6.6), personal information banked by each attorney (appendix 3), hiring and training of young lawyers (61.4%, table 6.6), information management (section 6.8.1), attending conferences (85.0%, table 6.7), accessing knowledge from the internet (81.5%, table 6.7), brainstorming, consultation with legal academics and informal consultation and discussion with other lawyers (appendix 3). These law firms are apprehensive about the concept of knowledge management most probably due to a limited understanding of its nature and full implication; yet they are excited about the potentials and benefits of knowledge management (table 6.12).

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18 Botswana is made up of 1,893,526 people who live in twenty three districts. The most populated district is Gaborone, the capital city, with 220,558 people while the least populated is Kweneng with 484 people. (Retrieved 20th May 2008 from http://www.population.wn.com/country/Botswana

19 From the analysis of the results in chapter 6, it was observed that the number of lawyers per firm ranged from one to nine; and there is one only one firm in Botswana with nine lawyers. A majority of the law firms are sole proprietors and the average number of lawyer per firm is two (see organisational characteristics of the firm chart 6.3 and section 6.3).

20 Sole proprietors are one-lawyer firms while partnerships in the context of these guidelines are considered as firms with two lawyers.

The guidelines proposed in this chapter serves to sensitise lawyers in Botswana on how to employ more targeted effort in implementing knowledge management in their firms so that they may enhance their practices for competitive advantage in the changing legal environment.
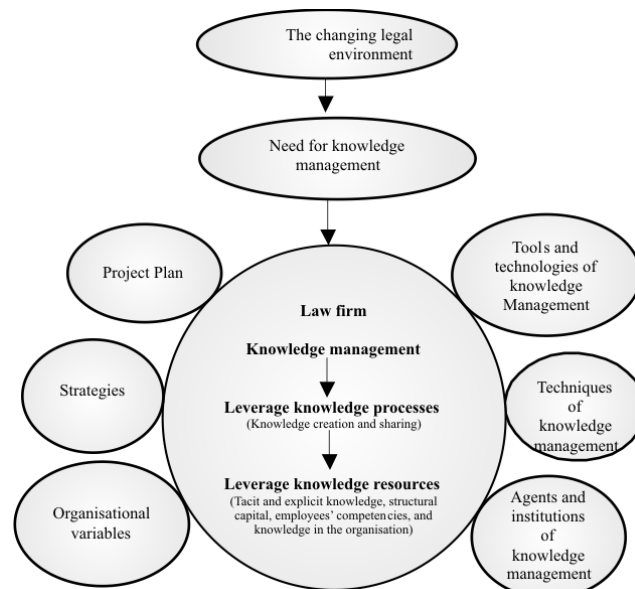
Figure 8.1 Guidelines for knowledge management in law firms in Botswana

Figure 8.1 presents different interdependent and interrelated steps in ensuring the effective implementation and leveraging of knowledge management in law firms. The diagram indicates that in the changing legal environment the need for knowledge management is imperative for all law firms. However, proper implementation of knowledge management in law firms requires the consideration of the following: a good project plan, determining the firm's knowledge strategy, identifying and addressing the possible organisational barriers to knowledge management, getting the appropriate tools and technologies, determining the possible knowledge management techniques and working with the appropriate agents and institutions of knowledge management. If all these interrelated and interdependent steps are put into place, the knowledge management process and knowledge management resources in a law firm will ultimately be leveraged such that the firm gains competitive advantage over other firms. The guidelines presented in figure 8.1 are elaborated upon in the subsequent sub sections.

8.2.1 The need for formal knowledge management in law firms in Botswana

Although law firms in Botswana are unconsciously practicing knowledge management (tables table 6.1, 6.6, 6.7, 6.8, 6.9, 6.10, appendix 3), they do not fully appreciate nor consider it as a priority. Only a few indicated that they had a knowledge management policy (table 6.1). Arguably, like other small and medium size firms (Sparrow, 2000; Lim & Klobas, 2000; Egbu et al, 2005) law firms in Botswana lack the resources in terms of time, finances, technology, human resources and red tape procedures in place to actually adopt a formal, comprehensive and prescriptive knowledge management system and programme. In addition, the processes and procedures in small firms are generally informal (Yewwong & Aspinwall, 2004). Nevertheless, considering that law firms in Botswana are experiencing different degrees of uncertainty in the delivery of legal services in the changing legal environment, it is crucial for the different law firms to systematically adopt knowledge management initiatives tailored to their size, resources and needs. Knowledge management should be prioritised and implemented in different phases reflecting the specific needs of the law firm. Therefore, the knowledge management approach in a one (sole proprietors, referred to in this study as the "owners" because they are owners of these firms) and two (partnership referred to as "partners" because they are partners in these firms) lawyer firm will be different from that in the 3 to 9 lawyer firm due to their differences in size, resources, staffing and knowledge management needs.

Quite clearly an all out approach to knowledge management is not feasible in small and medium size enterprises due to their size, ideals, value and limited resources (Lim & Klobas, 2000; Sparrow, 2000; Egbu et al., 2005). Nevertheless, law firms in Botswana like other small and medium size firms, need to consider certain basic fundamental principles when implementing knowledge management. At the outset, it is crucial for all the different law firms to undertake a needs assessment of knowledge management to critically analyse the knowledge needs of the firms and the legal practitioner in the particular law firm. This will then reflect the different type of knowledge management initiatives, tools and supporting architecture that could be adopted for use by the lawyer and the firm. No two lawyers have the same knowledge management needs because lawyers' needs are diverse, constantly changing, and are often reflected by the needs of a particular client and the kind of legal tasks undertaken. For example, in implementing a knowledge management system in a law firm, a receptionist would need a data base system to search for specific knowledge or techniques that will enable him/her to perform general tasks or assign the client to the right division, while a lawyer will need legal knowledge management tools

specialised in the legal domain to perform complex legal task. After these firms are certain about their needs for knowledge management, it will be crucial to establish a project plan for knowledge management.

8.2.2 The Project Plan

First, every law firm needs to have clear and articulated business objectives, a vision of where it is, where it wants to go and the resources that are needed to reach there. Law firms should implement one thing at a time at a rate which is commensurate with their level of resources and their capacity. It is necessary to start off with a relatively small, cheap, and manageable pilot programme that would lay the foundation for knowledge management (section 4.10.4). Small scale projects directed to support a specific initiative or legal task or directed towards the entire law firm are essential. Knowledge management is a long term continuing initiative and any attempt to deploy a firm-wide knowledge management initiative that incorporates all element of legal practice may be very expensive and overwhelming to the lawyers.

Second, law firms in Botswana like their counterparts in other small and medium size firms (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004) should be able to determine a balance between the needs and costs of knowledge management. Typical cost-related issues in knowledge management are the cost of investment in information communication technologies, acquisition of knowledge from external sources, creating, sharing and using of knowledge, hiring a knowledge management team, redesigning the firm and educating members in the law firm amongst others. A majority of the law firms felt that limited financial resources inhibit knowledge management (table 6.12). The reality is however that knowledge management is no longer an unaffordable luxury for small firms. With the advent of the internet, knowledge management has indeed surpassed the high cost-paradigm and firms of all sizes can now use it to acquire and share valuable information without undue expense. Knowledge management should be considered more as a key business driver rather than as a resource-intensive additional initiative. Although initial investments in knowledge management seem very high, a well designed knowledge management initiative can become the main source of future investment and profit to the law firm. The fact that lawyers identified several factors that could motivate them to adopt knowledge management (table 6.3) and did also acknowledge the perceived benefits of knowledge management (table 6.9) is suggestive that they are excited about the benefits of knowledge management and therefore will appreciate the importance of investing in

knowledge management. With this understanding, law firms may be ready to dedicate some resources for its implementation and be prepared to deal with the different cost-related issues.

Third, there is a need to appoint the right staff to the position of knowledge manager to head the knowledge management programme in the law firm. Due to their size and limited financial resources most law firms in Botswana like other small and medium size enterprises (Lim & Klobas, 2000; Egbu et al., 2005), are unable to hire full time consultants, dedicated information professionals and staff who may initiate knowledge management (table 6.14). There are presently no law librarians and human resource specialists in the law firms in Botswana (table 6.14). Therefore, the 3 to 9 lawyer firm may consider appointing one of the lawyers, preferably the most educated, sociable and experienced as knowledge manager to head the knowledge management programme in the law firm. He/she may be provided with an additional allowance so that he/she will be able to take some time off billable hours, possibly a day off each week to invest in the knowledge management initiatives of the firm without any pressure of meeting targets. His/her legal experience and solid academic background provides an added advantage to the law firm because his/her intellectual curiosity and profound understanding of the different knowledge management needs and initiatives in the law firm would help drive the process. These firms may consider hiring the services of an information technology consultant and an information professional on a part time bases to work as a team with the knowledge manager. The knowledge manager should also solicit the services of other agents and institutions (see table 6.14) responsible for knowledge management in the law firm.

In a 1 and 2 lawyer firm, the appointment to multiple new roles and positions is less practical because the only highly educated and experienced expert professional are the owners in a 1 lawyer firm and the partners in the two lawyer firm. Therefore, the responsibility for knowledge management in the 1 and 2 lawyer firms falls on the owners and partners respectively. Understandably, owners and partners oversee all the decision making processes in every aspect of their business and may be constrained by time to take care of knowledge management issues. However, it is advisable that the owners and partners should not only focus on the core business but should initiate knowledge management in the firm. They may devote half a day off legal practice each week on knowledge management issues. The owners and partners should work with the support staff in the firm and like in the 3 to 9 lawyer firm; consult with other agents or institutions that may assist the firm in knowledge management (table 6.14). Also, due to their limited

resources, these firms may consider entering into strategic alliances with other firms. Strategic alliances are special arrangements between two or more independent firms to cooperate on certain business activities, foster sharing of resources and knowledge as well as risks between the partnering firms (Chung et al., 2006). It has been noted that due to the limited resources strategic alliances in knowledge intensive small and medium size firms may increase their overall competitiveness and provide firms access to external resources and market opportunities (Lim & Klobas, 2000; Chung et al., 2006).

Fourth, an understanding of the different types of knowledge that have to be managed in the law firms is crucial for the development of any effective guidelines for knowledge management. This is because each type of knowledge that a firm creates or seeks to capture has a corresponding knowledge management initiative. The different types of knowledge identified in law firms in Botswana are tacit knowledge, explicit knowledge and knowledge of the business of law (table 6.2). These different types of knowledge should be pulled together in ways that will be beneficial to lawyers. The owners and partners in the 1 and 2 lawyer firms and the knowledge manager in the 3 to 9 lawyer firms should carry out a knowledge audit to identify the existing knowledge gaps that will reflect the business value of the firm. An observable strength in a 1 and 2 lawyer firm is that due to their limited knowledge assets, the process of organising and storing knowledge may be easier.

8.2.3 Determine the firm's knowledge management strategy

There should be a direct relationship between a firm's knowledge management strategy and the ability to achieve its business objectives. Codification and personalisation are essentially the two types of knowledge management strategies often used (section 4.10.3). Codification focuses on explicit knowledge and centres on the storage of explicit knowledge while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through personal contacts.

The codification strategy will help the I and 2 lawyers firms to manage and organise their knowledge, improves efficiency and reduces the tendency of repetitive work currently prevalent in these firms. In the 3 to 9 lawyer firm, codification will extract and codify knowledge that is independent from the lawyers and store it in electronic databases that may be searched, retrieved and used by other lawyers.

In line with other small and medium size firms (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004; Egbu et al., 2005), personalisation will prevent the loss of knowledge in

law firms in Botswana (table 3, 54.3%). An interviewee remarked that, "the importance of a lawyer's knowledge is often realised, perhaps too late, when the lawyer is about to leave the law firm as he/she takes with him/her the knowledge and experience gained over the years." In the 1 and 2 lawyer firms, the owners and partners are faced with the challenge of ensuring that knowledge remains in the law firm after their death or retirement. Also, lawyers in the 3 to 9 lawyer firm are highly susceptible to the loss of knowledge either due to death or retirement of employees or employees seeking better compensation packages elsewhere. Personalisation strategy will facilitate the sharing of knowledge amongst lawyers in a 3 to 9 lawyer firm by linking them with one another. It will also keep track of the knowledge and expertise of a lawyer and his/ her accomplishments making it easy for a firm to identify at the right time a lawyer whose experience and expertise are tailored towards the particular needs of a client.

The codification and personalisation process of knowledge in law firms in Botswana is still at the initial stages. Similar to other small and medium size firms (Lim & Klobas; 2000; Egbu et al., 2005) knowledge is not properly stored in retrievable formats due to the informal working systems and procedures and the lack of appropriate information communication technology tools. Understandably, due to their size, only few law firms can afford the portal technology, Yellow Pages or "expert locators" containing the curriculum vitae competency files, bulletin boards, wireless devices, intranets, extranets and web sites to facilitate codification process (tables 6.4, 6.5, 6.6). Law firms in Botswana may therefore consider adopting other informal techniques of knowledge capture common in small and medium size firms such as formal meetings, where meetings are minuted and circulated; writing reports after attending external seminars and production and exhibitions of biannual newsletters (Lim & Klobas, 2000; Sparrow, 2001; Yewwong & Aspinwall, 2004; Egbu et al., 2005).

The findings from the interview revealed that tacit knowledge is difficult to codify and is currently shared, captured and transferred in law firms mainly through informal face-to-face meetings, on the corridor conversation, brainstorming and mentoring schemes. Law firms with 3 to 9 lawyers should consider adopting cheaper and effective ways of sharing knowledge typical in small and medium size firms such as job rotation, apprenticeships, discussion forums, project teams, sharing sessions and work presentations (Lim & Klobas, 2000; Sparrow, 2001; Yewwong & Aspinwall, 2004; Egbu et al., 2005). Mentoring and shadowing, and coaching are other effective ways of sharing tacit knowledge in small and medium size firms (Egbu & Botterill, 2002). A firm's newsletter including upcoming community events, recent successes and failures, and newly published best practices and

lessons learned would be an option for knowledge transfer in small law firms.

8.2.4 Organisational variables for knowledge management in law firms in Botswana

Before implementing knowledge management in the law firm it is crucial for the different organisational variables of the law firm to be identified so that any inherent organisational barriers may be addressed. Leavitt's model (1965) of classic analysis of industrial organisations (see 3.8.3 and 4.7.2.3) elaborated upon by Galbraith (1997) was adopted and further adjusted to provide an integrated approach to understanding the organisational variables crucial for knowledge management in law firms in Botswana. Leavitt (1965) considers organisations to be complex systems in which four significant variables (task, structure, technology and humans) interact to effect changes in the organisation. Galbraith (1997) expanded on these organisational variables by including variables such as reward systems and information and decision processes. In considering the organisational variables for law firms in Botswana, this study draws on the above variables together with variables such as culture, leadership commitment and learning organisation. These different variables are presented in figure 8.2 below and discussed in subsequent paragraphs.
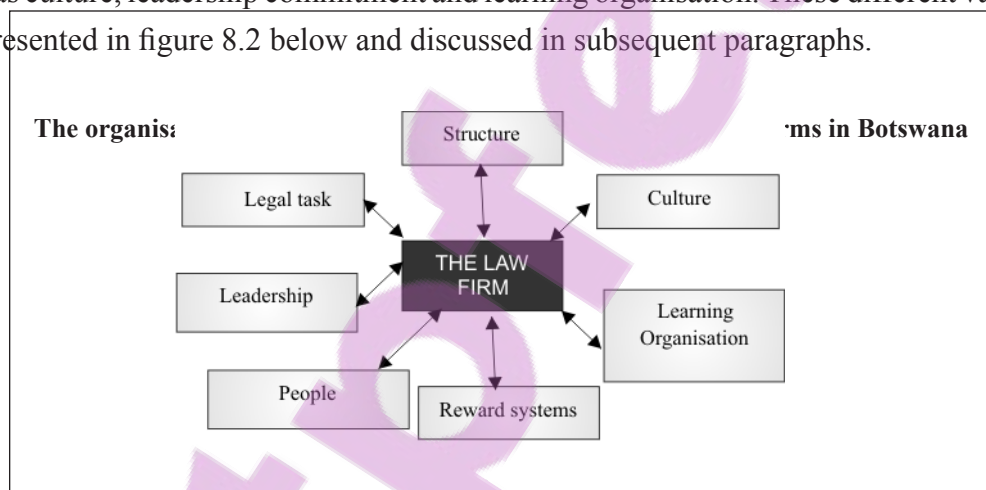
Figure 8.2 Organisational variables for knowledge management in law firms in Botswana

A task is the production of goods and services within an organisation (Leavitt, 1965). In order to ensure effective implementation of knowledge management in law firms in Botswana, the different tasks in the law firm need to be identified because each task is supported by a different type of knowledge management initiative, tool and supporting architecture. The major legal tasks performed in law firms Botswana are legal advice,

advocacy, corporate practice, litigation, conveyancing and legal research. The overall objective of a legal task is to provide services to the clients by adapting the law to the needs of a specific case and the case to the results wished for. It is worth noting that one of the major challenges to knowledge management in small firms is that these firms tend to have mainly generalists performing a variety of tasks (Yusof & Aspinwall, 2004) who may be termed, according to the old adage as "Jack of all trade and a master of none." In spite of the increasing drive to shift from the general practitioners mode of practice to the specialised divisions and tasks triggered by the changing legal environment (section 2.4.8; Susskind, 2001), there is hardly any specialisation in law firms in Botswana. Every lawyer is expected to perform the different legal tasks in the firm while the support staff performs the multiple support tasks. Therefore, the initial knowledge management initiatives in a law firm may be directed mainly towards leveraging the different legal tasks of the lawyers and support staff.

Organisational variables such as structure, culture, techniques, knowledge sources and technology are crucial in performing legal tasks. Structure is the system of communication, work flow, authority, positions and employees within the organisation (Leavitt, 1965:1144). In order for knowledge management to flourish, the structure should be designed flexibly in ways that formal and administrative procedures do not prevent cross-functional communication, cooperation and sharing of knowledge and new ideas. It has been suggested that a flexible and non hierarchical structure is an essential factor for knowledge management (Gold et al., 2001). Small and medium size firms are known to have the advantage of a simple, informal and flatter organisational structure that gives them distinct advantages over the agile and bureaucratic structure of larger firms when it comes to implementing knowledge management (YewWong & Aspinwall 2004; Egbu et al., 2005). It is therefore crucial to consider the employees and positions in the law firm that are essential in transmitting knowledge in an optimal manner.

Egbu et al. (2005) note that small and medium size enterprises have efficient and informal communication networks and shorter and direct communication lines that allows for a faster discourse on knowledge management issues within the organisation. For example, the line of communication flow is just between the owners, legal secretary and receptionist in a sole proprietorship and between the partners, legal secretary and receptionist in a partnership. This makes it easier for the owners and partners to declare the need to implement knowledge management in their firm and to disseminate their plans in a timelier manner due to little or no consultation. The employees in most of the 3 to 9 lawyer firms consist of the managing

partner, lawyers (partners and professional assistants); professional staff (legal secretaries and other legal assistants) and clerical support staff (secretaries, information system staff, marketing staff, and accountants). Although these firms are relatively bigger in comparison to the 1 and 2 lawyer firms, it is still easier to get all the employees together to initiate and implement change because members know each other. The shorter communication lines in small law firms in Botswana put them at an advantage over their larger counterparts in implementing knowledge management. Furthermore, although the decision-making process in the 3 to 9 lawyer firms, involves consultations between the managing partners and the committee of partners, the decision-making chain is still shorter as compared to larger firms because there are not many layers of management decision making and lawyers still enjoy a certain degree of professional autonomy.

The people in the law firm and other people-related issues are also critical variables for successful knowledge management because knowledge management is essentially about people, relationships and communities. Lim & Klobas (2000) & Egbu et al. (2005) note that in order for small and meduim size firms to manage their knowledge effectively, they need to manage their people effectively. The fact that small firms comprise fewer employees than their larger counterparts certainly gives them a distinct advantage since it is easier to get all the employees together to initiate and implement a change (YewWong & Aspinwall 2004). This advantage is apt in the 1 and 2 lawyer firms where the owner's and partners' personality, skills, responsibilities, attitudes, behaviour and personal motivation, have a decisive influence on knowledge management. It is therefore crucial for sole proprietors and partnerships to consider the interest of the support staff in the firm. It is also worthy to note that sole proprietors and partnerships may also engage in other people-related activities such as sharing knowledge with lawyers from other firms, sharing knowledge within the firm in the case of a partnership, subscription to email distribution list, members of professional development associations, hiring and training of young lawyers and entering into strategic alliances. In the 3 to 9 lawyer firm, it is crucial for the knowledge manager to ensure that the personal interest and activities of the different people in the law firm are aligned to the paradigms of the firm; and that they cooperate and share knowledge with each other. They should ensure that their employees have sufficient scope for personal development and career advancement. Employees should not be afraid of making mistakes, but should be encouraged to share the lessons learnt in order to curb repetitions of the same mistakes.

A culture of knowledge sharing is an important people-related issue that needs to be

considered in law firms. Generally, a unified and fluid culture with corporate mindset that emphasises the company as a single entity rather than a department is expected to be more salient in smaller firms (Matlay, 2000; Egbu & Botterill, 2002; Yewwong, & Aspinwall, 2004). However, the findings reveal that the culture of knowledge sharing runs counter to the values of law firms in Botswana. It was shown that lawyers manifest a team spirit only in the discussions of the general principles of the law, and in most cases tend to hoard knowledge because they consider that it gives them a competitive edge over their rivals (sections 7.7.3 and 7.7.4). However, the fact that an overwhelming majority of lawyers acknowledged the potential benefit of sharing knowledge (table 6.9), the benefits of working in teams (table 6.8) and the mutual care and concern amongst individuals (table 6.11), may be an indication that lawyers are positive about the benefits of knowledge sharing. Therefore, an open and non-secretive, corporate organisational culture (section 3.15.1) where lawyers are stimulated to cooperate with each other should be encouraged in the 3 to 9 lawyer firms in Botswana. Trust amongst lawyers is an important incentive in sharing knowledge. The Law Society will have to educate and instil the spirit of knowledge sharing and the notion of "increasing returns of knowledge" amongst lawyers. The concept of "knowledge is power" has to be tactfully tempered by the notion that shared knowledge stays with the giver, enriches the receiver, and results in competitive advantage to the firm.

In the 1 and 2 lawyer firms where power and knowledge are held closely by the owners and partners, there is often the tendency for knowledge sharing to be limited to areas defined by the owners/partners. Therefore, the owners and partners being the main engine for change in these firms should recognise the importance and potential of knowledge management. They should consider entering into strategic alliances with other firms of their size or larger firms. It has been observed that strategic alliances with other knowledge intensive firms can provide small firms and solo consultants with the muscle and capability to handle complex assignments (Chung et al., 2006).

Reward systems are an essential organisational variable for knowledge to be considered by law firms in Botswana. The findings revealed that lawyers have no intention to invest in non-billable hours and therefore consider the time spent in any internal efficiency other than billing clients as a waste of billable time. Also, the different methods of rewarding lawyers in law firms in Botswana such as department-based billing, earning bonuses and the revenue-based compensation methods (appendix 3) are a major challenge to knowledge management because lawyers are rewarded in the firm based on the time he/she spends in deploying knowledge to the services of clients rather than in managing the knowledge of

the firm. Furthermore, in table 6.11 it was observed that promotion in the law firms is not based on the ability to share knowledge, and that there is no special recognition of staff for time spent in creating, sharing and distributing knowledge. It is therefore important for the 3 to 9 lawyer firms to implement rewards systems where lawyers are rewarded not only on their work which results in billing clients, but also their willingness to participate in knowledge management activities and other kinds of work that do not result in billing clients. A reward system will serve as motivation both to the lawyer and to other lawyers to consider devoting time for knowledge management.

Arguably, due to their size and limited resources, the 3 to 9 lawyer firms in Botswana may ill afford financial rewards for knowledge management. However, it has been observed that non-financial incentives such as recognising employees' contributions, empowering employees, and giving freedom to apply ideas may outweigh the importance of other tangible offerings in small and medium size firms (Ghobadian & Gallear, 1997; Lim & Klobas, 2000; Egbu & Botterill, 2002, Egbu et al., 2005). The 3 to 9 lawyer firms may also consider promoting lawyers to partnership for sharing knowledge or those who sacrifice just as little as 1/10 of their time in knowledge management. Law firms may also consider introducing fixed contracts as opposed to hourly rate contracts. In a 1 and 2 lawyer, firm where the benefits from knowledge management at the end of the day rest with the sole proprietor or the partnership, they may consider rewarding the legal secretaries or other support staff.

Leadership is another crucial variable that law firms in Botswana need to consider when implementing knowledge management. In Egbu et al. (2005) qualitative findings, 33% of those interviewed acknowledged that leadership commitment is vital in small and medium size enterprises. The managing partner is responsible for knowledge management in the 3 to 9 lawyer firm while the owners and partners are responsible for knowledge management in the 1 and 2 lawyer firms. The owners and partners together with the managing partners should recognise, appreciate and integrate the concept of knowledge management into their core business operations. They should explain the meaning and purpose of knowledge management initiatives to other lawyers and members in the firm so that firm members can understand the specific and collective goal of knowledge management. Other lawyers in the firm are likely to pay attention to knowledge management if the managing partner positively communicates its importance to all the staff. Therefore, the managing partner should work together with the knowledge manager to sensitise the firm on the benefits of knowledge management. He/she should be willing to commit the firm's budget towards

supporting knowledge management activities, recognise and appreciate lawyers' efforts and achievement in the area of knowledge management, and be committed to, and address any inherent barriers to knowledge management. The managing partners in the 3 to 9 lawyer firm also has the advantage of time over the owners and partners in the 1 and 2 lawyer firms in that his/her roles and responsibilities may be distributed to other lawyers in the firms while more time is devoted to knowledge management. He/she should be responsible for appointing the appropriate lawyer to the position of a knowledge manager.

The personality of the owners and partners in the 1 and 2 lawyer firm has an important role in the accomplishment of knowledge management. Empirical findings have revealed that owners and managers in small and medium size firms who are dictatorial, hoard knowledge from employees, control every aspect of their business and punish mistakes may well impede the building of a knowledge friendly environment (Matlay, 2000; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004). It is also likely that besides, being deeply involved in the every day operations of the firm, the sole proprietors and partnerships may lack the skills, competence and understanding required for implementing knowledge management. Bearing in mind that no one else can initiate knowledge management in these firms, the owners and partners in the 1 and 2 lawyer firms need to be innovative and proactive towards knowledge management or else the firms risk being left behind in the fast changing legal environment. They should be aware that time invested in knowledge management is not wasted but instead would enhance the economic performance of the firm, result in the delivery of fast and high quality services, satisfy more clients, and generate more business, in ways that cannot be attained only from billing clients.

Finally, a learning organisation is an important organisational variable that all firms in Botswana need to consider for knowledge management to flourish. Law firms are generally referred to as learned organisations (section 4.7.1.1). The law itself is dynamic and constantly changing, implying that lawyers should crave for new skills and greater expertise throughout their career. The need for specialisation is becoming more imperative as legal practice is increasingly shifting from the general practitioners' model to the development of specialised divisions within different areas of the law (section 2.4.8). Lawyers need to develop skills and expertise in emerging areas of legal practice such as intellectual property, information technology, conflict resolution, banking, and international trade.

Unfortunately, law firms in Botswana are yet to fully establish themselves as learning organisations. Presently only 17% (chart 6.1) of the lawyers have a master's degree.

Most lawyers are not encouraged to further their education; others consider it as a waste of valuable billing time and others do not think an additional qualification will make a difference to their legal practice (section 7.7.5, appendix 3). Also, some lawyers view tutoring and mentoring as just a formality and therefore do not really invest any time in assisting young lawyers (section 7.7.5). Most lawyers do not provide or engage in professional development programmes (63.6%, table 6.10; 26.4%, table 6.6.). It may be argued that due to the lack of resources most law firms in Botswana like other small and medium size firms (Matlay, 2000) tend to rely more on informal incidental and reactive learning rather than formal learning programmes. Nevertheless, it is important for the 3 to 9 lawyers firms to consider some practical and achievable ways of individual, collective and organisational learning. One way may be to pair experienced lawyers to work with younger and inexperienced lawyers so that the new lawyer may share in the knowledge that the more experienced lawyers have acquired during years of practice. Incidental and informal learning should be encouraged. Lawyers should be encouraged to further their studies particularly in those fields that would improve their practicing skills or expand their areas of specialisation.

Bearing in mind the challenge of using business hours for study, the implications for individual and collective development may be difficult in law firms where lawyers particularly the owner and partners in the 1 and 2 lawyer firms are too busy with the core business operations. However, lawyers as well as owners and partners may consider other less demanding options such as getting affiliated to professional associations and enrolling in distant learning, correspondence or part time studies. These firms may also consider entering into strategic alliances with other firms. It has been reported that private learning, inter-organistional learning, and communal learning processes in a small knowledge intensive consulting firm has been facilitated by strategic alliances (Chung et al., 2006).

On the whole, the Law Society needs to sensitise lawyers in Botswana to develop an interest in continuous learning and professional development because one of the foundations of knowledge management is the power of learning (see sections 3.16.18 and 4.6.6). The Law Society should organise computer-based training programmes, web-based learning, acquire web-based tools, multimedia applications and presentation support systems in order to ensure an effective learning environment amongst lawyers. Lawyers are encouraged to contribute articles in journals and undertake research through published (print or electronic) resources to learn about recent legal developments.

8.2.5 Tools and technologies for knowledge management

A proper information and communication infrastructure will support the capturing and sharing of knowledge, promote collaboration and provide easy access to knowledge within the firm. Empirical findings on studies in small and medium size enterprises reveal that these firms have not fully exploited the potential benefits of information communication technology for knowledge management (Lim & Klobas, 2000; Egbu et al., 2005). Egbu et al., (2005) reported that the information communication technology provisions for knowledge management in the 11 pilot surveying practices were mainly phones, emails, faxes, intranet and internet. It was also evident from the findings in this study (tables 6.4 and 6.5) that law firms in Botswana are still at the initial stages of the adoption and use of information communication technologies for knowledge management. The information technologies identified in table 6.4 as commonly used in the law firms are limited to telephones (100%), computers (100%) network personal computers (81.4%), emails (71.4%), internet (69.3%), document and record management (16.4%) and legal information systems (40.0%). Very few law firms are using the intranet (20%, table 6.4) to share knowledge. Inadequate technological infrastructure was acknowledged as a major barrier to knowledge management in law firms in Botswana (67.2%, table 6.12).

It has been argued that information communication technology can be used as a strategic weapon by small firms to maintain their competitiveness and attain a favourable position within their sector of activity (Bergeron & Raymond; 1992; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004). Therefore, considering the importance of information communication technology for knowledge management in small firms, law firms in Botswana should consider investing in small, simple, inexpensive systems tailored towards their needs and integrated as part of their job. Law firms should adopt and integrate user-friendly computer software programmes for knowledge management in their day-to- day practice.

Typical technologies that will enhance the organisation of knowledge and internal efficiencies in both the 1 and 2 lawyer firms and the 3 to 9 lawyer firms are emails, internet, model documents, precedents databases, external legal information systems such as Juta and Butterworth, practice, case and content management systems, and automated document assembly. The 3 to 9 lawyer firms may consider adopting other technologies geared at facilitating communication between staff, such as intranet, extranet, video and text based video conferencing, chat lines, electronic bulletin boards, knowledge cafes and internal legal

information systems. These firms will have to rely on the services of part-time consultants and information professionals for success in championing a technological adoption, and the trial and error process during technology implementation. Law firms should welcome any opportunity to volunteer as "tolerant" testers for new software devices. All lawyers are challenged to be computer literate, acquire skills in knowledge management, electronic information retrieval, electronic communication and electronic publishing. These skills may be acquired by a programme of self-education, reading, attending computer courses for lawyers, and consulting with colleagues who have already mastered these skills. The part-time consultants and information professionals should play a great role in sensitising lawyers on the importance and use of information communication technologies for knowledge management.

Examples of cutting edge technological infrastructure for law firms were identified in chapters 3 and 4 (see sections 3.9 and 4.4). Figure 8.3 below presents suggested tools and technologies for knowledge management in law firms in Botswana.

<table>
<tr><td colspan="2">**Suggested tools and technologies for knowledge management in law firms in Botswana**</td></tr>
<tr>
<td>**Preliminary technologies** (telephones, fax, scanning software and personal networked computers, word processing tools, spreadsheets, voice dictation software, email and fax server software) **Groupware** (email, calendaring, Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafes) **Collaborative and communicative technologies** (internet/intranet, extranet, World Wide Web, and enterprise information portals) **Learning and professional development systems**</td>
<td>**Knowledge databases and software tools** (knowledge repository, model documents and precedent data bases, Collaborative hypermedia, Practice, Case and Content management systems, and automated document assembly such as word processing and accounting packages) **Corporate knowledge maps and directories of explicit and tacit** k**nowledg**e (Yellow Pages) **Intelligent Tools** (expert systems case based reasoning) **Knowledge support systems (**legal information systems**)**</td>
</tr>
</table>

Figure 8.3 Suggested tools and technologies for knowledge management in law firms in Botswana

Network computers, word processing tools, spreadsheets, voice dictation software, email, fax server software and scanning software should be used to support the process of capturing tacit knowledge and converting it into digital format so that it can be stored, indexed and shared within the law firms. The communicative and collaborative technologies (bulletin boards, discussion groups, Lotus Notes, internet, intranet, extranet and web based portals) will enable lawyers to collaborate virtually together without any barrier to geographical

location, accelerate the capture and transfer of tacit knowledge, support knowledge access and facilitate team work and individual contact with one another. Knowledge databases and software tools such as a knowledge repository of structured explicit knowledge will capture knowledge for later and broader access by others within the same firm, serve as a storage and retrieval system, serve as central inventory of employees' skills, competencies and experience (Yellow Pages) and provide online questions and answers that link clients with questions to a subject matter specialist in the firm. A corporate knowledge map is the main way of representing the knowledge base and it will enable lawyers in large firms to find relevant information in the server quickly. A typical knowledge map is a directory of tacit knowledge such as "Yellow Pages" (containing curriculum vitae, competency profiles, and research interest and will act as pointer to lawyers knowledgeable in a particular area of the law, documents, collections and data bases where knowledge is stored that can be consulted). For now, intelligent tools that are used to anticipate user needs, cull new knowledge from existing knowledge bases and codify and store structured explicit knowledge may not be a priority for the law firms due to its cost. However, learning and professional development systems are crucial in assisting lawyers to learn and use knowledge.

8.2.6 Techniques of knowledge management in law firms in Botswana

In considering the technological infrastructure, it is also important for law firms to identify the different techniques that they intend to adopt, because except for techniques that do not require the use of information communication technology, other techniques for knowledge management are supported by a corresponding technology. The current techniques of knowledge management in law firms in Botswana are limited to precedents (100%), legal research (80%), hiring and training of young lawyers (61.4%), record management (69.3%) conversation by water coolers, face-to-face communication and brief banks (appendix 3, table 6.6). While law firms in the country are unlikely to require techniques of the of size and complexity provided by large firms, it is apparent that they still need techniques for recording and documentation of events to ensure that knowledge and experiences gained are not lost through employee turnover or the passage of time.

For a start, and depending on the knowledge management needs of the firm, a knowledge repository such as the work product repository may be an excellent knowledge management initiative for the law firms. Empirical findings on knowledge management in small and medium size firms have revealed that the greatest need for knowledge management in these firms is the need to build maintain and use effective and cost-efficient knowledge

repositories (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004; Egbu, et al.). Knowledge repositories are a good start for these law firms because they can be built on technologies that these firms already have in place such as emails (71.4%, table 6.4) and document management systems (16.4%, table 6.4). A work product repository for example, is an electronic repository designed to collect good samples of a firm's work product (contracts, memos, briefs, drafting, and standard documents) as well as information about it and how it should be used (Chester, 2002; Staudt, 2003). These systems assist the firm's lawyers in the creation of new works, new documents, in legal research and analysis and in building presentations for clients. It also assists lawyers to find and contact other lawyers who have performed similar work in the past. Work product repository is very beneficial to lawyers because it will help them produce new work more quickly thus minimising the delays and inefficiencies that result from "reinventing the wheel." It facilitates the productivity of new lawyers and in case of the 3 to 9 lawyer firms, helps lawyers make their expertise visible within the firm so that other lawyers may find them and work with them.

Quite clearly, due to the informal procedures and operations, law firms in Botswana have less resources and capacity to maintain a knowledge repository to the same depth and breadth as large firms. They are unlikely able to afford dedicated employees to manage the knowledge repository as employees will be busy performing other core business. It is therefore advisable that these law firms adopt a simple, easy to use, quick to learn, and cost-efficient knowledge repository that is integrated into the firm's daily operations and tailored to the needs of the firm. Those who add knowledge to the repository should be those who create it while those who retrieve it should be those who need to use it. It is likely that the 1 and 2 lawyer firm may tend to ignore the need to organise and store knowledge in a repository due to their small size compounded with their limited financial resources. However, the fact that knowledge in these firms is kept mostly in the heads of the owners, partners and the employees, makes these firms very vulnerable to the loss of knowledge due to death or retirement of the owners and partners. Therefore, a knowledge repository will improve the firm's capability to codify, store, share and retrieve knowledge. A good start may be to go for a simple, manual, print-based, electronic document repository, or physical records management system integrated with the firm's existing office communication systems that will serve the firm's need.

Law firms may also consider other informal techniques of knowledge management that have been adopted by other small and medium size firms. Yewwong & Aspinwall

(2004) observed that informal environmental scanning whereby small firms depend on the experiences of other firms to serve as benchmarks against which they measured their performance is a crucial technique for knowledge management. It is noted that the personal relationships in small and medium size firms have traditionally been major contributors to the success of these firms (Egbu et al., 2005). Therefore, the 3 to 9 lawyer firms should utilise existing personal bonds and face-to-face contact with one another to build on their knowledge, seek others' opinions about knowledge they acquired, and test its application to problems within the firm.

Other techniques such as communities of practice (section 3.11.1), project experiences, knowledge networks, online forums like intranet news groups or email distribution list, and the development of the organisational memory (section 3.11.5), are suitable for the 3 to 9 lawyer firms. As time goes on, they may also consider adopting litigation strategy, client relation management, conflict checking, share fairs (events that combine knowledge providers like research and development (R&D) teams with knowledge users), effective marketing in the form of articles, knowledge centres, information sharing policies, regular in-house seminars, presentations and weekly learning reports.

Figure 8.4 below shows the present techniques of knowledge management in the law firms in Botswana and the suggested state of the art techniques for knowledge management in law firms.

Existing and suggested techniques of knowledge management in law firms in Botswana	
Present techniques of knowledge management in law firms in Botswana Precedents Brief banks Legal research Tutoring and mentoring Conversations by water coolers Brief Banks Personal information banked by lawyers	**Suggested state of the art techniques for knowledge management** Work product repositories, Communities of practice Online forums like Intranet news groups or email distribution list Developing the organisational memory Knowledge networks Professional development programmes Skills and expertise locator (Yellow Pages) Litigation strategy Conflict checking Client relation management After action review Knowledge centres and knowledge concierge Information sharing policies Regular in-house seminars and presentations Weekly learning report

Figure 8.4 Existing and suggested techniques for knowledge management in law firms in Botswana

8.2.7 Agents and institutions for knowledge management in law firms

The research findings (table 6.14, and appendix 3) identified several agents and institutions that can foster knowledge management in law firms. The key agents are the Law Society, legal secretaries, law librarians, legal academics at the University of Botswana and the courts. In order to ensure effective implementation of knowledge management in law firms in Botswana, law firms, should work closely with these key agents and institutions and other agents for knowledge management presented in figure 8.5 below.
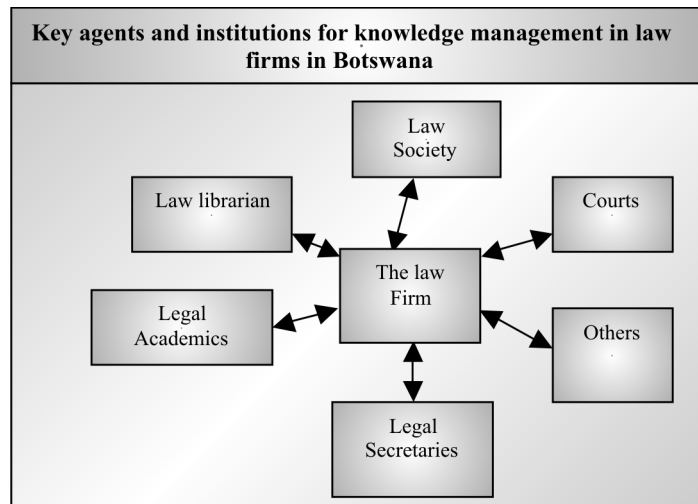
Figure 8.5 Major institutions and agents for knowledge management in law firms in Botswana

Lawyers acknowledged the fact that the Law Society of Botswana is a crucial agent in knowledge management (68.6 % agreed, table 6.14). Considering that it is the regulatory body of law firms in Botswana, it stands to reason that it can be the principal institution for facilitating knowledge management in law firms. It can undertake in several ways to sensitise and educate lawyers about the nature, importance and significance of knowledge management in law firms. One way may be by organising conferences and workshops on knowledge management during which lawyers will be sensitised about the benefits of knowledge management. The Law Society can lead by example; it should consider institutionalising knowledge management and substantially mobilise sole proprietors and partnerships to formalise knowledge management. It can also work together with law firms towards the development of a common network resource centre for lawyers that would be

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headed by a knowledge manager who would then constitute a knowledge management team. The Law Society and the law firms may work together with the legal academics and the law department at the University of Botswana to facilitate the implementation of knowledge management in the law firms by ensuring that the concept of knowledge management is introduced to students at law school.

Lawyers acknowledged that legal academics are important agents in facilitating knowledge management in the law firms (65.0% agreed, table 6.14). They are responsible for transferring knowledge to lawyers through a five year training programme at the law school during which they acquire the knowledge of the law (declarative knowledge). The legal academics need to redesign the curriculum of the law schools by infusing aspects of knowledge management into some law courses such as the course on introduction to law or the course on legal research methods. Lecturers may be outsourced from the department of information science in the university to offer lectures on knowledge management to law students. The law department may set up mock courtrooms wired with the latest infrastructure so that law students can experiment with cutting-edge tools. The law department should liaise with the information science department and the law librarian at the University of Botswana to organise seminars and workshops that would sensitise the law students on knowledge management.

The legal secretaries are expected to play an important role in knowledge management in the law firms because lawyers rated them highly as agents of knowledge management in the firms (76.4% agreed, table 6.14). This is probably because all lawyers currently engage the services of a legal secretary who assists them in the day to day running of their activities. Their knowledge about the firm, client and other legal issues pertaining to the lawyer to whom they are responsible, and their experience in organising and cross-referencing files by subject and practice area makes them indispensable agents in the knowledge management in the firm. In the 3 to 9 lawyer firms, the legal secretaries should work together with the knowledge manager to facilitate the management of the internal efficiencies of the firm and knowledge about the clients, while in the 1 and 2 lawyer firms he/she works together with the sole proprietor and the partnership.

Another important agent for knowledge management in the law firms should be the law librarian (the legal information professional). Law librarians are preferable to other information professionals because of their legal knowledge and expertise in retrieving, organising and managing legal information and knowledge for lawyers. They stand in a

better position to work closely with the staff in the law firms at all levels and by so doing provide insights into their knowledge needs. However, not many participants recognised the role of the law librarian (37.2% agreed, table 6.14). This is probably because there is no firm with an established library in the country and therefore law firms in Botswana may not appreciate the services of the law librarian because of the feeling they can make do with the legal secretaries. Bearing in mind that lawyers do not seem to appreciate the role of a law librarian, it is necessary to explain some of the different roles that such an individual can play in the firm.

If there is a law librarian in the law firm he/she can champion knowledge management in the law firm and create awareness within the firm about the importance of knowledge management and the benefits of knowledge sharing. He/she can constitute an active member of the knowledge management project team. The law librarian can be responsible for identifying, codifying, organising, packaging, publishing, designing, managing and representing the firm's explicit knowledge in ways that may be accessed and re-used by lawyers as well as foster a climate where tacit knowledge can be identified, captured, shared and re-used in the firms. The law librarian can also archive, purge and manage the life cycle of the knowledge repositories ensuring that the content of the knowledge management system is well indexed and represents the firms' specific subject matter. He/she will facilitate the development of communities of different practice areas and the use of collaborative tools such as virtual meetings (web-conferencing) and knowledge networks. The law librarian will also take part in developing an expertise skill directory such as an online electronic "Yellow Pages". Above all, the law librarian will be responsible for articulating and analysing the knowledge needs of the lawyers while engaging in strategic planning to ensure that the goals of the firm are aligned with the knowledge strategy of the firm. It is therefore imperative for at least the 3 to 9 lawyer firms to consider engaging the part time services of a law librarian. The 1 and 2 lawyer firms may for a start consider becoming registered members at the University of Botswana library which will automatically enable them to benefit from the services of the law librarian.

An information technology specialist is also an important agent of knowledge management. He/she will be able to advise the knowledge manager, the sole proprietor or the partnership with regards to the appropriate technology and software to buy and also in setting up a knowledge management system. Considering that hiring the services of full time information technology expert in law firms may be very costly, law firms particularly the small ones, should consider informal consultations with an information technology consultant.

It is crucial for all law firms to work together with other branches of the legal fraternity such as the magistrates and judges in implementing knowledge management in their firms. Participants and interviewees acknowledged that the courts play a crucial role in generating knowledge in the law firms by way of reasoned judgements that lawyers use as precedents (68.6%, table 6.14; appendix 3). The High Court's annual judicial conference also provides an excellent opportunity for knowledge sharing. It is therefore important that the Chief Justice of Botswana, who is head of the judiciary, devises ways of sensitising judges and magistrates on their role in facilitating knowledge management in the law firms. One way may be to devote some time during the annual judicial conferences for judges and magistrates to discuss their role in facilitating knowledge management in law firms.

The other agents of knowledge management include professional associations and those that emerged from the "other" category and the interviews (appendix 3) such as legal consultants, professional book shops, land tribunal and other quasi judicial bodies like labour arbitrator, International firms affiliated with local firms, publishers like Juta and Butterworth and professional assistants. It was shown (table 6.14) that not many lawyers are members of professional associations (47.1% agreed). It is therefore important for lawyers to consider joining professional associations other than the Law Society because they play a great role in the creation and sharing of knowledge. Although hiring the services of legal consultants can be costly, legal consultants facilitate knowledge creation in law firms. They assist lawyers to carry out research in complex matters where lawyers do not have the expertise and then present it to lawyers in the form of legal opinions. Law firms may therefore consider hiring their services from time to time and knowledge management systems would facilitate the process of contacting experts to make an inquiry. Managing partners rely very much on professional assistance to conduct legal research thus creating knowledge in the firm.

8.2.8 Leveraging of knowledge processes and knowledge resources

Given the appropriate strategy, tools, techniques, organisational variables and supportive institutions, the end result of knowledge management in law firms in Botswana will be the leveraging of the knowledge management processes and resources in ways that the firm would gain competitive edge over the other firms (figure 8.1) that are not conscious of knowledge management. It is therefore crucial for the law firms to be aware of the various knowledge management processes and the knowledge resources that the knowledge management initiative intends to leverage.

8.2.8.1 Leveraging of knowledge management processes

A typical knowledge management process in the law firm should consist of knowledge creation (capture), codification (storage and organisation), transfer (sharing) and utilisation (retrieval). A description of the different knowledge management processes is provided in sections 3.7 and 4.7.1.4.

Law firms should place emphasis on leveraging the knowledge creation and sharing processes because the knowledge codification and utilisation processes have always been part of the information management activities of law firms and are related to managing explicit knowledge. The knowledge creation and sharing processes are related to tacit knowledge and are more difficult to manage because it centres on the knowledge and experiences of the lawyer. Drawing from Nonaka & Takeuchi (1995) model of dynamic organisational knowledge creation modified and adopted by Nonaka et al (2002) (3.8.2 and 4.7.2.2) as "SECI knowledge asset and ba model" while focussing on the SECI, the different ways by which knowledge may be created and transferred in the law firms in Botswana are identified and presented in figure 8.6 below.

Socialisation Examples: Tutoring and mentoring, observation, meetings and social interaction	**Externalisation**: Examples: Producing firm work products such as drafting, brief banks, and precedents
Internalisation Examples: Reading and analysing legal reports, advice rendered in writing and arguing cases in courts	**Combination** Examples: Accessing print and documented knowledge in the firm, writing articles and research papers

Figure 8.6 The different ways knowledge may be transferred in law firms Botswana

In this study, the four different ways of creating and promoting the sharing of knowledge (socialisation, externalisation, combination, and internalisation) resulting from the interaction between tacit and explicit knowledge (section 3.8.2, section 4.6.2.2,) considered as the SECI model are applied within the context of the law firms.

During socialisation a lawyer's tacit knowledge is transmitted and acquired through the sharing of experiences. In spite of the expectations of a unified and fluid culture in small and medium size firms (Ghobadian & Gallear, 1997), knowledge sharing remains a challenge to knowledge management in small and medium size enterprises due to lack of trust (Lim & Klobas, 2000; Egbu et al., 2005*)*. It was also evident from the findings in the study that lawyers did not have a knowledge sharing culture (sections 7.8.3 and 7.8.4). Although it may be argued that the sole proprietor does not need to share knowledge because he/she is alone, benchmarking with other local and international firms is an important method of knowledge transfer in these firms. Besides the informal methods of knowledge transfer already existing in law firms such as tutoring and mentoring, chatting by the hallways, face-to-face communication and telephone chats, (section 7.8.3) there are other methods of transmission of tacit knowledge in the law firms. Tacit knowledge may also be transmitted in the 3 to 9 lawyer firms by observation, brainstorming and mentoring schemes, informal face-to-face meetings, consultation and discussion with other lawyers, team meetings where ideas are shared, discussion of major projects after conclusion, social networking of lawyers, and affiliation with other professional firms.

Externalisation is a process of knowledge creation whereby the lawyers' tacit knowledge is converted to explicit knowledge in the firm. In small and medium size enterprises, the attempts made to transform tacit knowledge into explicit knowledge have, in the main, been unsuccessful (Egbu et al., 2005). Therefore, in order to thrive law firms should seek ways of maintaining and retaining old and new knowledge. Examples of externalisation in the law firm are a lawyer's knowledge and experience reflected in completed contractual and transaction documents such as standard forms contracts; and drafting documents and submitting written reports after attending to a legal task.

Combination is the process where lawyers create explicit knowledge by bringing together explicit knowledge from several sources. For example, bringing together all the documented knowledge compiled in the firm either in print or electronic form. Legal research and writing of articles provides opportunities for lawyers to create knowledge through the process of combination. The 1 and 2 lawyer firms may engage in strategic alliances or conduct informal environmental scanning from other firms.

Internalisation is the process of internalising explicit knowledge and it is closely linked to learning by doing. For example, a lawyer is able to argue cases in court and provide legal advice to clients only after internalising explicit knowledge.

Lawyers should be willing to rock the boat and be willing to venture into trial and error activities.

Therefore, knowledge sharing takes place during the process of socialisation, the creation of new knowledge takes place during the process of externalisation and combination, while the process of internalisation internalises the experiences gained through the other modes of knowledge creation. The choice of a knowledge process most often depends on the knowledge resource that the law firm seeks to improve.

8.2.8.2 Leveraging of knowledge resources

The leveraging of the knowledge management processes will result in leveraging the knowledge resources of the law firms (figure 8.1). Drawing from the intellectual capital model[21] (Edvinsson, 1997, see section 3.8.1), the knowledge resources in both large and small law firms may be categorised as human capital and structural capital. The human capital in the law firm is equated to the firm's tacit knowledge base. It includes the knowledge and skills of the lawyers and employees in the law firm. The structural capital is equated to the firm's explicit knowledge and knowledge of the business of law. Structural capital is knowledge that remains in law firm when the employees and staff go home at night together with all other knowledge embedded in the processes, culture, print resources, electronic assets, information about the firm's operations, hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data. The following knowledge management researchers in small and medium size firms: Lim & Klobas (2000); Sparrow (2001); Yewwong & Aspinwall (2004) and Egbu et al. (2005) have identified resource constraints in terms of finance, time, capital, labour, equipment and physical commodities as one of the most important challenges of knowledge management in these firms. Egbu & Botterill (2002) also observed that due to lack of resources small firms are often weak in terms of financing, planning, training and the use and exploitation of advanced information technology. In the same way, this study has identified the lack of resources in terms of firm size, finance, time, people and information communication technology as the major barriers to major knowledge management in law firms. However, managing the knowledge assets and intangibles in small firms is vital because it provides a way for them to leverage

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21 Intellectual capital is similar to knowledge management in that the practical management objective of intellectual capital is to convert human capital (individual and group learning) to structural capital (organisational knowledge or what is left when people go home, such as documented processes and knowledge base) thereby reducing the risk of losing valuable knowledge when people leave the organisation.

most, if not all of the benefits of knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). Therefore, knowledge management in law firms in Botswana will leverage the tangible and intangible resources in these firms in ways that will enable them to benefit from knowledge management even more than larger law firms.

8.3 Conclusion

This chapter presented and discussed the guidelines for knowledge management in predominantly small law firms in Botswana in the light of the changing legal information environment. It is seen that, given an appropriate project plan, organisational variables, strategies, technologies, techniques, supportive institutions and agents of knowledge management, law firms will leverage the knowledge processes and resources for competitive advantage in relation to other firms in order to stay competitive.

While it appears that the principles of knowledge management could be transferred from large to small and medium size firms, the reality is that small firms are more than "little large businesses" and have certain distinct characteristics and features that distinguish them from their larger counterparts. Therefore, an all out approach to knowledge management is not feasible in small law firms in Botswana. The application of the principles of knowledge management in law firms in Botswana warrants the consideration of unique features typical of small law firms and a host of other complex factors, including finance, size, structure, resources and ideals. Each law firm is challenged to adopt a systematic approach to knowledge management tailored to its needs and resources. Above all, law firms in Botswana need to develop their understanding of knowledge management as a key business driver rather than as a resource-intensive additional initiative.

CHAPTER NINE
CONCLUSION AND RECOMMENDATIONS

9.1 Introduction

The aim of this study was to establish guidelines for knowledge management in law firms in Botswana in the light of the changing legal environment. This chapter presents the conclusions through comparing the actual research outcome with the objectives and research questions set at the beginning of the research. It makes some recommendations for effective implementation of knowledge management in law firms, identifies certain limitations and indicates possible areas for further research. It also shows how the following five sub problems set out at the onset of this study have been addressed:

- How is the legal environment changing and what challenges do these changes have for law firms?
- How can knowledge management assist law firms in addressing these challenges?
- What is the current status and scope of knowledge management in law firms in general?
- What is the current status of knowledge management in law firms in Botswana?
- How can knowledge management be implemented successfully in law firms in Botswana?

9.2 Conclusions

It was shown that the operation of law firms in Botswana have been significantly affected by the changes in the legal environment brought about by amongst other things the globalisation of legal practice, advances in information communication technology, electronic publishing, competition amongst firms, pressure from clients and increase in lawyers' mobility. Consequently, law firms in the country like law firms elsewhere were beginning to recognise the potential benefits of knowledge management as a strategic means to weather changes in the legal environment and sharpen their competitiveness as well as broaden their influence within the legal industry and the global economy.

There is, however, evidence that lawyers in Botswana like lawyers elsewhere in Africa, are still grappling with the whole concept and meaning of knowledge management. Although law firms do not have formal knowledge management systems in place, it was clear that knowledge management initiatives have existed in the law firms in Botswana for quite some time on an *ad hoc* basis and not under the banner of knowledge management. Typical

knowledge management initiatives that have existed in law offices such as precedents, legal research and development, hiring and training of young lawyers and brainstorming are no longer enough. It was at least a positive step that lawyers defined knowledge management as document management, information management and file management because information management is a sub set of knowledge management and may be considered as the first step to the adoption of formal knowledge management.

The conditions in the law firms at present are not very favourable for knowledge management to thrive. For example, there are no rewards or incentives for sharing knowledge. Also, promotions in these firms are not based on the ability to share knowledge and very few lawyers acknowledge that there is special recognition for staff on the time spent in knowledge creation, sharing and distribution. Furthermore, although lawyers were positive about the mutual trust, care and concern amongst individuals, it was seen that the trust and care is limited only to issues that have to do with the general interest of the firm rather than issues that involve sharing individual expertise with colleagues. There are many limitations to knowledge management such as inadequate technological infrastructure, limited financial resources, the firm size and the lack of initiative and perception of the value of knowledge management on the part of the sole proprietor, partnership or managing partners. The information and communication technologies for knowledge management in the law firms are still elementary. Most law firms do not provide opportunities for further education, while most lawyers do not think it is even necessary to acquire any further education because of the feeling that time taken to make money for the firm is being wasted on studies.

From the analysis of the questionnaire and the interviews that were conducted, the different ways in which knowledge is presently generated, created and shared in the law firms were identified. It was found that lawyers were positive about the prospects of knowledge generation, creation, and sharing. Although lawyers were excited about the prospects of a knowledge sharing culture, they are generally individualistic. The study is the first of its kind in Botswana to test the applicability of the knowledge management concepts of tacit and explicit knowledge within the context of law firms. It identified and classified the different knowledge in law firms into tacit knowledge, explicit knowledge and knowledge of the business of law.

The study also identified several stakeholders across multiple streams and institutions with different expertise who may work together with the lawyers for effective implementation

of knowledge management in law firms. The major stakeholders that emerged from the study include the Law Society, the University of Botswana legal academics, the courts, the legal secretaries, the law librarians and professional associations. There are also others such as the legal consultants, information technology consultants, professional assistants, professional book shops, International firms affiliated with local firms and publishers like Juta and Butterworth.

The last part of the study presents guidelines that are developed to explain the applicability of existing models and concepts of knowledge management within the context of knowledge management in law firms in Botswana. The guidelines identifies several key points that need to be considered before implementing knowledge management in small law firms in Botswana ensuring that information communication technology solutions are balanced with techniques that involve human, social and cultural interaction.

This study is the first exploratory empirical study that determines the guidelines for knowledge management in law firms in Botswana. The proposed guidelines elaborates on Leavitt's (1965) model while also taking into account aspects of Nonaka's (1995) SECI model and Edvinsson's (1997) intellectual capital model to provide a framework for knowledge management within the context of small law firms (law firms in Botswana are essentially small) in a different location (Botswana is a sparsely populated underdeveloped African country). In order to realise its objectives, this study took a snapshot on knowledge management in the law firms in Botswana through the triangulation of approaches. That is, the use of open and closed ended questionnaires, semi-structured interviews and qualitative and quantitative methods of data analysis. Based on the findings, a number of recommendations are considered necessary to enhance the implementation of knowledge management in law firms in Botswana.

9.3 Have the research questions of this thesis been answered?

The purpose of this section is to establish whether the different research questions identified at the beginning (section 1.4) pertaining to the five sub problems of the thesis have been addressed.

9.3.1 Research questions for sub problem 1 (the changing legal environment and the consequences to law firms)

The following two questions below pertaining to sub problem 1 of the study have been answered:

▸ How is the legal information environment changing?

▸ What are the consequences of the changing legal environment to the law firm?

It was established in section 2.4 of the literature and confirmed in the empirical findings (table 6.3) that rapid advances in information technology and several changes in the business environment such as the internet, globalisation of legal practice, the drive to specialisation and labour mobility amongst other factors have accelerated changes in the legal environment. In section 2.5, several consequences of the changing legal environment to the law firm were identified amongst which are coping with information overload, dealing with technological concerns, the need to provide proactive services, increased competition, the challenge to acquire new skills and competency, revolution of lawyers' mobility and meeting the information and knowledge needs of the lawyer. It was also established that all these pressures faced by the legal industry in recent years have compelled law firms to acquire and leverage knowledge effectively within the firms in order to become more adaptive, innovative and competitive (section 2.6, table 6.3, section 6.6 and section 7.5).

9.3.2 Research questions for sub problem 2 (the role of knowledge management towards addressing the challenges in the changing legal environment)

The following research questions relating to sub problem 2 of the study have been answered:

▸ What is knowledge?

▸ What are the different approaches to knowledge?

▸ What are the different types of knowledge?

▸ What is knowledge management?

▸ What are the various approaches to knowledge management?

▸ What are the existing frameworks and models for knowledge management?

▸ What are the technologies and techniques for knowledge management?

▸ What are the benefits of knowledge management?

▸ Which are drivers of knowledge management?

▸ What are the factors that inhibit the success of knowledge management?

▸ What are the enablers to knowledge management?

The first research question of sub problem 2, defining knowledge, was answered in section 3.2. Several definitions of knowledge were identified, each representing the different views of knowledge, and thus making it easier to describe knowledge than to define it. For purposes of this study, knowledge is defined as information combined with experience,

context interpretation, reflection, creativity and the ability to use information to act or innovate. It includes truths, beliefs, perspectives, concepts, judgement, expectations, methodologies and know-how. It is possessed by humans, agents or other active entities. It is also the ability to cause things to happen.

The second research question on the different approaches to knowledge was addressed in section 3.3. The different approaches to knowledge considered pertinent to this study are indicated as the data, information and knowledge perspective, the individual perspective, the social perspective and the organisational perspective.

The third research question on the different types of knowledge was considered in section 3.4. Examples of the different types of knowledge are tacit and explicit knowledge (3.4.1.1); declarative, procedural and analytical knowledge (3.4.1.2); know-how, know-about, know-why, know-with and care-why (3.4.1.3); human, mechanised, documented and automated knowledge (3.4.1.4) and internal, external, customer and market knowledge (3.4.1.5).

Section 3.5 addressed the fourth research question defining knowledge management. It was established that, like knowledge, there is no universally accepted definition of knowledge management. However, this study defined knowledge management as a set of systematic and disciplined actions that an organisation can take to obtain the greatest value from the knowledge available to it. It entails the management and communication of knowledge and information; a balance of people, process and technology; creating an organisation that encourages ideas and rewards success in order to leverage the organisation's knowledge for competitive advantage.

The fifth question on the different perspectives to knowledge management was addressed in section 3.6 of the literature review. The five different approaches of knowledge management considered pertinent to the study are information technology, personal, social, organisational and business perspective.

The sixth question on the existing frameworks and models of knowledge management was considered in sections 3.7 and 3.8 of the literature review. The different frameworks identified in the thesis are the organisational learning conceptual framework (3.7.1) the concept of the knowledge markets (3.7.2), the process framework (3.7.3), and the codification and personalisation knowledge management strategy for knowledge transfer (3.7.4). The different models of knowledge management that were considered pertinent for the study are: intellectual capital model, the SECI, ba and knowledge asset model and the socio-technical (diamond trist) model of Leavitt, 1965 (section 3.8).

The seventh question pertaining to the technologies and techniques of knowledge management in law firms was addressed in sections 3.9 and 3.11. The different technologies for knowledge management in law firms identified in section 3.9 are: communication and collaborative technologies, knowledge database and software tools, corporate knowledge maps and directories of explicit and tacit knowledge, intelligent tools and learning and professional development systems. Some of the techniques for knowledge management identified in section 3.11 are communities of practice, conversation by water coolers, knowledge networks, tutoring and mentoring, developing the organisational memory, after action review and effective debriefing.

The eight research question on the benefits of knowledge management was considered in section 3.12 of the literature review. The following are some of the compelling benefits of knowledge management: provides competitive advantage, improves efficiency, improves integration of knowledge within the firm, stimulates and motivates employees and provides organisational productivity and better-decision making. It was also established that the perceptions and benefits of knowledge management are often difficult to quantify and varies from individual to individual and organisation to organisation.

The ninth research question pertaining to the drivers of knowledge management was addressed in section 3.13 of the study. The following were identified as some of the reasons why organisations want to achieve best practices and leverage information and knowledge: the realisation of the changing role of knowledge, sophisticated customers, cost avoidance, leveraging of knowledge, value measurement of intangible assets, globalisation of business, international competition, increase in information technology, rapid growth, loss of corporate memory and geographic dispersion.

The tenth question dealing with the factors that inhibit the adoption of knowledge management was addressed in section 3.14 of the study. Cultural, social organisational and technical barriers were considered as the different barriers to knowledge management.

The last question on sub-problem 2 pertaining to the enablers of knowledge managements was addressed in section 3.15. Encouraging a culture of knowledge sharing, leadership commitment, appropriate information technology and organisational infrastructure were identified as some of the different enablers of knowledge management.

9.3.3 Research questions for sub problem 3 (the general status and scope of knowledge management in law firms)

The following research questions for sub problem 3 have been answered:

▸ What are the different types and categories of knowledge existing in the law firms?

▸ What approaches do law firms mainly follow in knowledge management?

▸ Which tools and technologies are used for knowledge management in law firms?

▸ What are some of the techniques of knowledge management in law firms?

▸ What are the benefits of knowledge management for law firms?

▸ What are the existing frameworks and models for knowledge management in law firms?

▸ What factors inhibit the success of knowledge management in law firms?

▸ What factors are critical to the success of knowledge management in law firms?

▸ What are the strategies for knowledge management in law firms?

The first research question of sub question 3 on the different types and categories of knowledge existing in the law firms was addressed in section 4.2 of the thesis. The studies draws from the different classification of knowledge in the law firm by legal researchers to classify knowledge in the law firm under three broad categories as tacit knowledge, explicit knowledge and knowledge of the business of law. This is because elements of tacit and explicit knowledge run through the different categorisations of knowledge suggested by the various legal researchers, while other knowledge crucial for the practice of law may be conveniently referred to as knowledge of the business of law.

The second research question pertaining to the approach law firms adopt in knowledge management was addressed in section 4.2. Drawing from the different perspectives of knowledge management (information technology, personal, social organisational and business) examined in section 3.6, it was established that most studies on knowledge management in law firms tend to adopt a technological approach to knowledge management. It was noted that law firms consider knowledge management as a narrow theoretical concept. For instance, there has been little acknowledgement from lawyers on the importance of managing knowledge about clients, skills and expertise about staff and knowledge about third parties. There has also been little attention on the identification and sharing of tacit knowledge and very little research on the knowledge management process.

The third research question was considered in section 4.3.1 The different tools and technologies for knowledge management in law firms were categorised as; preliminary tools

and technologies, software and databases tools, collaborative technologies, technologies for knowledge transfer, technologies for content management and technologies to support and augment the lawyer's work.

Section 4.4 addressed the fourth research question on the techniques of knowledge management in the law firms. Techniques of knowledge management such as precedents, "form libraries" legal research, tutoring and mentoring programmes and conversations by water cooler have been practiced in the law firms for a long time on an a*d hoc* base. Typical knowledge management techniques in law firms are: communities of practice, attending conferences, project summaries, skill and expertise locator, professional development programmes, client relation management, litigation strategy, best practices, weekly learning reports, regular in-house seminars, the discussion of major projects after conclusion, and online forums like email distribution list.

The fifth research question on the potential benefits of knowledge management was addressed in section 4.5. Some of the major benefits that may accrue from the implementation of a solid knowledge management strategy in the law firm are: the improvement of the provision of services to clients, economic profitability, professional satisfaction, a learning culture, team work, competitive advantage, and meeting the information and knowledge needs of the lawyer.

The sixth question pertaining to the models and frameworks for knowledge management in law firms was addressed in question 4.6. The four different frameworks for knowledge management already examined in section 3.7 (the learning organisation, knowledge markets, knowledge management process and the knowledge management strategy) are discussed within the context of the law firm.

In section 4.7, the seventh research question on barriers to knowledge management in law firms was addressed. Similar to most organisations, the cultural barriers was the most prevalent challenge to successful implementation of knowledge management in law firms. Other barriers to knowledge management in law firms are technological issues, inability to enforce knowledge management, conflict avoidance, bureaucracy and the size of the firm.

The eighth research question on the factors critical to the success of knowledge management in law firms was examined in section 4.8. The following were established as some of the factors crucial to the success of knowledge management in law firms: encouraging a culture of knowledge sharing (providing rewards and incentives, recognising those who contribute to knowledge, promoting an atmosphere of trust and concern), ensuring that there is a

solid technological platform, the leading role of management, and a proper organisational structure.

The final research question of sub question 3 pertaining to the strategies of knowledge management in law firms was addressed in section 4.9. In order to increase the chances of the successful implementation of knowledge management strategy in the law firms the following are some of the factors that should be considered: clear and articulated business objectives, defining the knowledge management strategy, prioritising and implementing knowledge management in phases, choosing the right staff, defining the scope of knowledge management and considering the information and knowledge needs of lawyers.

9.3.4 Research question for sub-problem 4 (the status and scope of knowledge management in law firms in Botswana)

The following research questions for sub problem four have all been addressed in the empirical findings:

- ‣ What are the different categories of knowledge existing in the law firms in Botswana?
- ‣ What are the tools and techniques used for knowledge management in law firms in Botswana?
- ‣ How do law firms in Botswana approach knowledge management?
- ‣ What factors are critical to the success of knowledge management in law firms in Botswana?
- ‣ What are the perceived benefits of knowledge management to law firms in Botswana?
- ‣ What factors inhibit the success of knowledge management in law firms in Botswana?
- ‣ What is the role of other institutions and agencies in knowledge management in law firms in Botswana?

The first research question to sub problem 4 pertaining to the different categories of knowledge existing in the law firms in Botswana has been addressed (table 6.2, section 6.4 and the discussion in section 7.4). The study classifies knowledge in the law firm in Botswana under three broad categories: tacit knowledge, explicit knowledge and knowledge of the business of law. The most frequently used tacit category of knowledge in law firms in Botswana are skill and expertise of lawyers and staff, procedural knowledge,

lessons learned from past projects, tips on drafting, analytical knowledge and conversation by the hall ways. Examples of explicit knowledge identified in the law firms are standard documents, legislation and case law, knowledge of the law, court decisions, knowledge from judges and expert opinion. The different types of knowledge on the business of law identified in law firms in Botswana are: client information, financial information, and marketing information.

The second research question addressing the tools and techniques for knowledge management in law firms in Botswana was examined in table 6.4, table 6.5 (tools), table 6.6 (techniques), sections 6.6, 6.7, 7.6 and 7.7. The main information communication technology used in law firms in Botswana is telephones, computers, personal networked computers, email and the internet. On the other hand, the major techniques of knowledge management used are: precedents, legal research and development, hiring and training of young lawyers, record management, weekly learning reports, office directory, office news letters, and meeting of lawyers with common interest.

The third research question pertaining to how law firms in Botswana approach knowledge management has been examined in section 6.8, tables 6.7, 6.8, 6.9, and 6.10, as well as the discussion in section 7.8. It was seen that lawyers in Botswana like many lawyers elsewhere, especially in Africa, are still grappling with understanding the meaning and concept of knowledge management.

The fourth research question addressing the factors critical to the success of knowledge management in law firms in Botswana was considered in section 6.8 6, table 6.11 and the discussion in section 7.8.6. It was seen that lawyers were negative or neutral on the different factors critical to the success of knowledge management in the law firms. For example, lawyers were not certain that promotion in the law firm was based on the ability to share knowledge and very few lawyers acknowledged that there is special recognition of staff for the time spent in knowledge creation.

The fifth research question on the perceived benefits of knowledge management in law firms in Botswana was addressed in section 6.9, table 6.12 and the discussion in section 7.9. The overall observation is that although lawyers have not formalised knowledge management, they recognised and appreciated the potential benefits of knowledge management to law firms in Botswana. These benefits include improving knowledge sharing in the firm, improving the sharing and transfer of knowledge with partners and strategic alliances, preventing duplication in research, protecting the firms' loss of knowledge, improving the

retention rate of lawyers, integrating knowledge within the firm and improving lawyers' relationship with their clients.

The sixth research question addressing the factors that inhibit the knowledge management in law firms in Botswana was answered in section 6.10, table 6.13 and the discussion in section 7.10. The findings identified two major obstacles to knowledge management in law firms in Botswana as inadequate technological infrastructure and limited financial resources.

The final research question of sub problem 4 pertaining to the role of other institutions and agencies in knowledge management in law firms in Botswana was addressed in section 6.11, table 6.14 and section 7.11. The different agents and institutions that emerged from the study are legal secretaries, the Law Society, the courts, the law librarians, legal consultants, legal academics at the law faculty, professional assistants, professional book shops and law publishers like Juta and Lexis/Nexis. The legal secretaries were regarded as the most important agents of knowledge management in the law firms, followed by the Law Society, the courts and the legal academics. Many participants did not appreciate the role of the law librarian and professional associations in the creation and sharing of knowledge.

9.3.5 Research question for sub-problem 5 (guidelines for knowledge management implementation in law firms in Botswana)

Chapters 8 and 9 of the thesis addressed the following research questions pertaining to sub problem five of the thesis:

- What are the guidelines for successful knowledge management in law firms in Botswana?
- How can knowledge management be effectively implemented in law firms in Botswana?

The guidelines for knowledge management in law firms in Botswana were established in chapter 8 of the thesis. These guidelines emerged from the literature in chapters 2, 3 and 4 and the analysis and findings of the results of the empirical study in chapters 6 and 7. The recommendations in section 9.4 below provides the way forward in enhancing a successful implementation of the knowledge management in law firms in Botswana.

9.4 Recommendations

Knowledge management is not an event or system focused on technology but a long term

continuing initiative. It is not about publicity or advertising to clients that the firm is doing knowledge management, but rather it is about categorising and organising knowledge as the core competency in the firm. Therefore, the Law Society of Botswana, which is the body that regulates all the lawyers in Botswana, is bound to play a crucial in facilitating the implementation of knowledge management. It should engage the services of a consultant who must sensitise lawyers on the importance of the above findings and guidelines of knowledge management in law firms. The following recommendations are specifically designed to ensure the effective implementation of knowledge management.

1. In order to avoid the risk of cultural shock and ensure that members adjust easily when knowledge management is introduced, efforts should be made at the outset to ensure that the collective goal and purposes of knowledge management is known and understood by all in the law firms. It is also important for the sole proprietor or partnership to fully understand the goal of knowledge management in their firm. The knowledge management goal of each firm depends on the needs of that particular firm. For a start, it is important for law firms to select simple initiatives that are within the reach of the firms' current technology, business processes, funding constraints and cultural readiness.

2. Knowledge management is a "lesson learned" process. Firms should therefore not be discouraged by projects that are slow moving or ultimately fail, but rather should learn from mistakes to make the next project even better.

3. Lawyers in the 3 to 9 lawyer firms should not consider knowledge management as a function of management alone. All lawyers need to go out of the box and be proactive about knowledge management. Sole proprietors and partnership should also consider investing at least 1/10 of their time each week on knowledge management. Lawyers should consider talking to others in the legal fraternity about knowledge management, attend meetings and workshops on knowledge management, invest time and money in creating bulletins boards, sample skill directories, form alliances with international professional associations and get connected to physical or electronic forum that engages in collaborative thinking.

4. Law firms in Botswana are encouraged to invest in information and communication technologies that support their knowledge management goals. It is, however, important to pay particular attention to the people, structure,

processes, leadership and techniques before selecting a technological solution.

5. The 3 to 9 lawyer firms should provide opportunities for professional development and encourage life-long continuing education and training of staff in the firms, while lawyers in the 1 and 2 lawyer firms should consider enrolling in part-time or online correspondence programmes to further their studies, particularly in those areas that would improve on their practicing skills or expand their areas of specialisation. These firms may also subscribe to online professional development programmes.

6. The 3 to 9 lawyer firms should consider one of the following ways of rewarding lawyers for knowledge sharing. First, the staff performance evaluation should not only include lawyer's ability to produce billable work but also rewards any lawyer who devote, 1/10 of his/her time in knowledge management initiatives. Second, they may consider assigning billing codes to lawyers for productive non-billable hours, such as writing articles, or submitting important pieces of know-how to the database. Third, special recognition of ownership from peers and from superiors when one contributes to a knowledge database or actively participates in knowledge sharing is important. Fourth, a new way of billing clients based on services provided rather than time taken, will promote knowledge management.

7. Knowledge management in the law firms should not only seek to manage the internal efficiencies of the law firm but should also extend to managing knowledge about clients and their industries, the skills and expertise of staff and knowledge about third parties. All lawyers should be aware of their clients' needs and challenges and keep pace with these challenges by creating an innovative working relationship.

8. Considering that lawyers would hardly find time for anything other than the pursuit of profit, the successes of the knowledge managements systems will depend on a friendly user interface that will require little time off lawyers for extensive training or for reading manuals.

9.5 Limitations of the study

Although the data for the study was very rich and measures were taken to potentially address any limitations to the study and increase the generalisability of the research, several

gaps were identified from the concepts discussed that still exposes a number of aspects for further examination. The following limitations of the study should therefore be kept in mind.

Knowledge management is an emerging concept that is highly valued in research and practice. It is however a relatively diffused concept and a lot still needs to be done in the form of extending, refining, and empirically validating its models. This study addresses only a few of the numerous aspects of the concept in the context of law firms thus leaving gaps for many other issues to be explored in the future. For example, the knowledge processes in the law firms were not discussed in depth and were limited only to Nonaka and Takeuchi's (1995) SECI model.

Some of the theories of knowledge management that lay the conceptual framework of this study are not fairly recent although they are very relevant in understanding knowledge management within the context of the law firms. For example, Leavitt (1965), socio technical model dates back to 1965 is still important for understanding knowledge management in the law firms and has been revised and modified over the years (Edward & Mahling, 1997; Galbraith, 1999; Pan & Scarbrough 1999). However, there is a need to also examine the applicability of other fairly recent theories of knowledge management within the context of the law firms.

The research focuses on the legal environment but law firms are only one of the four groups that constitute the legal profession in Botswana. The other three groups are those which fall under the auspices of the Judicial Service Commission (for example, judges, magistrates and court registrars), legal practitioners in the Attorney General's Chambers and finally the legal academics who teach at the University. Although it is believed that these findings could apply to these other branches, some insights specific to these branches of the legal profession may be lacking.

Most formal knowledge management initiatives have focused mainly on large law firms. Most law firms in Botswana are small firms who are not excluded from the knowledge management in the constantly changing legal environment. There was however, hardly any literature on knowledge management in small law firms. The study therefore draws on knowledge management in other small and medium size enterprises (Lim & Klobas, 2000; Matlay, 2000; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004; Egbu et al., 2005; Chung et al., 2006) in order to appreciate the applicability of knowledge management in small law firms. Although the concepts of knowledge management can be transferred

from one small firm to another, the findings demonstrate that the nature of knowledge management and the needs for knowledge management are likely to differ substantially among different types of small and medium size firms. It will have been desirable it if there were studies on knowledge management in small law firms in order to appreciate the distinct features and characteristics of these firms.

It would have been desirable to discuss the findings of this study in the light of several other legal international empirical studies of knowledge management. Unfortunately most of the writings on knowledge management in law firms, have very little empirical foundation. The notable empirical studies on knowledge management in law firms that have been alluded to (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; du Plessis, 2004; du Plessis & du Toit 2005; Gottschalk et al., 2005; Disterer, 2005; Forstenlechner, 2006) are studies on predominantly large law firms that approach knowledge management from different angles.

The research approach, the instruments for data collection and methods of data analysis were found very suitable for the purposes of this study. It is however likely that other insight could still be gained if other research approaches and methods of data collection and analysis were adopted.

9.6 Suggestions for further research

The preceding background provides the setting within which most of the following suggestions are made for future research.

▸ An investigation into the factors that inhibit knowledge management in law firms can be a topic of research on its own. Future studies in this area should explore the cultural, managerial and structural barriers to knowledge management.

▸ Future studies should focus on more recent theories of knowledge management. There is however a need for a detailed study on the tacit and explicit knowledge creation and transfer in the law firm that is not only limited to the SECI, but extended to the applicability of Nonaka et al. (2002) unified model of SECI "knowledge asset" and "ba" in the law firms.

▸ A study may also be carried out on the knowledge protection processes in the law firms. An understanding of the knowledge protection processes in the law firm is particularly important because lawyers are usually very obsessed about the security of information.

▸ In determining the guidelines of knowledge management in law firms, this study focused mainly on the pre-implementation phase of knowledge management. Therefore, there is a need for a study to be carried out on the adoption and implementation of knowledge management in law firms.

▸ Copies of the most important findings and recommendations in this study will be given to law firms. Therefore it is crucial for a follow up study to be carried out in about two year's time to assess if there has been a progression in law firms in terms of the implementation of the guidelines of knowledge management established in this study.

▸ Future research should attempt to improve on the data collection instruments and data analysis methods used in this research. A data analysis methods that does not only report mean scores from the questionnaire and the relationship amongst variables but may extend to analytical statistics such as correlation and multiple regression in order to determine the degree variation of interaction amongst these variables may be crucial. Also, A chi-square test can be used to "assess the statistical significance of relationships" (Robson, 1993: 334) and provide additional insight to the data.

▸ Bearing in mind that each law firm has a unique set of distinct characteristics and operating procedures that can play an important role in the creation and implementation of knowledge management, case studies and focus group discussions may be carried out in selected 1 to 2 lawyer firms and 3 to 9 lawyer firms in order to further appreciate the perculiarities and unique insight of knowledge management in small law firms.

▸ Another study may be carried out on knowledge management in the legal profession in Botswana in order to obtain other insights on knowledge management that are currently lacking in this study from the other three groups namely the judiciary (judges, magistrates and court registrars), legal practitioners in the Attorney General's Chambers, and the legal academics who teach at the University.

▸ Finally, it would also be good if further research is carried out to confirm or validate the results of this study.

9.7 Concluding remarks

Knowledge intensive organisations such as law firms have always intuitively appreciated the value of knowledge even though their knowledge management activities have been

accomplished traditionally without substantial change in how these firms conduct their business. However, with the rise of the knowledge-based economy at the close of the 20th century resulting from an increasing production of knowledge and the recognition of the importance of knowledge as the major form of sustainable competitive advantage, coupled with the pressures faced by the legal industry in recent years, law firms in Botswana are challenged to be more adaptive, innovative, effective and competitive in the provision of outstanding, cost efficient and effective services to the clients. These law firms can no longer afford to rely on the traditional methods of managing knowledge because they need the "best minds" and the best knowledge in their area of practice.

The study shows that knowledge management is already a reality in the developed countries and that whilst most law firms in Botswana have unconsciously practised aspects of knowledge management, it is now time to rethink this approach. The need for lawyers to have access to current and accurate knowledge in a profession where there are constant changes in legislation, legal precedents and opinion can not be gainsaid. Knowledge management will therefore offer law firms a competitive advantage that is not easily replaced, imitated nor attained from billing clients. Based on the assessment of the present state of knowledge management and the possible needs for the future, the study therefore proposed guidelines for the successful introduction and implementation of a formal knowledge management in Botswana. It is hoped that these are flexible and adaptable guidelines that will not only work in Botswana but should also work in many other African countries or even countries further afield who share similar challenges. Although knowledge management is not a quick fix or ready-made panacea to all the challenges posed by the rapidly emerging knowledge society, it will certainly help to prepare law firms, especially those in the Third World to be alive to the fact that systematically harnessing legal knowledge is no longer a luxury but an absolute necessity in a rapidly globalising world where competition has become more intense.

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LIST OF APPENDICES

APPENDIX 1: Glossary of terms used in the study

Best Practice: Those practices that have produced outstanding results in one situation that could be adapted for other situations.

Brief bank: Collection of summaries of the facts and points of law of a legal case, drawn up by an attorney

Data: It is a set of discrete raw numbers and facts and unstructured records of transaction about events in an organisation

Explicit knowledge: One of the two types of knowledge which was most notable espoused by Polanyi (1966). It is knowledge that is formal easily codified and conveyed to others. It is available in the form of books, documents, white papers and policy manuals

Extranet: It is part of the firms' intranet accessible also to outsiders such as clients and opposing counsel at every stage of a legal matter. It makes it possible for the firm to share and exchange information with clients thus reducing the cost of travel office supplies and telephone

Information Communication Technology: It is the building blocks of the networked world. Information communication technologies include telecommunication technologies such as telephone, cable, satellite, and radio, as well as digital technologies such as computers, information networks and software Information communication technologies is used in this study to mean the use of computing and electronic machines and programmes (hardware and software) and the use of knowledge management systems for processing, storage, transfer, retrieval, analysis and presentation of information

Information: It is a message, usually in the form of a document or an audible or visible communication meant to change the way the receiver perceives something, which has an impact on his judgment and behaviour. It is data that makes a difference

Intranet: An intranet is an internal internet that links all computer systems within the firm. It is a private network accessible only to members of a firm.

Knowledge audit: It is assessment of an organisations current achievement in knowledge management

Knowledge concierge: An individual who keeps track of the lawyer working on a particular issue

Knowledge management initiatives: An integration of technologies and techniques

Knowledge management systems: These are tools in the organisation that manages and facilitates the leveraging of knowledge

Knowledge management: This is the name given to the set of systematic and disciplined actions that an organisation can take to obtain the greatest value from the knowledge available to it. It involves leveraging the creation, sharing, organisation, dissemination and reuse of knowledge contained within the documents and the human mind. It can also be refereed to as conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organisational performance

Knowledge map: This process that provides an organisation with the specific knowledge it requires supporting a business process.

Knowledge repository: It is a central location (database system or network location) were legal work product is aggregated, organised and maintained, It may include indexing coding and other meta data on legal products

Knowledge: This is the integration of ideas, experience, intuition, skill, and lessons learned that has the potential to create value for a business, its employees, its products and services, its customers and ultimately its shareholders by informing decisions and

Law firm: A law firm is a partnership or any other business that is not a company formed by one or more lawyers to engage in the practice of law and the effective and efficient creation and delivery of legal services to clients

Law librarians: These are information professionals with good understanding of legal knowledge who are professionally trained to assist legal researchers in various legal settings such as law school, libraries, law firms, companies and courts

Tacit Knowledge: One of the two types of knowledge espoused by Polanyi (1966). It is base on experiences, hunches, instincts, and personal insights and it is distinct form formal knowledge

Work product: This is the content of work that has already been done by the lawyers These include trial and appellate briefs, legal memoranda, pleadings, depositions, form templates, transactional documents such as contract, spreadsheet, purchase agreements ,letters, emails attachments and any written compilation, commutation of the product of the lawyers work

Yellow Pages: This is a central inventory of employee's skills competencies and experience and contact information .They are also refereed to as expertise locators

APPENDIX 2: Research questionnaire

Questionnaire to determine the strategy of knowledge management in the law firms in Botswana

Dear sir / Madam,

I am conducting a research study on the strategy for knowledge management in law firms in Botswana in partial fulfilment of my doctoral degree at the University of Pretoria, South Africa. Attached is a questionnaire to gather data regarding your response. I am kindly requesting you to answer the questionnaire that has been composed for this study. The outcome of this research would be beneficial to law firms in several ways:

- It would provide valuable insight into the knowledge management pattern in law firms in Botswana;
- Determine how knowledge management can be effectively implemented in law firms in Botswana;
- Establish the strategies for successful knowledge management in law firms in Botswana and;
- Make suggestions and recommendations on how to enhance the strategy for knowledge management in law firms in Botswana.

1 will be very grateful if you can respond within the next two weeks. For those with mailed questionnaires, please kindly return the completed questionnaire in the self- addressed envelope. The information that you will supply will be used strictly for the purpose of the study and for nothing else. Your confidentiality will be respected, hence you do not have to write your name or give any information that will reveal your identity. Should you wish to read a summary of the final report, copies will be made available to you.

Thank you for your time.

NOTA BENE: The following are some of the abbreviations and meanings of the words used in the questionnaire.

Knowledge management - This is the name given to the set of systematic and disciplined actions that an organisation can take to obtain the greatest value from the knowledge available to it. It involves leveraging the creation, sharing, organisation, dissemination and reuse of knowledge contained within the documents and the human mind. It can also be refereed to as conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organisational performance

I**nformation communication technology (*ICTs*)** - *Computing and electronic machines and programmes (hardware and software) for processing, storage, transfer, retrieval, analysis and presentation of information. It includes such facilities as computers, e-mail /internet, extranet, intranet, and Local area network*

Analytical knowledge – *This is knowledge that results from analysing the substantive principles of the law*

Intranet - *Private network accessible only to members of the firm*

Extranet - *Part of a firms' intranet accessible to outsiders*

Yellow pages - *An internal expert skill directory with the CV and phone numbers of the experts*

Knowledge concierge - *An individual who keeps track of the lawyer working on a particular issue*

Part 1. Personal profile

1. **What is your level of education? (Please tick or circle the most appropriate box or answer)**

    a) Bachelors in law   b) Masters in law   c) Doctorate in law

    d.) Other professional qualifications, please specify

2. How long have you practised as a lawyer?

Part 2. Organisational characteristics of the firm

3. **How many lawyers are there in your firm?**
4. **What do you consider as the most strategic resource in your firm? (Please tick or circle the most appropriate box or answer)**

    a) Land   b) Labor   c) Capital   d) Knowledge   e) Others, please

specify

5. **Please tick Yes or No in the box that best suits your response**

	2 Yes	1 No
Does your firm have a formal knowledge management programme in place	Yes	No
If no, do you plan to introduce it?	Yes	No
If your answer is in the affirmative, does your firm have a knowledge officer or any person in similar position specifically dedicated to gathering, distributing or leveraging the firm's knowledge?	Yes	No
Does your firm have a written knowledge management policy?	Yes	No
Does the knowledge management programme in your firm have a dedicated budget?	Yes	No

6. **If your firm has knowledge management please indicate who is responsible for knowledge management in your firm?**

    a) The executive management team

    b) Knowledge management unit

    c) Information technology department

    d) Law librarian

    e) Knowledge officer

    f) Human resource management

    g) **Others please specify**

Part 3. Knowledge management practices

7. On the basis of the experience at working with your law firm, indicate in the appropriate column <u>how frequently</u> each of the following types of knowledge is used in your firm

	1 Very Frequently	2 Frequently	3 Not at all	4 Not Frequently
Skill and expertise of lawyers and staff				
Lessons learned from past projects				
Analytical knowledge				
Tips on drafting				
Procedural knowledge				
Conversation by the hallways				
Knowledge of the law				
Expert opinion				
Legal text				
Legislation and case law				
Standard documents				
Knowledge from judges				
Court decisions				
Financial information				
Marketing information				
Client information				

Please specify other types of knowledge that exist in your firm

_____

_____

_____

_____

_____

_____

_____

_____

8. Based on a five point pre- coded scale described as: strongly agree = 1, agree = 2, neutral = 3, disagree = 4, and strongly disagree = 5 Please tick the category of the column that best describes your degree of agreement or disagreement The following factors would motivate my firm to implement or increase its knowledge management practices:

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Advances in information communication technologies					
The shift from paper-based to electronic sources of information					
The internet					
Electronic publishing					
Globalisation of legal services					
Competition amongst firms					
Pressure from clients					
Information overload					
Loss of key personnel and their knowledge					
The use of knowledge management tools and practices by other competitors					
An increase in the mobility of lawyers					
The need to identify and protect strategic knowledge in the firm					
The desire to promote professional satisfaction					
The desire to support and encourage a learning culture					
The desire to promote team work					
The desire to meet the information and knowledge needs of the lawyer					
Pressure from other professional service firms					

What are some other factors that would motivate your firm to implement or increase its knowledge management practices?

_____

_____

_____

9. Please indicate "Yes" or "No" by the side boxes provided as to whether the different information communication technologies used in your firm

	2 YES	1NO		2YES	1 NO
1. Telephones					
2. Computers			15. Enterprise information portals (EIP		
3. Personal networked computers			16. Calendaring, group scheduling and task list software		
4. Intranet			17. Artificial intelligence systems		
5. Extranet			18. Expert systems		
6. Internet			19. Content management systems		
7. Emails			20. Publishing systems		
8. Video and text-based conferencing technology					
9. Lotus Notes			21. Data base tools		
10. Electronic Bulletin boards			22. Record management systems		
11. Legal information systems			23. Indexing tools		
12. Document management systems			24. World Wide Web		
13. Practice management systems			25. Case map		
14. Case management systems			26. Automated billing document assembly system		

Please specify other types of information communication technologies available in your firm

_____

_____

_____

_____

10. The following are some of the ways in which information communication technologies are used for knowledge management in my firm (please tick the category of the column that best describes your degree of agreement or disagreement)

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Lawyers subscribe to online forums, Intranet news groups or email distribution lists					
My firm uses communicative tools and technologies such as Lotus Notes to support the knowledge transfer process and to encourage the sharing of ideas and projects					
My firm uses the Internet/Intranet, Extranet and World Wide Web, for gathering knowledge so that it can be used through out the firm					
My firm uses legal information systems such as Lexis/ Nexis, Butterworth's, Justastat, Westlaw, and Thomas and Dialog to facilitate legal research					
My firm uses "Yellow Pages" containing CVs, competency profiles, and research interest of experts					
My firm has knowledge maps that act as electronic intermediaries connecting knowledge seekers to knowledgeable people.					
My firm uses document and content management systems in managing the content of knowledge					
My firm uses indexing tools to organise and cross-reference material by subject and practice area					
My firm has an expert system that captures the knowledge of experts					
My firm uses artificial intelligence to support advanced information searching and retrieval					

Please indicate other ways by which technologies are used for knowledge management in your firm

_____

_____

11. Please indicate yes or no as to whether the different techniques of knowledge management that are applicable in your firm by the side boxes provided

	2Yes	1 No		2 Yes	1 No
1. Precedents			13. Office directory and office news letters		
2. Work product repositories			14. Client information and matter		
3. Professional development programmes			15. Know-how systems and info-banks		
4. Brief banks			16. Yellow pages		
5. Legal research			17. Meeting of lawyers with a common interest		
6. Hiring and training young lawyers			18. Litigation strategy		
7. Best practices			19. Client relation management		
8. Record management			20. Conflict checking,		
9. An excellent staffed knowl-edge centre			21. Knowledge concierge.		
10. Presentations			22. Regular in-house seminars		
11. Internal publications			23. The discussion of major projects with other lawyers after conclusion		
12. Know-how index			24. Weekly learning report		
			25. Skills and expertise locator		

Please specify other techniques of knowledge management practised in your firm

_____

_____

_____

_____

_____

Questions 12-19 are based on a five point pre- coded scale described as: strongly agree = 1, agree = 2, neutral = 3, disagree = 4, and strongly disagree = 5

Please tick the category of the column that best describes your degree of agreement or disagreement with the different knowledge management practices

12. **Knowledge is created in my firm in the following ways**

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Capturing and using knowledge obtained from clients, competitors and suppliers					
Capturing knowledge from research institutions and Universities					
Encouraging lawyers to participate in project teams with other experts					
Accessing knowledge from the internet					
Attending conferences					
Attending workshops					
Writing internal reports					
Accessing legal databases					

Please indicate other ways by which you create knowledge in your firm

_____
_____
_____
_____
_____
_____

13. The knowledge transfer process in my firm occurs in the following ways

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Through team work					
Through discussions of major projects after conclusion (debriefing)					
Informal social net working of lawyers to exchange views					
Organising formal meetings					
The intranet					
Alliances with professional associations					

Please indicate other ways of knowledge transfer in your firm

_____

_____

_____

14. With regard to knowledge sharing in my firm, I feel that

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
We have a knowledge sharing culture in the firm					
My firm conducts events and provides time in which ideas and experiences may be shared					
Colleagues from different areas or offices assist one another on a need basis					
I have time to chat informally with other colleagues					
The firm's lay out and organisational design is conducive for discussing with colleagues					
My firm uses intranet sites to share knowledge					
My firm provides opportunities for regular meetings					
My firm provides opportunities for formal an informal social networking of lawyers					

Please indicate other ways of knowledge sharing in your firm

_____

_____

_____

15. The following are some of the tutoring and mentoring opportunities in my firm

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Encouraging employees to continue their education					
Encouraging partners to train associates					
Providing professional development programmes					
Hiring and training of young lawyers					

Please indicate other ways of tutoring and mentoring in your firm

_____

_____

_____

_____

16. The following are some of the factors that promote knowledge management in my firm

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
There is monetary and non-monetary rewards for sharing knowledge					
Promotions are based on the ability to share knowledge					
There is special recognition of staff for the time spent in knowledge creation sharing and distribution					
Mutual respect, trust, care and concern amongst individuals					

Please indicate other factors that may influence knowledge management in your firm

_____

17. I think that the effective implementation of knowledge management would

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Improve knowledge sharing					
Improve lawyers efficiency and productivity					
Improve lawyers' relationship viz-a-viz clients and customers					
Prevent duplication in research					
Increase flexibility amongst lawyers					
Protect the firm's loss of knowledge					
Result in competitive advantage					
Integrate knowledge within the firm					
Improve retention rate of lawyers in the firm					
Improve the sharing and transfer of knowledge with partners and strategic alliances					
Enhance economic profitability					

Please indicate other perceived benefits of knowledge management in your firm

_____
_____
_____
_____
_____

18. The factors that inhibit knowledge management in my firm are

_____
_____
_____

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Lawyers' view of knowledge as a source of power					
Internal competition amongst lawyers					
The perception that knowledge management is an additional workload					
The feeling that it puts pressure on billable hours					
The feeling that the firm size is too small					
Limited financial resources					
Inadequate technological infrastructure					
The inability of the firm's leadership to enforce knowledge management					

Other reasons, please indicate _____

_____

_____

_____

Part Four: The role of other institutions and agents in the creation, sharing and capturing of knowledge in law firms.

19. The following agents or institutions are responsible for the creation, sharing and transfer of knowledge in my firm

	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree
Legal secretaries					
Law librarians					
The Courts					
Legal academics at the Law Faculty					
Law Society					
Professional Associations					

Which other agents and institutions assist in the creation, sharing and transfer of knowledge in your firm?

_____

_____

20. In what ways does each of the above agents assist in the creation, transfer and sharing of Knowledge in your firm?

_____

_____

_____

Once more, I really appreciate your effort and time

APPENDIX 3: Interview guide to lawyers on strategies of knowledge management in law firms

Purpose of the Interview

Dear sir / Madam,

The objective of this interview is to further investigate the preliminary findings of my thesis on the strategy for knowledge management in law firms in Botswana As already indicated in the research questionnaire, the outcome of this research would be beneficial to law firms in several ways.

Consent

Please not that your confidentiality is guaranteed. Your participation is entirely voluntary. You may answer or choose not to answer a particular question as you wish and you may end the session at any point. Your participation and information provided will be strictly confidential and your identity will be separated form your answers so that it will not be attributed to you.

Please indicate whether or not you wish to continue to participate Yes ☐ No ☐

Summary of results of semi structured interview and the "other" category from lawyers in law firms in Botswana

	Questions	Findings
Section I: **Personal profile and organisational characteristic of the firm**	What is your level of education? What other qualifications do you have? What position do you have in the firm? What is the most strategic resource in your firm?	**Level of education** Bachelors of law , Masters in Law, **other professional qualifications** conveyancer, post gradate diploma in International law, Masters in sports executive management **Positions in the firm** professional assistants, sole proprietors, partners **Other People in the law firm** partners, professional assistants, legal secretaries, clerical support staff, secretaries, information system staff, marketing staff, and accountants **Resources** Knowledge ,time, clients, and client base
Section 2: **The changing legal environment**	May you indicate some of the changes that you have been experiencing in the legal environment from when you started practising until present? What are some the factors that have brought about these changes? What are the consequences of these changes to your law firm?	**Changes** Constant splitting up from firms to start off as sole proprietors or to form a partnership, the desire to attract new clientele, desire to network with other lawyers ,desire to standardise knowledge, competition **Factors of change** internet, computers, observation, networking with other lawyer, competition for clients **Consequences** bearing on profits, lawyers are migrating from firm to firm, competition, increase use if information technology
Section 3: Information communication technologies (ICT) and knowledge management in law firms in Botswana	What are some of the information communication technologies used in your firm How is ICT use for knowledge management in your firm What are the types of knowledge in your firm What do you understand by knowledge management? Have your firm adopted knowledge management as one of its initiatives, if so why?	**ICT** Telephone personal computers, internet Intranet email , law plan and quick books for accounts document management systems, record management systems telephone management systems, legal information systems **ICT usage for Knowledge management** firm accounts, file management, legal research **Knowledge in the firm** lawyers knowledge, print text, manuals, statutes, law report, case briefs, the general knowledge of the firm and its workers, the general attitude of the workers and clients and internet sourced knowledge **Meaning of knowledge management** File management., information management, document management, how lawyers store information they receive and how they protect information, knowledge management is about trade secrets, it is how law firms use information for strategic management, it is clients affair

	Questions	**Findings**
(continued from previous page) **Section 3:** **Information communication technologies (ICT) and knowledge management in law firms in Botswana**	Who is responsible for knowledge management What are some of the tools and techniques of knowledge management in your firm? What are some of the benefit of knowledge management that you have observed in your firm	**Knowledge management adoption** not quite sure, no, manages information **Knowledge management responsibility** not sure, the managing partner is responsible for the overall decisions of the firm so he may have to decide on knowledge management **Tools and techniques** precedents, personal information banked by each attorney research from University of Botswana library for electronic resources, access of Law Reports on CD, online Law Report and Judgments such as the Canadian Supreme Court Judgment and the Australian Court Judgments **Benefits** General and overall efficiency, improvement of quality of output and improvement in the quality of the clients, networking with other lawyers, net working with other lawyers within and without the country,, improve overall efficiency
Section 4: **How knowledge management manifested in law firms in Botswana**	How is knowledge created in your firm How is knowledge transferred How is knowledge shared in your firm Do you encourage tutoring and mentoring in your firm? Are there rewards and other incentives for sharing knowledge in your firm	**Knowledge creation** informal queries directed at external attorneys, reasoned judgments by the judges, subscription to law journals and judgments from the High court brainstorming, attending seminars and workshops and consultation with legal academics or legal consultants **Knowledge transfer** Availing materials for other attorneys by fax, instructions given verbally by partners to staff and to junior attorney with clear explanation as to why it is vital to carry out such instructions, informal consultation and discussions with other lawyers, discussion with international firms affiliated with local firms and Law Society **Knowledge sharing** there is lot of individualism in law firms; practitioners are willing to help fellow attorneys who are friends only in the basic principles of the law, face to face discussions, informal chatting at the boardroom, meetings every Tuesdays in the boardroom for debriefing **Tutoring and mentoring** some firms boast and pride in mentoring, pupils, other firms are not interested in mentoring, some expect you to be a lawyer on the very first day in the firm, law firms do not provide opportunities for further education, some firms feel a law degree is enough **Rewards** No reward for sharing knowledge methods of reward include income from time billing, contract basis, department base, revenue generated , meeting targets

	Questions	**Findings**
Section 5: Investigating the enablers and barriers to knowledge management in the law firms in Botswana	What are some of the factors that are instrumental to knowledge management in your firm? What do you think are the major barriers for sharing knowledge in your firm?	**Knowledge management motivators** technology, management influence , size of the firm, size of the firm, observation from other firms **Barriers** lack of initiative or perception of the value of knowledge management to the lawyer, the leadership do not take any initiatives on knowledge management nor do they seem to appreciate the benefit of knowledge management, clients do not appreciate knowledge management, work pressure and the pressure of meeting targets are major barriers to knowledge management.
Section 6: The role of other agents and institutions in facilitating knowledge management initiatives in law firms in Botswana	What are the different agents and institutions that may assist in facilitating knowledge management your firm How does these agent and institutions assist you in knowledge management	**Agents and institutions** professional assistants, legal consultants, professional bookshops, Information technology consultants, Land tribunal and other quasi judicial bodies like labour arbitrator, International firms affiliated with local firms and Publishers **Role** Secretaries manage the files and provide first contact with clients; Law Society organises meetings, regulate activities, link law firms with professional bodies; Courts provide latest judgments on the basis of on subscription; Legal academics conduct legal research and write books, articles and provide legal opinion, members in professional associations exchange and share ideas

APPENDIX 4: Interview guide to stake holders of knowledge management in law firms

Purpose of the Interview

Dear sir / Madam,

I am conducting a research study on the strategy for knowledge management in law firms in Botswana in partial fulfilment of my doctoral degree at the University of Pretoria, South Africa. A separate questionnaire has already been sent to all lawyers at the law firm I am seeking your assistance in examining your role and value in knowledge management in law firms. The outcome of this research would be beneficial to law firms in several ways:

▸ It would provide valuable insight into the knowledge management pattern in law firms in Botswana;

▸ Determine how knowledge management can be effectively implemented in law firms in Botswana;

▸ Establish the strategies for successful knowledge management in law firms in Botswana and;

▸ Make suggestions and recommendations on how to enhance the strategy for knowledge management in law firms in Botswana.

▸ Consent

Please not that your confidentiality is guaranteed. Your participation is entirely voluntary. You may answer or choose not to answer a particular question as you wish and you may end the session at any point. Your participation and information provided will be strictly confidential and your identity will be separated form your answers so that it will not be attributed to you

Please indicate whether or not you wish to continue to participate Yes/No

▸ What do you understand by knowledge management?

▸ What role do you and your organisation play in the creation, transfer and sharing of knowledge in law firms

▸ How do you or your organisation contribute to knowledge management in law firms?

I appreciate your willingness to contribute to this project and to set aside time for the interview
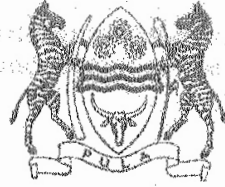
Appendix 5: Research Permit grant

TELEGRAMS: PULA
TELEPHONE: 3950800
TELEX: 2655 BD

REPUBLIC OF BOTSWANA

OFFICE OF THE PRESIDENT
PRIVATE BAG 001
GABORONE

Mrs. Madeleine Fombad
C/O Department of Law
University of Botswana
Private Bag UB 00705
Gaborone

OP 5/59/8 II (57)

05 December 200'

Dear Madam,

GRANT OF A RESEARCH PERMIT- "STRATEGIES FOR KNOWLEDGE MANAGEMENT IN LAW FIRMS IN BOTSWANA"

Your application for a research permit on the aforementioned topic refers.

2.   You are herewith granted permit to conduct a research entitled **"STRATEGIES FOR KNOWLEDGE MANAGEMENT IN LAW FIRMS IN BOTSWANA."**

3.   The permit is valid for a period not exceeding five (5) months effective 06 December 2007.

4.   The permit is granted subject to the following conditions:

Copies of any report/papers written as a result of the study are directly deposited with the Office of the President, Attorney General's Chambers, Botswana Police Service and the University of Botswana.

    i.   The permit does not give authority to enter any premises, private establishment or protected area. Permission for such entry should be negotiated with those concerned.

    ii.   You conduct the study according to the particulars furnished in the approved application taking into account the above conditions.

iii. Failure to comply with any of the above-stipulated conditions will res
in the immediate cancellation of the permit.

Yours faithfully,

Nkosiyabo .F. Moyo
For/PERMANENT SECRETARY TO THE PRESIDENT

cc: Attorney General
Commissioner, Botswana Police Service