“Knowledge is that which unfolds your possibilities
and capacities that save you from every
imperfection and helps discover a larger
existence.”

Swami Chinmayananda
Verse 3, Bhagavad-Geeta Chapter 13
(The Field of the Knower)
A FUTURE FOR HUMAN RESOURCES

A Specialised Role in Knowledge Management

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This thesis is submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy in the School of Business, Swinburne University of Technology

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Declaration

This thesis contains no material, which has been accepted for the award to the candidate of any other degree or diploma, in any university or other institution.

To the best of my knowledge the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

________________________________________

MAKARAND TARE
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# TABLE OF CONTENTS

**LIST OF FIGURES** vii  
**LIST OF TABLES** viii  
**ABSTRACT** x  
**CHAPTER ONE: A FUTURE FOR HUMAN RESOURCES** 1  
**CHAPTER TWO: THE CONCEPT OF KNOWLEDGE MANAGEMENT** 15  
Knowledge Management and Human Capital Theory  
What is Knowledge and Knowledge Management?  
Aims and Objectives of Knowledge Management  
A Selection of Knowledge Management Models  
Knowledge Management and a Human Resource Perspective  
Some Comments Made  
**CHAPTER THREE: LEARNING AND THE LEARNING ORGANISATION** 57  
Some Definitions  
. Learning  
. Organisational Learning  
. The Learning Organisation  
**CHAPTER FOUR: AN EMPIRICAL STUDY- A KNOWLEDGE MANAGEMENT STUDY OF COMPANIES IN THE AUSTRALIAN STATES OF VICTORIA AND NEW SOUTH WALES** 81  
Characteristics of the Sample  
Hypotheses  
Results  
. Knowledge Management Importance and Implementation Compared  
. Human Resource Management and its Relationship to Knowledge Management  
. Knowledge Management Implementation and Gender  
. Knowledge Management Implementation and Educational Qualification  
Discussion and Summary
| CHAPTER FIVE: | A SPECIALISED ROLE IN KNOWLEDGE MANAGEMENT – A FUTURE FOR HUMAN RESOURCES. | 133 |
| Challenges Revisited | Knowledge Management Revisited | Learning Revisited | The Data Revisited | Recapitulation |
| APPENDIX A: | Letter of Invitation to Participate | 154 |
| APPENDIX B: | Reminder | 155 |
| APPENDIX C: | KM Survey Questionnaire | 156 |
| PUBLICATION | 168 |
| REFERENCES | 169 |
List of Figures

FIGURE 2.1 The SECI Model 31
FIGURE 2.2 Pillars and Functions of Knowledge Management 33
FIGURE 2.3 A Strategic Model for Conceptualising and Leveraging Knowledge 36
FIGURE 2.4 A Model of Knowledge Transformation 37
FIGURE 2.5 Types, Forms, and Levels of Knowledge 38
FIGURE 2.6 A Model of Best Practice Transfer 39
FIGURE 2.7 A Five Forces Model 40
FIGURE 2.8 An Information Technology Model 41
FIGURE 2.9 The Knowing Organisation 42
FIGURE 2.10 Integration of KM Practices in the HR Function 50
List of Tables

TABLE 4.1  Size and Annual Turnover of the Respondent Companies 87

TABLE 4.2  Characteristics of the Responding Officer 88

TABLE 4.3  Functional Areas where Knowledge Management is being Applied 89

TABLE 4.4  Knowledge Management Policy 91

TABLE 4.5  Knowledge Management Strategy 92

TABLE 4.6  Importance Attached to a General Inclination Towards Knowledge Management 99

TABLE 4.7  Importance Attached to Two Aspects of KM Strategy 99

TABLE 4.8  Importance Attached to various possible KM Initiatives 101

TABLE 4.9  Importance Attached to the place of Information Technology 102

TABLE 4.10  Importance Attached to various possible Benefits that may be derived from KM 103

TABLE 4.11  Importance Attached to various Cultural Variables 104

TABLE 4.12  Importance Attached to KM Training 105

TABLE 4.13  Degree of Implementation of a Number of KM Strategies 106
<table>
<thead>
<tr>
<th>Table Number</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 4.14</td>
<td>Degree of Implementation of various KM Initiatives</td>
<td>108</td>
</tr>
<tr>
<td>TABLE 4.15</td>
<td>Degree of Implementation of a Number of KM Processes</td>
<td>109</td>
</tr>
<tr>
<td>TABLE 4.16</td>
<td>Degree of Implementation of Documentation, Maintenance, and Protection Systems</td>
<td>110</td>
</tr>
<tr>
<td>TABLE 4.17</td>
<td>Degree of Implementation of a Number of Incentives</td>
<td>111</td>
</tr>
<tr>
<td>TABLE 4.18</td>
<td>Degree of Implementation of Measurement and Review Systems</td>
<td>112</td>
</tr>
<tr>
<td>TABLE 4.19</td>
<td>Degree of Implementation of Variables Relating to Culture</td>
<td>113</td>
</tr>
<tr>
<td>TABLE 4.20</td>
<td>Degree of HR Initiatives in KM</td>
<td>116</td>
</tr>
<tr>
<td>TABLE 4.21</td>
<td>Strength of the Relationship between Giving Responsibility, and Providing Compensation, for Developing Knowledge</td>
<td>118</td>
</tr>
<tr>
<td>TABLE 4.22</td>
<td>Strength of the Relationship between Supportive Senior Staff and Encouraging Employees to do Worthwhile Things</td>
<td>119</td>
</tr>
<tr>
<td>TABLE 4.23 (a)</td>
<td>Degree of Implementation by Gender (Group Statistics)</td>
<td>121</td>
</tr>
<tr>
<td>TABLE 4.23 (b)</td>
<td>Degree of Implementation by Gender (Independent Samples Test)</td>
<td>121</td>
</tr>
</tbody>
</table>
ABSTRACT

This thesis is broadly concerned with the future of the Human Resources function within organisations. The nature of these concerns is two-fold: first, how can Human Resources deal effectively with the challenges of organisational life today; second, how can Human Resources convince senior management that it is both relevant, and necessary, to the economic success of the enterprise, and so assure its future as an internal organisational function. This thesis posits that not only does an involvement in the knowledge management process hold considerable benefits for an organisation through a direct and positive influence on the ‘bottom-line’, but that such an involvement takes on a specialised set of aims and objectives within the human resource perspective that should not be ignored.

The argument is that Human Resources, with its own knowledge-awareness and overview of the structures, manpower, performance and reward systems, and training and development programs, is uniquely placed to be instrumental in creating the open, unselfish culture required to make a success of Knowledge Management, and secure its own future as a trusted and valued strategic partner, fully contributing to the enhancement of organisational performance, and ultimately, the organisation’s place in the world.

The thesis commences with an overview of how Human Resources has defined its role within organisations since the 1980s. The challenges and concerns of human resources professionals are discussed, and the opportunity for them to take the lead in developing the social networks that are vital to the capture and transfer of knowledge is foreshadowed. An examination of knowledge and knowledge management concepts and
principles, and a discussion of the specialised aims and objectives that a knowledge management system can be argued to have within a human resources management perspective in the 21st century is discussed next. As learning from experience with the aim of improving business performance is one of the uses of knowledge management, a discussion of ‘learning’ and the concepts of the ‘learning organisation’ follows.

The chapters in the first part of the thesis contain the theoretical material concerning knowledge and knowledge management, learning and the Learning Organisation, and the argument that Human Resources is in a position to play a major role in moving the organisation's culture to one of value creation and valuable strategic decision-making capability, through its awareness of the concept of knowledge and its implementation of knowledge systems, policies, and practices.

The second part of the thesis is more empirically based, and reports the results of recent research by the author into the levels of awareness of the knowledge concept, and the degree to which knowledge management systems, policies, and practices are being implemented. The purpose of the study was to test a number of hypotheses about knowledge and knowledge management and the role of the Human Resources function vis-à-vis these issues. The results and their implications are subsequently discussed.

The thesis concludes with some reflections on the concepts of knowledge and learning, and the specialised role that the Human Resources professional can play in knowledge work.
It should also be noted that although every effort has been made to read widely, and stay recent, the amount of literature that has been published since the researcher first began work, barely three years ago, has been so overwhelmingly large, that this has proved to be a Herculean task. Of course, a thesis has an end, and it is necessary to draw a line, under which the incorporation of the never-ending stream of new articles must be rationalised. The researcher trusts his labours have been equal to his task.
Human Resources and Personnel practitioners, academics, and others interested in the field of human resources (HR) have long held dual concerns for the future of the HR function. The first of these concerns is the need to deal effectively with the challenges organisational life presents to it. The second, which is both concern and challenge, is how to convince senior management that Human Resources Management (HRM) is both relevant, and necessary, to the business success of the organisation.

CHALLENGES

A typical set of challenges facing personnel departments (as they were once usually called) may be inferred from a list of job titles to be found in many such departments in the 1980s. Such titles include Personnel Interviewer; Counsellor; Training Services Coordinator; Compensation Specialist; Safety Specialist; Director of Labor Relations, and so on (Schuler, 1981). A ‘more intensely competitive business environment, increased use of technology … and the shift in corporate philosophy from asset management to operations management’ (Collins, 1987, p.29) were the trends identified by some that defined the challenges for HR of that time. Hand-in-hand with the need for organisation’s to cope with a business environment of corporate take-overs, restructures, rationalisation of existing operations and new technologies, was the realisation that organisational success was largely dependent on ‘matching skills with jobs, keeping key personnel after a merger, and solving the human problems that arise from introducing a new technology or closing a plant’ (Business Week, 1985, p.58). Arguably, although HR people have recognised the increased value of their work in this
context, it has been more difficult to ‘gain the support of senior management, secure the commitment of the CEO, and ensure HR management makes the most effective contribution possible to the organisation’s objectives’ (Collins, 1987, p. 30). Nevertheless, the future for HR was starting to be seen to be inextricably linked with overall business strategy and effective organisational performance (Peters and Waterman, 1982). It may be surprising, therefore, that some 15 years or so later ‘current practices in attempting to assess the contribution of HRM to organisational effectiveness can be seen to be less than adequate’ (McKean and Wyse, 1995, p.13).

Throughout the 1980s and into the 1990s, increasing competition and rapid changes in technology continued to provide the context in which organisations had to survive. Added to this were pressures towards globalisation, and issues of diversity, and growing calls ‘for an evaluation of the traditional role of the HR manager’ (Kramar, 2000, p.3). HR managers should be able to add value to their organisations, it was being said, by developing people management policies that support the achievement of the business strategy; designing and delivering efficient people management policies; increasing employee capability and commitment; and effectively managing organisational change (Kramar, 2000).

Established in 1989, the Cranfield Network on European Human Resource Management (Cranet) project, a collaboration between 34 universities and business schools, aimed to ‘provide hard data on HRM policies and practices’ (Cranet.org, 2000, p.1). Data is collected through a standardised postal questionnaire, and addressed to the most senior HR specialist. Public and private organisations are surveyed in different countries, with each country producing its own Executive Report. Two rounds of data have been
collected in Australia (1996 and 1999), and a third round is planned for 2003/2004. The latest available Executive Report (Kramar, 2000) reported that HR managers in the survey identified five challenges for the near future: ‘management of change … improving the HR function … organisational development … general recruitment [and] performance management’ (Kramar, 2000, p.11). As the Australian survey shows that HR managers are sharing their responsibilities with a number of partners, the future for the HR function is also seen in terms of a partnership, or ‘series of partnerships involving the HR manager, Line Manager, external provider of HR services and Senior Executives’ (Kramar, 2000, p.27).

A special six-month study of the future direction of the American HR profession was commissioned towards the end of the 1990s by Workforce. Predicting that the 10 years to 2008 would bring considerable upheaval in the areas of workplace flexibility, global business, workforce development, and the strategic role of HR, among other things, the editors of Workforce selected 10 leading HR Directors, company Vice-Presidents, and consultants, and asked them individually to brainstorm what developments they thought would occur in these areas. Then, using the Delphi technique, that isolates group members from each other so that they do not unduly influence each other’s responses (Robbins, 1994), Workforce created a consensus of feeling for how the American HR profession sees its future in the first decade of the 21st century (Kemske, 1998).

Many predictions for the future were highlighted in this American study. Of particular interest here, however, are: the role of corporate HR will change to that of creator of overall organisational values and direction; the need for HR professionals to develop a stronger understanding of, and sensitivity to, other cultures; a focus, by small teams of
HR professionals involved in training/learning activities on performance improvement; a key role in multidisciplinary consulting; a ‘seat at the table’ of the top management team; a shift from strategic business partner to strategic business leadership; and a focus on human capital development and organisational productivity where the key HR role will be to manage increasingly scarce human and intellectual capital (Kemske, 1998). A further study commissioned by Workforce, entitled ‘A Day in the Life of HR’, asked nearly 900 HR professionals more than 70 questions about the detail of their workday (Halcrow, 1998). This survey shows the future of HR as one of strategic partner, rather than simply as administrative support.

To bring its future to reality, however, HR needs ‘to establish a presence … as a key contributor on the management team’ (Voves, 1996, p.43). One sure way to be recognised and respected as a true business partner, it is said, is for HR to use return-on-investment (ROI) measurement to illustrate to senior management how its efforts help move the organisation closer to its fixed goals and objectives. In a world where pressure to improve productivity and increase efficiency has brought scrutiny and demands for full accountability, arguably, it is as incumbent on HR, as it is on other departments, to measure its ROI (Davidson, 1998). ROI refers to a comparison of the organisation’s training benefits with the costs of that training, expressed in dollars. Direct as well as indirect costs are included, and compared to how well training programs have contributed to the on-the-job performance of participants, as well as to how well the design of the program comes to fulfil the aim it was developed to meet in the first place.

Other ways to measure the contribution and value of HR to an organisation have been put forward. One such is the Balanced Scorecard, a means of measurement that allows
managers ‘to look at their company from the perspective of internal and external customers, employees and shareholders’ (De Cieri and Kramar, 2003, p.482). Advocated by Ulrich (1997), the Balanced Scorecard shows how people systems can contribute to organisations. Human resources practices relate to people, but also to process and productivity. The Scorecard should therefore be used, says Ulrich, first to show the link between HR activities and the overall business strategy of the organisation, and second to evaluate the extent to which the HR function is helping the organisation move towards meeting its strategic goals and objectives.

The effects of HR efforts can often only be inferred from such things as productivity levels, and lower turnover, absenteeism and accident rates. Yet, arguably, it is more important than ever, not only to quantify that which can be measured easily, but to also ‘make the invisible visible’ (Standfield, 2002, p. xix). As organisations ‘become more knowledge-based (and less production-line based), the means of production (knowledge and relationships) will frequently reside in employees and not in physical systems’ (Standfield, 2002, p. 37). That is, the means of production will become as invisible as many of the efforts of HR seem to be now. In the knowledge-based economy of the new millennium, and therefore in the knowledge-aware organisation, the value of the balance sheet ‘has literally nothing to do with that organisation’s real value … the very act of reducing expenses today [by downsizing the workforce] reduces the organisation’s source of value creation’ (Standfield, 2002, p. 40). This source of value creation is, as indicated above, the employees, and, in the words of Caudron (1999) it is the HR professional, with their ‘advanced degrees …[and] average work experience [in the HR field, of] 22 years [who have] a much broader base of knowledge … than anyone in a corporation’ (p.24).
At the start of the new millennium, writers such as Loabs (2000) were continuing to cite accelerated globalisation and evolving technology as major issues for organisations, adding data management to the mix. The challenge now, for HR, was not only ‘to balance the demands of … business partner, internal consultant, operational and administrative expert and both employee and employer advocate … [but] to establish new deliverables and to sustain strong partnerships with both internal and external customers’ (Loabs, 2000, p.52). The ability to ‘see the big picture - and to deploy [the appropriate] resources … will be more important than ever’ (Loabs, 2000, pp.52-53). Recognising that HR ‘must reinvent itself on a regular and on-going basis’ (Greengard, 2000, p. 43), some have forecast an HR future based on an involvement with new technologies (Greengard, 2000; Sunderland, 2001), while others forecast the winding down of HR as a central function, with line management assuming the role of HR consultant (Dear Workforce, 2002). Futurist David Synder (1998), is one who believes that ‘the outsourcing, downsizing and focusing on core competencies [in] American business will have profound implications for human resource professionals [leading to] the growth of a free-standing human resources industry’ (p.56). In other words, as large bureaucracies reduce their permanent career workforce by ‘about two-thirds … HR will be massively outsourced’ (Synder, 1998, p.56), left to act as agents for those not permanently employed.

The need for HR to convince senior management of its worth, then, also continues to bedevil HR professionals. Being ‘excellent at operational HR … [is only the beginning] you have to understand what drives the performance of the business, and then show that what’s done in HR relates to that’ (Evans, 2001, p.15, interview with Roger Collins). Most organisations today, says Collins, recognise that ‘the most powerful sources of
competitive advantage is people’ (Evans, 2001, p.15). The key, according to Collins, is
the ability to understand performance, and high involvement/commitment organisations
(sometimes known as High-Performance Work Systems (HPWS)) ‘use a distinctive
managerial approach that enables high performance through people’ (Tomer, 2001,
p.64), by empowering employees so that they have the ‘information, knowledge, and
rewards to perform at the highest level’ (Lawler, Mohrman and Ledford, 1995, cited in
Tomer, 2001). The opportunity is there, according to Collins, for HR to exercise
leadership in this area by becoming involved in relationship management, and through
that, in knowledge creation (Evans, 2001). Taking the lead in developing the social
networks of the organisation has, in fact, been called a ‘core strategic role of the top HR
executive’ (Bartlett and Ghoshal, 2003, p.15).

More recently, challenges have been defined variously as ‘the responsibility … to turn
future strategies into future capabilities in order to achieve organisational results … [by
moving] HR management from a cost-centre perspective to an investment in the
development of mission-critical organisational capabilities’ (Sussman, 2002, p.11), and
the need to make efforts to help ‘create a unique culture [that] would help keep good
people employees longer and assist in productivity, while making it easier to attract new
talent through a good reputation’ (Vitale, 2002, p. 11). The need to focus on ‘the core
competencies and capabilities of employees [that] allow us to view intellectual or
organisational capital as strategic assets’ (Sussman, 2002, p.11) is also high on the list
of challenges in the 21st century. In the knowledge economy, intellectual capital as a
‘wealth production factor takes precedence … to physical assets’ (Seetharaman, Sooria,
and Saravanan, 2002, p.128). ‘Intellectual capital, also known as employee brainpower,
knowledge management, knowledge capital, professional intellect and learning
organizations’ (Birkner, 2000, p.49) presents both an ‘exciting area for … researchers and practitioners’ (Bontis, 1999), and a challenge to value, measure, and represent on the balance sheet. It has been said that ‘fewer than 10% of … balance sheets show a value for intellectual capital’ (Coulson-Thomas, 2000, p.33), even though ‘tangibles now explain less than 20% of the value of most publicly listed firms’ (Standfield, 2002, p.41), and ‘more than 50% of GDP in the major OECD economies was attributable to knowledge and other intangibles’ (Standfield, 2002, p.43).

In the economy, knowledge gains its status by being perceived and defined as a commodity, an ‘intangible asset’ (Thompson and McHugh, 2002, p.169), to which value can be assigned. Many have claimed that ‘knowledge work is the engine of growth in the new economy’ (Thompson and McHugh, 2002, p.171), although, according to Warhurst and Thompson (1998), the scope of knowledge work may be exaggerated.

Nevertheless, a number of intellectual capital models have been put forward. For instance, Yakhlef and Salzer-Morling (2000) cite the case of Skandia, who developed a model showing the different components of intellectual capital, as they understood them to be. That is, they put together innovation and process capital, with customer, organisational, human, structural, and financial capital. Taken together, these various forms of capital are what make up the market value of the company. The American Society for Training and Development (ASTD) is another organisation that has developed an intellectual capital model (Van Buren, 1999). This model aims to create a standard generic set of measures that can be used by organisations to assess their knowledge management activities. Two types of measures are incorporated in the
model. The first pertains to human, innovation, process and customer capital, collectively designated as the intellectual capital stocks. The second pertains to financial performance and business effectiveness. The critical knowledge management processes here, which are imbedded in the firm’s activities and initiatives, are held to be the definition, creation, capture, sharing and use of knowledge. The enablers, that is, those corporate functions, systems, and structures that define, leverage and structure the organisation’s activities, are defined in this model as leadership, culture, communication, technology, human resources processes, and so on. Taken together, the knowledge management processes and the enablers lead to financial performance, which in turn leads to changes (positive or negative accordingly) in the organisation’s intellectual capital stocks. Pollard (2000) also developed a somewhat similar model. This model depicts human capital (the tacit knowledge that goes into the competencies of individuals and teams), with the addition of structural capital (the explicit knowledge contained in databases, tools, products and processes), being applied to the strategic direction of the organisation, resulting in customer capital (the relationships with customers), leading to financial capital (cash, net receivables and investments) and physical capital (inventory and fixed assets). What is important to note here, is that these intellectual capital models all attempt to integrate the many aspects of organisations - from the physical (hard) to the invisible (soft); from technology, to the human.

Not everyone, it should be noted, has held a positive view of the future of HR. Human Resources departments have been rather prominent in the downsizing of organisations, and company focus on reducing administrative costs has seen more organisations move towards more automation, with the result that ‘the skills of HR people move more
towards administration skills’ (Carey, 2002, p.16). This may mean that HR is perceived
as recruiting quickly without regard to quality; applying rules in an inflexible manner
that makes it difficult, for example, to pay for performance or dismiss poor
performance; and only running training programs when there are sufficient people to
justify the cost, rather than recognising that skill advancement is essential to improved
performance and therefore the long-term success of the enterprise (Wolfson, 2002). A
series of interviews conducted by Workforce in mid-2000 revealed that HR
professionals are variously thought of as ‘bullying bureaucrats’, and ‘incompetent,
unsympathetic, and punitive’ (Halcrow, 2002, p. 28). However, if the so-called people-
people are ‘not embodying empathy and relationship skills’ (Evans, 2002, p.14
interview with Jude Pettit), then how, Pettit asks, ‘can [HR] expect it of others’ (Evans,

HR has also been slow, according to some, to ‘accept responsibility and meet the
demands of ultimate accountability … contend[ing] that measurement and evaluation
systems … are too difficult, too costly, and in some cases, impossible’ (Phillips, J, 1996
cited in Davidson, 1998, p. 37). Furthermore, there are external companies ready and
‘available and champing at the bit to help with every single product and service offered
by HR [who] through technology and economies of scale can provide more efficient and
cost-effective HR services than in-house departments’ (Caudron, 2003, pp.27-28).

External vendors, however, ‘have been so successful doing HR work … that … HR
professionals [now have the time] to focus on the kind of transformational work that
helps the bottom line’ (Caudron, 2003, pp. 28-29), and although ‘research indicates that
the majority of HR people still don’t have what it takes to fulfill leadership roles’
opportunities can still be seen to abound for HR people wanting to make a positive difference to their organisation’s performance. In a workplace where a dispersed workforce, ‘globalisation, technology and people’s quest for greater work-life balance are some of the factors that influence thinking about how people can be managed in ways that foster their maximum contribution’ (Rance, 2003, p.30 interview with Robin Kramar), the HR professional has the chance, not only to ‘determine what kind of talent is needed to meet company goals and then devise recruitment and retention programs based on that need [but to] determine how to keep [sometimes] widely dispersed employees connected to corporate goals’ (Caudron, 2003, p.32). Furthermore, all employees still need to be paid, trained, and rewarded if they are to be retained. With the continuation of downsizing activity, HR professionals have also been challenged to handle restructures, put together large scale redundancy packages, counsel and assist retrenched staff, and work hard to keep the surviving staff members from losing motivation and heart (Stewart, 2003).

The top challenges facing business continue to be how to reduce costs and improve profitability. A recent study conducted for the Asia-Pacific Economic Cooperation (APEC) organisation into contextually embedded HRM policies and practices in the Asia-Pacific region identified a number of trends and issues that were relevant to Australia, the region with which this thesis is concerned. These have included intensification of work pressure within workplaces; continuous organisational change; devolvement of centralised industrial relations and wages systems; a shift to non-standard employment and flexible working hours; decentralisation and outsourcing of HRM; training and development (Zanko, 2003). Performance management, occupational health and safety, and HR strategy and planning were also called for by
Zanko (2003). Interestingly, the concept of knowledge management appears to be of no consequence, as it does not rate a mention.

The call to HR professionals is to see themselves not only as a fully integrated component of a much larger system, but as part of a department that is, itself, highly cohesive and co-operative (Sullivan, 2003). A closely integrated HR department, it is argued, will be better able to merge with the organisation’s strategic objectives.

This may be no easy matter, however, as ‘many old-school HR executives [are] finding that neither their training nor their experience has prepared them for a leading strategic role’ (Bartlett and Ghoshal, 2003, p.14). For instance, in the 1980s, the role of HR was to ensure that it supported the organisation’s strategic and operational goals through its recruitment and training programs, and the administration of the company benefits program. In the 1990s the task was to help define the organisation’s core competencies and to support the strategic assets through the development of management skills. In this new millennium, where ‘specialised knowledge, skills and expertise are seen as the scarce strategic resource’ (Bartlett and Ghoshal, 2003, p.14), HR professionals must become the key to the development and delivery of the organisation’s strategy. However, say Bartlett and Ghoshal (2003), many HR professionals are ill prepared to do so - viewing ‘the new task through old lenses’ (p.14). That is, they develop more aggressive approaches to recruitment and use more sophisticated software packages and the like, while continuing to acquire employees and try to make them useful through training, instead of seeing employees as ‘talent investors’ (p.14) or partners in the enterprise. Decisions continue to be made to address short-term difficulties, rather than long-term growth; few have built the type of HR systems and cultures, or instituted the
sort of processes, that can offset the usual company bias toward financial assets. Recruitment of the ‘merely average individual’ allows the organisation to avoid having ‘to set standards, monitor activities and measure recruiting outcomes in a way that [makes] the [recruiting] decision as precise and rigorous as those guiding capital allocation’ (Bartlett and Ghoshal, 2003, pp.14-15). After all, if new recruits are tempted by large compensation packages, they will no doubt leave the organisation when another company offers an even larger one. It allows the avoidance of constantly developing talented people. Nor do companies regularly cut out their deadwood, concentrating instead on their recruitment and training programs and allowing the average, or non-performer, to stunt organisational growth until there is a financial crisis, or a merger, in the offing. Most organisations are therefore in a situation where they have ‘a scarcity of talented people and the knowledge they possess’ (Bartlett and Ghoshal, 2003, p.15).

At the core, then, is a fundamental failure of most organisations to recognise that knowledge management systems, processes, and practices are operated through a social network. In other words, it is the relationships between the people of the organisation that are critical to the successful operation of KM. Certainly the task would be more difficult, and the results possibly less accurate and achieved with less efficiency, without the use of technologies to codify, store, and make knowledge available. Nevertheless, if the organisation is to link, leverage, and embed the knowledge that is held by individuals and groups within it, it is essential that the value of relationships and networks is recognised and acknowledged. It is here that there is an opportunity for the HR professional ‘to take the lead in developing the social networks that are vital to the capture and transfer of knowledge … [and] to help management develop the engaging,
motivating and bonding culture necessary to attract and keep talented employees’ (Bartlett and Ghoshal, 2003, p.15-16). This means working hard to ensure that those talented people do become, and stay, committed to the organisation’s aspirations.

If the idea of knowledge management is accepted as the appropriate management of policies, procedures, and systems required in order to capture, make accessible, and use all the tacit and explicit knowledge available in the organisation, to the benefit of the enterprise and its employees, customers, suppliers, shareholders and so on, then, this thesis posits, the HR department, as a total entity, is well placed to further those strategic objectives through its own knowledge-aware management of the way it performs the HR function, and its ability to move senior management, and then later the whole organisation, away from ‘hollow, slogan-driven communications, which are more likely to lead to detached cynicism than to engaged motivation’ (Bartlett and Ghoshal, 2003, p.18) towards a clear personal commitment to organisational strategies and goals.

As the next chapter shall illustrate, however, much has now been said about the concepts of knowledge and knowledge management, although there is no universally accepted view of what these terms mean. Nevertheless, there does appear to be general agreement about the benefits to be had by an involvement in knowledge management. The next chapter examines the concepts of knowledge and knowledge management, and proposes that a knowledge management system takes on a specialised set of aims and objectives within a human resources perspective.
CHAPTER TWO

THE CONCEPT OF KNOWLEDGE MANAGEMENT

Knowledge, as a decisive factor affecting an organisation’s ability to gain competitive advantage (Von Krogh, Ichijo and Nonaka, 2000) has been steadily gaining prominence in the management literature over the last five years. Recognised as a valuable resource, it will behove organisations to ‘develop a mechanism for tapping into the collective intelligence and skills of employees in order to create a greater organisational knowledge base’ (Bollinger and Smith, 2001, p.1). It is the management of knowledge that will achieve this goal.

Not surprisingly, the focus on knowledge management is often explicitly oriented to matters of competitive advantage and commercial effectiveness. Several conditions and factors in the world today, including such things as economic and marketing competition; environmental and ecological pressures; and societal turbulence have led to this, and organisations have been encouraged to globalise by opportunities to earn additional income with existing technology; access foreign technology, skills, capital, knowledge, and human and natural resources; increase profits with economies of scale in production, logistics and marketing; and lower transportation costs, amongst other things (Marquardt, 1996). This globalisation is putting enormous pressure on companies, however, to adapt and innovate ever more quickly (Prusak, 1998). Furthermore, increasing competition brought about by deregulation locally as well as abroad, new legislation, changing customer demands, the mobility of the workforce, and volatile economic and political environments (Van der Spek and Spijkervet, 1997) have all forced companies to reconsider their business practices. In this fast moving, ever-
changing environment, it is knowledge that ‘has become the pre- eminent economic resource (Stewart, 1997, p.6), and ‘managing knowledge - finding and growing intellectual capital, storing it, selling it, sharing it - has become the most important economic task of individuals, businesses and nations’ (Stewart, 1997, p.12). Companies must therefore be more systematic in the ways in which they manage this capital, devising an agenda for transforming the organisation from one ‘simply comprising knowledgeable individuals [to one] that stewards the creation and sharing of knowledge within and across internal business functions’ (Klein, 1998, p.2). The ‘utilisation of state-of-the-art knowledge is now the critical ingredient for commercial viability … [and workplaces must be redefined as] central mechanism[s] for knowledge exchange, making organisations more alert, informed and more responsive’ (Clarke and Clegg, 1998, p.431).

KNOWLEDGE MANAGEMENT AND HUMAN CAPITAL THEORY

Arguably, for many countries, including Australia, these greater environmental considerations have led to governments being strongly persuaded to a Human Capital view (sometimes called economic rationalism or liberalism), emphasising the necessity of a free labor market, in the belief that this will lead to the development of ‘flexible, responsive, and perhaps above all else, highly competitive organizations’ (Ivancevich, Lorenzi, Skinner & Crosby, 1994, p. 276). The stock of human capital within organisations (and society as a whole) is ‘reflected in the level of skills, competencies, and knowledge of members of [organisations and] society … [and] is built up over time mainly through investment in education’ (Australia. ABS, 2002 Chapters 4 & 5).
The assumptions of such a view are that individuals are assumed to be rational in the way portrayed by ‘rational-economic man’. Presumptions regarding ‘economic man’ are premised on a number of things, including: that his, or her, only motive in making decisions is economic incentive; that there is always an attempt to maximise the use of resources; that decisions are made in an environment of absolute certainty; and that decision makers can list preferences from most to least preferred and will then select their most preferred choice (Robbins, 1976). With regard to the present study, proponents of this economic view could be anticipated to expect both individuals at work, and companies and their Boards, Directors, and perhaps even their shareholders, to advocate the importance of knowledge management initiatives, as the implementation of such initiatives would be seen as a rational way to behave to enhance the efficiency and wealth of company and nation. After all, things change very rapidly in today’s global business environment, and the resultant economic imperative (or invisible hand that economic liberals like to evoke) demands continual rationalisation of behaviours in a competitive market economy. To resist this imperative is to risk bankruptcy for the business (or the nation), or having to put up with expensive poor-quality goods and services, or prolonged unemployment as a job seeker with either the wrong, or insufficient, skills. Human Capital theorists could therefore be expected to argue strongly for the growth of intellectual, or knowledge, capital, its storage, and its effective use.

The economist’s view of Man, it should be noted, is not without its critics. Herbert Simon (1957) in his book *Administrative Behaviour* has suggested that there is a difference between how economists describe human decision-making behaviour and the realities of that behaviour. Simon distinguished between two kinds of ‘reality’ – an ‘objective reality’ and a ‘subjective reality’. A decision is ‘objectively’ rational, he said,
‘if in fact it is the correct behaviour for maximizing given values in a given situation. It is ‘subjectively’ rational if it maximizes attainment relative to the actual knowledge of the subject’ (Simon, 1957, p.76).

‘Objective reality’, the kind described above, is the only reality considered by the economist. Decision-making of this kind - the comparison and assessment of options against their economic consequences - considers information and choice to be necessary conditions for rational behaviour.

‘Subjective reality’ on the other hand, the kind that is ‘consistent with the values, the alternatives, and the information which [the individual] weighed in reaching it’ (Simon, 1957, p.243) is the end result of human imperfection. ‘Rational-economic man’ is an unattainable ideal, for it is not possible for decision-makers to have full knowledge of all the conceivable alternatives and their consequences. Firstly, there is never enough time for the businessman pressed to make quick decisions to identify all the options, and there are too many things that remain uncertain. Secondly, the complexity of the business environment is such that the decision-maker typically constructs a ‘simplified model of the real situation’ (Robbins, 1976, p.154) to reduce the situation to a level at which he, or she, can make a decision ‘within the limitations imposed by his or her thinking capabilities and knowledge’ (Robbins, 1976, p.154). Thirdly, and more to the point here, people do not typically approach decision situations in a perfectly neutral and objective frame of mind, but rather bring pre-formed beliefs and values to the situation which pre-dispose them towards particular choices. These beliefs and values might have been influenced by personality, or more likely by their social experience and by exposure to a systematic socialisation process. All these factors will affect the weight
given by individuals to the concepts of knowledge and knowledge management, and the degree to which those concepts are implemented, and consciously and continuously used by them.

There is an enormous body of behavioural science literature that is devoted to the study of the effect of social context on thinking and behaviour. Social learning theorists have been assiduous in pointing out that ‘social learning begins in infancy’ (Lindgren, 1973, p.87), and is a process whereby children learn the behaviours appropriate to their particular culture, class, and gender. The claim is that ‘all behaviour is controlled by its consequences’ (Lazerson, 1975, p.480). That is, it is selected and shaped by the environment (behaviour that is valued is rewarded and tends to recur; behaviour that is not valued is punished and tends to disappear) and is therefore predictable. Radical behaviourists such as Skinner, however, strongly challenged notions of independence and ‘free choice’ asserting that ‘the question of freedom never arises’ (Skinner, 1948, p.262 italics in the original), as the conditions external to the behaving organism could be identified and manipulated so subtly that the organism would believe it was simply doing that which it wanted to do.

Group psychology literature has emphasised the psychology of proximity, attraction, and conformity, and their effects on individuals’ reasoning, decisions, and actions. Indeed, the history of industrial social psychology since the Hawthorne Studies had generally promoted an image of ‘Social Man’ that depicts rationality and choice as having a social foundation rather than an economic self-interested foundation. Notions of ‘group-ness’ therefore encompass the idea of people interacting with each other ‘in such a way that the behaviour and/or performance of a member is influenced by the behaviour and/or performance of other members’ (Ivancevich and Matteson, 1987,
The pressures exerted on individual members to conform, as a requirement of sustained group membership, act to suppress any critical thoughts, even when the group decision-making process results in unrealistic, perhaps potentially dangerous, behaviour. This is the phenomenon described as *groupthink* (Janis, 1984). This is not to say that ‘groupthink’ is the unavoidable outcome of group socialisation processes, but rather to illustrate that thinking and behaviour in groups, as in individuals, are socially conditioned. Arguably then, if influential individuals or groups are seen to value and use knowledge management concepts and principles, others will follow suit. Stereotypical assumptions that treat individuals as representatives, or symbols, of their category (for example, managers, HR personnel, or production workers) also act to inhibit self-expression and to promote conformity to the prevailing culture, as Kanter’s (1977) study of *skewed* groups showed. Thus, if a particular senior manager, for example, is disinterested or negative about knowledge and knowledge management, others at lower hierarchical levels in the organisation will assume that management per se is also negative about it, and they will see no reason to be involved themselves.

Two opposing viewpoints on socialisation can be discerned in the HRM (and similar) literature. The first regards culture -the values, norms and practices of an organisation (DeLong, 1997)- teamwork, and socialisation very positively. Here, culture is seen as the particular pattern of basic assumptions that a given group has ‘invented...or developed in learning to cope with its problems...and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to [external adaptation and internal integration] problems’ (Schein, 1984, p.3). As such, culture fulfils several important functions, including the conveyance of a sense of identity to its members, and serving as a guide to
expected behaviours. It is an asset ‘because shared beliefs ease and economize communications, and shared values generate higher levels of cooperation and commitment than is otherwise possible’ (Sathe, 1983, pp.9-10), so contributing to discipline and unity.

“Organisation culture” theorists have generally portrayed culture as the major shaping influence of employee attitudes and behaviour. One group of theorists has promoted the view that organisations are ‘manifestations of human consciousness’ (Smircich, 1983, p.347) or, the expression of deeply embedded unconscious processes that affect people’s thinking and behaviour without their fully realising it. Typically, however, these understandings lie out of people’s awareness until they are violated or challenged (Sathe, 1983). It is also expressed variously as an instrument serving human needs; an adaptive-regulatory mechanism uniting people within social structures; a system of shared cognitions; or a system of shared meanings and symbols, that is, ‘a socially constructed reality [made up of] artefacts, symbols, norms, values, beliefs … assumptions … and physical, behavioral, and linguistic symbol … interrelated in a web of interwoven meanings … accessible to all members of the culture”(Hatch, 1997, p.236).This view of the nature of culture can be understood in cognitive, symbolic, structured, or psychodynamic terms, depending on the context in which the artefacts, symbols, behaviours and so on are to be found (Hatch, 1997). Arguably, when we talk about culture, we are referring to ‘the pattern of development reflected in a society’s system of knowledge, ideology, values, laws, and day-to-day ritual’ (Morgan, 1986, p.112).
Another group of theorists also depicted it as a ‘critical lever or key by which strategic managers can influence and direct the course of their organizations’ (Smircich, 1983, p.346). This interpretation of culture has led to the second viewpoint that regards it negatively, or, at least ambivalently as ‘simply an addition to other forms of control which companies have tried to implement’ (Ray, 1986, p.287), through such variables as the organisational structure, rewards system, training and development program, or technology system, which can all be moulded by management to suit current purposes.

Whether or not culture is understood as an unconscious process or a manipulable variable, one’s experience of it can influence greatly the way one assesses a situation, including one’s options and the expected consequences of them. There is an emerging realisation by some, that to achieve the behaviours required for commercial excellence means taking into account all that a worker is (Wiig, 2000). That also means understanding the effect of the prevailing culture on the worker, whether unconscious or not. This means taking account of the organisational structure and the workers’ place in it, the technology, training and development, performance management and reward systems, and so on, and recognising how those things motivate the worker. The importance placed on knowledge management concepts and principles by the top level of the organisation, and the role-played by the Human Resources Department in recruiting and ensuring that appropriate values are transmitted and reinforced through rewards and training programs are also important constituents of the prevailing culture. The culture can be positively or negatively motivating and rewarding, but no matter which it is, it will inevitably set the context within which individuals perceive the choices available to them, and whether or not the concepts and principles of knowledge management are understood, implemented, and used to their best advantage.
WHAT IS KNOWLEDGE AND KNOWLEDGE MANAGEMENT?

Definitions of knowledge and knowledge management are legion. To some, the word knowledge can mean simply information, or be extended to include cognition, ‘experience, skill, insight…know how, learning, wisdom…and so on’ (Sveiby, 1997, p.29). To others, the concept of knowledge is distinctly different from the concepts of information, or data. It is

’a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experience and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but in organizational routines, processes, practices, and norms’ (Davenport and Prusak, 1998, p.2).

Wilson (2002) defines knowledge as ‘what we know [involving] the mental processes of comprehension, understanding and learning that go on in the mind, however much they involve interaction with the world outside the mind, and interaction with others’ (p.2). The connotation being expressed by the word knowledge is, however, dependent ‘on the context in which the term is used’ (Sveiby, 1997, p.29).

Thus, when thought about in a cultural or human resources context, knowledge is defined as the ‘whole set of insights, experiences and procedures which are considered correct and true and which therefore guide the thoughts, behaviour and communication of people’ (Van Der Spek and Spijkervet, 1997, p.36), and knowledge management is most often associated with the effort needed ‘to capture or tap an organisation’s collective experience and wisdom…to make it accessible and useful to everyone in the enterprise’ (Gordon, 2000, p.159). Hampden-Turner (1970) helps us to visualise the process by which this passing on of knowledge occurs at the human level, when he speaks of people risking their psychological beings by suspending their own values in
an effort to meet the other and engage authentically with them. In other words, where people are prepared to be open and flexible and meet each other halfway, learning and the growth of knowledge can take place. When thought about in terms of economy and competitive advantage, knowledge can be described as the ‘output(s) from a continuous feedback loop, which refines information through the application of that information’ (Bonaventura, 1997, cited in Webb, 1998, p.1), and knowledge management can be understood as the ‘acquisition and use of resources to create an environment in which information is accessible to individuals and in which individuals…share…and are encouraged and enabled to apply their knowledge for the benefit of the organisation’ (Harman and Brelade, 2000, p.5). When thought about at an operational level, knowledge can be understood in terms of developing first, competency, and second, mastery, of both traditional and new skills (Raftopolous, 2002).

Overall it might be best understood as a structured set of processes that establishes procedures for identifying, assessing, organising, storing and retrieving knowledge to meet the needs of the organisation (Dillon, 1999; Hansen, Nohria and Tierney, 1999). In other words, it is ‘a conscious strategy of getting the right knowledge to the right people and helping people share and put information into action in ways that strive to improve organisational performance’ (O’Dell and Grayson, 1998, p.5). Improved organisational performance may also be said to derive from deep owner motivation; that is, the type of motivation that arises when the employee feels deeply and meaningfully connected to the organisation, and which is the ‘product of the relationship of the member to the organisation’ (Tomer, 2001, p.69). It is due to this relationship that the organisation has a performance capability, and therefore a productive capacity, that is greater than it would otherwise have. This capacity or capability has ‘as asset-like or
capital-like quality...a kind of human capital...that is embodied in [the organizations] social relationships’ (Tomer, 2001, p.69). One might say, organisational knowledge is the total sum of the tacit knowledge of all the employees in the organisation plus the total explicit knowledge of the existing processes, technology used, and products of the organisation.

There are generally just these two basic kinds of knowledge that are recognised - explicit, and tacit. Explicit knowledge is easily codified and is found in memos and manuals, annual report and the like. It is more precisely and formally expressed than tacit knowledge (Zack, 1999). The term tacit ‘originates with Polanyi (1958) [and means] hidden knowledge, hidden even from the consciousness of the knower ... an inexpressible process ... It involves the process of comprehension, a process which is, itself, little understood’ (Wilson, 2002, p.21). That is, it is informal, hidden, highly complex and personal, and is the type that forms the basis of intuition, hunches and insights (Nonaka and Takeuchi, 1995). It is ‘subconsciously understood and applied, difficult to articulate, developed from direct experience and custom, and usually shared through highly interactive conversation, storytelling, and shared experience’ (Zack, 1999, p.46). Takeuchi (1999) divides tacit knowledge into a technical dimension and a cognitive dimension: the first referring to those skills or crafts often said to be ‘know-how’; the second includes those ‘taken-for-granted’ beliefs, values and mental models that shape the way a person sees the world. Cognitive psychologists on the other hand distinguish three categories of knowledge - declarative, that consists of facts, methods and procedures; procedural, that may be viewed either as how to do something, or manifests in the actual doing; and strategic, or ‘know-when and know-why’ (Nickols, 2000, p.17). There are a number of things, however, that knowledge management is not,
including being a new religion, an existentialist search for truth, a science, a philosophical concept (an idea accepted by others, however, such as Pfeffer and Sutton (2000)), or a management fad (O’Dell and Grayson, 1998).

For knowledge and the process of knowledge management to have a broad impact, there must be integration with the organisation’s strategic direction. That is, managing organisational knowledge must be done for the benefit of the organisation in terms of profits and sustainability, and to the benefit of the employees in terms of satisfaction and growth. Strickland (1992 cited in Bounds, Yorks, Adams and Ranney, 1994) defines strategy as ‘the pattern of organisational moves and management approaches used to achieve organisational objectives and pursue the organisation’s mission’ (p.213). The strategic process therefore asks the questions – ‘where is the organisation today? – and follows with the queries – ‘where does the organisation want to be tomorrow? and how do we get there?’ Pettigrew (1985) describes strategy as an outward looking plan that allows the organisation to choose the most rational course of action to gain competitive advantage. Similarly, Glueck (1980) defines it as a unified, comprehensive and integrated plan aimed at ensuring the organisation’s objectives are achieved. Mintzberg and Quinn (1998) note that a well formulated strategy also takes into account the internal competencies and shortcomings of the organisation, anticipates changes in the environment, and keeps an eye on competitor behaviour. Others, such as Walker (1992) make a distinction between business strategy and Human Resources (HR) strategy, where the former outlines the organisation’s plan for development and profitability, and the latter helps focus, mobilise, and direct human resources activities on issues that affect the enterprise. In similar vein, a knowledge management strategy is therefore one that supports the direction of the organisation and matches its philosophy,
capabilities, and long term goals (Liebowitz, 1999; Bounds et al, 1994). Its purpose, Davenport (1999) suggests, is to ‘define agreed on objectives by reflecting the knowledge management vision into a coherent framework’ (pp.2-2), and, by integrating this vision with the organisation’s strategic one, helps to transform the ongoing strategic objectives, core competencies, and employee capabilities so that organisation performance is noticeably improved (Davenport, 1999). It might be said that strategic knowledge of any organisation lies in its long-term knowledge generating capability, that is ‘the result of the quality of the [organisation’s] internal network of people, skills, communications, information resources, and cultural norms, and the quality of its external network of relationships with customers, suppliers and distributors, information sources and other associates’ (Choo, 1998, pp.134-135). There seem to be few organisations, however, that actually use the word knowledge in their planning documents, and, it appears that some companies who ‘have previously dabbled with the idea have moved on to other things’ (Wilson, 2002, p. 15).

As currently practised, knowledge management appears to be characterised instead ‘by terminology, approaches, methods, and organisational units that are consciously separate from the organisations served by the concept’ (Davenport, 1999; 2-2), and those who have managed to develop a knowledge strategy at all have failed to link it to a business strategy in any specific way (Davenport, 1999). Further, this author posits that although some businesses have become aware of the concept of knowledge management, in practice few do more than collect and store data, and most overlook the importance of the ‘human’ side, so failing to build an appropriate human resources perspective into any knowledge management process that may be under consideration, or that may exist. It is the degree of awareness, implementation, and human resources
perspective current in organisations in the Australian States of New South Wales (NSW) and Victoria that this thesis aims to investigate.

AIMS AND OBJECTIVES OF KNOWLEDGE MANAGEMENT

Wiig (1997) has identified two objectives of knowledge management, the first being to make the organisation ‘act as intelligently as possible in order to secure its viability and overall success; and [the second being] to otherwise realise the best value of its knowledge assets’ (pp.71-72). Bollinger and Smith (2001) note that there are three major ways of thinking about knowledge management. The first is to think about knowledge management as primarily an information technology issue where the extensive use of computer networks and communication tools is assumed to lead people to share information and knowledge in the effort to secure the organisation’s success. Here the focus is on knowledge management from an Information Technology (IT) perspective (Martensson, 2000). The focus is on explicit knowledge: creating databases for storing information and making it available. There is very little written however on how this stored information can be used and translated into knowledge (Raftopoulos, 2002), or how it can be used to provide creative and innovative solutions to organisation problems. Von Krogh et al (2000) warn that there is an over emphasis on information technology and other measurement tools in many organisations that can undermine knowledge management and creation in a constricting paradigm rather than an enabling one. The second school of thought suggests that knowledge management is primarily a human resources issue with an emphasis on a strong, positive organisational culture and teamwork. Public celebration of organisational benefits from sharing and developing knowledge are therefore important. A third school of thought promotes the development of processes to capture and measure the organisation’s knowledge, and which do not
necessarily involve the use of information technology. This raises the question of how innovation and knowledge is, or should be, measured, and how its importance is communicated to employees.

In an integrated situation where learning about the application and development of knowledge is central, knowledge management systems have a number of aims and objectives, including: improving the performance of organisational systems and processes; preventing future bottlenecks and solving existing ones; cashing in on opportunities (Van Der Spek and Spijkervet, 1997); persuading people to share (Havens and Hass, 2000); leveraging and using the uniqueness of the organisation ‘to capitalise on the mix of people, processes, services and products that defines its identity and place in its competitive market’ (Abell and Oxbrow, 1999); building and exploiting the organisation’s intellectual capital effectively (Wiig, 1999); making knowledge more visible throughout the organisation (Allee, 1997), and increasing the abilities of employees to improve services and products (Marquardt, 1996).

A SELECTION OF KNOWLEDGE MANAGEMENT MODELS

A useful way of coming to understand the different perspectives on knowledge and knowledge management being put forward by researchers and practitioners is to study the various models that abound in the literature. Models of processes give us visual ways of thinking about things - a sort of visual metaphor, you might say. Metaphorical imagery, as Coffey and Atkinson (1996) point out, can ‘provide a useful way of thinking about and interpreting … data’ (p.85). Another way to think of models, of course, and perhaps the more usual way, is to see them as ‘highly formalised representations of phenomena and their interactions and, in most cases, are established
in order to predict or control the phenomena in question’ (Despres and Chauvel, 2000, p.59). A selection of models is described and discussed below. Each has been selected for its contribution, as this author perceives it, to our understanding of what knowledge is, and what it means to manage it.

*The Ba Model*

An interesting model, and one which, it is argued, owes much to the Japanese culture of its proponents, is built around the concept of *Ba*, which is equivalent to the English idea of ‘a space’. Introduced by Nonaka and Konno (1998) cited in Despres and Chauvel, (2000), *Ba*, as it relates to knowledge management, is a space for dynamic knowledge conversion and emerging relationships. The authors define four *Ba’s:*

- **Originating Ba** - the space where individuals share their feelings, experiences and mental models
- **Interacting Ba** - the space where tacit knowledge is made explicit
- **Cyber Ba** - the space where new and existing explicit knowledge come together and generate new explicit knowledge
- **Exercising Ba** - the space that facilitates the conversion of explicit knowledge into tacit knowledge


This emphasis on a space per se, rather than on what is happening in it, allows for an image of fluidity and expansion to accommodate the processes occurring within - an image, the researcher argues, that is well suited to the idea of knowledge as a fluid mix of information, values, experience, and insight (Davenport and Prusak, 1998). This is in contrast, perhaps, with the more Western image of a space as an empty area with a fixed boundary around it, that a process may fill, after which there is room for no more: a
more limiting, static model that, the researcher argues, perhaps best suits the technology-based models of managing knowledge.

*The SECI Model*

**FIGURE 2.1**
The SECI Model

\[ \text{Tacit knowledge} \quad \text{Tacit knowledge} \]

Socialization

\[ \begin{array}{c}
\text{i} \\
\text{i}
\end{array} \]

Externalization

\[ \begin{array}{c}
\text{i} \\
\text{g} \\
\text{i}
\end{array} \]

Internalization

\[ \begin{array}{c}
\text{i} \\
\text{g}
\end{array} \]

Combination

\[ \begin{array}{c}
\text{g} \\
\text{g} \\
\text{g}
\end{array} \]

Explicit knowledge

\[ \begin{array}{c}
\text{i} \\
\text{g} \\
\text{o}
\end{array} \]

Explicit knowledge

\[ \begin{array}{c}
\text{i} \\
\text{g}
\end{array} \]

\[ \begin{array}{c}
\text{g} \\
\text{g}
\end{array} \]

\[ \begin{array}{c}
\text{g}
\end{array} \]

i = individual

g = group

o = organisation

Source: Despres and Chauvel, 2000, p.61. (*Adapted from Nonaka 1998 pp.40-54*).
The earlier model by Nonaka (1991) cited in Despres and Chauvel (2000), known as the SECI Model (Socialisation; Externalisation; Combination; Internalisation) shown above, clearly the forerunner of the *Ba*, postulates that the conscious interplay of tacit with explicit knowledge forms can be accomplished through an organisation’s structures and systems, by utilising culture to facilitate the interaction of four knowledge creating processes - socialisation; externalisation; combination; and internalisation (Nonaka, 1991 cited by Despres and Chauvel, 2000, pp.59-61). (Figure 2.1). Both these models (the *Ba* and the SECI) focus on the dynamic interplay between the two kinds of knowledge (tacit and explicit) and the conversion of knowledge per se into action that will benefit the organisation.

Most models, or theories, of organisational learning, developed out of the cognitive psychology discipline. ‘Cognitive models were mostly based on stimulus-response (S-R) mechanisms in which individuals, interacting with their environment, learned to discriminate within repertoires of stimuli and to connect these stimuli to repertoires of behavior’ (Hedberg, 2000, p.270). Wiigs’s (1993) cited in Despres and Chauvel (2000), model, for example, attempts to build an edifice to knowledge management, presenting the image of a classic Greek building with solid base, three well proportioned columns, and the whole capped off with a well balanced cornice and pediment: an image no doubt designed to convey the message that if you follow the steps laid out, you will proceed from a broad understanding of knowledge, to an elegant and seamless method of knowledge management. Here is a model to delight the more technically minded (Wiig, 1993 cited in Despres and Chauvel, 2000, p.69). (Figure 2.2).
As Figure 2.2 shows, the foundation of knowledge management is comprised of the way knowledge is created, used in decision-making, and becomes apparent in the organisation’s culture and procedures. The three pillars indicate the main areas that Wiig believes an organisation should focus its knowledge management initiatives on - that is, knowledge exploration (I), knowledge value assessment (II), and the active
management of knowledge (III). Here, knowledge exploration (surveying and categorising knowledge) is the stimulus that leads to knowledge analysis, codification, and organisation; value assessment is the stimulus to knowledge related activities; and the active management of knowledge is the stimulus for learning to handle, leverage, distribute and control knowledge.

A Psycho-Social Development Model

Arguably an often over-looked theory, Hampden-Turner’s (1970) Psycho-Social Development Model does have, however, something to offer to the discussion on the process of learning and the production of knowledge. Hampden-Turner recognises the creative, integrative side of human personality, that leads to the ‘drive for exploration [that, when successful, expands the individuals’] symbolizing, synthesizing, and experiential capacities [which] in turn guide [their] further exploration’ (p.23). It is this drive to explore, this researcher argues, that leads to learning, and then to knowledge. Man (used here in the generic sense, to include women) exists in relation to others, and he chooses what he sees through the filter of his set of values. He invests himself in this process, and risks his self in trying to bridge the distance between his self and the selves of others, in order to have a positive impact on them. Where both parties have thus risked their selves by suspending their values in an authentic effort to open up to others, a higher synergy of understanding, feedback, and action can be achieved, and both parties grow in this relationship to each other (Hampden-Turner, 1970). In other words, learning can take place.

The development of one man’s capacity to engage in this way ‘is interdependent with the development of such capacities in other men and the total relationship may be
regarded as a continuous process’ (Hampden-Turner, 1970, p.31). The model is cyclical
and each engagement of an individual with another may be represented by the
intersection of their cycles. Each cycle can also be thought of as ‘a helix spiralling
upwards and the model can be visualised as a *double helix*’ (Hampden-Turner, 1970, p.
32 italics in the original), where ‘the upper reaches … represent more mature
relationships [and] the lower reaches represent frustrating, debilitating, neurotic, and
alienated levels of development. Each individual helix can divide from the other and
enter fresh relationships, taking with it what it has learnt’ (Hampden-Turner, 1970,
p.33).

*A Strategic Model*

Some models, such as that depicted in Figure 2.3 below, are relatively simple, picturing
various phases for conceptualising and leveraging knowledge as flowing in a continuous
unbroken circular pattern (Huseman and Goodman, 1999) (Figure 2.3). Again,
identifying knowledge is the stimulus to capturing it; valuing knowledge is the stimulus
to prioritising it; sharing knowledge stimulates its leverage; and the response to all these
stimuli is the creation and connection of new knowledge.
FIGURE 2.3
A Strategic Model for Conceptualising and Leveraging Knowledge

Phase 1:
Identifying & capturing knowledge

Phase 2:
Valuing & prioritising

Phase 3:
Sharing & leveraging knowledge

Phase 4:
Creation & connection of new knowledge


A Model of Knowledge Transformation

Other models, such as Figure 2.4 below, attempt to represent the complexity of the knowledge transformation process (Hedlund, 1992 cited by Harryson, 2000).
FIGURE 2.4
A Model of Knowledge Transformation

Hedlund (1992) cited in Harryson (2000), is concerned here with the interaction between tacit knowledge (TK), and what he calls articulated (AK) knowledge. This latter is tacit knowledge made explicit. The model delineates four different agents of knowledge - the individual, the group, the organisation, and the interorganisation. Tacit knowledge is made explicit, and, through the act of reflection, is internalised by the agent(s). In turn, the internalisation of knowledge turns articulated knowledge back into tacit knowledge, where it becomes embodied in the agent's unconscious routines. The word ‘extension’ is used in the model to indicate the transfer of knowledge (either tacit
or articulated) between agents, while the word ‘appropriation’ is used to indicate the ‘indoctrination’ of new employees into the corporate culture. ‘Dialogue’ is the process of interaction that occurs between the extension and appropriation processes.

A later, further developed model proposed by Hedlund (1994 cited in Despres and Chauvel, 2000) ‘juxtaposes tacit and articulated knowledge … with different levels of social aggregation … in a classification scheme that assumes cognitive, skill-based and embodied forms of knowledge … across [all] organizational levels’ (p.62). (Figure 2.5).

![FIGURE 2.5](image_url)

Types, Forms, and Levels of Knowledge

Source: Despres and Chauvel 2000 p. 63. *(Adapted from Hedlund 1994 pp. 73-90).*

**A Model of Best Practice**

Some models focus on a particular activity. O’Dell and Grayson (1998) for instance, are interested in modeling the transfer of best practice in a customer-focused environment.
The model revolves around a value proposition, which, although unique to each organisation, will likely be about customer intimacy, product-to-market excellence, or operational excellence. To ensure that knowledge is created, captured, shared, and leveraged, companies must create the enablers of culture, measurement, technology, and infrastructure, and then act to ensure that they are well understood and well managed. To guide the company in its transition to a state of knowledge awareness and implementation that actually delivers sustainable improvement in performance, a four phase change process should be implemented, that moves from a planning stage, to design, implementation, and a scaling-up phase. Each phase focuses on a different activity. Planning involves the company in assessing their current reality, and clearly defining the value proposition(s) at the heart of their need to transfer best practice knowledge. The design phase involves defining roles and functions of employees and technologies, as well as identifying any necessary overlap with organisation structure,
and performance measures. A pilot program to test new ideas and identify areas that either work well or cause problems or difficulties is the focus of the implementation stage. When difficulties have been attended to, it is time to scale-up the program to an enterprise-wide activity in order to capture the full benefit of best practice transfer.

*A Five Forces Model*

Another model that focuses on customers, but also takes into account other external players, is the competition model of Porter (1985) cited in Hertog and Huizenga (2000), as Figure 2.7 below, shows. At the centre of the model is the knowledge organisation, while around it there are relationships with customers, suppliers, competitors and so on. Knowledge is depicted as being able to flow freely between the knowledge enterprise and those in its external environment. This knowledge, unique to each enterprise, can then be applied to provide a simple framework for discussions about the organisation’s place, and course, in the market.

**FIGURE 2.7**
A Five Forces Model

Of course, customer-focused and competition models are not the only models that concentrate on a particular activity or function. There a number of self-explanatory models, for instance, that focuses on Information Technology (IT), such as that given below.

FIGURE 2.8
An Information Technology Model

A more holistic view of the knowledge process, however, is provided by Choo (1998), who visualises the knowing organisation as one in which there are three concentric layers of organisational information behaviour: sense-making, knowledge creating, and decision-making, and where information flowing in from the external environment is progressively assimilated and used to enable the organisation to act. This action changes the organisational environment, which brings new information to the enterprise and causes the cycle to begin again.

FIGURE 2.9
The Knowing Organisation

Source: Choo 1998, p.4
During sense making, news and information about the environment is interpreted, while in the knowledge creating phase the information regarded as significant is converted into knowledge through the processes of dialogue and discourse. The key information activity of decision-making is the processing, analysing, and weighing up of information about available alternative actions. These three modes of information use are ‘dynamic social processes that continuously constitute and reconstitute meaning, knowledge, and action’ (Choo, 1998, p.3).

A number of models of knowledge and knowledge management have been presented above, each of which has something important to add to our understanding of what knowledge is, and what it means to manage it. The idea of *Ba*, or space, as defined by Nonaka and Konno (1998) cited in Despres & Chauvel (2000), is important for its image of fluidity and expansiveness. The earlier *SECI Model* (Nonaka, 1991, cited in Despres & Chauvel, 2000) focuses on the dynamic interplay of tacit and explicit knowledge within an organisation’s structure, while Wiig’s model (1993) cited in Despres & Chauvel (2000), is grounded in the steps required to define and evaluate an organisation’s needs, synchronise and transfer, and use and control those needs. The psychological model of Hampden-Turner (1970) emphasises the role that the personality of the individual plays in creating knowledge and transferring it to others, while Huseman and Goodman (1999) visualise a model of knowledge linked to organisation strategy. The strategic model of Hedlund (1992) cited in Harryson (2000) is concerned with the processes of turning tacit into explicit knowledge, and vice versa, and the transfer of knowledge (explicit as well as tacit) between individuals, groups, and functions in the organisation. A specific focus on best practice transfer, competitors, and IT has been provided by O’Dell and Grayson (1998), (Porter, 1985 and Zorkoczy, 1991.
cited in Hertog & Huizenga, 2000), respectively, while a more holistic view is evident in Choo’s (1998) model. However, the specific role of the HR function is not highlighted; indeed, appears to be overlooked, even though there are models that mention culture and negotiation and communication skills and the like. We are left to infer, if we will, that it is here that HRM people have a role.

KNOWLEDGE MANAGEMENT AND A HUMAN RESOURCE PERSPECTIVE

A knowledge management system, however, it is proposed, takes on a specialised set of aims and objectives within a human resources management perspective, with the potential to transform conventional Human Resources processes (that usually operate ‘behind the scenes’) into a visible set of knowledge management practices closely integrated with the organisation’s strategic objectives.

These practices would form an internal part of the way in which Human Resources people and departments ‘do business’. The recruitment process, for example, is generally understood as the process of ‘seeking and attracting a pool of qualified candidates for a job vacancy’ (Stone, 2002, p. 174). A critical HR function, recruitment officers are therefore charged with the responsibility of finding, and choosing, people with the right mix of qualifications, skills, attitudes and traits to do the particular job, in a manner that is consistent with the prevailing culture. An HR department with a commitment to knowledge and knowledge management principles, could, arguably, be expected to actively seek recruits who also value these concepts and principles, and who would contribute to any existing knowledge management process. The recruitment officer would look for recruits who are willing, and able, to help convert tacit, into explicit, knowledge. Personality tests, where used, would also seek to discover job
applicant’s responses to sharing knowledge, and to holding on to power, as sharing is an important and integral principle of knowledge management.

Conventionally, job descriptions are written statements of the ‘qualifications, skills and know-how a person needs to perform a given job successfully’ (Stone, 2002, p.132). That is, they give some of the parameters and circumstances under which the individual is required to perform. They lay out the boundaries of authority, key results areas, and lines of reporting, among other things. An appreciation of knowledge management will view the job description in terms of the joint accountability of individuals to each other and the organisation, within a chain of activities. This will mean changing the conventional focus of the particular job description, to a description that recognises that individuals are interdependent - that is, to recognise that one person’s output is another person’s input - and that therefore both people are jointly accountable for the flow and quality of the work. Sharing knowledge thus becomes a very important part of the work process, and this would be reflected in the job description, where key performance indicators would include some ways of measuring the individual’s knowledge contribution to the task.

Performance appraisals are concerned with determining how well employees are doing their job, as well as establishing a plan for future performance improvement (Stone, 2002). The rating of performance can be done by the employee’s supervisor, peers, subordinates, team, by the self, or any combination of these methods. Multi-source, or 360- degree appraisals may even include feedback from customers. Whatever form they come in, they do share some common features. They give key results areas; define key performance indicators; measure performance; and reveal any difficulties or limitations
being experienced by the individual. In the process, they uncover evidence of readiness for promotion or ability to take on higher duties. The appraisal of the person as a team player is also part of the conventional use to which performance appraisals are put.

Knowledge processes (the creation of knowledge and its use), it is generally recognised, are difficult to observe and measure. This is not to say that one shouldn’t therefore try to do so. Many methods are in use, including ranking, grading, recording of behaviour in times of critical incident, management by objectives, and more recently and controversially, workplace surveillance. It is not the aim of this thesis to discuss these methods in any detail, not to devise any new way of measurement. It is, of course, essential to have some measure of performance, and to do it well and as objectively as possible, if effective feedback is to be given to employees. This, in turn, is necessary if appropriate goals are to be set. Appropriate record keeping of appraisals is another essential.

In the knowledge-aware organisation there is a particular difficulty in measuring tacit knowledge and its use. Tacit knowledge, by its very nature, is hidden, and its use can only be inferred through observation of behaviour. Nevertheless, it will be important to identify some observable elements by which to judge an employees contribution to knowledge management. Goals could be set that include working on a team to set up a database, or system, to convert tacit into explicit knowledge; identifying personal usage of tacit knowledge; identifying behaviour that involves sharing, and encouraging the use of, tacit knowledge; appraising the persons’ ability to convert ‘team tacit knowledge’ into explicit knowledge, and appraising the knowledge so gained for its ability to be used in management decisions or for achieving company objectives, and so on. A
persons’ contribution to the creation of a knowledge culture could also be appraised. To date, it is the organisation learning, document management, expert systems, and computer-supported co-operative work tools models that informed the thinking here (Raftopoulos, 2002). These things have not, yet, been integrated into a holistic model, however, and this produces confusion as to the role each plays towards knowledge management outcomes (Patrick, 2001 cited in Raftopoulos, 2002).

The HR functions of training and development will have a particularly important role to play in the knowledge-aware organisation. Conventionally, training ‘typically emphasises immediate improvements in job performance via the procurement of specific skills … [while] development … aims to prepare the employee for future job responsibilities’ (Stone, 2002, p.323). This means that existing skills in the organisation need to be inventoried, along with the number and types of task skills actually required, and access to training programs provided, internally and/or externally, to address any gap between the two. In the knowledge-aware organisation, an extra dimension would be added to the training needs analysis process. When doing the inventory of skills, the organisation would also need to take into account whether it had the ability to - convert tacit, into explicit, knowledge; retain the tacit knowledge of those people about to leave the organisation; use the available explicit knowledge in day-to-day processes and decision-making; and measure the achievement of the organisation in converting, retaining and using, tacit knowledge.

The inventory of knowledge skills - existing and required- would bring about the development of initiatives in the areas of individual and group training, counselling, and cultural training. New ways of measuring the effectiveness of training programs, as well
as extended ways of measuring performance would need to take account of individual and group contributions to the knowledge bank within the organisation. And substantial increases in training and development budgets would probably also be required.

Although in today’s world of depleted managerial ranks, less internal promotions, and more short term contracts, succession planning has been dismissed by many as superfluous (Stone, 2002), it has been the HR manager’s role to ensure that the organisation’s future managers receive the necessary preparation to successfully fill potential vacancies. In the knowledge organisation, part of this preparation would be to see that those with management potential develop positive attitudes to contributing their own knowledge and experiences to the organisation’s knowledge bank, as well as encouraging these attitudes and behaviours in others. This means a total commitment by senior management, through the performance appraisal system, needs-oriented training and development programs, and a corporate culture that fosters individual growth and internal promotion, to knowledge concepts and principles and knowledge management systems.

The process of separation from the organisation is no less important in a knowledge organisation than any of the other HR functions. When a person exits from an organisation it behoves the organisation to try to learn why the employee is leaving (unless of course the reason is obvious, such as retirement, for example). ‘Properly handled the exit interview can yield much revealing information … help[ing] the HR manager to diagnose the organisation’s weaknesses and confirm its strengths’ (Stone, 2002, p.800). In separation instances it is usually the HR manager, the line manager, and the person themselves who try to evaluate the causes of the exit and the impact the separation will have on the job in particular, and the organisation in general. This
evaluation process could include an attempt to measure the degree, to which the organisation’s skills and manpower will be affected, plus some reflection on, and evaluation of, any cultural, political, or social change that may result from the separation.

The organisation that takes knowledge and knowledge management seriously would view the exit interview as not only an opportunity to evaluate the causes of the separation, but also a chance to consider the as yet uncontributed tacit knowledge of the individual. A focus of the exit interview would then be on how to convert the individual’s tacit knowledge to explicit knowledge, in the short time that might be available before they leave. This may be quite difficult to achieve, even if the separation is an amicable one. It may be quite impossible if there is animosity towards the organisation from the individual. One might hypothesise that the exit interview may even be deliberately used in a destructive way, if the individual chooses to impart false or misleading knowledge. Care would therefore need to be taken.

*An Interactive Knowledge - HR Model*

The researcher here has developed his own model (Figure 2.10 below) in an effort to depict the HR processes of convention, their dynamic interplay with knowledge management practice, and the integration of the two within the framework of a Unified Field of Knowledge.
KM CONCEPTS

CONVENTIONAL HR PROCESSES
- Recruitment (R)
- Performance Appraisal (PA)
- Training and Development (TD)
- Succession Planning (SP)

K - HR PROCESSES
- K - R
- K - PA
- K - TD
- K - SP

HR Processes + KM

EMPLOYEE IN

KNOWLEDGE STATE

KNOWING STATE

KNOWN STATE

KM INTEGRATION IN HR

FIGURE 2.10
Integration of KM Practices in the HR Function
The left side of the model depicts the conventional HR processes of recruitment, performance appraisal, training and development, and succession planning. The conventional practices exist in the field of the knower, or the one that is open to knowledge; the one with the drive to seek experiences. The whirlpool indicates the dynamic interaction of conventional HR process with KM practice, and this exists in the field of the knowing, or process of knowing (Maharishi, 2003), or act of understanding (Webster, 1971). It is here that change occurs. That is, the HR professional integrates the concepts of knowledge and knowledge management into their everyday HR practices by suspending their values to enable themselves to be open to the new concepts of knowledge/knowledge management. This in turn leads to higher levels of understanding, and enables new actions to take place. These new actions, consisting of the integrated processes and practices, are depicted on the right side of the model. Two things may result from this integration. First, the learning’s of the HR professional engaged in this process will be fed back to the HR function for its future use and development in knowledge and knowledge management matters. This is depicted in the model by the feedback loop. Second, and just as importantly, the HR professional and the HR department per se, have the opportunity to engage with ‘open-others’ in the organisation, with whom the HR department is interdependent, and thus influence their experiences, leading to higher levels of understanding and new actions in other functions. Of course, where others are not prepared to risk their selves and their view of organisational life, new knowledge is not created, and no new actions can take place. These integrated processes exist in the field of the known. That is, the individual and the organisation may be said to be in a state of knowledge. In the words of Maharishi (2003): ‘Knowledge results from the coming together of the knower, the process of knowing, and the object of knowing … Knowledge is the Unified Field of knower,
process of knowing, and known’ (p.1). In this sense, knowledge is a learning activity, as Garvin (2000) points out. It is an activity that requires the effective transfer of knowledge from one part of the organisation to another, with the intention of using it to solve problems. This applies at the individual, group, and whole-of-organisation level.

SOME COMMENTS MADE

A review of the burgeoning literature on knowledge and knowledge management reveals that there is no universally accepted definition of what these terms mean. On the one hand, some writers, such as Sanchez and Heene (1997), view knowledge as a set of beliefs about causal relationships, while others see it as part of the broader concept of learning (Badaracco, 1991 cited in Wilson, 1996; Kim, 1998). Wilson (1996) describes knowledge as the link between data and action, whereas many others see it as a method to produce, or refine, information (Sveiby, 1997; Bonaventura, 1997 cited in Webb, 1998; Beckman, 1999 cited in Liebowitz, 1999). Knowledge management, on the other hand, is sometimes described in terms of a process, or conscious strategy, for capturing expertise (Burkowitz and Williams, 1999; Wiig, 2000), and sometimes as the lever for the use and reuse of resources (Wah, 2000 cited in Cortada and Woods; 2000; Harman and Brelade, 2000).

If there is no universally accepted definition of the terms knowledge and knowledge management, there is, however, general agreement about the benefits to be had through the application of knowledge concepts and the systematic management of knowledge. These have variously been described as adding value through improved interaction (TFPL, 1999); creating value through new connections (Edvinsson and Malone, 1997; Bahra, 2001); identifying best practice (TFPL, 1999); and articulating previously
obscured expertise and experience of workers (Barron, 2000 cited in Bahra, 2001), among other things. Writers such as Breu et al, 2000 (cited in Bahra, 2001) cite innovation and growth, increased organisational responsiveness, a customer focus, improved staff morale, and quality of decision-making as the business benefits to be gained.

Of course, not all researchers and writers in the knowledge field stop at pointing out the benefits of managing knowledge. Pfeffer and Sutton (2000), for example, make the point that the importance of the philosophy behind the concepts of knowledge and knowledge management is generally overlooked by organisations that focus, instead, on specific practices and the transfer of codified information to, and from, databases and other formal systems that cannot easily store tacit knowledge. The focus on specifics leads to a concentration on packaging and disseminating the knowledge that is most readily available, rather than seeking out the knowledge that is going to be most useful. There is often little senior management support for any sort of knowledge work anyway, and this may leave small groups of isolated, but interested workers, sharing knowledge between themselves, without engaging the total organisation. Further, when knowledge management is seen as just another fad, or short-term project, new systems and behaviours are not given sufficient time to become embedded (Chase, 1998; Davenport and Prusak, 1997). Sometimes, when organisations are told that knowledge management techniques must be applied throughout the enterprise, they discover that the cost of doing so becomes prohibitive (Wilson, 2002). For the same reason knowledge management systems fail when offered as Utopian ideals (Wilson, 2002).
Issues of time, plus those of power, structure, measurement systems, and culture are cited by Bahra (2001) as contributing to the failure of knowledge management in organisations. First, he says, most organisations are simply too busy to make knowledge management work. Second, knowledge management requires ‘a fundamental unselfishness’ (Bahra, 2001, p.208), such that knowledge is used in the service of others, rather than of the self - arguably anathema to many people, and organisations today. Third, the practice of structuring organisations along functional, regional, or business unit lines, each complete with its own recruitment and reward systems, and the need to make a profit, militates against the operation of knowledge management (let alone the successful operation thereof). Fourth, the measurement systems in use measure the wrong things, and fifth, existing organisational cultures, highly competitive and often aggressive as they are, also work against the success of knowledge management.

This thesis posits that instead of the current practice of designating one person, or unit, to be responsible for knowledge management, sometimes within the HR department, but often working ‘in isolated pockets without strong senior management support … [and being] responsible for KM systems … without engaging the whole organisation’ (Chase, 1998, pp.53-54) it would be efficacious for the HR department, the ‘people’ people, as a total entity, to be accountable for the growth of knowledge-awareness within the organisation, and the implementation of an integrated approach to knowledge management. This is because knowledge management is, above all, about people and the relationships between them. The HR department is uniquely placed, with its overview of the structures, manpower, reward systems, and training and development programs, to be instrumental in creating the open, accepting, unselfish culture required
to make a success of knowledge management. It is also the place that is usually responsible for hiring the right people and rewarding and developing them, so that they become effective and efficient contributors to the organisations ‘bottom-line’.

More than this, however, the HR professional has the opportunity to reinvent, not only themselves, but senior and middle management, in ways that lead to fundamental changes in what is considered to be of value to the organisation, and the actions by which these new values are implemented. According to Bartlett and Ghoshal (2003) this will, of necessity, mean a shift in the total concept of value management within the organisation. That is, until recently, the name of the game was to take as much economic value as possible away from ones competitors in order to increase the value of the organisation’s shares. Today, in these early years of the new millennium where those at the top earn commensurately more than those lower down, and, in the eyes of many, disproportionately so in relation to the value they create, or bring to the organisation, it will behove the enterprise to fully recognise the value of their human capital. This can be achieved by nurturing and developing it, leveraging it through cost-unit sharing, and rewarding those who focus, mobilise, and direct activities for the benefit for of the organisation and its employees. In other words, it is vital to capture and transfer the knowledge that resides in the human capital, and to do this effectively will mean gaining the trust and cooperation of the people. This in turn, it is argued, can best be done through developing a culture of knowledge-awareness, knowledge-sharing, and the appropriate resourcing and rewarding of individuals. It requires leadership - leadership that the HR professional is, this thesis posits, well placed to give.
Arguably, no-one would dispute that organisations need to recognise those things that motivate individuals, provide meaningful work, appropriately reward the right behaviours, and empower individuals to be creative and innovative in an environment that is encouraged to be open, and sharing. One final step, in a knowledge-aware organisation, needs to be taken, however, and that, according to Drucker (1993 cited in Allee, 1997, p.6) is to use knowledge to discover how existing knowledge can best be used and managed to produce results - ‘knowledge applied to knowledge itself’. No matter how one thinks about it, there is no argument that learning is increasingly important in organisations today, and learning from experience with the aim of improving business performance is one of the uses of knowledge management (Cross and Baird, 2000). It is to ‘learning’ and the ‘Learning Organisation’ that we now turn.
CHAPTER THREE

LEARNING AND THE LEARNING ORGANISATION

‘It is therefore an essential feature of man’s life that he should be established either on the path of knowledge or on the path of action. And if he wants to be ‘wise’, then he must also rise to embrace the goal of both’

(Maharishi Mahesh Yogi, 1976, p.279).

The practical need to know how to do something has always been important, although managing practical knowledge only became systematic with the advent of the craft guilds and the apprenticeship system of the thirteenth century. Later, the industrial revolution found new factory based enterprises endeavouring to create, produce, and deliver goods in larger quantities and at a more reasonable price than had ever been possible before. Where apprenticeship promoted the value of learning from practical experience, the factory system led workers to learn some rudimentary skills. At this time scientific management thinking segregated ‘thinking’ from ‘doing’ tasks, and, ‘work training’ was confined to a narrow skills-training function (Elsey, 1997). The rise of technical experts however ‘was based on formal learning and the codification of bodies of knowledge’ (Elsey, 1997, p.121). With the arrival of the human relations movement, work training was more broadly conceived as Human Resources Development (HRD), and training came to be regarded more seriously ‘as a tool of change’ (Elsey, 1997, p.121). Moving from the scientific management insistence on learning ‘the one best way’ to perform work tasks, the human relations movement concerned itself instead with facilitating learning in a variety of approaches, including encouraging a positive learning environment, critical reflection, and more constructive involvement in the work by the workers (Elsey, 1997). Out of these developments it is
only a short step to the idea of the Learning Organisation and on, to the idea of the knowledge organisation.

A review of the literature on learning immediately reveals a landscape of considerable complexity and confusion. Clear and unambiguous definitions of learning, organisational learning, and the Learning Organisation are not readily to hand. Discussion tends to quickly turn to issues of context (the internal and external environmental conditions), culture (traits and characteristics that help or hinder learning), the learner (the individual, group, or organisation), and types of learning, including strategies that facilitate learning (that is, the various models and approaches that have been developed). The literature emphasises the learning of individuals rather than that of organisations; how individual’s learning is turned into organisational learning is still vague however, and ‘rich empirical studies are needed in order to validate measures of organisation learning’ (Lahteenmaki, 2001, p. 113).

SOME DEFINITIONS

The precise meanings of the terms learning and organisation learning are not generally agreed on, but more general meanings can be derived from the ways researchers and others talk about these concepts. That is, that which people mean by the terms is implicit in the ways they talk and write about them. It is not the intention of this thesis to address in detail the debate that concerns itself with the meanings of these terms, and the reader may well be critical of this, perceiving it as a weakness of this work. The author points out, however, that these difficulties became apparent in the course of doing this review, and to give these issues detailed attention here would be to write a different thesis entirely, and so distract him from his major focus, which is to
investigate: the degree to which organisations in the Australian States of New South Wales and Victoria are aware of the concept of knowledge management, as it is currently being discussed in the literature; the degree to which these organisations implement knowledge management systems; and the current involvement, if any, of HR departments in achieving the knowledge management goals of the organisation.

This said, it is important to attempt some working definitions in the context of this particular work. First, however, a number of assumptions made in the literature, and in this thesis, about the nature of learning need to be made clear. It is generally agreed that learning is something that ‘occurs all the time … [and] is any relatively permanent change in behavior that occurs as a result of experience (Robbins, 2003, p.43 italics in the original). Further, it is usually accepted that learning involves change, which may be good, but also may be bad. That is, people can learn unfavourable, or dysfunctional behaviours just as readily as they can learn good, or favourable ones. Also, the change that occurs must be relatively permanent, and must be accompanied by a change in actions (Robbins, 2003). Next, it is generally accepted that learning is a given and assumed to be a constant for almost everyone (Garvin, 2000). The ability to learn is also expected to be the major source of competitive advantage today, and into the future (Senge, 1998; Stata, 1989) and it is thought, learning always means attaining the desired developments (Lahteenmaki, 2001). That is, the assumption is that all learning is valuable, and ‘firms with greater learning capacities will benefit more from a learning-based alliance so that companies with enhanced abilities in this regard will benefit’ (Rolland & Chauvel, 2000, p.233). A further central assumption is ‘that it is possible to measure learning’ (Thomsen and Hoest, 2001, p.469), and so know when, and if, learning has taken place. It must be noted, however, that learning as such cannot
be directly measured, but must be inferred from business results (Lahteenmaki, 2001). It is possible, at least in theory, however, to measure the learning process by focusing on the process and the people and their capacity to learn, which should be revealed through their attitudes to change. That is, the capacity to set objectives and demonstrate new behaviours will be indicative of a positive attitude to change and this in itself indicates that learning has taken place (Lahteenmaki, 2001).

**Learning**

The concepts of individual learning are important to an understanding of how common behavioural patterns are built up out of perceptual experiences. As mentioned in Chapter Two, there is a very large body of literature devoted to this subject, that explains new behaviour ‘on the basis of observing and imitating the behaviour of others’ (Thompson and McHugh, 2002, p.241). That is, learned knowledge is used through applying ‘categories of particular activities’ (p. 242). However, in order to know what we need to learn and what the appropriate behaviours are in a particular circumstance, we need ‘to know how the demands of that setting are communicated to us and why we internalise them’ (p.242). This is part of the enculturation process in organisations. By learning “how things are done around here” we avoid ‘indulging in wasteful and possibly embarrassing attempts to fit ourselves to our surroundings by trial and error, while managing to exert some control … over our own activity’ (p.242).

Learning may be thought about as a process of development to organisational memory (Walsh and Ungson, 1991) and is often talked about as being ‘a prerequisite for the survival of today’s organizations … because organizations continuously need to change internally, as well as adapt to changes they meet in their operational environment’
(Lahteenmaki, 2001, p. 113). Statements such as these, though, do not offer a definition of learning per se. Garvin (2000), however, offers the simple definition, of learning as an activity. Alheit and Dausien (2002) define it ‘as the (trans)-formation of experience, knowledge and action structures in the context of people’s life histories and lifeworlds’ (p.9). Cross and Baird (2000), however, consider learning ‘as a process of developing organizational memory’ (p.72). To Argyris (1999) learning is ‘the detection and correction of error’ (p.165). Elkjaer (2001) defines learning as the ‘intentional effort aimed at discovering relations between our actions and the resulting consequences in addition to our former/present experiences’ (p.441 italics in the original), while to Dixon (1994) learning is sense-making and is the process which leads to knowledge. Others, however, suggest that it is knowledge that is essential for learning (Huber, 1991). Whichever comes first (and this is a ‘chicken- and- egg’ conundrum that is beyond the scope of this thesis to debate) it has been suggested that learning and knowledge management should be integrated into one generic process (McLean, 2000). Perhaps, as Aspin (2000) suggests, the quest for a definition is a vain one, and ‘rather than engaging in a futile search for … an uncontested definition … the best one can do is to follow Wittgenstein’s advice (Wittgenstein, 1953;1958) and ‘look at the use’ of this term in the discourse of those who employ it’ (p.3). No doubt this is the best advice regarding the phrases organisational learning and the Learning Organisation too. In the context of this thesis, then, knowledge is considered to be that which is gained by learning through experience. In other words, learning is a process that leads to knowledge.

In the management literature, learning theory work is often linked to ‘increasing the effectiveness of formal training programmes’ (Thompson and McHugh, 2002, p.242;
Jones and Hendry, 1994), the province of the HR professional. The management learning literature has an emphasis here on learning styles, often directly linked to personality traits. Kolb’s (1976) work on the learning cycle and the Learning Styles Inventory (Kolb, Rubin and McIntyre, 1984) is, arguably, one of the best known models in this field, suggesting that learning takes place in four stages, all of which are deemed necessary if effective learning is to take place. A fore-runner of the action-learning methodology, the stages of learning start with a goal-related concrete experience, progress to reflection and interpretation of that experience, and move on to the formation of abstractions and generalisations related to goals. A period of action, or active experimentation follows, leading back to a goal-related concrete experience, and so on, continuously through the cycle.

In general, training refers to a ‘planned effort by a company to facilitate employees’ learning of job-related competencies … [which include] knowledge, skills, or behaviours … critical for successful job performance’ (De Cieri and Kramar, 2003, p.340). Recently, however, it has been acknowledged ‘that to gain a competitive advantage, training has to involve more than just basic skill development … [it has to move] to a broader focus of creating and sharing knowledge’ (De Cieri and Kramar, 2003, p.341). Facilitated by social capital (that is, the relationships between people), intellectual capital comes about through the combined knowledge and experience, and sharing of that experience, of many people.

**Organisational Learning**

Although, as mentioned above, the literature emphasises the learning of individuals, there is also much written about organisational learning. Here, again, any quest for an
uncontested definition is likely to be a vain one. Morgan (1986) cited in Aiken and Britton (1997) even suggests that organisations cannot, themselves, learn, but can only be organised in such a way that learning can take place. Again, it is not the intention of this thesis to argue points such as these.

Definitions of what organisation learning means vary from the simple to the more complex. Guns and Anundsen (1996) provide examples of both types of definition. Simply put, they define organisation learning as ‘figuring out what works or what works better’ (p.16). More elaborately put, they define it as ‘acquiring and applying knowledge, skills, values, beliefs, and attitudes that enhance the maintenance, growth, and development of the organisation’ (p.16). Writers such as Fiol and Lyles (1985) see organisation learning as ‘a process of improving actions through better knowledge and understanding’ (p.803), while Cummings and Worley (1997) express the meaning of the term as a ‘process aimed at helping organizations to develop and to use knowledge to change and improve themselves continuously’ (p.492). It is, if you like, an adaptive behaviour (King, 2001), and one in which the organisation’s knowledge base changes, leading to improved problem-solving ability and capacity for effective action (Probst and Buchel, 1997). The meaning of the phrase organisation learning seems to have broad acceptance in terms of being a process, then, and in the context of this thesis that is the meaning ascribed to it.

Argyris and Schon (1978) are often credited with the seminal work on organisational learning, and their work itself as deriving from Revans’ (1983) action learning model. Learning by doing, or ‘action learning’, is ‘a powerful and very cost effective ... approach to learning by using personal experience and reflection, group discussion and
analysis, trial and error discovery, and learning from one another’ (O’Shea, 1999, p.58).
Action learning looks at those aspects of a social system that are dynamic and changing, and focus on the experience(s) of those in the system. As Riding, Fowell, and Levy (1999) point out, action learning is:

‘both a way of producing knowledge ... and a powerful way of improving ... practice ... Practitioners not only look for ways to improve their practice within the various constraints of the situation in which they are working, but are also critical change agents of those constraints’ (p.2).

In other words, making tacit knowledge explicit, and reflecting on it, is a powerful way to produce new knowledge for the benefit of the organisation.

Developing Revans’ model, Argyris and Schon (1978) proposed that organisation practices and individual behaviors are defined by goals, expectations and learned methods - a framework that can be understood as a theory-of-action. This theory-of-action may be seen in two ways - first, in the espoused theory that the organisation wishes to present to the outside world, and that is visible in its documents, policies, reports and so on.; second, in its actual theory-in-use, that may be understood as the tacit knowledge that drives behavior in the organisation and that is often at odds with the espoused theory and therefore cannot be discussed.

An organisation learns by testing its theories-in-action, they said, and thereby detecting and correcting errors. Two types of learning have been developed - single loop/adaptive learning and double loop/generative learning (Argyris and Schon, 1978; Argyris, 1994; Senge, 1998). Single loop or adaptive learning enables short-term survival, but double loop or generative learning, is where fundamental changes to organisational operating paradigms are made. That is, the former detects and corrects errors without challenging existing norms of behaviour, while the latter detects and corrects errors that result, first,
in norms changing, and second, in a change in the underlying strategies and assumptions associated with the norms (Choo, 1998, pp.221-222). In other words, single loop learning results in ‘simple adjustments to strategies and processes without altering the underlying thinking [while] double loop learning involves challenging and reframing mental models, subsequently leading to increases in problem solving capability’ (Chapman and Ferfolja 2000, p.2).

Double loop learning is the critical difference between success and failure over the long term. Double loop learning therefore results in innovation and the reformulation of competitive strategies (Carneiro, 2000). Carneiro suggests that there are different levels of knowledge an organisation must manage: basic and available to everyone, and specialised. It is the specialised knowledge, which must be managed to support innovation in a dynamic environment. This can be done by developing a learning orientation within organisations.

Huber (1991) identified four constructs integral to the organisational learning process. These constructs are linked to knowledge, and suggest that knowledge is essential for learning. Huber’s learning constructs are:

Knowledge acquisition. Knowledge may be acquired intentionally (searching) or unintentionally (noticing).

Knowledge/information distribution. Information/knowledge from various sources must be shared: the wider the distribution, the greater the ability to learn. Distribution may be through formal processes or through informal contacts and learning by doing.

Information interpretation. Information is given meaning and shared understandings are developed. This may occur through formal meetings and discussions, or through recursive and informal, intuitive experiences.

Organisational memory. Knowledge is stored for future use, either formally codified (reports, memos etc) or institutionalised in cultural values.
These organisational learning constructs are essentially about knowledge management, demonstrating that the two processes of organisational learning and knowledge management are inextricably linked. In other words, the creation, acquisition, and communication of information and knowledge causes organisations to behave differently and subsequently produce improved organisational results (Huber, 1991).

Writers such as Davenport and Prusack (1998) also note that it is the disciplinary background of researchers and practitioners that is one of the critical factors in determining whether the term knowledge management is used, in preference to say, organisational learning, or vice versa. Others, such as Dixon (1994), describe organisation learning as a process involving the ‘generation, integration, interpretation and utilisation of knowledge’ (p. 44). As McLean (2000) points out, the ‘on-going separation of these two critical issues [that is, knowledge management and organisation learning] is not only confusing but [is] also detrimental to their development’ (p.1).

Much of the literature in this field, particularly in the 1990s, is ‘very normative and prescriptive … [and] does not usually provide clear answers about how [an organisation can] support and develop a learning environment in practice’ (Thomsen and Hoest, 2001, p.469), without which, this researcher contends, it is not possible to develop a knowing organisation. Furthermore, the language of these writings is abstract, and appears to assume that any organisation learning is a secondary phenomenon. That is, one begins with individual learning (and not with changes to work practices and structures), and the implication is that there is no problem in the relationship between individual learning and organisational problem-solving (Elkjaer, 2001). Such views have been heartily criticised, as Elkjaer (2001) notes, with many researchers pointing
out that learning is ‘related to the institutional and social context in which it takes place’ (p.439). In other words, the culture and climate of the organisation must be conducive to learning taking place.

*Learning Facilitators*: There are numerous supporting infrastructure factors, which can facilitate learning (McLean, 2000). DiBella and Nevis (1998) suggest that an appropriate reward system is crucial if there is to be real commitment to learning. This implies some form of management: measuring learning and knowledge and rewarding learning-related behaviours. The question of how learning behaviours can be measured in order to be rewarded remains to be satisfactorily answered, however.

Another infrastructure requirement mentioned in the literature is technological support such as computer databases, internet and email access and the like, to facilitate access to the information which when acquired, distributed, interpreted and stored becomes knowledge and learning (McLean, 2000). Clear systems for managing information and knowledge are also important. Additionally, there is a need for leadership support, and a clear commitment to learning and to individual team development. (Senge, 1998). Cultural factors are also important in helping to facilitate learning, and include high trust and mutual respect; open communications; truthfulness; commitment; team learning; sharing; systems thinking; and a move from competition to collaboration and co-operation (McLean, 2000).

It is our mental models (theories or assumptions) that influence our ways of understanding the world and how we take action (Senge, 1998). However, as noted by Chapman and Ferfolja (2000), as these models are simplified abstractions of the
experienced world, they are incomplete. Further, they may reflect out-of-date knowledge, and thus be flawed. These flaws may develop in a number of ways: that is, when knowledge remains in current use despite environmental changes; when attempts to make sense of the current reality are complex, uncertain, or ambiguous; when the structures for providing access to, and distributing knowledge, are inadequate; where there is a lack of congruity between what is intended to be communicated and how the communication is received; and where people ‘know’ different things about the same event, but do not realise it (Chapman and Ferfolja, 2000). Such flaws, in ‘the absence of appropriate education and organisational support [lead to] poor learning processes [and] unanticipated and unwanted outcomes’ (Chapman and Ferfolja, 2000, p.7).

Learning Inhibitors: There are also a number of other factors that may inhibit learning. Argyris (1994) lists several including: bureaucratic structures and processes that may prevent innovations by subjecting every new idea to too many checks and balances; learning that is restrictive; and/or defensive reasoning, where individuals act to protect themselves and others whenever important problems involve potential threats or embarrassment. Face-saving behavior, and ensuring that others don’t make mistakes, is anti-innovation and anti-learning. Finally, mental models which are used for dealing with emotional or threatening issues can be anti-learning. Further, the actual theory-in-use resorted to in moments of stress may be quite different to the rational principles of the espoused theory-of-action.

Beer and Eisenstadt (2000) suggest further factors, which inhibit learning: top-down or laissez-faire senior management style; unclear strategy and conflicting priorities; ineffective and inadequate senior management team and leadership skills; poor vertical
communication; and poor coordination across functions. Further, the building of knowledge repositories is likely to be time consuming, labour intensive, and very costly, and the technology is not yet sophisticated enough for large scale use. Nor should we overlook the difficulties involved in codifying tacit knowledge, and in keeping up with the constant changes and development in knowledge - without a great deal of attention to the upkeep of the system the knowledge base could easily become obsolete. Information overload and an employee’s inability to see the benefits of knowledge management will also generally result in the system not being used (Bollinger and Smith 2001).

Poor organisational memory would also, presumably, inhibit learning. Organisational memory ‘is a persistent record not dependent on a tight coupling between sender and receiver’ (Stein, 1995 in Argote, 1999, p.22). It is the means by which past knowledge is brought to bear on the present. Organisational memory can be seen to reside in the individual employee, the culture of the organisation, the standard operating procedures and practices of the organisation, its structures and roles, and the physical structure of the workplace (Walsh and Ungson, 1991 cited in Argote, 1999). However, when people leave the organisation, or forget things, and when records are lost or destroyed, and technologies become obsolete, one could say that the organisation has lost some of its memory; that is, it has ‘forgotten’. (If organisations can be said to learn and remember, then likewise they can be said to forget). This has important consequences, it must be pointed out, for organisational performance. If one considers that an individual in an organisation in fact has many relationships, the ‘damage [to] and loss of significant ‘chunks’ of organisational memory’ (Pickett, 2003, p.19) may lead to foregone business opportunities -something that every organisation should be working very hard to avoid.
Szulanski (1996) concludes that organisations may not learn because they do not know how to learn. She suggests that knowledge related factors such as ambiguity associated with knowledge, the ability of the recipient to identify, value and apply new knowledge, and the ease of communication between the recipient and the source of knowledge may affect the ability to learn. Feelings of ownership of certain knowledge may also lead to a (deliberate or otherwise) lack of interest in sharing it for fear of losing the power that comes with having it.

It is important to note, however, that if one accepts the notion that learning is related to the social context in which it takes place, the barriers to learning are ‘created by peoples’ wishes, expectation, beliefs and habits [which] remain in place because they [are] reinforced and never challenged; eventually they become invisible, because they [are] so taken for granted’ (Senge et al, 1999, p.48).

**The Learning Organisation**

The Learning Organisation is a relatively new term, but it is really an old concept that refers to a group that is ‘structured and motivated to respond intelligently to market changes and competitive advantage’ (Spender, 2000, p.152). It is a concept that is ‘characterised by themes of strategic and self-managed change as a way of dealing with environmental uncertainty’ (Thompson and McHugh, 2002, p.247). The ‘Learning Organisation’ is a descriptor phrase, then, for a particular type of organisation, one ‘skilled at creating, acquiring and transferring knowledge and at modifying its behavior to reflect new knowledge and insights’ (Garvin, 1993, p. 80). Whether or not one can
actually ‘designate certain firms as learning organizations’ (Rowden, 2001, p.2) and others as not being so, has been debated elsewhere.

The idea of the Learning Organisation has developed, however, according to Rowden (2001), through a number of stages, or models. The first three of these were based on learning how to change by encountering obstacles, and over time, figuring out what actions would lead to change. The first model focused on the creation of a formal, fixed, plan, which presumed that ‘incipient trends could be detected through the use of sophisticated environmental scanning methods’ (p.3). This plan was usually a once a year event, and was restricted to the most senior staff only. As a rational tool, using quantitative analyses of the internal and external environments, it was consistent with the traditional scientific management view of organisation structure, where planning is done at the top and those further down are responsible for operationalising the plan. It was expected that action would be quick, and results would be as planned. Such plans often failed however. The reasons were varied, including issues of limited time and resources, lack of commitment by those not at the top, and so on.

The limitations of this formal planning process led to the second model. Emerging in the late 1970s, early 1980s, this model paid a great deal of attention to how plans were to be implemented (Fusch, 1997, cited in Rowden, 2001). Middle managers were now included in the planning process, as it was recognised that they frequently did have information that was valuable and likely to aid in the success rate of the plans. More consideration was given to resources and to informing all affected employees of the expected outcomes of the plan, and how they pertained to the strategic direction of the
organisation. Monitoring of progress and resolving problems as they occurred was also emphasised.

This model too, had its limitations. Senior managers often let internal politics drive their vision for the organisations’ future, while middle managers were prone to focusing on the short-term operational results, as these were what were rewarded. Line staffs were not told about the changes occurring in the environment around them, nor were they aware of the strategic direction of their enterprise, making it difficult for them to see the need to change their ways of doing things.

The time was right for the third model to evolve. In response to the problems of the implementation focused model, the next stage emphasised a ‘creation of readiness for change … recogniz[ing] the importance of … readiness, planning, and implementation’ (Rowden, 2001, p.4). That is, successful strategic change was seen to be dependent on a degree of readiness for that change, and that meant building awareness for the need to change, creating a climate that would support the change, including realigning the culture, rewards systems, policies and procedures, and training the people in the necessary skills to carry out the required change. Of course, these things do not always happen smoothly, or effectively. Changing people’s attitudes is extremely hard to do; resources are not always available, nor are they necessarily used to best advantage; implementation of new policies and procedures can take time; and consideration of reward systems is often the last thing to receive attention.

These limitations then led to the fourth model, the Learning Organisation. Rowden (2001) describes the Learning Organisation as one where there is a state of ‘constant
readiness, continuous planning, improvised implementation, and action learning’ (p.6). In other words, the Learning Organisation prepares, not for a specific change event, but for change in general. It develops ‘open, flexible plans that are fully shared and embraced by the entire organisation’ (Rowden, 2001, p.6) and encourages experimentation, rewarding success along the way. Every member of the organisation is seen as a strategic partner. The Learning Organisation reflects on its experiences and takes appropriate action as it goes. This, of course, is the essence of double-loop generative learning/action learning.

The researcher here posits that a fifth model presents itself as a natural extension of the Learning Organisation. This is what shall be called Knowledge Management. Ives and Gordon (2000) argue for the integration of Knowledge Management and organisation learning, suggesting that the ‘optimization of business functions is best achieved by integrating knowledge management with other learning initiatives’ (p.1). McLean (2000) highlights how knowledge management and organisation learning ‘are both symbiotic and synergistic … [while] the overall process of developing … knowledge, and of utilizing new and existing knowledge is considered ‘learning’’ (p.1).

No learning, however, occurs without individuals who learn, and facilitating the building of Learning Organisations involves, according to Senge (1998) ‘developing people who learn to see as systems thinkers ( p.367). Systems thinking, according to Senge (1998), makes understandable the way individuals perceive themselves, and their world (including their work world). Systems thinking allows individuals to see themselves as connected to their world/business, rather than as separate from it; it allows individuals to see how their own actions create the problems they experience.
According to Senge (1998) systems thinking is the cornerstone of the Learning Organisation. It allows us to examine processes and understand the complexity of the underlying structures (that is, the pattern of interrelationships among key components of the system (Senge, Kleiner, Roberts, Ross and Smith, 1999)), leading to a long-term view of situations, and therefore to long-term solutions to problems. Systems’ thinking goes beyond being a problem-solving methodology. It becomes a way of thinking that first ‘allows people to see more clearly their own and others’ assumptions, actions, and consequences of both’ (Senge, 1998, p.377). Second, it leads to a loosening of all the old rules and the creation of new ‘action rules based on new assumptions so they can see what they yield’ (Senge, 1998, p.377). Third, it allows people to ‘string together rules that reflect new action values and operating assumptions’ (Senge, 1998, p. 377). In other words, learning is encouraged; there is time for reflection on actions, and the incorporation of new learnings; and there is time for the practice of new actions and so on, through a continuous cycle.

It is fair to say that individual and organisational learning, along with the knowledge management process, are the means by which organisations move from where they are, to where they want to be. Flood (1998) cited in McLean (2000), suggests ‘we must learn to ‘learn our way into the future’ - making the necessary corrections/adjustments as we go’ (p.2). Effective learning and knowledge management is therefore ‘a core strategic competency necessary to move organisations from their ‘Current Reality’ to a new ‘Future Desired State’ (Seemann, 1992 and Wheelan & Hunger, 1998, cited in McLean, 2000, p.2).
King (2001) has identified six knowledge related activities, or strategies, for creating a Learning Organisation. These are: knowledge management; intellectual property management; innovation; organisational learning; individual learning; and information systems infrastructure. Each of these strategies has a different conceptual basis, focus, objectives, processes, performance measure, culture and systems. Not all organisations will develop all six strategies. Nor should they, choosing instead, those that will be potentially more effective in their particular case.

The knowledge management strategy, for instance, presumes that tacit knowledge can be made explicit, at least in part. This is ‘somewhat at odds with the view that tacit knowledge is best transferred tacitly, from individual to individual: [a view] that is a linchpin of the individual learning strategy’ (King, 2001, p.6). The conceptual basis here is that specific professional expertise can be leveraged through sharing, which itself is facilitated through knowledge management programs, activities and systems. Performance is measured by ‘the quality and timeliness of decision making, increases in knowledge-sharing behavior, the level of reuse of existing knowledge, less dependence of the organisation on a few key individuals, reduced administrative costs, and less redundancy’ (King and Ko, 1999 cited in King, 2001). The culture is, of course, one of knowledge sharing.

The individual learning strategy emphasises the training and learning of individuals, and focuses on enhancing the value of the human capital of the organisation. It requires a focus on both explicit and tacit knowledge if it is to be effective and includes both formal training and on-the-job training, allowing the individual ‘to capture the knowledge of experts through observation, imitation, and practice’ (King, 2001, p.4).
Performance measures include the number of successfully completed training programs and career advancements. The culture is one of valuing learning. The organisation hopes that by encouraging and supporting individual learning, organisational behaviors and performance will also improve.

Organisational learning, as pointed out earlier, is related to individual learning. The focus of the organisational learning strategy is on learning by social systems resulting in ‘shared knowledge, values, normative standards, and behavioral patterns’ (Probst and Buchel, 1997, p.17). The conceptual basis here is that of social capital, and the objective is to facilitate learning through organisational processes. These processes include formal training and teamwork. Performance measures include improved productivity, customer and employee satisfaction, improved quality of product, reduced costs and so on.

The innovation strategy, as one would expect, focuses on generating, developing, and implementing new techniques, products and processes, and on generative learning, or creativity. Thus, the culture is one of creativity, and performance is measured by the number of patents applied for and how much revenue is derived from new products and so on. The intellectual property management strategy leverages existing explicit assets such as patents, trademarks, formulas and the like, and thinks of this explicit knowledge as a capital asset. Performance is measured by the return on investment from the generation of these activities. The information systems infrastructure strategy is involved in the collection of data and its transformation into valuable and useable explicit information. These strategies, whatever the combination organisations choose to use them in, may be developed in the pursuit of becoming a Learning Organisation,
and also may be used ‘to revitalize an organisation’s learning initiative’ (King, 2001, p.1).

The term Learning Organisation will be used in this thesis to indicate organisations that tend to have particular characteristics. These characteristics include: learning collaboratively; valuing the process of learning as much as the content; investing in staying ahead of the learning curve relevant to the organisation’s industry; turning data into useful knowledge quickly and at the right time and place; enabling each employee to feel that every experience is potentially useful; investing in, and supporting people who want to pursue experimental learning; not penalising those who share information and conclusions (Calvert et al, 1994 cited in Sandelands and Christie, 1998); organisations having the ability to transform themselves by using learning to adapt and succeed in changing environments (Marquardt, 1996); being flexible; creating settings as contexts for human development (Argyris, 1999); recognising that self-development ‘is a necessity and not a self-indulgent luxury’ (Murphy and Blantern, 1997, p. 55); nurturing new and expansive patterns of thinking, and ‘where people are continually learning how to learn together’ (Senge, 1998, p. 3).

By the end of the 1990s, the Learning Organisation idea had become an indispensable one for managers, researchers, and consultants (Sugarman, 2001). Able to be recognised from the outside ‘by its agility in changing how it relates to the external world and how it conducts its internal operation it [is also recognisable] from the inside by an ethos in which learning from challenges and mistakes is central (Sugarman, 2001, p.62). Learning Organisations also tend to provide continuous learning opportunities, link individual performance to organisational performance, foster inquiry and dialogue,
have an open, sharing culture where it is safe to take risks, derive energy from creative
tension, and are continuously aware of, and interact with the environment (Calvert,

Many researchers and consultants, as mentioned earlier, also talk about the Learning
Organisation with, and/or as, part of one or another process of organisational change,
usually in the context of competitive advantage: ‘…many leading organizations are
constructing arks comprised of their inherent capacity to adapt to unforeseen situations,
to learn from their own experiences to shift their shared mindsets, and to change more
quickly, broadly, and deeply than ever before. In other words, to become learning
organizations’ (Rowden, 2001, p.2).

The concept of organisational learning within the change management literature is not
clearly defined however, according to Lahteenmaki (2001). It is seen simply as
something ‘that increases an organisation’s ability to implement planned change and
reach its objectives’ (Lahteenmaki, 2001, p.9). According to Geertz (1964) learning
reduces uncertainty and therefore helps reduce resistance to change, and it is a vital part
of the change process because it improves the organisation’s efficiency and
Thus, learning can be seen as ‘a mediating factor between change objectives and
business results’ (Lahteenmaki, 2001, p.9). Change resistance, on the other hand, might
be understood as ‘a resistance to unlearn’ (Lahteenmaki, 2001, p.10).

Whether one prefers the phrase Learning Organisation, or organisational learning, too
‘few have paid attention to the crucial role of learning as a key enabler to knowledge
management. This is troubling as learning processes define the quality of knowledge’ (Cross and Israelit, 2000, p.viii). The worker of today is valued for their ‘ability to contribute unique knowledge, skills and perspectives [but] to truly leverage knowledge, we must work with the subjective nature of learning’ (Cross and Israelit, 2000, p.viii).

The key to acting on new ideas faster than one’s competitors, is the transformation of important experiences into knowledge that benefits the whole organisation. To do this, however, requires planning and resources (Moingeon and Edmondson, 1996; Sanchez and Heene, 1997), and something more than simple enthusiasm for buying knowledge management technologies, without substantial ‘investments of time in [the] “softer” processes of learning’ (Cross and Israelit, 2000, p.ix). Organisational learning, or, if you will, competence development or strategic capability, is increasingly important in the knowledge economy. However, learning in organisational settings is a complex and fragile process, occurring as it does in a social context. Thus,

‘to be truly effective, knowledge management initiatives must help individuals learn more effectively, and must also attend to the social processes that shape how knowledge becomes actionable [for] the true pay - off for knowledge management lies with putting newly created knowledge into action …and then ensuring that lessons from the experience benefit others within the organisation’ (Cross and Israelit, 2000, p.x).

That is, ‘if organizations want to see business improvements they must look to embed knowledge into various organizational structures and processes’ (Cross and Israelit, 2000, p.87). As mentioned earlier, HR is ideally placed to add value to the organisations’ processes through its handling of employee relations.

Workplace changes that have important implications for HRM, which surveys of Australian organisations in the 1990s have identified as: employee relations, worker participation and teamwork, and training, learning and development (De Cieri and
Kramar, 2003). Assessments have also been made by HR managers of the activities that HR professionals perform. The words ‘Knowledge’ and ‘Knowledge Management’ (KM) are noticeably absent from these assessments. It is likely that this is due to the researchers who developed the surveys not including any specific questions about knowledge and KM. On the other hand, if this is the case, this too is surprising, as the concept of knowledge and how to manage it has been talked about for the best part of ten years now. Perhaps the inclusion of learning and development in such discussions and surveys is meant to be inclusive of the idea of knowledge management. But this we do not know.

The empirical research that shall be reported next hopes to correct this apparent oversight, at least as much as it can. It was designed to test the degree to which organisations are aware of knowledge concepts, and the degree to which they implement KM systems. Special attention was given to the HR function, its awareness of knowledge concepts, and the role it currently plays in implementing KM policies, practices, and systems.
CHAPTER FOUR
AN EMPIRICAL STUDY
A KNOWLEDGE MANAGEMENT STUDY OF COMPANIES IN
THE AUSTRALIAN STATES OF VICTORIA AND NEW SOUTH
WALES

It was noted earlier that the concept of Knowledge Management as a decisive factor in an organisation’s ability to gain competitive advantage and be commercially effective has gained prominence in the management literature in recent times. Environmental pressures, globalisation, changing employee and customer demands, and the urgent push to innovate, have led, among other things, to a proliferation of business/management consultants who are promoting their skills by running workshops/seminars, writing books, and consulting privately to business (For example, Stapleton, 2003; McElroy, 2003; Garvey and Williamson, 2002; BizMedia, 2002; Senge, 1998; E-Gov, 2002; Association of Computing Machinery, 2003). For all this, and the doubtless very large sums of money being spent by companies to avail themselves of this expertise, there is a general lack of empirical work being done to show that companies have made any substantial progress from ‘talking the talk’, to ‘walking the walk’.

Writers such as Conceicao, Gibson and Shariq (1997) have pleaded for ‘new research areas, and the development of a new research agenda to deal with [an] emerging Knowledge Management discipline’ (p. 138; 139). They identified three main research directions - ‘the development of a better conceptual understanding of the mechanisms that make knowledge so relevant nowadays; the construction of indicators associated with the immaterial aspects of the knowledge-based economy; and the study of the
opportunities and threats faced by developing nations’ (p.129). This study adds to the research agenda of Conceicao, Gibson and Shariq. The study reported below set out to redress, albeit in a small way, the lack of empirical works available to date. The author notes that there is beginning to be quite a body of work devoted to case studies that aim to help organisations think about KM in a practical way (De Cieri and Kramar, 2003), but there still appears to be a lack of research of the type attempted here.

Broadly speaking, this empirical study set out to discover if there was a causal relationship between an act of acknowledging the importance of Knowledge Management as a concept, and any implementation of KM policies, practices, and systems. A second area of study looked at the role of the Human Resources function in any implementation process. A third aim was to investigate the relationship, if any, between the degree of implementation of KM policies, practices, and systems and the gender and level of educational qualification of the individual responsible for such matters.

As indicated earlier, there is a school of thought that understands KM as primarily an information technology issue where the focus is on explicit knowledge and the creation of databases for storing information and making it available. A second school of thought, however, understands KM as a human resources issue with an emphasis on a strong, positive, organisational culture and teamwork. The research survey therefore directed some questions towards understanding the degree of importance (or, level of awareness) and level of implementation of Information Technology in the respondent’s organisation, and other questions towards an understanding of the culture of the organisation (Appendix C).
The study involved a series of questions. Section One of the survey contains questions which cover the key areas of KM as identified in the theory and relates to the importance the respondent’s organisation places on it. In other words, this Section tries to identify levels of awareness of KM concepts and so on. Section Two relates to the degree of implementation of the elements within the respondent’s organisation. The third section contains questions about tacit knowledge and the role of the HR department in regard to it, while the final section of the survey asks some demographic questions (Appendix C).

The selection of organisations to which survey questionnaires were to be sent was made on a couple of premises. First, it was important that organisations were of sufficient size for the researcher to be confident that there would be a discrete Human Resources department, as one of the areas of interest in this research was to look at the role of the HR function in any process of implementation of KM policies, practices, and systems. For this reason organisations having 500 or more employees were selected from the Dun and Bradstreet *Business Who’s Who* (2001) Second, it was thought that the Human Resources department would more likely be found in the organisation’s Head Office (its traditional location), than not, and it was presumed that the majority of potential respondent organisations would locate their Head Office in either Melbourne (capital city of the State of Victoria), or Sydney (capital city of the State of New South Wales). For this reason the scope of the survey was confined to the States of Victoria and New South Wales.
The survey was addressed to the Manager, Human Resources. Using the Dun and Bradstreet database (2001) mentioned above, a total of 250 companies meeting the required criteria of size, location, and discrete HR department were identified, and sent a survey through the mail. Eight-eight Victorian companies received the mail-out, the remainder going to companies in New South Wales. The questionnaire method was chosen in preference to the interview method as the study was interested, largely, in the frequency of occurrence of the phenomena of KM implementation in organisations.

Questionnaires consist of a ‘list of carefully structured questions … with a view to eliciting reliable responses from a chosen sample. The aim is to find out what a selected group of participants think or feel’ (Hussey and Hussey, 1997, p161). The survey questionnaire technique records data in a systematic way and allows for results to be produced in a standardised format. As time was of the essence here, the survey questionnaire was felt to be most appropriate. Quantitative data, such as that here, also lends itself well to statistical software packages as the instrument of analysis. The statistical package favoured here was the Statistical Package for the Social Sciences (SPSS)(2002). It could be argued, of course, that this research study might be enhanced by the addition of some qualitative data in the form of interview material. The author acknowledges that this might be so, but notes that the very limited time in which to complete the research and submit the thesis to examination made the gathering, analysis, and write-up of interview material impracticable.

Cost was also a consideration. It was necessary, for a variety of reasons, to keep costs down. Utilising a survey questionnaire allowed a larger, more geographically dispersed sample, to be reached, at lower cost, and in less time. The postal survey questionnaire,
the type this survey was, has the further advantage 'that every respondent is asked the
questions in exactly the same way as the others’ (Hussey and Hussey, 1997, p.161).
This reduces the risk of bias, that is present in the qualitative interview situation. Of
course, it also obviates the opportunity to ask follow-up questions. Nevertheless, as the
frequency of occurrences of certain phenomena was of interest here, this was not felt to
be a critical consideration.

A small pilot study was conducted to check the clarity of the questions and the time
taken to fill in the survey. Several drafts were completed. Two separate mail-outs
eventuated. The survey was addressed to the Manager, Human Resources (or similar
title), as listed in the Dun and Bradstreet database (2001). A reminder was sent to all
companies extending the period of time available in which to respond by two weeks
(Appendix B). This was done in an effort to maximise the response rate. The survey was
anonymous, and the researcher had overlooked giving each questionnaire a number, so
it was not possible to know who had responded and who had not; it was therefore
necessary to duplicate the entire mail-out.

A valid response rate of 15% was ultimately achieved. Although this may be considered
a low response rate by some, there is no agreed upon standard for what constitutes a
minimum acceptable rate (Fowler, 1984), and ordinarily, response rates for mail surveys
are low (Alreck and Settle, 1985). Furthermore, it has never been satisfactorily
established that low response rates automatically produce bias (McMillan, 1985). There
are a variety of reasons, one could hypothesise, for the response rate not being higher.
The subject of KM is somewhat specialised, and companies not implementing KM
systems, regardless of their level of awareness of the issues, may not have felt they
could make a useful contribution. Some may have felt embarrassed at a lack of involvement, and so did not reply. Participation was entirely voluntary and no inducements to respond were used. The survey was addressed to the Manager, Human Resources (or similar title) and an absence of that individual during the time nominated in which to reply would probably have led to a non-response. Finally, it is also possible that some companies felt that to answer the questions would be to break their confidentiality or privacy rules. Three companies did, in fact, indicate that this was the case. On the other hand, it should be pointed out, those who did reply were likely to have been those considering, or about to embark upon a KM implementation program, as well as those already involved in some way, or perhaps a few who might have had an intellectual interest in the area, rather than any disinterested people. Thus there may be a degree of positive bias in the sample.

CHARACTERISTICS OF THE SAMPLE

A general summary of the size and annual turnover of the obtained organisational sample is shown in Table 4.1. Size was, as mentioned above, an important criteria used in selecting organisations to survey. For the reasons given earlier, organisations having 500 or more employees were chosen. Twenty-five percent of the obtained sample employed between 500 - 999 people, while 36% employed between 1000 - 5000. A further 19% employed in excess of 5000 people. The organisations in the obtained sample are therefore considered to be large businesses, as so defined by the Australian Bureau of Statistics, 2002 (Cat. No. 1321.0).
Table 4.1
Size and Annual Turnover of the Respondent Companies
(N=36)

<table>
<thead>
<tr>
<th>Size (Number of employees)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 – 999</td>
<td>25</td>
</tr>
<tr>
<td>1000 – 4999</td>
<td>36</td>
</tr>
<tr>
<td>5000 or more</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Turnover in millions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1-999m</td>
<td>47</td>
</tr>
<tr>
<td>$1000-4999m</td>
<td>17</td>
</tr>
<tr>
<td>$5000m and above</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Figures do not always add up to 100% because some respondents omitted to record a response in these categories.

Table 4.2, below, is a general summary of the characteristics of the Officer of the organisation who responded to the survey. The largest proportion of the obtained sample (58%) were males, while 39% of all respondents were aged between 36-45 years. A substantial proportion of respondents (86%) had spent less than 10 years in the employ of their current organisation, while 28% had been involved in some way in KM implementation for a period of more than three years. A further 22% had been involved in KM implementation for 12 months or less. One third of the respondents held a Masters degree of some sort, or a higher qualification, while a quarter of the respondents held a Graduate Diploma qualification. That is, a little more than half of all respondents held a post-graduate degree of some sort. The remaining 44% of respondents held either a Bachelor or Honours degree, a School Certificate, or some other, unspecified, qualification.
Table 4.2  
Characteristics of the Responding Officer  
(N=36)  

<table>
<thead>
<tr>
<th>Gender</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>58</td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 35 years</td>
<td>22</td>
</tr>
<tr>
<td>36 - 45 years</td>
<td>39</td>
</tr>
<tr>
<td>46 - 55 years</td>
<td>28</td>
</tr>
<tr>
<td>56 - 65 years</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational Qualification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Diploma</td>
<td>25</td>
</tr>
<tr>
<td>MBA;Masters;PhD</td>
<td>31</td>
</tr>
<tr>
<td>Other (mainly Bachelor/Hons degree; School Certificates; Unspecified)</td>
<td>44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years in Organisation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10 years</td>
<td>86</td>
</tr>
<tr>
<td>11 - 20 years</td>
<td>8</td>
</tr>
<tr>
<td>21 - years and above</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Months in KM Implementation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 12 months</td>
<td>22</td>
</tr>
<tr>
<td>13 - 24 months</td>
<td>17</td>
</tr>
<tr>
<td>25 - 36 months</td>
<td>6</td>
</tr>
<tr>
<td>More than 36 months</td>
<td>28</td>
</tr>
</tbody>
</table>

Note: Figures do not always add up to 100% because some respondents either omitted to record a response in these categories, or responded Not Applicable.

Respondent organisations represented many sectors of the private economy. Manufacturing had the largest representation (17%), followed by Finance (14%). The third largest sector was telecommunications (6%). Other sectors represented included banking, chemicals, clothing, engineering, food, market research, media, pharmacy, publishing, recruitment, and transport. Each of these was represented by one organisation in the obtained sample.
Respondents were also asked to indicate the functional areas within their organisations where knowledge management concepts were being applied. These are shown in Table 4.3 below.

Table 4.3
Functional Areas where Knowledge Management is being Applied

(N=36)

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service</td>
<td>69</td>
</tr>
<tr>
<td>Marketing</td>
<td>75</td>
</tr>
<tr>
<td>Information Technology</td>
<td>72</td>
</tr>
<tr>
<td>Sales</td>
<td>67</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>47</td>
</tr>
<tr>
<td>Web site management</td>
<td>47</td>
</tr>
<tr>
<td>Engineering</td>
<td>33</td>
</tr>
<tr>
<td>Finance</td>
<td>50</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>36</td>
</tr>
<tr>
<td>Legal</td>
<td>39</td>
</tr>
<tr>
<td>Other (Human Resources)</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: Figures will add up to more than 100% as companies may apply knowledge management practices and technology in more than one functional area.

The functional areas indicated in the Table above are, arguably, those you would expect to see in an organisation applying knowledge management concepts, practices, and systems. Of course, this Table does not show in which ways KM is being applied. That is, is the organisation using technology to gather, store, and have available for use, the explicit, easily measured knowledge, or is it making efforts to uncover and use the tacit knowledge of its employees? Although Question Nine Section Four does not specify the HR function as one where KM systems might be applied, there is the option, under the category Other, for respondents to nominate the HR function. Five respondents indicated this category, citing Health Safety and Environment; Therapy Services; HR.
Products; HR; and Logistics and Supply. All but the last, arguably, form part of the HR function and department, these five responses forming 14% of the total responses here. Given that the survey was addressed to the HR manager (or similarly senior HR person), and presumably was more likely to have been answered by that person rather than a more junior member of the department, it is a surprisingly low percentage. Perhaps many of the respondents, used to seeing the HR function as providing a service to the rest of the organisation, automatically look outward to the organisation, rather than inward to the HR function itself. This may account for the low percentage of responses here indicating that Knowledge Management is being applied in the HR function.

In hindsight, Section Four, Questions 10, 11, 12, and 13 may have caused some small confusion in the minds of respondents, and this may have been the reason that there were nine (5.6%) missing responses to each of these questions. The confusion, if such existed, may lie in the choice of wording and the way respondents interpreted the words, although the Pilot study did not indicate that there were difficulties. For instance, it is possible that some readers interpret the words ‘policy’ and ‘strategy’ to mean the same thing, as a policy can be defined as a ‘course of action’ (Reader’s Digest, 1985, p.373), and a strategy is sometimes referred to as an ‘overall plan, grand design’ (Reader’s Digest, 1985, p.476). However, it is fair to say that generally, the word ‘policy’ is taken to mean a plan that results ‘in outcomes of organisational commitment, competence and cost effectiveness and, in turn, [has] long-term consequences for individuals, enterprises and society’ (De Cieri and Kramar, 2003, p.6). ‘Strategy’ is also generally understood as the ways an organisation tries to ‘fulfil its mission and achieve its long term goals’ (De Cieri and Kramar, 2003, p.600). In other words, policies are
plans that layout future directions for the enterprise, and strategies are the operational steps to be taken to achieve those goals. These definitions, then, are the ones the author had in mind when constructing his survey. However, as noted above, at no stage, either during the pilot study or the main research project, did anyone indicate that they had a problem interpreting these questions. Of course, this does not necessarily mean that no person had a difficulty, just that no one said so.

Table 4.4
Knowledge Management Policy

<table>
<thead>
<tr>
<th>Level Responsible</th>
<th>Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=36)</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Senior Management</td>
<td>36</td>
</tr>
<tr>
<td>Middle Management</td>
<td>19</td>
</tr>
<tr>
<td>Line Management</td>
<td>n/a</td>
</tr>
<tr>
<td>HR department</td>
<td>8</td>
</tr>
<tr>
<td>Separate KM Cell</td>
<td>8</td>
</tr>
<tr>
<td>Different levels jointly responsible</td>
<td>19</td>
</tr>
</tbody>
</table>

Note: Figures do not always add up to 100% because some respondents omitted to record a response in these categories.

Table 4.4, above, indicates the organisational level responsible for planning KM policy. Here, and not unexpectedly, we find that senior management is the group largely responsible for deciding on the plans that will take the organisation forward (36%). Significantly, the author argues, only 8% of the obtained sample indicated that KM policy is contributed to by the HR department.
Table 4.5 indicates the organisational level responsible for KM strategy.

Table 4.5
Knowledge Management Strategy

<table>
<thead>
<tr>
<th>Level Responsible</th>
<th>Implementing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N=36)</td>
<td>%</td>
</tr>
<tr>
<td>Senior Management</td>
<td>19</td>
</tr>
<tr>
<td>Middle Management</td>
<td>31</td>
</tr>
<tr>
<td>Line Management</td>
<td>11</td>
</tr>
<tr>
<td>HR department</td>
<td>2</td>
</tr>
<tr>
<td>Separate KM Cell</td>
<td>2</td>
</tr>
<tr>
<td>Different levels jointly responsible</td>
<td>25</td>
</tr>
</tbody>
</table>

Note: Figures do not always add up to 100% because some respondents omitted to record a response in these categories.

Again, and not unexpectedly, we find middle management is the group largely responsible for operationalising the plans (31%). Here, only 2% of the obtained sample indicates HR department involvement, although 25% of the responses indicate that more than one level takes responsibility. Unfortunately, it is not possible to ascertain the percentage distribution from each level within this jointly responsible category.

HYPOTHESES

The method of the study employed here involved testing hypotheses about the degree to which companies in Australia, specifically in the States of Victoria and New South Wales, recognise the concepts of knowledge and knowledge management and implement them in the day-to-day running of their businesses. The role of the Human Resources function is also tested. Further tests were aimed at discovering if there was any significant relationship between the gender of the responsible individual and the
degree of implementation occurring in the obtained sample, and similarly between the levels of educational qualification held by the responsible individual and the degree of implementation. It should be noted, however, that in line with the Australian Bureau of Statistics methodology for measuring a knowledge-based economy, this research attempts to ‘describe a subject using statistics rather than trying to view those statistics within the context of a statistical … framework’ (Australia. ABS., 2002, p.1).

Hypotheses are predictions that can be tested empirically for internal consistency in a systematic and controlled way. They are a basic tool of scientific research that aims to explain phenomenon. They specify relations among variables with the purpose of explaining and predicting phenomena, and reflect the proper scepticism of scientific inquiry about claimed relationships between phenomena by accepting only results that have a statistically low probability (5% or less) of occurring by chance.

The hypotheses in this study were expressed as null hypotheses. The null hypothesis ‘is a succinct way to express the testing of obtained data, against chance expectation. It expresses the chance expectation’ (Kerlinger, 1976, p.203). Null hypotheses are tested by subjecting them to statistical tests that measure the probability of the event occurring by the ratio of the favourable cases to the whole number of cases possible. It then becomes possible to make appropriate inferences. In the description that follows, the conventional abbreviation for listing hypotheses is used. Much of the interest of the researcher was on the frequency of responses in various categories, and the null hypothesis expression therefore is not considered quite correct by some. Nevertheless it was considered to be a convenient mode of expression here.
HI: No relationship exists between the act of acknowledging the importance of Knowledge Management and the act of implementing a Knowledge Management system, policy, or practice.

This hypothesis proposed to test whether there was any causal relationship between an act of acknowledging the importance of Knowledge Management as a concept, and any implementation of Knowledge Management system(s), policies and practices. It has often been observed that although companies ‘talk the talk’ of Knowledge Management, little, if anything, appears to be implemented in the way of systems, apart from the installation of technology to record easily quantifiable data, such as, absenteeism rates, sales figures, and so. Observations such as this seem good grounds for suspecting the sincerity of companies in fully embracing Knowledge Management concepts. Furthermore, one can question the wisdom of concentrating on technology and the capture of explicit data (in the main), whilst generally overlooking the importance of the human relationship in motivating people to implement and use Knowledge Management systems. If the null hypothesis were rejected, that is to say, if the implementation of Knowledge Management systems is found to follow an acknowledgement of the importance of the concept, then one would have more confidence that companies were serious about it, and were prepared to make the changes necessary to capture, and use, both the tacit and explicit knowledge of their employees, to the benefit of all.

This therefore seemed a good place to start. It was intended to probe further, however, and try to discover what role the Human Resources department plays in any planning and implementation of Knowledge Management policy and strategy. The Human Resources department has been chosen, specifically, as it is generally recognised that ‘HRM is a major contributor to the success of an enterprise because it is in a position to affect customers business results and ultimately shareholder value’ (Stone, 2002, p.4).
H2: No relationship exists between the Human Resources function and the degree of Knowledge Management planning and implementation taking place.

This hypothesis proposed to test for the role of the Human Resources function in Knowledge Management implementation. A close relationship between the Human Resources function and the implementation of Knowledge Management systems might be expected, given the Human Resources ‘four major roles…[of] formulation…implementation…audit and control…. and innovation in new policies and programs’ (Schuler, McFillen and Dalton, 1981, p.71).

If such a relationship were found, this would strengthen the argument that Human Resources departments can play an important, albeit specialised, role in transforming conventional Human Resources processes into a visible set of Knowledge Management practices that are closely integrated with the organisations’ strategic objectives. If no such relationship is found to exist, the null hypothesis would be upheld.

The remaining hypotheses proposed to test whether the degree of implementation of a Knowledge Management system in a company could reasonably be attributed to the gender, or level of educational qualification, of the individual responsible for such matters within the Human Resources function.

H3: No relationship exists between the degree of implementation of Knowledge Management policies, practices, and systems and the gender of the individual responsible for such matters.

If the null hypothesis were rejected, that is, if implementation of Knowledge Management policies, practices, and systems were said to be occurring in their companies by male respondents, say, rather than female respondents, this would
suggest, on the face of it, that companies should place males in positions of responsibility for such implementation. If, on the other hand, female respondents, rather than male respondents, say that their companies are implementing Knowledge Management policies, practices, and systems then companies should place females in positions of responsibility for Knowledge Management. On the other hand, if no relationship were found between the degree of implementation of Knowledge Management policies, practices, and systems and the gender of the implementer, the null hypothesis would be upheld. If the null hypothesis were upheld, then the choice of gender of the individual responsible for implementing Knowledge Management policies, practices, and systems would not seem to matter.

*H4: No relationship exists between the degree of implementation of Knowledge Management policies, practices, and systems and the educational qualifications of the individuals responsible for such matters.*

This hypothesis proposed to test whether the degree of implementation of Knowledge Management policies, practices, and systems was related to the level of educational qualification held by the individual responsible for such matters. If the null hypothesis were rejected, that is, if implementation of Knowledge Management policies, practices, and systems has occurred and the responsible individual holds a University qualification, say, rather than a non-University, or ‘in-house’ company qualification, or some other unspecified qualification, this would suggest that it is important for the success of Knowledge Management implementation efforts that individuals responsible for such matters hold a University degree. On the other hand, if no relationship were found between the degree of implementation of Knowledge Management policies, practices, and systems and the level of educational qualifications held by the responsible individuals, the null hypothesis would be upheld. Level of qualification would then not
be a matter of consideration.

**RESULTS**

As noted earlier, the purpose of this study was to examine if a causal relationship existed between the act of acknowledging the importance of Knowledge Management as a concept (that is, if there was any causal relationship between levels of awareness of KM concepts and so on) and any implementation of Knowledge Management policies, practices, and systems. This study also investigated whether, or not, the Human Resources function played any role in any implementation process present, and whether the gender, or level of educational qualification of the individual responsible for implementation had any significant part to play in it, or not.

The Statistical Package for the Social Sciences (SPSS) (2002) was used to run the various statistical tests discussed in this chapter. The first test run was a reliability test. This test is concerned with the findings of the research and is aimed at confirming whether the rating scales used in the survey questionnaire measure respondent’s views consistently (Hussey and Hussey, 1997). It was appropriate to submit Sections One, Two, and Three of the survey questionnaire to the reliability analysis. The results were as follows: Section One: Alpha = .9839; Section Two: Alpha = .9902; and Section Three: Alpha = .8983. In other words, these Sections were found to be reliable. The rating scale used in this research is a five point *Likert type scale*, which

‘turns the question into a statement and asks the respondent to indicate their level of agreement with the statement by ticking a box or circling a response [and has the] further advantage …. that a number of different statements can be provided in a list which does not take up much space, is simple for the respondent to complete and simple for the researcher to code and analyse’ (Hussey and Hussey, 1997, p. 171).
Knowledge Management Importance and Implementation Compared.

The first null hypothesis \((H1)\) predicted no relationship between the act of acknowledgement of Knowledge Management (KM) and the act of implementation of knowledge management systems in the same organisation. A straight comparison was made of the answers to questions in Section One of the survey questionnaire (Degree of Importance) with the answers to questions in Section Two (Degree of Implementation). Tables showing the frequency of responses in the various categories for each statement are shown below. Admittedly this is not a sophisticated statistical test, but as the researcher’s interest was in the frequency of responses to the question of whether KM was considered important as a concept, and then, whether and/or to what degree KM systems were being implemented in the respondent’s organisation, sophisticated statistical tests were not required. A five point Likert type scale was used in all cases, and levels of response ranged from Extremely Important (EI), Very Important (VI), Moderately Important (MI), and Slightly Important (SI), to Not at all Important (NI). In Tables 4.6 – 4.12 inclusive, presented below, the abbreviations EI, VI, MI, SI, and NI are used so that Tables do not appear too cluttered. For Tables 4.13 – 4.19 inclusive the abbreviation HI is used in place of VI, to indicate a High degree of Implementation.

Tables 4.6 – 4.12 show the percentages of respondents and the degrees of importance they attach to various aspects of KM. Table 4.6, below, indicates whether organisations attach importance to having a general understanding of KM concepts throughout their enterprise.
Responses show a general avoidance of extreme views. That is, with the exception of 14% of the obtained sample, respondent organisations consider the concept of KM as neither extremely important, nor totally unimportant. There is acknowledgement that KM as a concept is under consideration by organisations, but perhaps they are not, as yet, totally convinced of its value. Perhaps there is still an element of experimentation with the concepts in the minds of some.

Table 4.7 shows the importance placed on two particular KM strategies.

It is clear here that organisations attach a high degree of importance to the idea of KM being used to create customer value. Further, the HR managers who responded to the
survey also report a high level of importance to the idea of KM being central to their organisation’s overall business strategy.

The next Table looks at a number of possible KM initiatives that organisations could take up (Table 4.8). It is reported to be very important for organisations to allocate resources to KM initiatives and to show clearly the connection between these and the business plan. Further, 42% indicate that a moderate level of importance is attached to encouraging and facilitating knowledge-sharing, in either a formal or informal manner, while a further 47% indicate high to extreme importance here. Nearly 60% indicate a moderate, or higher, degree of importance to putting a knowledge plan in place to guide employees towards the knowledge they need. Interestingly, nearly three-quarters of respondents do not feel it to be of particularly high importance that an advocate for, or representative of, KM as a concept and initiative be on the Board of the enterprise.
Table 4.8
Importance Attached to various possible KM Initiatives

<table>
<thead>
<tr>
<th>KM Initiative</th>
<th>EI (%)</th>
<th>VI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation. encourages &amp; facilitates knowledge sharing</td>
<td>19</td>
<td>28</td>
<td>42</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Allocating resources to increase knowledge base.</td>
<td>17</td>
<td>33</td>
<td>31</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>It is clear how KM initiatives support the business plan</td>
<td>11</td>
<td>28</td>
<td>25</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Informal networks across the organisation are encouraged.</td>
<td>17</td>
<td>31</td>
<td>33</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>Board level representation for KM.</td>
<td>3</td>
<td>25</td>
<td>22</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>’Knowledge-Plan’ is in place to guide employees towards the knowledge they pursue</td>
<td>11</td>
<td>14</td>
<td>33</td>
<td>14</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 4.9, below, shows the high level of importance that organisations put on the place of information technology (IT) within their enterprise. More than half the respondents reported that it was extremely important that the IT system be seen as vital, while 39% of respondents also felt that it was extremely important that people in the organisation use IT effectively as part of their normal working practice. Respondents indicated very high usage within their companies of the intranet (100%) internet (89%), and on-line information sources (83%). More than two-thirds of respondents said their companies used video-conferencing (69%) and CD-ROM (67%), electronic bulletin boards (64%) and data warehousing/mining technologies (61%). Interestingly, 28% of respondents reported that it was not important to develop any sort of sophisticated and ethical intelligence gathering mechanisms.
Table 4.9
Importance Attached to the place of Information Technology

<table>
<thead>
<tr>
<th>KM Information Technology</th>
<th>EI (%)</th>
<th>VI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A sophisticated &amp; ethical intelligence gathering mechanism has been developed.</td>
<td>14</td>
<td>19</td>
<td>17</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>Technology is used to create an institutional memory.</td>
<td>14</td>
<td>25</td>
<td>25</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Technology is used to bring the organisation closer to its customer.</td>
<td>25</td>
<td>22</td>
<td>25</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Technology is used to ensure that the information is available to employees on time.</td>
<td>22</td>
<td>36</td>
<td>31</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>The organisation’s people use IT effectively as normal working practice.</td>
<td>39</td>
<td>31</td>
<td>28</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>The IT system is considered vital</td>
<td>56</td>
<td>42</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

The next Table, number 4.10, shows the degree of importance attached to a number of possible benefits that have been identified by practitioners and theorists alike that may be derived from the implementation of KM systems. Not unexpectedly, gaining competitive advantage, improving efficiency, identifying and improving market share, and instigating change, all rate as very or extremely important. It is a little unexpected therefore, that as many as 36% of responses in regard to instigating change only see it as moderately important.
Table 4.10
Importance Attached to various possible Benefits that may be derived from KM

<table>
<thead>
<tr>
<th>KM Benefits</th>
<th>EI (%)</th>
<th>VI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing value for customers.</td>
<td>33</td>
<td>44</td>
<td>19</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Faster response rate from suppliers.</td>
<td>28</td>
<td>42</td>
<td>17</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Higher levels of innovation.</td>
<td>28</td>
<td>44</td>
<td>17</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Reduction of costs overall.</td>
<td>31</td>
<td>44</td>
<td>22</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Keeping up with the competition.</td>
<td>33</td>
<td>42</td>
<td>17</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Gaining a competitive advantage</td>
<td>39</td>
<td>47</td>
<td>11</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Increasing profits</td>
<td>33</td>
<td>44</td>
<td>17</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Developing new products/services</td>
<td>25</td>
<td>44</td>
<td>28</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Instigating change</td>
<td>28</td>
<td>33</td>
<td>36</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Identifying new markets</td>
<td>31</td>
<td>28</td>
<td>25</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Improving efficiency</td>
<td>33</td>
<td>42</td>
<td>19</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Improving market share</td>
<td>33</td>
<td>25</td>
<td>28</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Increasing over all organisation effectiveness</td>
<td>36</td>
<td>39</td>
<td>17</td>
<td>-</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 4.11 asks about the degree of importance attached by organisations to a number of variables to do with the culture of the enterprise. A number of variables that pertain to culture within the organisation are reported to be very important. Chief among them being the idea that a cross-functional culture should be established to facilitate employees from different functional areas being able to work together effectively and efficiently. Variables such as the establishment of a no-blame culture where mistakes are tolerated, best practice as a natural, standard process, and time for creative thinking, all rated relatively highly.
Table 4.11
Importance Attached to various Cultural Variables

<table>
<thead>
<tr>
<th>KM Culture</th>
<th>EI (%)</th>
<th>VI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior management supports a culture of KM</td>
<td>22</td>
<td>31</td>
<td>19</td>
<td>28</td>
<td>-</td>
</tr>
<tr>
<td>The business unit owns KM initiatives</td>
<td>19</td>
<td>31</td>
<td>25</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>The organisation moves towards creating an internal market in knowledge</td>
<td>14</td>
<td>14</td>
<td>28</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>The top management respects KM policies and guidelines.</td>
<td>25</td>
<td>22</td>
<td>17</td>
<td>28</td>
<td>8</td>
</tr>
<tr>
<td>A cross functional culture should be established to enable employees from various functional areas to work together</td>
<td>25</td>
<td>50</td>
<td>17</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>A no-blame culture, which tolerates mistakes, is developed</td>
<td>14</td>
<td>42</td>
<td>25</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Employees understand the concept that in giving, one receives, and in holding on, one loses.</td>
<td>22</td>
<td>22</td>
<td>28</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>There are fewer secrets within the work group</td>
<td>6</td>
<td>42</td>
<td>33</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Time is allowed for creative thinking</td>
<td>11</td>
<td>39</td>
<td>19</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Best practice should be a natural, standard process</td>
<td>33</td>
<td>42</td>
<td>19</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The last question in Section One of the survey questionnaire looks at the issue of KM training (Table 4.12, below). Here it is acknowledged as very important that respondent organisations enable people to develop a can-do mentality, and include training in KM behavior and procedures in the induction program for new recruits. More than 40% of respondents indicated, however, that it was only moderately important to provide employees with immediate feedback to aid in their learning, while a further 44% thought it was very, to extremely, important to do so. Forty-four percent felt it was moderately important to provide employees with the facility to retrieve and develop
their ideas in the future, while a third more felt it was very to extremely important. Furthermore, a third of respondents indicated it was very important for real life experiences to be publicised so that employees can learn from them. This is seemingly at odds with the third of respondents who said it was only slightly important to demonstrate that sharing knowledge is a workable and practical activity for organisations to be engaged in.

Table 4.12
Importance Attached to KM Training

<table>
<thead>
<tr>
<th>KM Training</th>
<th>EI (%)</th>
<th>VI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing competencies is part of training and development</td>
<td>22</td>
<td>39</td>
<td>17</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>The organisation enables people to develop a can-do mentality</td>
<td>19</td>
<td>47</td>
<td>22</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Employees are provided with immediate feedback to help their own learning</td>
<td>11</td>
<td>33</td>
<td>42</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>People are provided with the facility to retrieve and develop ideas in the future</td>
<td>11</td>
<td>22</td>
<td>44</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Real life experiences are publicised from which people can learn</td>
<td>6</td>
<td>33</td>
<td>22</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>Knowledge sharing is demonstrated to be a workable and practical activity throughout the organisation</td>
<td>11</td>
<td>31</td>
<td>14</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>Training in KM behaviour and procedures should begin with the induction program of new recruits.</td>
<td>14</td>
<td>39</td>
<td>22</td>
<td>17</td>
<td>8</td>
</tr>
</tbody>
</table>

The following Tables (Numbers 4.13 – 4.19) show the percentages of respondents and the degree to which their organisations have implemented KM strategies, initiatives, process, documentation, incentives, measurement systems, culture, and information technologies. That is, respondents could indicate an extreme degree of implementation (EI), a high degree (HI), a moderate degree (MI), a slight degree (SI), or no
implementation at all (NI). Again, frequency tables are shown below, and the abbreviations EI, HI, MI, SI, and NI are used so that Tables do not appear to be too cluttered.

Table 4.13 reports on the degree of implementation of certain KM strategies identified in the KM literature.

<table>
<thead>
<tr>
<th>KM Strategy</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge management is embedded in business processes generally</td>
<td>8</td>
<td>14</td>
<td>19</td>
<td>47</td>
<td>11</td>
</tr>
<tr>
<td>There is a set method in place to collect and conceptualise vital business data</td>
<td>6</td>
<td>25</td>
<td>33</td>
<td>28</td>
<td>8</td>
</tr>
<tr>
<td>The organisation has a marketing strategy for knowledge management ideas that it uses internally</td>
<td>3</td>
<td>11</td>
<td>33</td>
<td>22</td>
<td>31</td>
</tr>
<tr>
<td>Organisation focuses on evaluating alliances and mergers planned for enhancing the intellectual assets</td>
<td>3</td>
<td>11</td>
<td>42</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>There are defined responsibilities for knowledge management initiatives</td>
<td>3</td>
<td>11</td>
<td>25</td>
<td>28</td>
<td>33</td>
</tr>
</tbody>
</table>

This Table indicates that less than half of respondent organisations consider it to be even moderately important to have an eye on planning to enhance the enterprise’s intellectual assets, while only a total of 14% consider such a strategy to be worthy of a high, or extremely high degree of implementation. A third of respondents said there was a moderate degree of implementation in their organisations in such things as setting in place an internal marketing strategy for KM ideas, and organising a method to collect and conceptualise vital business data. Given that these strategies are being
implemented, however moderately, it is a little disconcerting that 47% of respondents report only slight implementation of KM systems and ideas within the business processes generally, and quite alarming that a third of respondent organisations do not define responsibilities for KM initiatives at all.

Table 4.14, below, reports on the degree of implementation of certain KM initiatives identified in the KM literature. Forty-eight percent of respondent organisations say they commonly exchange knowledge with clients, suppliers, and others to a moderate degree, while 42% report that learning is used to moderately support already existing core competencies. Sixty-one percent indicate that it is moderately to extremely important that no restrictions are placed on access to information (unless it is confidential or personal). Thirty-six percent report that work is arranged in ways that moderately encourage experiential learning, and another 36% say this happens but only slightly. A further third indicate that there is no budget set in place for KM initiatives.
### Table 4.14
Degree of Implementation of various KM Initiatives

<table>
<thead>
<tr>
<th>KM Initiatives</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees have time to document new knowledge during and after a project is finished</td>
<td>6</td>
<td>6</td>
<td>31</td>
<td>44</td>
<td>14</td>
</tr>
<tr>
<td>A budget is in place for knowledge management initiatives</td>
<td>6</td>
<td>17</td>
<td>19</td>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>The practices of competitors are identified</td>
<td>11</td>
<td>31</td>
<td>22</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Work is arranged in ways that encourage experiential learning</td>
<td>11</td>
<td>11</td>
<td>36</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Learning is used to support existing core competencies</td>
<td>8</td>
<td>25</td>
<td>42</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>New core competencies are created</td>
<td>6</td>
<td>14</td>
<td>36</td>
<td>39</td>
<td>3</td>
</tr>
<tr>
<td>Ambiguous, meaningless terms are avoided</td>
<td>3</td>
<td>17</td>
<td>28</td>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>Knowledge is commonly exchanged with clients, suppliers and other organisations</td>
<td>6</td>
<td>17</td>
<td>48</td>
<td>28</td>
<td>-</td>
</tr>
<tr>
<td>There are no restrictions placed on access to information unless it is confidential or personal</td>
<td>8</td>
<td>22</td>
<td>31</td>
<td>28</td>
<td>6</td>
</tr>
</tbody>
</table>

A number of KM processes have been identified in the literature, and these are looked at in Table 4.15, below. Information technology systems are high on more than half the respondent organisation’s list, and this is not an unexpected result. Nor is it a surprise that a large percentage of respondent organisations report moderate to high implementation of legal guidelines to protect intellectual capital, and use controls to keep in line with regulatory and compliance requirements. Relatively high levels of implementation are also reported in areas of openness and trust, dissemination of knowledge through set procedures and formal networks, and by bringing employees together from different parts of the organisation to share knowledge. Somewhat
surprising, however, is that a third of respondent organisations were only slightly interested in identifying gaps in their knowledge, while 11% were not at all interested in doing this.

Table 4.15
Degree of Implementation of a Number of KM Processes

<table>
<thead>
<tr>
<th>KM Process</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A climate of openness and trust operates in the organisation</td>
<td>3</td>
<td>33</td>
<td>25</td>
<td>31</td>
<td>6</td>
</tr>
<tr>
<td>Knowledge is effectively disseminated through set procedures and formal networks</td>
<td>3</td>
<td>28</td>
<td>28</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>Identification of knowledge gaps</td>
<td>3</td>
<td>19</td>
<td>28</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Use of knowledge and information is controlled in line with regulatory and compliance requirements</td>
<td>8</td>
<td>33</td>
<td>33</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Legal guidelines are in place to protect intellectual capital.</td>
<td>19</td>
<td>36</td>
<td>22</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>The IT system has an in built back up and recovery facility for securing data</td>
<td>56</td>
<td>25</td>
<td>11</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Employees are brought together from different divisions and/or locations to offer different approaches to thinking and working</td>
<td>11</td>
<td>28</td>
<td>31</td>
<td>25</td>
<td>3</td>
</tr>
</tbody>
</table>

The Table to be shown next (Table 4.16) deals with issues of documentation, maintenance, and protection.
<table>
<thead>
<tr>
<th>KM Documentation/Maintenance &amp; Protection</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organisation has formalised the process of transferring best practices</td>
<td>8</td>
<td>14</td>
<td>22</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Recording and sharing knowledge is routine and second nature</td>
<td>3</td>
<td>8</td>
<td>36</td>
<td>39</td>
<td>11</td>
</tr>
<tr>
<td>There are regular reviews to delete out-of-date information</td>
<td>6</td>
<td>11</td>
<td>25</td>
<td>42</td>
<td>11</td>
</tr>
<tr>
<td>There are regular updates from designated information owners</td>
<td>6</td>
<td>8</td>
<td>31</td>
<td>39</td>
<td>11</td>
</tr>
<tr>
<td>Effective cataloguing and archiving procedures are in place for document management, whether held electronically or not</td>
<td>6</td>
<td>28</td>
<td>31</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Regulatory and compliance requirements are clearly published</td>
<td>11</td>
<td>42</td>
<td>28</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Regulatory and compliance requirements are monitored to ensure compliance</td>
<td>14</td>
<td>31</td>
<td>33</td>
<td>17</td>
<td>3</td>
</tr>
</tbody>
</table>

Here we see that 81% of respondent organisations are careful to publish regulatory and compliance requirements that pertain to their businesses, while 78% have a moderate to very high level of implementation of monitoring systems to ensure compliance happens. Given this awareness of legal issues, one might have expected a similar level of implementation of archival cataloguing and procedures, but only 59% of respondent organisations are involved from a moderate to a very high level, and only 6% put themselves in the extreme category. Half or three-quarters of respondents indicated a slight to moderate involvement in formalising processes of transferring best practice; routinely recording knowledge; and regularly updating data banks to include new knowledge and delete out-of-date information.
Table 4.17, below, singles out four incentives commonly mentioned in the literature.

Table 4.17
Degree of Implementation of a Number of Incentives

<table>
<thead>
<tr>
<th>KM Incentives</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rewards are given for high performance, and achievement of specific objectives</td>
<td>11</td>
<td>28</td>
<td>36</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Productive teamwork is recognised and rewarded</td>
<td>6</td>
<td>33</td>
<td>39</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>People are singled out and praised for their exemplary work in knowledge management</td>
<td>6</td>
<td>17</td>
<td>19</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>Intellectual capital is rewarded in the organisation</td>
<td>6</td>
<td>14</td>
<td>42</td>
<td>28</td>
<td>11</td>
</tr>
</tbody>
</table>

Recognition and rewards for high performance, productive teamwork, and the achievement of specific objectives are evident, but 33% of respondent organisations only slightly recognise and reward individuals for exemplary KM work. A further 25% of respondent organisations give no recognition whatsoever to such individuals. Such behaviour could be attributed to a certain cultural effect, as Australians generally are inclined to ‘knock’ high achievers. In Australia, this is refereed to as the *tall poppy syndrome*. There is a potentially serious side to this however – consistent and long standing lack, or absence of appreciation might well lead to a lowering of motivation and ultimately of performance, or even, in some cases, to separation of the employee from the company, with a resultant loss of their tacit knowledge.

Table 4.18 is concerned with monitoring, measuring, and reviewing of KM behaviours within organisations. Respondent organisations indicate 28% do no monitoring of KM
behaviour, while a further 33% have not developed a specific set of indicators by which to measure and manage knowledge. A further third report that senior management fails to review the effectiveness of any KM measures that exist in the company. There is a slight to moderate instance of review of best practice however by 58% of the obtained sample.

Table 4.18
Degree of Implementation of Measurement and Review Systems

<table>
<thead>
<tr>
<th>KM Measurement</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good KM behaviour is monitored and built into the appraisal system</td>
<td>8</td>
<td>14</td>
<td>25</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>The organisation has developed a specific set of indicators to manage knowledge</td>
<td>8</td>
<td>3</td>
<td>28</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>The organisation’s set of measures balances financial and non-financial indicators</td>
<td>11</td>
<td>8</td>
<td>39</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Senior management reviews the effectiveness of KM to the whole company on a regular basis</td>
<td>6</td>
<td>8</td>
<td>25</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Best practice in internal methods is reviewed regularly</td>
<td>11</td>
<td>17</td>
<td>22</td>
<td>36</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 4.19 focuses on some specific behaviors that are considered by researchers generally to indicate a culture that is KM oriented. The results are mixed. Three-quarters of respondent organisations appear to organise task specialists so that they are working with like-minded staff, either moderately, or to a high/ extreme degree, while 20% indicate that it is important that expertise in the area of KM does not lead to an extreme or very high rise in personal status within the company for those concerned. Most of the obtained sample however, to some degree, actively discourages hoarding, or holding onto, knowledge, however slight. Nearly 50% of responses (in the moderate –
extreme categories) indicate that key players do not desire, nor presumably use, information to their own ends, while a similar overall percentage over those same three categories play by the rules. One has to wonder, however, what it is the other 47% are doing in this regard. Perhaps some of the respondents were thinking of themselves, rather than their organisations, as indicated in the question.

Table 4.19
Degree of Implementation of Variables Relating to Culture

<table>
<thead>
<tr>
<th>KM Culture</th>
<th>EI (%)</th>
<th>HI (%)</th>
<th>MI (%)</th>
<th>SI (%)</th>
<th>NI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key players do not avoid the rules</td>
<td>8</td>
<td>19</td>
<td>22</td>
<td>33</td>
<td>14</td>
</tr>
<tr>
<td>Information is not desired by key players to achieve personal ends</td>
<td>3</td>
<td>17</td>
<td>28</td>
<td>36</td>
<td>11</td>
</tr>
<tr>
<td>Personal status is not gained through the exercise of specialist skills and knowledge</td>
<td>3</td>
<td>17</td>
<td>42</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Task specialists tend to network with like-minded specialists</td>
<td>3</td>
<td>33</td>
<td>39</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Behaviour like hoarding, non-sharing etc., is actively discouraged</td>
<td>14</td>
<td>22</td>
<td>25</td>
<td>25</td>
<td>11</td>
</tr>
</tbody>
</table>

The first hypothesis ($H1$) had predicted there would be no relationship between the act of acknowledging the importance of KM and the act of implementing a KM system. The results reported here are somewhat mixed. There is clearly some evidence of moderate to high degrees of importance being placed on the perceived significance of the KM concept. There is also evidence, in selected areas such as IT and compliance with legal requirements, of considerable degrees of implementation taking place. Nevertheless, the overall involvement of the obtained sample in very high levels of implementation in important areas such as defining KM responsibilities, targeting budgets to KM, identifying knowledge gaps, recognising and rewarding good KM
performance and so on, is very disappointing. Hypothesis One, it is argued, should therefore be upheld.

**Human Resource Management and its Relationship to Knowledge Management**

The second null hypothesis \((H2)\) predicted no relationship would exist between the HR function and the degree of KM planning and implementation taking place in respondent organisations. Here again, the researcher’s interest is in the frequency of responses in each of the categories for each statement shown. Statements relate to Section Three of the survey questionnaire, which pertains specifically to the company’s HR department. A five point *Likert scale* was used, and levels of response ranged from Strongly Disagree (SD), Disagree (D), Neither agree or disagree (NAND), and Strongly Agree (SA). In Table 4.20, presented below, the abbreviations SD, D, NAND, and SA are used so that the Table does not appear unduly cluttered.

Table 4.20, below, lists eight possible initiatives that HR departments might well take towards the implementation, and maintenance of, KM systems, policies, and practices within their organisations. The question asked was whether the respondents’ HR department was responsible for the particular initiatives indicated. For example, 70% of respondents agreed/strongly agreed that their HR department encouraged employees to do worthwhile things that left a lasting impression, and that it had put key indicators for KM in place. Sixty-seven percent agreed/strongly agreed that the HR department had secured support for knowledge sharing from senior staff, while 36% agreed that the HR department was responsible for compensating individuals for their contributions to the development of organisational knowledge. Fully 89% of respondents agreed/strongly agreed that HR was responsible for helping supervisors and managers build harmonious
relationships with their subordinates – arguably, a necessary precondition to the effective implementation of KM systems and their on-going use.

The second hypothesis (H2) had predicted there would be no relationship between the HR function and the degree of KM planning and implementation taking place in organisations. The results reported show that in the obtained sample there was fairly strong agreement that the HR department was involved in such KM initiatives as making sure employees understand their rights and responsibilities within their organisations, compensating individuals for their contributions, securing support for knowledge-sharing from senior staff, helping supervisors and managers build harmonious relationships with their subordinates, and so on. On the face of it, this evidence suggests that the null hypothesis H2 should be rejected. Of course, it could be argued, as it was HR managers, or similar, to whom the survey was directed, it should not surprise us to find such strong agreement. Such initiatives as those mentioned above, also fit well, of course, with the general consensus that the HR person is responsible for relationships, which are at the heart of good knowledge management, after all. This is not to say that the respondents are ‘colouring the truth’ or ‘seeing through rose coloured glasses’, necessarily. They may be quite sincere in their reporting, truly believing their departments perform in these ways – as well they might be. However, if one denies the validity of their responses to questions, then one must presumably deny the point of asking questions at all, since the answers will not necessarily reveal the truth. The point is, it has to be assumed in all research involving asking questions of people that, once a question is asked, the researcher is bound to accept that the respondent knows the truth, and tells it. One cannot accept some answers
at face value and reject others. In short, one must accept all answers at face value, or none: one cannot have it both ways.

Table 4.20 gives the frequencies of responses to questions in Section Three of the survey questionnaire.

### Table 4.20

Degree of HR Initiatives in KM

<table>
<thead>
<tr>
<th>HR Initiatives in KM</th>
<th>SD (%)</th>
<th>D (%)</th>
<th>NAND (%)</th>
<th>A (%)</th>
<th>SA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making sure that employees see their company like any social entity in which they have rights &amp; responsibilities.</td>
<td>3</td>
<td>8</td>
<td>17</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>Giving individuals the responsibility for coordinating knowledge within a division.</td>
<td>8</td>
<td>25</td>
<td>17</td>
<td>36</td>
<td>14</td>
</tr>
<tr>
<td>Compensating individuals for their contributions to the development of organisational knowledge</td>
<td>6</td>
<td>22</td>
<td>22</td>
<td>36</td>
<td>14</td>
</tr>
<tr>
<td>Securing support for knowledge sharing from senior staff.</td>
<td>3</td>
<td>14</td>
<td>17</td>
<td>39</td>
<td>28</td>
</tr>
<tr>
<td>Encouraging employees to do worthwhile things that leave a lasting impact.</td>
<td>3</td>
<td>3</td>
<td>22</td>
<td>42</td>
<td>28</td>
</tr>
<tr>
<td>Putting key performance indicators for KM in place.</td>
<td>8</td>
<td>25</td>
<td>8</td>
<td>42</td>
<td>17</td>
</tr>
<tr>
<td>Sharing technology with suppliers in order to build better relationships with them</td>
<td>11</td>
<td>28</td>
<td>22</td>
<td>28</td>
<td>11</td>
</tr>
<tr>
<td>Helping supervisors and managers build harmonious relationships with their subordinates.</td>
<td>-</td>
<td>3</td>
<td>8</td>
<td>39</td>
<td>50</td>
</tr>
</tbody>
</table>

In a further effort to clarify the situation, it was thought that, perhaps, a test of correlation coefficient $r$ might be useful. To this end a *Pearson's product moment correlation coefficient* $r$ was run, as it is ‘a parametric technique which gives a measure of strength of association between two variables’ (Hussey and Hussey, 1997, p.227). By
definition a correlation coefficient ‘assumes a value between –1 and +1. Absolute values near 1 are considered strong correlations; that is, the two variables have a strong tendency to vary together (Carver and Nash, 2000). Each question in Section Three of the survey questionnaire was tested against each other question, in an effort to discover if any correlations existed. Correlations are considered significant at the 0.01 (2-tailed) and the 0.05 (2-tailed) levels. However, care must be taken with the interpretation of correlation coefficients,

‘s since a correlation between two variables does not prove the existence of a causal link between them; two causally unrelated variables can be correlated because they both relate to a third variable. For example, sales of ice-cream and sales of suntan lotion may be correlated because they both relate to higher temperatures’ (Hussey and Hussey, 1997, p.230).

It was thought, for instance, that giving individuals the responsibility for co-ordinating knowledge within a division (Section Three Question 1 (b)) might be correlated with the act of compensating individuals for their contributions to the development of organisational knowledge (Section Three Question 1 (c)). Table 4.21 shows there is, in fact, a strong relationship between these variables (\(r = .749 \ p< .01\)). One would expect this to be the case if the person given the job of co-ordinating knowledge received a higher duties allowance, say, for taking on this responsibility. This would also no doubt hold true if a person were promoted to a position such as knowledge co-ordinator, as promotion usually carries with it ‘compensation’ in the form of higher salary or benefit of some kind. However, the survey did not ask on what basis individuals were compensated for their contributions, nor what any compensation consisted of. This line of inquiry could be followed up in later research however. There were other variables correlated with the giving of responsibility to individuals, however, and these were – receiving support from senior staff (\(r=.466 \ p<.01\)); encouragement to do worthwhile things (\(r=.443 \ p<.01\)); and key performance indicators being in place (\(r=.690 \ p<.01\)).
Table 4.21
Strength of the Relationship between Giving Responsibility, and Providing Compensation, for Developing Knowledge

<table>
<thead>
<tr>
<th></th>
<th>IIIQ1B</th>
<th>IIIQ1C</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIIQ1B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giving individuals the responsibility for co-ordinating knowledge within a division.</td>
<td>Pearson Correlation</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.749 **</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>IIIQ1C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensating individuals for their contributions to the development of organisational knowledge.</td>
<td>Pearson Correlation</td>
<td>.749 **</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)

The question of whether support for knowledge-sharing from senior staff (Section Three Question 1 (d)) was correlated to the act of encouraging employees to do worthwhile things (Section Three Question 1 (e)) was tested next.
Table 4.22
Strength of the Relationship between Supportive Senior Staff and Encouraging Employees to do Worthwhile Things

<table>
<thead>
<tr>
<th>IIIQ1D</th>
<th>IIIQ1E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securing support for knowledge sharing from senior staff.</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Encouraging employees to do worthwhile things that leave a lasting impact.</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)

Again, the relationship appears to be strong (r = .735 p< .01). It would be reasonable to assume, then, that if senior staff were supportive of knowledge-sharing within their organisations, then key performance indicators for knowledge management would be in place, so that senior people could demonstrate their support by some sort of compensation to the individual based on their performance. These variables were, in fact, correlated (r=.756 p<.01). Support from senior staff was also correlated with compensating individuals for their contributions (r=.538 p<.01), although, as noted above, the survey did not ask what form such compensation took.

Making sure that employees see their company as a social entity in which they have rights, but also responsibilities, is correlated with - giving individuals coordination of knowledge responsibility (r=.465 p<.01); compensating individuals for their knowledge contributions (r=.485 p<.01); and encouraging individuals to do worthwhile things (r=.514 p <.01).
Taken together with the evidence presented by the frequency data (Table 4.20, above) the null hypothesis \((H2)\) is rejected. That is, there is a relationship between the Human Resources function and the degree of Knowledge Management planning and implementation taking place. In other words, HR professionals are involved in the planning and implementation of KM systems, policies, and practices, at least as much as their organisations allow. It would also appear from this, that organisations/senior management consign the responsibility for KM matters to the HR department, in much the same way that EEO/Affirmative Action matters have been consigned to it in the past. This may prove to be a two-edged sword in the long run.

**Knowledge Management Implementation and Gender**

Hypothesis Three \((H3)\) predicted there would be no relationship between the level of implementation of knowledge management policies, practices, and systems and the gender of the individual responsible for such matters. The researcher wished to investigate, that is, whether there was a possible association between the gender of the responsible individual, and the degree of knowledge management implementation. In this instance, the \(t\)-test was used. The \(t\)-test indicates the extent to which ‘two samples need to differ in order for … the null hypothesis’ (Hussey and Hussey, 1997, p. 236) to be rejected. Each question in Section Two of the survey questionnaire was tested for its relationship to gender. Table 4.23, below, shows the only instance of significant difference in the mean between males and females. Given that in 52 other variables tested this is the only one to show that gender has an impact on the implementation of KM policies, practices, and systems, the null hypothesis \((H3)\) is upheld.
### Table 4.23 (a)
Degree of Implementation by Gender
(Group Statistics)

<table>
<thead>
<tr>
<th>IVQ1 Gender</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIQ2C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The practices of competitors are identified.</td>
<td>M</td>
<td>21</td>
<td>2.48</td>
<td>1.030</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>13</td>
<td>3.31</td>
<td>1.032</td>
</tr>
</tbody>
</table>

### Table 4.23 (b)
Degree of Implementation by Gender
(Independent Samples Test)

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for equality of means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>IIQ2C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal Variances</td>
<td>.014</td>
<td>.908</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal Variances</td>
<td>-2.285</td>
<td>25.55</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In Table 4.23 (b), the Levene’s test (p > .05) indicates the variances to be equal, and the $t$-test ($t$ equals -2.286, p is .029 < .05) shows a significant difference between males and females. Given the lack of significant difference in all the other comparisons, the conclusion to be drawn from this is that the choice of gender of the individual responsible for implementing KM policies, practices, and systems would not seem to matter.

A chi-square test was also conducted on the questions in Section Two of the survey questionnaire, to see if there was any statistical relation between the levels of implementation of the variables, and gender. Chi-square is a rigorous test to apply to categorical data (Ferguson, 1981). This essentially determines whether differences between the proportions of cases in the compared categories differed significantly from those that would be expected to occur by chance. Differences occurring at the .05 level of probability or less were accepted as statistically significant, and those between the .1 and .05 level were accepted as indicating a strong tendency. For ease of calculation the five categories of level, or degree, of implementation were collapsed into two – anything from extremely, down to moderately implemented, was interpreted as ‘implementation’, while not at all or slightly implemented was interpreted as ‘no implementation’.

First, it was found that men were clearly different from women in identifying the actions of competitors (Chi= 4.43 $1df$ p > .05). This is not particularly surprising. It is, rather, good business practice. That women do not appear to engage in doing so to the same extent that men do, may be due to a lack of opportunity by virtue of their position in the organisation; feelings of guilt, perhaps, at what they may interpret as, in effect, to
be spying; simply a lack of knowledge or expertise in how to go about it, or some other reason. Interestingly, men were also clearly different from women in commonly exchanging knowledge with clients and suppliers, and other organisations. Note that the nature of the ‘other’ organisations is unknown. This may mean government agencies that companies have a legal responsibility to report to (Chi= 4.17 \(1df \ p > .05\)). Also, the nature of the knowledge shared with clients and suppliers is also unknown, and conceivably could be anything from information that is derogatory or damaging to competitors, to social chit-chat.

There is also a difference between men and women, although not large, in the matter of playing by the rules (Chi= 2.83 \(1df \ p > .10\)). That is, there is a strong tendency for men to do so to a greater degree than women. This is a curious result, and, taken together with the 37% of organisations where there does not appear to be a climate of openness and trust (see Table 4.15), could bear a closer look at some other time. Finally, there was found to be a strong tendency, by men, not to gain personal status through the exercise of specialist skills and knowledge (Chi= 2.82 \(1df \ p > .10\)). This raises the question, how do people gain personal status within their organisations, if not through the exercise of their expertise. One answer may be that they gain status through the exercise of organisational power, their own, or possibly that of a mentor. Another answer may be that they have been lucky, or perhaps have certain personal characteristics (personal power) that give them status. This also raises another concern about the value actually placed by organisations on implementing knowledge policies, practices, and systems. For all this, 38 other tests failed to reveal further significant relationships or strong tendencies with regard to gender and its effect on the variables in Section Two – Degree of Implementation, in the survey questionnaire. These results,
taken together with those of the $t$-test, indicate that it does not seem to matter if the individual responsible for implementing knowledge systems and so on is a man, or a women. Hypothesis $H3$ is therefore upheld.

**Knowledge Management Implementation and Educational Qualification**

Hypothesis (H4) predicted there would be no relationship between the level of KM policies, practices, and systems implementation and the educational qualifications of the individual responsible for such matters. More particularly, the researcher wished to investigate whether, or not, a person with a post-graduate degree was more likely to implement KM systems and so on, than a person with only in-house training, or an under-graduate degree. The $\chi^2$-square test was used and was conducted on all questions in Section Two of the survey questionnaire to see if there was any relationship between the level of qualification held by the individual, and the level of KM implementation of any of the mentioned possible practices. The levels of qualification were divided into two categories – post-graduate (that is, those who held a Graduate Diploma, MBA, Masters other than an MBA, and PhD), and under-graduate (that is, those with a Bachelor’s degree, or Honours degree. Also, for convenience, those with some other sort of certificate were included here). Again, for ease of calculation, the five categories of level of implementation were collapsed into two – the three highest levels being interpreted as ‘implementation’ and the two lowest levels as ‘no implementation’. For the most part, no statistically significant relationships were found. However, in four of the mentioned possible practices that could be implemented by organisations, there were differences.
First, it was found that there was a strong tendency for those who held post-graduate qualifications to arrange work in ways that encourage experiential learning ($\chi^2 = 3.22 \text{ df} = 1 \text{ p} > .10$). This is interesting because the ability to learn from experience is where our ‘most powerful learning comes from’ (Senge, 1998, p.23), and learning is central to the creation of the knowledge bank of an organisation. Second, those with post-graduate qualifications were found to be clearly different from those with under-graduate qualifications only, in creating new core competencies ($\chi^2 = 4.42 \text{ df} = 1 \text{ p} > .05$). This is important because it indicates the flexibility that comes with learning, to create competencies appropriate to changing situations. Third, those with post-graduate qualifications were found to be different from those with under-graduate qualifications in avoiding ambiguous and meaningless terms ($\chi^2 = 3.12 \text{ df} = 1 \text{ p} > .05$). This may seem an odd initiative to include here, yet it is an important one. People need to receive clear and unambiguous communications, whether they be of rules and procedures, policies, in hands-on training, about strategic direction and so on. Without clear communication, people can be left floundering about what is expected of them, and what is needed as their contribution to the ‘bottom-line’. Results such as these are even more important when compared to the frequency data revealed in Table 4.14, where each of these initiatives is largely, only slightly – moderately implemented. The chi-square statistics on the other hand give a clear signal that people with post-graduate qualifications are likely to engage, at least on some occasions, with KM implementation, to a degree that those with under-graduate qualifications are not. Those with post-graduate qualifications are also different from those with under-graduate qualifications in that they are involved in formalising the process of transferring best practices ($\chi^2 = 6.14 \text{ df} = 1 \text{ p} > .05$). As with the other initiatives noted above, Table 4.16 reveals only slight – moderate implementation. One might conclude, however, that the more highly qualified
the people, the more likely they are to be aware, to appreciate, and to implement KM strategies, processes, and initiatives. For all this, 38 other tests failed to reveal further significant relationships, or even strong tendencies, so on balance, it would be prudent to uphold hypothesis $H_4$ and leave it to future research to take a closer, more detailed look at these issues. At the moment, however, based on the data here, it would seem not to matter greatly if the individual responsible for implementing knowledge systems, policies, and practices holds a post-graduate or under-graduate degree, or certificate, or not.

**DISCUSSION AND SUMMARY**

The results that have been reported on the question of the degree of organisational awareness of the concept of knowledge management per se, (results also referred to as the degree of importance) suggest that there is some moderate to high interest in it within the respondent organisations. This view is supported, to a fair degree, by an examination of a number of the items in Section One of the survey questionnaire.

On the one hand we find, for example, that organisations are very aware that it is important to their overall business strategy to manage knowledge and use KM to create customer value (see Table 4.7); to make clear how KM initiatives support the business plan and to allocate resources to KM (see Table 4.8); to gain competitive advantage, identify new markets and improve market share, and efficiency (see Table 4.10); and to support a culture of KM (see Table 4.11).
On the other hand, there appears to be a general lack of any real interest and initiative in gaining Board level representation for KM (see Table 4.8); and, arguably, only half-hearted interest by top management, in respecting KM policies and guidelines (see Table 4.11) and in demonstrating to the organisation that knowledge-sharing is both a workable and a practical activity (see Table 4.12). There is also a general lack of high degrees of interest in defining responsibilities for KM initiatives and in embedding KM in the business process generally (see Table 4.13), and generally only slight to moderate levels of interest in providing a budget (see Table 4.14). There is also only slight to moderate interest in documentation, maintenance, measurement and protection measures, over and above that which is minimally necessary to meet regulatory and compliance requirements (see Tables 4.16 and 4.18).

This suggests that although organisations may be aware of the benefits KM may have, they are either unaware of the practical steps they need to take to implement KM practices and systems, or, are simply unwilling to provide a budget, among other things, to enable effective implementation to take place. The question of resources here is a particularly interesting one, as on the one hand there is recognition of the importance of allocating resources (see Table 4.8), while on the other hand there is little to no inclination to provide a budget (see Table 4.14). Perhaps the resources alluded to in Table 4.8 are to do with technology and manpower, rather than dollars per se, although the former clearly rely on the provision of the latter in any case. In fact, as Table 4.9 indicates, information technology systems are considered vital, and organisations expect their employees to use IT systems effectively in their day-to-day work. Such systems, together with their back-up and recovery facilities (see Table 4.15) do not come cheaply.
Perhaps there is not, as yet, sufficient confidence or trust in the KM concept to do more than intellectually acknowledge the importance of the ideas. Perhaps there is a genuine lack of understanding of the practical steps that need to be taken. Maybe KM is simply given a low priority in terms of implementation, or is seen as just another fancy scheme being promoted by consultants that will soon go the way of many other schemes. Implementation of new ideas demands change in an organisation culture, which in turn demands changes in the philosophy and attitudes at the top. Fairness, transparency in decision-making, and equal distribution of authority are what is needed here, although many have recognised how hard it is ‘to change the orientation and mindset of [an organisation’s] senior managers’ (Bartlett and Ghoshal, 2003, p.13). On reflection here however, it is not possible to say, definitively, whether the overall view of the importance of the KM concept indicated by the survey, is that of the organisation itself reported by the individual responding to the survey, or is, in fact, specifically the view of the respondent individual.

In summary, then, in Tables 4.6 - 4.12 inclusive, high levels of awareness are evident with regard to the notions of KM as central to an organisation’s overall business strategy, including being used to create customer value. In principle, the allocation of resources to increasing the organisation’s knowledge base is considered very, to extremely important, at least by half the respondents, although the high level of awareness of the need for effective IT systems leads one to suspect that the bulk of any KM allocated budget will be spent on technology. As one would expect, gaining competitive advantage, improving efficiency and market share, facilitating high levels of innovation, increasing profits, and reducing costs, among other things, all rated very,
to extremely, important. The importance of establishing effective cross-functional teams is also recognised, as well as that of developing best practice standards, time for creative thinking, and a no-blame culture.

In summarising Tables 4.13 - 4.19, however (Section Two of the survey questionnaire), all of which focus on the degree of implementation of certain aspects of KM, a different picture emerges. Almost half the obtained sample appears to only slightly embed KM in their business process overall, while a further 11% do not do so at all. Only 14% plan the enhancement of their intellectual assets, and a third do not define responsibilities for KM initiatives (see Table 4.13). Less than a quarter of the obtained sample have a budget in place specifically targeted at KM initiatives (see Table 4.14). Although there are moderate to high levels of implementation around regulation and compliance requirements, nearly three quarters of the obtained sample were at best moderately, and at worst, not at all, engaged in identifying where they had gaps in their knowledge base (see Table 4.15). Almost two-thirds of respondent organisations only reward high KM performance to a moderate degree or less, while the same percentage of organisations only recognise productive teamwork to a slight - moderate degree (see Table 4.17). One of the reasons for this seemingly relative low interest in recognising and rewarding good performance could be that organisations are not fully aware of the quality of the work being done by their staff in the knowledge management area. This is very easy to believe when we find a third of respondents report their organisations have no specific indicators by which to manage knowledge, and senior management does not regularly review the effectiveness of any KM systems or policies (see Table 4.18). Where indicators and reviews are implemented however, it is largely in a slight to moderate degree only.
Although the overall results obtained from Section One and Section Two of the survey questionnaire are somewhat mixed, on balance, it might be concluded that there is a failure to fully appreciate what it means, in a practical sense, to implement KM systems, practices and procedures, even though there is a moderate to high level of awareness of the importance of doing so.

The researcher here had also wondered whether the level of implementation of Knowledge Management policies, practices, and systems would be influenced by either the gender of the implementer, and/or by their level of educational qualification. Taken overall, the various tests applied to the data failed to show any considerable relationships between the level of implementation of KM and either the gender or the educational qualification of the implementer. However, one would point out, the holders of post-graduate qualifications did appear to have a better conceptual grasp of the concept of Knowledge Management, arranging work in ways that encouraged experiential learning, creating new core competencies, avoiding ambiguous and/or meaningless communications, and formalising the process of transferring best practice.

Section Three of the survey questionnaire looked specifically at the human resources function within the organisations in the obtained sample. The overall results showed that HR professionals were aware of, and were involved in, KM implementation, at least as much as their organisations allowed. A third or more of respondents, for instance, indicated that key indicators for KM were in place, that support from senior staff for knowledge-sharing had been secured, and individuals were compensated for their contributions to organisational knowledge. These perceptions seemed somewhat at
odds, however, with other indications. For example, Table 4.18 shows that monitoring
good KM behaviour is not, by and large, very high on the implementation agenda within
the obtained sample, and nor is developing a specific set of indicators by which to
manage knowledge. The incidence of high to very high levels of implementation of
regular reviews of best practice and effective KM is also fairly limited (see Table 4.18).
Further, Board level representation for KM is non-existent in a third of cases (see Table
4.8). Rewards to individuals or teams for productive/high performance is generally
implemented to a moderate degree, although about a third of the obtained sample did do
better than that (see Table 4.17). It did appear, however, that some compensation was
being made to individuals who were responsible for co-ordinating knowledge, and,
where key indicators for KM were in place, support and encouragement from senior
staff was forthcoming. What is not clear, however, is what form this support and
encouragement takes. It may mean as little as a verbal pat on the back. Of course,
Section Three is HRM specific in its focus, and Sections One and Two are focused on
the organisation overall, so that in answering the questionnaire, the HR respondents may
see that although the HR department is involved in KM initiatives, the organisation
overall is perhaps somewhat less so. This is a believable scenario, given the lengths that
HR departments often have to go to convince senior management of their relevance and
effectiveness.

Arguably, there is little in the way of an integrated approach that, with strong support
from senior management, puts in place appropriate key KM indicators linked clearly,
and demonstrably, with performance reviews and measurement and a fitting
compensation package. One could argue that the current level of HR involvement in
KM, commendable as it is, barely touches the surface of what could, it is contended, be a real future for the HR professional. As Bartlett and Ghoshal (2003) point out

‘first, human resources issues must move up near the top of the agenda in discussions of the company’s strategic priorities. That means that a first-class human resources executive must be at the CEO’s right hand. Eventually, traditional strategic-planning processes will need to be overhauled and the financially calibrated measurement and reward systems will have to be redesigned to recognise the strategic importance of human … resources’ (p. 13).

The next chapter concludes the thesis, and offers some further reflections on the question of a role for Human Resources in Knowledge Management.
CHAPTER FIVE

A SPECIALISED ROLE IN KNOWLEDGE MANAGEMENT - A FUTURE FOR HUMAN RESOURCES

As has been noted at the beginning of this thesis, human resources practitioners and academics, and others interested in the field of human resources (HR), have long held concerns for the future of the HR function within organisations. The nature of these concerns is two-fold: first, how can HR deal effectively with the challenges of organisational life today; second, how can HR convince senior management that it is both relevant, and necessary, to the economic success of the enterprise, and so assure its future as an internal organisational function. This thesis posits that not only does an involvement in the knowledge management process hold considerable benefits for an organisation through a direct and positive influence on the ‘bottom-line’, but that such an involvement takes on a specialised set of aims and objectives within the human resource function that should not be ignored.

CHALLENGES REVISITED

Challenges to the HR function/department are not new. As Chapter One explained, in the 1980s, for example, researchers, and other writers in the field, identified the need to survive in a more intensely competitive environment with an increased reliance on technology, in an age with an eye on operations, rather than asset, management. Not only did HR have to come to grips with how to use new technologies in the performance of its own function, just as importantly (if not more so) it was faced with solving the human problems that technology brings with it. Added to the increase in competition and technology, pressures towards globalisation and issues of diversity in the 1990s led
to calls for HR to design and deliver efficient and effective people management policies, including change management programs, that would help the organisation achieve its strategic goals. Increasingly, as the 1990s progressed, HR was being asked to focus on performance improvement of staff, including its own people, through its training programs and other learning activities, while HR practitioners and academics increased their calls for an HR presence on the senior management team. Along with this stronger push towards senior recognition for the strategic and intrinsic value of the HR function, HR practitioners were being urged to develop a means of measurement of their activities that would make clear the HR contribution to the ‘bottom-line’ of the organisation. As we move into the new millennium, and the so-called age of the knowledge economy, HR professionals have been exhorted to become involved in relationship management, and through that, in knowledge creation. As well, issues of diversity, securing HRM flexibility, and organisational change are still major challenges. More recently still, there has been stronger interest in recognising that HRM is ‘reciprocally interdependent with the environments in which it is embedded’ (Zanko, 2003, p.75). These environments again emphasise issues of continuous change; intensification of competitive pressure; decentralisation of HRM, and training and development.

Arguably, the other constant in the lives of HR professionals has been to gain appropriate credibility with senior management by successfully meeting such challenges, and by this means, preserve their role within organisations. This, however, as has been noted in Chapter One, has proven to be quite difficult. One reason for this is that the HR professional has not necessarily had the appropriate training or experience, and so has continued to have difficulty in convincing management of their importance
in designing, developing, and delivering on the strategies of the organisation. A second reason for these difficulties is, arguably, that the HR professional is trying to ‘bring about major systemic change with incremental programmatic solutions’ (Bartlett and Ghoshal, 2003, p.14). That is, the HR professional is using the techniques of old - training programs (even though they may be innovative) and ever-more sophisticated compensation packages; and solutions to short-term problems that in turn prove to be short-term themselves - to tackle the dramatic changes in the ‘external strategic imperatives and internal strategic resources’ (Bartlett and Ghoshal, 2003, p.12) of the new millennium. A third reason may be structural; the fact that in many cases the HR Director is situated on the management tree one tier below that of the executive. When the person to whom the HR Director then reports, gives ‘HR issues … a lower priority than they actually warrant’ (Gillam, 2003, p.12) the credibility of HR suffers. It is further eroded if, when due to the HR Director’s hierarchical position, HR fails to be ‘apprised of strategic issues facing the organisation early enough to be able to influence strategic decision-making’ (Gillam, 2003, p.12). Not all commentators, it should be noted, agree of course. Kevin Wallis (2003), for instance, Managing Director of Mercuri Urval Australia/New Zealand, says it does not matter ‘where the HR team sits, but what it does that counts [as] the highly effective HR team is working to very defined key performance indicators today; [as long as HR] is linked to the business model [it will be effective;] it’s not necessarily an hierarchical thing’ (p.12). Whether or not it is important where HR is hierarchically situated, is a matter for others to debate. What is clear is that without full access to the strategic issues that concern the organisation and the strategic thinking of the senior decision-makers, HR would find it extremely difficult to advise the organisation appropriately on any ‘people factors that may impact on the organisation’s ability to achieve what it needs to achieve’ (Yeo, 2003, p.13).
It was argued in Chapter Two, that the HR department, as a total entity, is actually well placed to further the organisation’s strategic objectives through its own knowledge-aware management of the way it performs the HR function. Further, the HR professional, with their unique overview of the organisation’s structure, culture, manpower distribution, reward and compensation systems, and training programs, is ideally placed to see, and help others understand, how knowledge management is an appropriate and effective way to manage policies, procedures and systems so that all the tacit and explicit knowledge/information available in the organisation is made accessible, to the benefit of employees, customers, suppliers, shareholders and so on. Further, a deep understanding of the nature of changes in both external and internal environments, and a recognition that the real scarce resource is people with knowledge, and that unlike capital, knowledge will actually increase when it is shared (Standfield, 2002) would help the HR professional move the culture of the organisation towards one of value creation, rather than of value appropriation. The task here, at least initially, is to help senior and middle level managers to change their attitudes to value distribution practices. That is, to create a sense of purpose within the organisation that also brings meaning to individual effort; to articulate a set of values that align effort with the organisation’s strategic objectives, and also defines a community to which people want to belong; and to develop organisational processes that not only empower and develop people, but also make clear that the organisation is committed to them in a way that they find is meaningful (Bartlett and Ghoshal, 2003). Further than all this, providing that HR is ‘capable of operating … as a partner in strategic direction setting (Gillam, 2003, p.12), the HR professional would be able to add valuable strategic decision-making capability to the senior levels of the organisation.
KNOWLEDGE MANAGEMENT REVISITED

It has been observed that knowledge, as a decisive factor affecting an organisation’s ability to gain competitive advantage, is an idea that has steadily received prominence in the management literature in recent times. Given the turbulent economic, political, social, and ecological times which are the norm in the new millennium, it is not surprising that the issue of knowledge management is explicitly directed towards economic advantage and effectiveness, and that economic liberalism has been a common policy of many governments worldwide, including Australia. Economic liberalism, or Human Capital theory, as has been explained in Chapter Two, believes in the idea of a free labor market, that will in turn lead to the development of highly flexible and responsive organisations, without which businesses and nations risk bankruptcy. The continual rationalisation of behaviours that a competitive market economy demands can, it is argued, only benefit from the growth of intellectual/knowledge capital, its storage, and effective use. The ‘value of human capital in the development of competitive advantage cannot be overstated … [and indeed] skilled people operating in a supportive culture become the only sustainable competitive advantage’ (Hitt, Ireland and Hoskinson, 2001; Thurow, 1990 cited in Sharkie, 2002, p.5).

What constitutes human, or knowledge capital, and how to go about managing it, is by no means clear, however. How it is defined varies with the particular context within which it is seen. A number of different perspectives are evident in the knowledge management literature, and a number of these have been discussed in Chapter Two. For instance, the human resources or cultural perspective, defines knowledge as the experiences and procedures that guide the thoughts and behaviours of people in the
ways that the organisation believes are right. This is, if you will, premised on the relationships that people develop and are socialised into. The economic perspective, as one would expect, defines knowledge in terms of the acquisition and use of resources to create the conditions in which information is made accessible to all. Individuals are then encouraged to apply the information so gained to the benefit of the organisation. The operational perspective understands knowledge capital in terms of skill acquisition and mastery, while a processual view discerns knowledge and its management as a strategy of getting the right information to the right people at the right time.

Three major schools of thought about knowledge and its management may also be discerned in the literature. The first focuses on information technology and its use in collecting and making knowledge available to people. This perspective is concerned largely, if not exclusively, with explicit knowledge - that which is easily codified and collated, is reported in Annual Reports, and recorded on databases, and in memos and manuals. The second suggests that knowledge management is primarily a human resources issue. This perspective focuses more on tacit knowledge - that which is informal and hidden. It is here that issues of teamwork, motivation, leadership, and culture come into play. The third school of thought is a processual one, and focuses on how to capture, and measure an organisation’s knowledge. In this thesis, organisational knowledge is considered to be the total sum of the tacit knowledge of all the employees in the organisation, plus the total sum of the explicit knowledge of the existing processes, technology used, and products of the organisation. Knowledge Management, however, is considered to be the way in which organisational knowledge is managed for the benefit of the organisation with regard to profits and sustainability, and for the
benefit of the employees with regard to their job satisfaction and personal growth and
development.

This thesis has been particularly concerned with the specialised role that the human
resources practitioner can play in knowledge work so that the organisation can ‘exploit
its knowledge base effectively’ (Newell, Robertson, Scarbrough and Swan, 2002, p.72).
It has been explained that the HR functions of recruitment, writing job descriptions,
performance appraisal, training and development, succession planning and internal
promotion, and separation processes can, if viewed and operationalised from a KM
perspective, transform HR processes in ways that make clear to organisations the
effectiveness of HR in developing the human capital of the enterprise and thereby
enhancing organisational performance. For instance, a knowledge-committed HR
department would actively recruit people who were committed to the principle of
sharing what they know, for the benefit of other individuals in the organisation, and the
organisation itself. This requires a different attitude to organisational life (and life in
general) than that which is most often in evidence. It requires a holistic view that does
not focus on individual status or gain, but which sees the individual as an integral part
of a whole, working towards the goals of that whole. This is an idea sometimes
discussed under the rubric of ‘communities of practice’ or ‘organisational citizenship’.
Of course, recruiting people who are corporate knowledgeable-citizens, requires job
descriptions that recognise the interdependency of individuals and their joint
accountability for the flow and quality of the work. This in turn obliges organisations to
develop and institute appropriate key performance indicators that measure an
individual’s knowledge contributions to the creation and maintenance of a knowledge
culture. Appropriate reward systems must also be instituted. These things are not easy to
accomplish of course, but ‘the possibilities for professional and personal development are unlimited, if one knows how to exploit these opportunities’ (Larsen, 2002, cited in Besseyre des Horts, 2002, p.49). Training programs also gain a knowledge dimension, including taking inventory of the organisation’s knowledge skills when training inventories are being conducted, developing individual and group programs that expand trainees knowledge awareness and knowledge implementation skills, and extending ways of measuring the effectiveness of training programs to take account of how well the training has prepared people to be able to contribute to the knowledge bank of the organisation. As Chapter Two pointed out, career development programs and internal promotion criteria would also take account of a person’s ability to contribute to the knowledge bank of the enterprise, while the exit interview (when the individual finally separates from the organisation), handled with sensitivity, presents the organisation with a last opportunity to try to convert the person’s tacit knowledge into explicit knowledge, for the benefit of those remaining.

In order to make clear the role that this researcher feels the HR department can play in knowledge management, he has offered his own model, depicting the integration of KM practices, as he sees it occurring in the HR function. The model is a process model, and purports to show how, when conventional HR processes interact with KM practice, the result is to lead to higher levels of understanding, and new actions, for the benefit of the organisation as a whole. In a holistic sense, Knowledge is the field that brings together, and unifies, the knower (the individual open to knowledge), the field of knowing, and the known (the organisation in a state of knowledge). The knower is the individual who chooses how to perceive, and whom to perceive (Hampden-Turner, 1970). In the case of the HR professional, they define themselves by their HR expertise, and invest this
defining expertise in their work. When KM is integrated into HR practice and becomes a recognised part of HR expertise, this work is associated with a certain degree of risk and purpose, especially where implementation of knowledge systems, policies, and practices is largely unsupported. It is here, however, that the HR professional has the opportunity to take risks and develop the appropriate environment (culture) and opportunities for employees of different functions and levels within the organisation to interact and exchange communications in an informal and open atmosphere that brings the tacit knowledge to the surface, and to find ways to transfer this knowledge to explicit knowledge for storage and availability for the day-to-day and strategic decision-making processes of the organisation. This is the essence of knowledge transfer, which is a key part of the learning organisation. Goh (2001) points out, organisational learning occurs when knowledge in one part of the organisation is effectively transferred to another part, and used to solve problems.

LEARNING REVISITED

It has been noted (see Chapter Three) that learning from experience with the aim of solving problems and thereby improving business performance is one of the uses of knowledge management. Therefore, no discussion on knowledge and knowledge management would be complete without taking into account the management literature on learning, organisational learning, and the Learning Organisation. As discussed in Chapter Three, as with the concept of knowledge management, there is a lack of agreement about the meanings of the terms used. Indeed, it has been suggested the quest for a definition of learning (and arguably also of ‘organisational learning’ and the Learning Organisation) is a vain one (Aspin, 2000). Nonetheless, there have been many attempts at defining the terms. At its simplest, learning has been said to simply be an
activity (Garvin, 2000). Other writers have emphasised different facets of this activity. For instance, the transformative nature of learning is recognised by Alheit and Dausien (2002), Cummings and Worley (1997), King (2001), Argyris (1994), Senge (1998) and many others. The process aspect of learning is noted by Elkjaer (2001), Cross and Baird (2000), Dixon (1994), McLean (2000) and so on. A number of writers, however, have acknowledged the confusion that has been generated by the seemingly interchangeable use of words such as knowledge, information, learning, organisation learning and the Learning Organisation. Taking Wittgenstein’s advice, the researcher here advises the reader that he considers learning to be a process that leads to knowledge, whether that is learning by the individual, or by the organisation. Furthermore, he considers the term Learning Organisation to describe organisations that, among other things, value the process of learning, are flexible, recognise self-development as a necessity, nurture an open, sharing culture where it is safe to take risks, and have the ability to change quickly to adapt to unforeseen circumstances. There appears to be broad acceptance of this idea in the literature, in any case.

As mentioned above, learning from experience in order to solve problems and improve performance is one of the uses of knowledge management. As learning itself cannot be directly measured, that learning has occurred must be inferred from new behaviours and improved business performance. The HR department however is visibly connected to the learning process through the training programs that it develops and delivers. It was explained in Chapter Two, and mentioned again above, that an appropriate time to inventory the knowledge skills base of the organisation is when the training skills inventory was being conducted. An audit, or inventory, of the knowledge-skills would take account of, not only existing skills and those required but not yet present, such as
the ability to convert tacit into explicit knowledge, but also of what processes, procedures, and technologies were required to retain knowledge once it had been converted, and concomitantly, needed, to release knowledge for use in day-to-day and strategic decision-making.

A cultural audit conducted simultaneously with knowledge and training audits would also have the benefit of including a review of current organisational values and thus reveal any gap that existed between the values-in-use and the espoused values (Argyris, 1999). This is important as ‘the values should form the basis of the processes used to manage people … [The] assessment provides the means to examine the extent to which [organisational] policies support or hinder the desired culture’ (De Cieri and Kramar, 2003, p.258). In other words, where an organisations is aware of the concept of knowledge, and the benefits that can accrue from effective knowledge management, it is important that the current organisational culture be examined, including that of the HR department itself, to ensure that HR policies, as much as any others, ‘are consistent with and support the values and the strategy’ (De Cieri and Kramar, 2003, p.268) of the organisation.

In other words, opportunity exists for the HR professional, particularly in the organisation that is aware of the concept of knowledge and the benefits that can accrue from effective knowledge management, to conduct a cultural audit and highlight the ways organisational policies support or hinder the development of a culture that values learning and KM as the way to improve business performance. Nor should the HR department be exempt from such an audit, if the HR professional is to show the senior management team that it is a function both relevant and necessary to the business
success of the organisation. What better way to role model to the whole organisation the
benefits of implementing good KM practices, policies and systems than for HR to
highlight benefits gained by the HR function itself, by improving its own business
performance through sound KM practice?

Many have commented on the importance of cultural factors in facilitating learning, and
it is fair to say that an organisation that values learning would hold its employees in
high regard. Levels of trust would be high, communications would be open and truthful.
A general atmosphere and climate of collaboration and co-operation would prevail. A
thoroughly committed leadership would clearly be necessary however; not only a
leadership committed and supportive of the concept of knowledge, and to the
implementation of KM, but one also ‘oriented towards utilising effective HR [without
which any HR] strategies don’t have a chance of working’ (Wallis, 2003, p. 12). Such
support would be evidenced, for example, in Board representation for the HR profession
and for the concept of KM; in the amount of dedicated budget put into purchasing any
technology required to appropriately store knowledge and make it available as needed
for the strategic and day-to-day decisions of the business; in the development of
appropriate performance measures of knowledge work and people’s contributions to the
knowledge base of the organisation, and in the institution of a reward system clearly
linked to performance. Other forms of recognition for knowledge-work leading to
improved business performance, such as monthly awards or write-ups in in-house
magazines or newsletters, and the constant use of knowledge-aware language would
also be signs of senior management/leadership support.
No less important than these positive measures would be the efforts made (and encouraged to be made) to avoid, or overcome, factors that inhibit learning. For example, efforts to train the managerial team and improve their leadership skills, clear strategies that are unambiguous and do not conflict with each other, and effective systems of communication would all signal management’s commitment to learning as a key organisational value.

THE DATA REVISITED

As mentioned earlier, some schools of thought about knowledge management focus on information technology issues, while others understand it as a human resources or process issue. The survey questionnaire used in this research therefore asked questions relating to both information technology and human resources. The researcher was also interested in how aware the respondent organisations were of KM concepts, and in the degree of implementation of KM policies, practices and systems. As a particular interest of this work was concerned with the role the HR professional played (and can play) in knowledge work, a section of the survey was devoted to this.

Four hypotheses were proposed in all. The first tested whether there was any relationship between the act of acknowledging the importance of KM and the act of implementing a KM systems, policies and practices. The second tested whether there was any relationship between the HR function and the level, or degree, of KM planning and implementation taking place. The third hypothesis tested whether the degree of implementation of KM policies, practices and systems was related to the gender of the individual responsible for such matters. The fourth, and last, hypothesis tested whether
there was any relationship between the level of implementation of KM and the educational qualification of the individual responsible for such matters.

The data indicated that levels of awareness of the benefits to be gained from KM were quite high, with better than two-thirds of the obtained sample seeing the benefit to be had, in increasing value for customers; gaining a faster response rate from suppliers; increasing levels of innovation and profit; reducing costs; gaining competitive advantage; and improving overall efficiency and effectiveness. Further, it appeared to be well understood that it was important for there to be a culture that was encouraging and supportive, where time to be think creatively was valued. None of this is particularly surprising. After all, much has been written, and presumably read, that outlined these advantages. Nor is it difficult to say that one understands that these benefits can accrue from KM. But, this is an intellectual understanding. The test is whether or not this understanding can be converted into practice. This is the question that was tested by the first hypothesis. The data suggested that implementation was taking place when it came to using technologies such as the internet, intranet, video-conferencing facilities and so on, and where there was a legal requirement that something be reported or actioned. However, generally, very high levels of implementation did seem to be lacking in areas such as defining KM responsibilities, identifying knowledge gaps, providing a budget specifically for KM development and implementation, and recognising and rewarding good KM practice. Furthermore, most respondents in the obtained sample did not feel that KM as a concept should have representation on the Board. The data suggested that as far as implementation goes, the response by organisations thus far was moderate. One might say, lukewarm. One would have expected that an organisation that was serious about the concept of knowledge and
the implementation of KM systems, policies, and practices would have conducted a knowledge-audit, pin-pointed gaps in its knowledge base so that appropriate training could take place, provided an appropriate dedicated budget, and developed performance measures and reward systems clearly linked to knowledge-work. Given the rather indifferent efforts at KM implementation, Hypothesis One was upheld.

The frequency data with regard to the involvement of the HR function in KM initiatives showed there was considerable involvement by HR here. It would be easy to leave it at that and conclude that the second hypothesis should be rejected. However, keeping in mind that there could have been the objection that HR managers, as the ones to whom the survey was directed, would naturally perceive their departments as being involved in the KM initiatives listed, further tests were carried out. That is, each question in Section Three of the survey questionnaire was tested against each other question to discover if any correlations existed. It was found that securing support from senior staff for knowledge-sharing was correlated with giving individuals responsibility for co-ordinating knowledge within divisions of the organisation, encouragement to do worthwhile things, putting key performance indicators in place, and compensating individuals for their contributions to the development of organisational knowledge, although it was not known what form such compensation took. Even so, the general lack of high levels of implementation of KM policies and practices in important areas, as detailed above, suggests that senior managements are less enthusiastic about the knowledge concept than their HR professionals.

The data thus revealed overall (that is, by the frequency data and the *Pearson’s product moment correlation coefficient* \( r \) taken together), showed that there was indeed a
relationship between the HR function and the degree of KM planning and implementation taking place. Even so, the general lack of high levels of KM implementation as perceived at the overall level in matters such as providing budgetary support and identifying gaps in organisational knowledge, and representing the concept at Board level and so on, suggested that the HR department may be somewhat constrained in what it is allowed to do. Nevertheless, a relationship between the HR function and the degree of KM implementation evident in the respondent organisations was shown, and Hypothesis Two was rejected.

The data obtained with regard to the relationship, or otherwise, of gender to the level of KM implementation did not show anything of note, however. The $t$-tests conducted on the 52 variables of Section Two of the survey questionnaire, with the sole exception of Question 2C - The practices of competitors are identified - all failed to show any significant difference between males and females. Not content to leave it at that, chi-square tests were also conducted on Section Two of the survey questionnaire. First, it was found that more men than women engaged in identifying the actions of competitors, and in commonly exchanging knowledge with clients, suppliers, and other organisations. These results should not be taken at their surface value only, however. It would be fruitful to investigate, at some later time, and with an appropriately large sample of equal numbers of males and females, whether these results hold true, and if so, why there are these differences. It would also be of interest to know the nature of the organisations that men exchanged knowledge with, and the relationship of those organisations to the one in which the men worked. The type of knowledge exchanged could be of interest too. Second, there appeared to be a strong tendency for more men than women to ‘play by the rules’ and not to gain personal status in their organisations.
through the exercise of specialist skills and knowledge. These tendencies are rather curious, to say the least, and raise questions about power and influence in organisations, and openness and trust. A deeper look at such issues through a process of interviewing and narrative methodology and analysis, at a later time, might be productive. Apart from these results, however, 38 other chi-square tests failed to reveal any significant relationships. Hypothesis Three was therefore upheld.

The fourth hypothesis had revealed some differences between those holding post-graduate educational qualifications, and those who did not. That is, post-graduates were more likely to encourage experiential learning, create new core competencies, avoid using ambiguous and meaningless terms, and be involved in the formalising of best practices. As these activities are all important in KM systems, it was tempting to reject the fourth hypothesis. The problem here, though, was that 38 other tests carried out failed to reveal any other significant relationships/strong tendencies. Further than this, the frequency data from Tables 4.14 and 4.16 showed that by far the largest percentage of respondents indicated only moderate to slight implementation of the important activities described above. This would suggest that, as was proposed in regard to the HR departments’ ability to implement KM activities, people who held post-graduate educational qualifications might be similarly constrained in what they are allowed to do. In this case, however, the evidence is not strong enough to justify rejecting Hypothesis Four. Hypothesis Four was therefore upheld.

It is important to say something finally about the validity of generalising from the research results that have been reported here, since objections might be raised if the grounds for claiming generalisability are not now set out clearly. There are one or two
objections that could possibly be raised: first, that as it was HR managers, or similar, to whom the survey was directed, the sample contains a positive bias towards the role HR is perceived to be already playing in the knowledge management process. Second, the attitudes of these HR managers towards knowledge management are not representative of HR managers generally. By way of broad reply, it must be emphasised that the researcher is bound to accept the answers that the respondent gives, and to accept them as truth. Furthermore, ‘recent findings in cognitive sciences describing how the cognitive capabilities of individuals co-evolve within specific contexts, [allow us to look] … at the firm as a specific context … The firm may be seen as a community capable of generating stable cognitive models’ (Turvani, 2001, p.310). However, whether or not the respondent organisations actually have HR departments as involved in KM implementation as the data has suggested, is immaterial to the proposition that this thesis posits - that is, that the HR department, as a total entity, is well placed to further the organisation’s strategic objectives through its own knowledge-aware management of the way it performs the HR function. Indeed, the HR department is uniquely placed, with its overview of the organisational structures, reward and recognition programs, training program and so on, to help create the open and sharing culture required to make a success of KM. The argument is that a general conclusion can be drawn from this study, if it is viewed as a particular case, where the attitudes of HR managers are considered, not unreasonably, to be typical of other HR managers, and to reflect their perceptions of their role within the organisation.

The researcher argues, similarly to Arthur and Parker (2002) cited in Besseyre des Horts (2002), that HR and the HR professional has the ideal opportunity to move from ‘a person-centred approach … [to] a knowledge-centred approach … [where the]
traditional HRM tools and practices are put in question’ (p.49) - for instance, ‘recruitment of knowledge not people, retention of knowledge not people … encouragement of community links, reinforcement of industry citizenship’ (p.50). Currently, it would appear that organisations have been slow to implement the type of changes that would be necessary for them to become fully knowledge-aware and knowledge-practicing, and this has meant, arguably, that HR has been constrained in what it has been able to accomplish. For all this, it has been acknowledged that KM is about ‘a transfer of skills, a process that entails learning and creative development … [and that] falls under the HR umbrella’ (De Mello, 2002, p.29). It would be efficacious, therefore, for the HR professional and their department, to be accountable for the growth of knowledge-awareness within the organisation, and the implementation of an integrated approach to knowledge management.

RECAPITULATION

This thesis has been broadly concerned with the future of the HR function within organisations. The nature of this concern has been two-fold: first, how can HR deal effectively with the many challenges of organisational life in the opening years of the new millennium; second, how can HR convince senior management that, as a function, it is both relevant and necessary, to the economic success of the enterprise. This thesis posits that not only does an involvement in the knowledge management process hold considerable benefits for the enterprise through a direct influence on the ‘bottom-line’, but that involvement takes on a specialised set of aims and objectives within the HR function that should not be ignored.
It has been shown that the HR function is aware of the concepts of knowledge and Knowledge Management, and perceives itself to be considerably involved in the implementation of knowledge systems, policies, and practices. It has also been shown that across the whole of the organisations represented in this research, there was a general lack of high levels of KM implementation, especially in the important areas of senior management and budgetary support, of processes such as audits that would help identify gaps in current knowledge required to improve business performance, and of appropriate performance and reward systems.

The argument, therefore, is that the HR function has been constrained in what it has been allowed to do, even though it is uniquely placed, with its overview of the structures, manpower, performance and reward systems, and training and development programs, to be instrumental in creating the open, unselfish culture required to make a success of Knowledge Management, and secure its own future as a trusted and valued strategic partner, fully contributing to the enhancement of organisational performance, and ultimately, the organisation’s place in the world.

In other words, with its own knowledge-awareness and unique overview of the organisation, HR is in a position to play a major role in moving the organisation’s culture to one of value creation, and to add valuable strategic decision-making capability to its senior ranks. In these ways, HR could make clear its effectiveness in developing the human capital of the organisation and thereby enhancing organisational performance.
Appendix A

Invitation to Participate

Date:

To:

Dear Sir/Madam

Re: Request for participation in a research project on Knowledge Management (KM).

I am a full-time Ph.D. student in the School of Business, Swinburne University of Technology, Melbourne. I have a background in Human Resource Management. The study is being done under the supervision of Dr. Barbara Lasky, Senior Lecturer in the School of Business, Swinburne University of Technology.

I write to invite your participation in a research project on Knowledge Management, its importance and implementation in Australian companies. The research is aimed at making a significant contribution to the field of Knowledge Management, and has an HR perspective. I am inviting a sample of companies in Australia to participate in this research.

You are assured that your response will remain confidential. Your name is not required. Your participation is voluntary, however your consent to this research is implied when you complete the questionnaire. Your perspective is very important for the research. Data collected will be aggregated and will form part of my doctoral thesis. Aggregated data may also be published in conference papers or journal articles.

Please answer all of the questions and forward the completed questionnaire to me through the enclosed Reply Paid Envelope. Please respond by Friday May 31st, 2002.

Thank you for your co-operation.

Makarand Tare
Research Scholar

School of Business
Internal mail No.23
Swinburne University of Technology
P.O. Box 218.
Hawthorn 3122
Victoria
Date: 6th June 02

To:

Dear Sir/Madam

Re: Reminder for participation in a research project on Knowledge Management.

I refer to my letter dated 15th May 2002, inviting you to participate in a research project, which focuses on Knowledge Management, its importance and implementation in Australian companies.

I, along with my supervisor Dr.Barbara Lasky, have extended the date of response to 20th June 2002, keeping in mind the busy schedule you may have and the enhanced value your participation will add to the research project.

In case you have already responded, you may ignore this reminder, but if not we encourage you to participate as we believe that this survey will produce benefits for Australian companies, as well as for human resource practitioners.

If you require any further information, please do not hesitate to contact either myself on (03) 9214 5476 or my supervisor Dr.Barbara Lasky (03) 9214 5350.

Thanking you in anticipation

Yours Sincerely

Makarand Tare
APPENDIX C

KNOWLEDGE MANAGEMENT SURVEY QUESTIONNAIRE

Knowledge Management (KM) is a business strategy that can produce measurable business results.

The questions here are designed to assess the level of awareness and the level of implementation of the concepts of KM in companies based in Australia.

Your participation is voluntary. Your consent to participate in this research is implied if you complete the survey.

The questionnaire is divided into four sections.

a). Section one contains questions which cover the key areas of KM as identified in the theory and relate to the importance your organisation places on KM.

b). Section two relates to the degree of implementation of the elements within your organisation.

c). Section three contains questions on tacit knowledge, and the role of the HR department in your organisation in regard to tacit knowledge.

d). Section four asks some demographic questions.

Scoring: Please place a tick (✓) in the appropriate column.

Please complete and return survey in the Reply Paid Envelope provided no later than May 31st, 2002.
SECTION ONE

Degree of importance

<table>
<thead>
<tr>
<th>It is important that:</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
</table>

1. KM Inclination.
   a) A general understanding of knowledge management principles exist throughout the organisation.

2. KM Strategy
   a) Managing organisation knowledge is central to the organisation's overall business strategy.
   b) Knowledge management is used to create customer value.

3. KM Initiatives
   a) The organisation encourages and facilitates knowledge sharing.
   b) The organisation allocates resources toward efforts that measurably increase its knowledge base.
   c) It is clear how knowledge management initiatives support the business plan.
   d) Informal networks across the organisation are encouraged.
   e) The organisation has board level representation for knowledge management.
   f) There is a 'knowledge plan' in place to guide the employees towards the knowledge they pursue.

4. KM Information Technology
   a) A sophisticated and ethical intelligence gathering mechanism has been developed.
   b) Technology is used to create an institutional memory that is accessible to the entire enterprise.
   c) Technology is used to bring the organisation closer to its customers.
d) Technology is used to ensure that the required information is available to the employees in a timely manner.

e) The organisation's people use IT effectively as normal working practice.

f) The IT system is considered vital.

5. KM Benefits

It is important that the organization benefits from knowledge management by:

a) Increasing value for customers

b) Faster response rate from suppliers.

c) Higher levels of innovation

d) Reduction of costs overall

e) Keep up with competition.

f) Gaining a competitive advantage

g) Increasing profits

h) Developing new products/services

i) Instigating change

j) Identifying new markets

k) Improving efficiency

l) Improving market share

m) Increasing overall organisational effectiveness

n) Other ____________________

(Please rate)

6. KM Culture

a) Senior management supports a culture of knowledge management.

b) The business unit owns knowledge management initiatives.

c) The organisation moves towards creating an internal market in knowledge.

d) The top management respects knowledge management policies and guidelines.
e) A cross-functional culture should be established to enable employees from various functional areas to work together.

f) A no-blame culture, which tolerates mistakes, is developed.

g) Employees understand the concept that in giving, one receives, and in holding on, one loses.

h) There are fewer secrets within the work group.

i) Time is allowed for creative thinking.

j) Best practice should be a natural, standard process.

7. **KM Training**

   a) Sharing competencies is part of training and developmental initiatives.
   
   b) The organisation enables people to develop a can-do mentality.
   
   c) Employees are provided with immediate feedback to help their own learning.
   
   d) People are provided with the facility to retrieve and develop ideas in the future.
   
   e) Real life experiences are publicised from which people can learn.
   
   f) Knowledge sharing is demonstrated to be a workable and practical activity throughout the organisation.
   
   g) Training in knowledge management behaviour and procedures should begin with the Induction program of new recruits.
### SECTION TWO

*To what degree has the organisation engaged in the following:*

<table>
<thead>
<tr>
<th>Degree of implementation</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
</table>

1. **KM Strategy**
   a) Knowledge management is embedded in business processes generally.
   b) There is a set method in place to collect and conceptualize vital business data.
   c) The organisation has a marketing strategy for knowledge management ideas that it uses internally.
   d) Organisation focuses on evaluating alliances and mergers planned for enhancing the intellectual assets.
   e) There are defined responsibilities for knowledge management initiatives.

2. **KM Initiatives**
   a) Employees have time to document new knowledge during and after a project is finished.
   b) A budget is in place for knowledge management initiatives.
   c) The practices of competitors are identified.
   d) Work is arranged in ways that encourage experiential learning.
   e) Learning is used to support existing core competencies.
   f) New core competencies are created.
   g) Ambiguous, meaningless terms are avoided.
   h) Knowledge is commonly exchanged with clients, suppliers and other organisations.
   i) There are no restrictions placed on access to information unless it is confidential or personal.
3. **KM Process**
   a) A climate of openness and trust operates in the organisation.
   b) Knowledge is effectively disseminated through set procedures and formal networks.
   c) Identification of knowledge gaps.
   d) Use of knowledge and information is controlled in line with regulatory and compliance requirements.
   e) Legal guidelines are in place to protect intellectual capital.
   f) The IT system has an in built backup and recovery facility for securing data.
   g) Employees are brought together from different divisions and/or locations to offer different approaches to thinking and working.

4. **KM Documentation/Maintenance & Protection**
   a) The organisation has formalised the process of transferring best practices.
   b) Recording and sharing knowledge is routine and second nature.
   c) There are regular reviews to delete out-of-date information.
   d) There are regular updates from designated information owners.
   e) Effective cataloguing and archiving procedures are in place for document management, whether held electronically or not.
   f) Regulatory and compliance requirements are clearly published.
   g) Regulatory and compliance requirements are monitored to ensure compliance.
5. KM Incentives
   a) Rewards are given for high performance, and achievement of specific objectives.
   b) Productive teamwork is recognized and rewarded.
   c) People are singled out and praised for their exemplary work in knowledge management.
   d) Intellectual capital is rewarded in the organisation.

6. KM Measurement
   a) Good knowledge management behaviour is monitored and built into the appraisal system.
   b) The organisation has developed a specific set of indicators to manage knowledge.
   c) The organisation's set of measures balances financial and non-financial indicators.
   d) Senior management reviews the effectiveness of knowledge management to the whole company on a regular basis.
   e) Best practice in internal methods is reviewed regularly.

7. KM Culture
   a) Key players do not avoid the rules.
   b) Information is not desired by key players to achieve personal ends.
   c) Personal status is not gained through the exercise of specialist skills and knowledge.
   d) Task specialists tend to network with like-minded specialists.
   e) Behaviour like hoarding, non-sharing etc., is actively discouraged.
8. The Use of knowledge Technologies include:
(Tick all the applicable boxes.)

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>a)</td>
<td>Video-conferencing</td>
</tr>
<tr>
<td>b)</td>
<td>GroupWare</td>
</tr>
<tr>
<td>c)</td>
<td>Electronic bulletin boards</td>
</tr>
<tr>
<td>d)</td>
<td>Online information sources</td>
</tr>
<tr>
<td>e)</td>
<td>CD-ROMs</td>
</tr>
<tr>
<td>f)</td>
<td>Internet</td>
</tr>
<tr>
<td>g)</td>
<td>Intranet</td>
</tr>
<tr>
<td>h)</td>
<td>Expert systems</td>
</tr>
<tr>
<td>i)</td>
<td>Search &amp; retrieval agents</td>
</tr>
<tr>
<td>j)</td>
<td>Data warehousing/mining</td>
</tr>
<tr>
<td>k)</td>
<td>Other, Please Specify</td>
</tr>
</tbody>
</table>
SECTION THREE

The HR department is responsible for:

<table>
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<tr>
<th>The HR department is responsible for:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

1. HR Initiatives in KM

a) Making sure that employees see their company like any social entity in which they have rights and responsibilities.

b) Giving individuals the responsibility for co-ordinating knowledge within a division.

c) Compensating individuals for their contributions to the development of organisational knowledge.

d) Securing support for knowledge sharing from senior staff.

e) Encouraging employees to do worthwhile things that leave a lasting impact.

f) Putting key performance indicators for knowledge management in place.

g) Sharing technology with suppliers in order to build better relationships with them.

h) Helping supervisors and managers build harmonious relationships with their subordinates.
SECTION FOUR

Demographics:
(Please tick the appropriate box)

1. Gender: Male ☐ Female ☐

2. Age: 25 - 35 ☐ 36 - 45 ☐ 46 - 55 ☐ 56 - 65 ☐

3. Educational Qualifications: ___________________________________________

4. Position/ Title: _______________________________________________________

5. Number of years in the organisation? ___________________________________

6. The industry your organisation belongs too?

7. Approximate the annual Sales turnover of your organisation: ____________________________

8. Approximately how many people are employed by the organisation in Australia:
(Please tick one box only)

   - Fewer than 100
   - Between 100 and 499
   - Between 500 and 999
   - Between 1,000 and 5,000
   - More than 5,000

9. In which of the following functional areas does your organisation apply knowledge management.
(Please place tick in all appropriate boxes)

   - Customer Service
   - Marketing
   - IT
   - Sales
   - R&D
   - Web site management
   - Engineering
   - Finance
   - Manufacturing
   - Legal
   - Other, please specify ____________________________________________

   ____________________________
10. Who is largely responsible for **planning KM policy** in your organisation?  
(Please tick one box only)

- Senior Management
- Middle Management
- Line Management
- HR department
- Separate KM Cell

11. Who is largely responsible for **implementing KM policy** in your organisation?  
(Please tick one box only)

- Senior Management
- Middle Management
- Line Management
- HR department
- Separate KM Cell

12. Who is largely responsible for **planning KM strategy** in your organisation?  
(Please tick one box only)

- Senior Management
- Middle Management
- Line Management
- HR department
- Separate KM Cell

13. Who is largely responsible for **implementing KM strategy** in your organisation?  
(Please tick one box only)

- Senior Management
- Middle Management
- Line Management
- HR department
- Separate KM Cell

14. Do you have knowledge management implementation experience from any earlier employment?  

- No
- Some
- Extensive
15. How long has your organisation been working on implementing knowledge management concepts?
(Please tick one box only)

- 1- 12 months
- 13- 24 months
- 25- 36 months
- More than 36 months
- Not applicable

Thank you for your assistance.
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