



Proceedings of GLOGIFT 09
November 12 – 14, 2009
National Institute of Industrial Engineering
Mumbai, India

The Winning Strategy

Dr. Neena Sinha,

Reader,
University School of Management Studies,
GGSIP University, Delhi
dr_neenasinha@yahoo.com
Phone: 91+9818056810

Dr. N. K. Kakkar,

Director,
Maharaja Agrasen Institute of Management Studies,
Rohini, Delhi
maimsrohini@yahoo.co.in
Phone: 91+9810668900

Mr. Vikas Gupta,

Sr. Lecturer,
Maharaja Agrasen Institute of Management Studies,
Rohini, Delhi.
vikasgupta.maims@gmail.com
Phone: 91+9810928046

Abstract

It is widely recognized that there is a need for better understanding the process of organisational learning and knowledge management. Various studies have been conducted in the areas of Organisational Learning and Knowledge Management to develop various models to replicate the success story of companies that gained sustainable competitive advantage using organizational learning and knowledge management process effectively. The scope of these studies is very limited in Indian context. The researchers wish to contribute in this area by making a study in Indian context, as India is having a large pool of Intellectual Capital. Peter Senge in his book, “The Fifth Discipline” (1990), asserts that “The most successful corporation of the future will be something called the learning organisation and having the ability to learn faster than their competitors may be the only sustainable means of achieving competitive advantage”. Drucker maintains that a society is emerging that is dependent on the development and application of new knowledge: ‘knowledge is being applied to knowledge itself’. Productivity is becoming dependent on the development and application of new knowledge by specialist knowledgeable workers. In the knowledge driven economy, organisations are becoming more and more aware of the fact that knowledge is a resource requiring explicit and specific management policies and practices to be acquired, processed and exploited efficiently. Among other objectives, the role of Knowledge Management policies and practices is to give an organisation a competitive advantage. Knowledge management enhances an organisation’s ability to perform knowledge processing, and ultimately leading to enhancing of the quality of its business process behaviour and its ability to adapt to its environment. (Firestone, 2003)

Keywords: Knowledge Management, Organisational Learning, Learning Organisation

Introduction

The basic economic resource in today's "knowledge society" is no longer capital, natural resources, or labor, but knowledge (Drucker, 1993). It is increasingly important for organizations to be aware of the existing pool of knowledge and whether that existing knowledge is enough to sustain in the business. Development of knowledge society is accelerated by globalization and dynamic fast changing business environment. This changing environment requires flexible organizations. Organizations that are not flexible cannot respond to unpredictable changes and cannot be competitive. Learning organization represents a type of organization that can quickly respond to changes. Major asset of learning organization is knowledge which means that learning organizations need proper knowledge management.

Knowledge serves as a glue to keep the different separated parts together and harmonize the operations of the organizations. The mantra is to make innovative products through the knowledge and competence of the workforce (knowledge workers) of the organization. They need to understand the importance of knowledge for their success and should actively strive for higher levels of excellence through knowledge transfer. Learning organizations are highly flexible innovative organizations that meet this requirement. They learn and respond to their external and internal environment in similar way to living organisms. The major prerequisite of their success is the ability to exploit their most precious asset, knowledge.

“Organizational learning” and “knowledge management” are terms commonly used in today’s business. These concepts give competitive advantage to a company and provide an ability to learn faster than its competitors. Although early discussions about these concepts date to the 1960s (Cangelosi & Dill, 1965; Galbraith, 1967; Polanyi, 1967), it was not until the 1990s that these topics dramatically captured the attention of managers, when Senge (1990) popularized the concept of the “learning organization” and Nonaka and Takeuchi (1995) described how to become a “knowledge-creating company”.

Objective and Methodology

The researcher supports the fact that the competitiveness of organisations is the country’s greatest asset and has always underpinned the country’s economic success. This paper briefly looks at the convergence and synergies between the two constructs, by referring to peer reviewed publications as well as Indian case studies. The study will concentrate on the processes and practices of learning organisations that aim to improve competitiveness, with specific focus on knowledge management. The research design will employ exploratory research for the present research.

The major objective of the research is *“To identify and explore intrinsic variables and the relationship between Knowledge Management and learning process in the organisation.”*

Organizational Learning

The concept of the learning organization is increasingly relevant to twenty-first century management because of the increasing complexity, uncertainty and rapidity of change of the organizational environment (Malhotra, 1996). Therefore, it is important to understand the concept of learning organization. Learning organizations are *“organizations where people continually expand their capacity to create the results*

they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990).

The concept of the LO was popularised by Peter Senge who established five disciplines (systems thinking, personal mastery, mental models, building shared vision and team learning) that he believed were necessary for an organization to be regarded as a LO. He quoted extensively from contributions to organizational learning by Argyris and Schon and Arie de Geus from Royal Dutch Shell. They learn on a continual basis. Argyris and Schön (1978) were the first to propose models that facilitate organizational learning. They distinguished between single-loop and double-loop learning. Nonaka and Takeuchi (1995) developed a four stage spiral model of organizational learning (Nonaka & Takeuchi 1995). They started by differentiating Polanyi's concept of "tacit knowledge" from "explicit knowledge" and describe a process of alternating between the two. Tacit knowledge is personal, context specific, subjective knowledge, whereas explicit knowledge is codified, systematic, formal, and easy to communicate.

The tacit knowledge can be made explicit by codification and this process is known as "externalization". The reverse process (from explicit to implicit) they call "internalization". They also use the term "socialization" to denote the sharing of tacit knowledge, and the term "combination" to denote the dissemination of codified knowledge. According to this model, knowledge creation and organizational learning take a path of socialization, externalization, combination, internalization, socialization, externalization, combination . . . etc. in an infinite spiral.

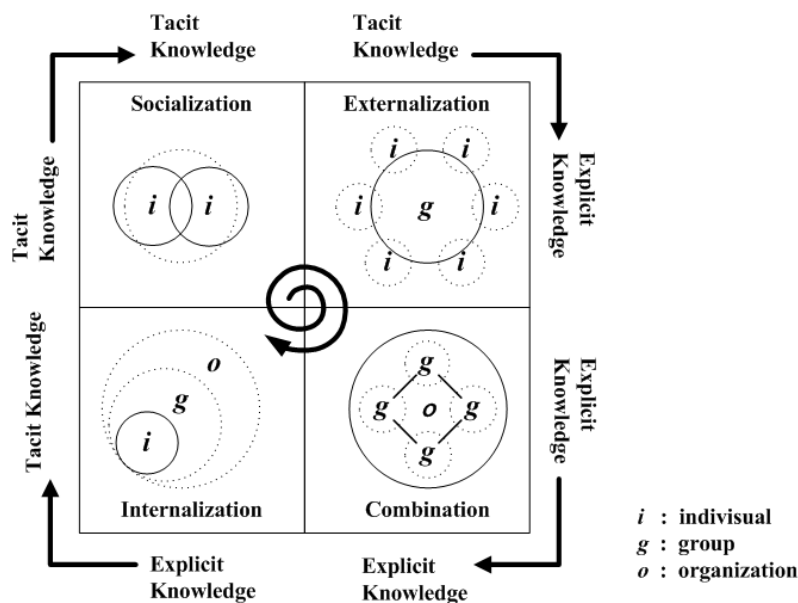


Figure 1. Knowledge Creation as the Self-Transcending Process

Source : Nonaka and Konno (1998) , p.43

Learning occurs at three levels: individual (personal mastery), group (team learning), and organizational (building shared vision). Mental models underlie all learning. The theorists (Argyris & Schoen, 1978; Duncan & Weiss, 1979; Miller, 1996) emphasize the interrelationship between cognition and behavior and conclude that the learning

process encompasses both cognitive and behavioral change. Individuals and groups learn by understanding and then acting or by acting and then interpreting (Crossan et al., 1995).

Knowledge Management

Knowledge Management (KM) comprises a range of practices used in an organisation to identify, create, represent, distribute and enable adoption of insights and experiences. The definition by Swan *et al.* (1999) for KM was found to be one of the most useful definition: *Any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organizations.*

Knowledge management is divided in several branches. One significant branch of academic work has been interested in studying organizational knowledge as a firm resource and a source of competitive advantage and is rooted in research on the resource-based view of the firm (Barney, 1991; Penrose, 1959). Several authors argue for a “knowledge-based theory of the firm” as a theory that explains the organizational advantage of firms over markets (Ghoshal & Moran, 1996; Grant, 1996; Kogut & Zander, 1992). There are various views regarding knowledge. For positivists, knowledge (“justified true belief”) is universal and the result of systematic analysis of experience in a knowable reality (Spender, 1996). It is predominant in Western culture and a generally accepted assumption in organizational theory (Nonaka & Takeuchi, 1995). However Kant and followers reject this view and assert that reality will be forever unknowable, because knowledge is constructed from sense impressions, and cannot tell us anything about reality beyond these impressions (Spender, 1996).

High velocity change in the extant global business environment demand high-velocity learning and with the rate of change continuing to increase relentlessly, pressure on learning at organizational level has never been greater. This requires new knowledge to be generated continuously and managed in a systematic way. The combined disciplines of OL and KM provide the theoretical framework within which this can occur. Organizations may not even use the terms LO and KM for one reason or another but they may still be very successful in implementing and managing the principles on which these disciplines are based.

Relationship between OL and KM

Some literature on the LO (e.g. Senge, 1990; Malhotra, 1996; Santosus, 1996) does not mention knowledge at all and some only briefly mentions knowledge in passing but does not expand on the relationship (e.g. Addleson, 1999; Schein, 1997). Conversely, some literature on KM does not mention learning (e.g. Davenport and Prusak, 1998; Sveiby, 1997) whilst some sees close relationships between the theories and practice of knowledge generation and learning (Allee, 1997; Nonaka and Takeuchi, 1995; Leonard, 1998; Sierhuis and Clancey, 1997).

Senge (1990) does not mention the term KM and rarely mentions knowledge at all. Flood (1999), in his in-depth analysis of Senge’s work, also failed to make the connection between knowledge creation and organizational learning. Nonaka and Takeuchi (1995) on the other hand commented rather critically on Senge’s failure to appreciate the important synergies between the organizational learning process and knowledge creation. Gore and Gore (1999), supporting previous quotes from Nonaka and Takeuchi, Sandelands, Amidon and Brown and Woodland, also go beyond

Senge's treatise and believe that the LO was a useful development but does not get to the core of the issue which is too little emphasis on organizational as opposed to individual learning.

Taking a broader view, knowledge creation is the final result of the learning process and conversely, learning occurs when we talk about creating, sharing and using knowledge. This makes a very clear link between knowledge and the learning process, at least at an individual level. However, as supported in previous sections, in order to establish a relationship between the OL and KM, it is necessary to look at the learning and knowledge generation processes at the organisational level. Polanyi's (1967) work, in particular, has been highly influential in defining knowledge as dynamic, when he argues that knowledge is an activity which could be better described as a process of knowing. The concepts of knowing, knowledge, and learning as closely intertwined.

There is sufficient support now for the suggestion that knowledge creation at organizational level is indeed should be, part of knowledge management (Nonaka and Takeuchi, 1995; Swan et al., 1999; Nissen et al., 2000; Gore and Gore, 1999). The promotion of learning and the inclusion of knowledge creation are the key attributes of KM. Nonaka & Takeuchi model the process of "organisational knowledge creation" as a spiral in which knowledge is "amplified" through these four modes of knowledge conversion. It is also considered that the knowledge becomes "crystallized" within the organisation at higher levels moving from the individual through the group to organisational and even inter-organisational levels. Also, Nonaka and Konno (1998) have coined the term *ba* to refer to a place and process where knowledge can be created, disseminated and used. Ba can be physical, such as an office, virtual, such as email, or mental, such as shared experiences--common to all bas is that they facilitate the development of dialogue and thus the construction of social consonance.

While the OL generates new knowledge, the organization that is skilled in KM efficiently and effectively manages the knowledge that has been created. If an organization wishes to continue learning then it most certainly needs to effectively manage the knowledge that it creates. In accepting this proposition, we can thus say that the OL and KM disciplines must become mutually self-supporting; one concept simply cannot operate without the other. As Allee (1997) put it, "In order to be a high-performing learning organization, work processes must incorporate conscious and deliberate attention to every aspect of knowledge".

Nonaka (1998) believes that the Japanese are better at learning and managing knowledge than most of the western world (the USA in particular). But the researchers do not agree to this. The new-age organizations are global and the workforce is not limited to one country only. There are companies like Pacific Gas and Company Limited, Texado, Chevron, BP, Shell, NTPC, TATA Steel which are not limited to one country and irrespective of their origin they have made their mark in the global arena.

For this paper we have chosen two companies NTPC and TATA Steel (Indian Multinationals). "Tata Steel enters the new millennium with the confidence of learning and knowledge based organization." Head Knowledge Management, Tata Steel. The beginning was made in July'99 to place a KM programme for the company to systematically & formally share and transfer learning concepts, best practices and other implicit knowledge. The essence of knowledge management is to capture the

available abundant knowledge assets either in form of tacit (experience, learning from failure, thumb rules, etc.) or explicit (literature, reports, failure analysis etc.), to organize and transform the captured knowledge, and to facilitate its usage at right place and at the right time.

The central theme of knowledge management is to leverage and reuse knowledge resources that already exist in the organization so that people will seek out best practices rather than reinvent the wheel. Few other ways to define KM are:

- Capturing, storing, retrieving and distributing tangible Knowledge Assets such as copyrights patents and licenses.
- Gathering, organizing and disseminating intangible knowledge, such as professional know how and expertise, individual insight and experience, creative solutions and the like, brands, technology.
- Creating an interactive learning environment where people readily transfer and share what they know, internalize it and apply it to create new knowledge.

The ideology of NTPC is : “We are strongly committed to the development and growth of all our employees as individuals and not just as employees.” Competence building, Commitment building, Culture building and Systems building are the four building blocks of NTPC’s HR systems.

To meet the objective of becoming a learning organisation, an integrated Knowledge Management System has been developed, which facilitates tacit knowledge in the form of learning and experiences of employees to be captured and summarized for future reference. NTPC subscribes to the belief that efficiency, effectiveness and success of the organisation, depends largely on the skills, abilities and commitment of the employees who constitute the most important asset of the organisation. Their Training Policy envisages a minimum of 7 man days of training per employee per year. They have developed our own comprehensive training infrastructure. NTPC has a well established talent management system in place, to ensure that it delivers on its promise of meaningful growth and relevant challenges for its employees. The talent management system comprises Performance Management, Career Paths and Leadership Development.

Based on the discussion and the case-studies, the relationship is summarized in Figure 2. First, knowledge can be obtained through the mind (learning by reflection, anticipatory learning) and through the body (learning by doing, experimental learning). Second, knowledge can be accumulated in our minds (knowing what, theoretical knowledge, declarative knowledge) and also in our bodies (knowing how, practical knowledge, procedural knowledge). Last, learning is the change in knowledge and the change in knowing, which involves, as mentioned before, changes in cognition and changes in behavior. Knowledge and knowing are the content of the learning process, in other words, what we learn or get to know. The main distinction between knowledge and knowing is that knowledge is mainly cognitive, including the facts and capabilities we know, while knowing is mainly behavioral, or the expression of knowledge in action. According to Davenport (1999), KM is gradually expanding in scope, consuming not only the LO but also other emerging concepts such as business and customer intelligence.

		KNOWLEDGE	
		Stable	Change
KNOWING	Stable	<ul style="list-style-type: none"> •NO LEARNING •EXECUTION 	<ul style="list-style-type: none"> •LEARNING OF NEW FACTS (learning by reflection) (knowing-what/theoretical knowledge)
	Change	<ul style="list-style-type: none"> •APPLICATION OF KNOWLEDGE (learning by doing) (knowing-how/practical knowledge) (knowledge in action) (e.g. consulting frameworks; new piano song) 	<ul style="list-style-type: none"> •LEARNING OF SKILLS •LEARNING OF NEW FACTS AND ITS APPLICATION (e.g. arts, sports, leadership)

Figure 2: Knowledge-Knowing -Learning Matrix

Source: Vera and Crossan, Pg.24

OL focuses on learning as a process of change, KM stresses knowledge as a resource towards competitive advantage and studies the processes associated with it. OL has been associated with changes in cognition and/or changes in behavior and there is a growing agreement in the literature that for learning to occur, these two processes must be included. In the case of the KM literature, it discusses knowledge and knowing as grounded in action and as processes that requires both cognitive and physical activity. Although the OL field has been the most explicit one in explaining the cognition and behavioral aspects of the learning phenomenon, the KM does not only focus on cognition, but also on the action-orientation and utilization of the knowledge acquired.

While learning produces new knowledge, knowledge impacts future learning. In conclusion, OL and KM views of the impact of learning and on performance are diverse. While the OL literature presents an equivocal link between the learning process and performance, the knowledge literature states that knowledge – if recognized as a source of competitive advantage - explains differences in performance. The understanding of the LO and its connection with the generation of organizational knowledge is far from clear (Schein, 1997; Gourlay, 1999; Macleod, 1999). This problem was identified even earlier by Nonaka and Takeuchi (1995) who stated that “organizational learning theories basically lack the view that knowledge development constitutes learning and most OL theories concentrate on individual learning and have not developed a comprehensive view of learning at an organizational level”. According to Sandelands (1999) and Amidon (1996), companies that are not able to embrace shared learning and knowledge generation at the organizational level simply disappear. Brown and Woodland (1999) add further insight into the learning/knowledge synergy by claiming that “it is impossible for an organization to sustain competitive advantage without constantly learning and developing new knowledge”. Managing knowledge is same as fostering and supporting a learning

organization. Organizations should focus on the total inter-organization learning process (i.e. the creation of new corporate knowledge from the total environment within which the organization operates) and the nurturing of the cultural environment that supports it and ensures its continuing development.

Conclusion and Future Research

The purpose of the paper is to clear some doubts regarding the conceptual confusion in the learning field by providing synthesis and integrating these closely related constructs: organizational learning and knowledge management. In order to accomplish this, a critical review of the literature is undertaken. Upto an extent, the relationship amongst the concepts has been established with the help of the literature and the case studies of the companies. There are many areas which are overlapping. It is believed that there are huge opportunities to learn from the experience of the researchers and the developments in these areas.

But we have to be very cautious as need of the hour is to view these concepts from a broader perspective. Researchers have to come out of the water-tight compartments and have to acknowledge the contribution of others. They need to see this kaleidoscope with an open heart where there is acknowledgement of others work. A more common work is for authors to simultaneously use the learning, knowledge, and intellectual capital constructs in their discussions. The next step is to integrate the vocabulary and the findings to provide more comprehensive descriptions of the phenomenon. Efforts in this direction are the studies by Miller (1996), Argote (1999), and Bontis et al. (2001).

The authors conclude that the creation of a learning culture not only facilitates the creation of new knowledge but also prevents much of the knowledge loss. Knowledge is not only internal to an organization, it must cover the entire value chain that an organization is part of and this places enormous pressure on the concepts of the OL and KM to deliver on their promises. Also, learning can be defined in terms of the processes of knowledge creation, retention, transfer, etc. Seeing the LO and KM as the heart and lungs of a living organism, both being mutually self-supporting and critical to the well-being and survival of the host, may be a useful analogy. The differences are mainly to do with the LO focusing on the learning process whilst the knowledge oriented organization focuses on the results or output from the learning process. In addition to this when knowledge-associated processes are studied at different levels of analysis, learning is linked to processes such as knowledge share, transfer, access, etc. This means that learning and the accumulation of knowledge leads to better performance, when they support and are aligned with the firm's strategy. We expect a lot of potential in the further theoretical and empirical development of the two concepts, their relationship at deeper levels and encourage researchers in these fields to work together to find solutions for the India Incorporation.

References

Addleson, M. (1999), "What is a learning organization?", <http://psol.gmu.edu/Home/pers/>

Argote, L. (1999) *Organizational learning: Creating, retaining, and transferring knowledge*. Norwell, MA: Kluwer.

- Argote, L., & P. Ingram (2000) '*Knowledge transfer: A basis for competitive advantage in firms*'. *Organizational Behavior and Human Decision Processes*, 82(1), 150-169.
- Argyris, C., & D. Schoen (1978) *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley Publishing Co.
- Amidon, D.M. (1996), "The momentum of knowledge management", *Journal for Industrial Research Institute*.
- Barney, J. (1991) '*Firm resources and sustained competitive advantage*'. *Journal of Management*, 17(1), 99-120.
- Bontis, N. (1998) '*Managing organizational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field*'. *International Journal of technology management*, 18, 433-462.
- Bontis, N., M. Crossan, & J. Hulland (2001) '*Managing an organizational learning system by aligning stocks and flows*'. *Journal of Management Studies*, forthcoming,
- Bontis, N., N. Dragonetti, K. Jacobsen, & G. Roos (1999) '*The knowledge toolbox: A review of the tools available to measure and manage intangible resources*'. *European Management Journal*, 17(4), 391-402.
- Brown, J. S., & P. Duguid (1991) '*Organizational learning and communities of practice: toward a unified view of working, learning, and innovation*'. *Organizational Science*, 2, 40-57.
- Cangelosi, V., & W. Dill (1965) '*Organizational learning observations: Toward a theory*'. *Administrative Sciences Quarterly*, 10, 175-203.
- Crossan, M. (1991) *Organization learning: a sociocognitive model of strategic management*. Thesis, Richard Ivey School of Business, The University of Western Ontario, London, ON.
- Crossan, M., H. Lane, & R. White. 1998. *Organizational learning: Toward a theory*. London, ON: The University of Western Ontario.
- Crossan, M., H. Lane, & R. White (1999) '*An organizational learning framework: From intuition to institution*'. *Academy of Management Review*, 24(3), 522-538.
- Crossan, M., H. Lane, R. White, & L. Djurfeldt (1995) '*Organizational learning: Dimensions for a theory*'. *The International Journal of Organizational Analysis*, 3(4), 337-360.
- Davenport, T., D. De Long, & M. Beers (1998) '*Successful knowledge management projects*'. *Sloan Management Review*, Winter, 43-57.
- Davenport, T., & L. Prusak (1998) *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School Press.
- Decarolis, D. M., & D. Deeds (1999) '*The impact of stocks and flows of organizational knowledge on firm performance: An empirical investigation of the biotechnology industry*'. *Strategic Management Journal*, 20, 953-968.
- Drucker, P. 1993, *Post-Capitalist Society*, Butterworth.
- Drucker. The coming of the new organization. *Harvard Business Review*, Jan.-Feb. 1988.

- Duncan, R., & A. Weiss (1979) '*Organizational learning: Implications for organizational design*'. *Research in Organizational Behavior*, , 75-124.
- Edvinsson, L. (1997) '*Developing intellectual capital at Skandia*'. *Long Range Planning*, 30(3), 366-373.
- Edvinsson, L., & M. Malone (1997) *Intellectual capital: Realizing your company's true value by finding its hidden roots*. New York: Harper Business.
- Edvinsson, L., & P. Sullivan (1996) '*Developing a model for managing intellectual capital*'. *European Management Journal*, 14(4), 356-364.
- Flood, R.L. (1999), *Re-thinking the Fifth Discipline: Learning Within the Unknowable*, Routledge, London.
- Galbraith, J. K. (1967) *The new industrial state*. Boston: Houghton Mifflin.
- Ghoshal, S., & P. Moran (1996) '*Bad for practice: A critique of the transaction cost theory*'. *Academy of Management Review*, 21, 13-47.
- Gourlay, M.J. (1999), "Foundationalism: the problem of knowledge", www.xs4all.nl/-nexus/gourlay/found_prob.html
- Gore, C., Gore, E. (1999), "Knowledge management: the way forward", *Total Quality Management*.
- Grant, R. (1996) '*Toward a knowledge-based theory of the firm*'. *Strategic Management Journal*, 17(Winter Special Issue), 109-122.
- Firestone, Joseph M. (2003), *Key Issues in the New Knowledge Management*, Burlington, MA: KMCI Press/Butterworth-Heinemann.
- Kogut, B. (1988) '*Joint ventures: Theoretical and empirical perspectives*'. *Strategic Management Journal*, 9(4), 319-333.
- Kogut, B., & U. Zander (1992) '*Knowledge of the firm, combinative capabilities, and the replication of technology*'. *Organization Science*, 3, 383-397.
- Leonard, D. (1992) '*Core capabilities and core rigidities: A paradox in managing new product development*'. *Strategic Management Journal*, 13(Summer Special Issue), 111-125.
- Leonard, D. (1995) *Wellsprings of knowledge: Building and sustaining the sources of innovation*. Boston: Harvard Business School Press.
- Macleod, M. (1999), "The knowledge chain", *Supply Management*.
- Malhotra, Y., Deciphering the Knowledge Management Hype. *Journal for Quality & Participation*, July-August, 1998.
- Miller, D. (1996) '*A preliminary typology of organizational learning: Synthesizing the literature*'. *Journal of Management*, 22(3), 485-505.
- Nissen, M., Kamel, M., Sengupta, K. (2000), "Integrated analysis and design of knowledge systems and processes", *Information Resources Management Journal*.
- Nonaka, I., & H. Takeuchi (1995) *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Penrose, E. (1959) *The theory of the growth of the firm*. Oxford: Blackwell.

- Prusak, L. (1998), *Knowledge Management: The Ultimate Competitive Weapon*, IBM Global Services, White Plains, NY.
- Polanyi, M. (1967) *The tacit dimension*. London: Routledge.
- Quinn, J. B. (1998) '*Organizing around intellect*'. Harvard Management Update, , 3-6.
- Sandelands, E. (1999), "Learning organizations: a review of the literature relating to strategies, building blocks and barriers", *Management Literature in Review*, Vol. 1.
- Santosus, M. (1996), "The learning organization", *CIO Magazine*.
- Schein, E.H. (1997), *Organizational Learning: What is New? Society for Organizational Learning*, MIT Sloan School of Management, Cambridge, MA
- Senge, P. (1990) *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday/Currency.
- Sierhuis, M., Clancey, W.J. (1997), "Knowledge, practice, activities and people", <http://ksi.cpsc.ucalgary.ca/aikm97/sierhuis/sierhuis.html>.
- Spender, J. (1994) '*Knowing, managing, and learning*'. *Management Learning*, 25(3), 387-412.
- Spender, J., & R. Grant (1996) '*Knowledge and the firm: overview*'. *Strategic Management Journal*, 17(Winter Special Issue), 5-9.
- Spender, J. C. (1996) '*Making knowledge the basis of a dynamic theory of the firm*'. *Strategic Management Journal*, 17(Winter Special Issue),
- Sveiby, K. (1997) *The new organizational wealth: Managing and measuring knowledge based assets*. San Francisco: Berrett-Koehler Publishers.
- Swan, J., Scarborough, H., Preston, J. (1999), "Knowledge management – the next fad to forget people?", *Proceedings of the 7th European Conference on Information Systems*, Copenhagen, .
- Veera D, Crossan M: Organizational learning and knowledge management: towards an integrative framework. In *The Blackwell Handbook of Organizational Learning and Knowledge Management*.