

# “An Empirical Study on the Imperatives of Knowledge Management Practices in Selected Information Technology Enterprises of Delhi North India”

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**Abstract:** *In today’s world of increasingly uncertain and complex business environments, dynamically evolving outcomes are the key drivers of how “intellectual capital” uses “innovative ways” to leverage strategic opportunities and challenges. The last decade has seen the growth of knowledge companies and knowledge work. The ever increasing competition and change has made the companies understand the value of their corporate intellectual value and effective methods to use that knowledge. Knowledge has emerged as the most critical competence for any business to survive in this dynamic nature of the competitive global marketplace. Intellectual capital has become an important factor in determining the organizational effectiveness.*

**Key Words:** Knowledge, Knowledge management, Intellectual Capital

## Introduction

In this global marketplace Knowledge has become the most critical resource and how an organization manages its knowledge resource, makes all the strategic difference. According to Nonaka (1995) an economy where the only certainty is uncertainty, one core source of lasting competitive advantage is knowledge. He also says, “Successful companies are those that consistently create new knowledge, disseminate it widely throughout the organization and quickly embody it in new technologies and products”.

Managing knowledge has become a business imperative for those companies who want to guard their present market share, build future opportunities and stay ahead of competition (Natrajan and Shekhar, 2000).

In the words of Raman (2003), knowledge management basically involves acquisition, creation, dissemination, renewal and application of knowledge towards organizational sustenance and survival.

Effective knowledge management enhances the influence of innovation, improves customer service, shortens product life cycle, increases revenue (Massey and Weiss, 2002), thereby resulting in enhanced level of corporate performance.

*Knowledge is categorized into two types: Explicit and Tacit (Nonaka and Takeuchi, 1995). Explicit knowledge is knowledge that can be articulated, codified, verbalized and stored in certain media. It can be readily transmitted to others. The information contained in encyclopedias is good examples of explicit knowledge.*

*Tacit knowledge refers to intuitive, insight based, hard to define knowledge that is largely experience based. It is context dependent and personal in nature, embedded in individual experience and involves intangible factors, such as personal beliefs, perspective, and the value system. Tacit knowledge is hard to communicate and deeply rooted in action, commitment and involvement (Nonaka, 1995).*

Definition given by American Productivity and Quality Council (2002) highlights the same as, “Knowledge management is the systematic process of identifying, capturing and transmitting information and knowledge people can use to create, compete and improve”.

## Review of Literature

In the last decade, Knowledge management has emerged as a key area in today's business world. Right from the beginning of man's history, acquisition and sharing of knowledge has been important. KM is conceived as an important domain within the business as well as in the research field. A number of management experts have contributed to the evolution of knowledge management, among them are notables as Peter Drucker, Paul Starossman and Peter Senge. This field had started emerging in the beginning of 1990s but it's important to note that the debate started much earlier (Hayek, 1945, Bell, 1978). Drucker (1988) was the first to coin the term knowledge worker. Several inputs have been pouring in ever since as to how knowledge can be created, utilized and transferred within the organizations and how this knowledge management leads to the transmission of innovation.

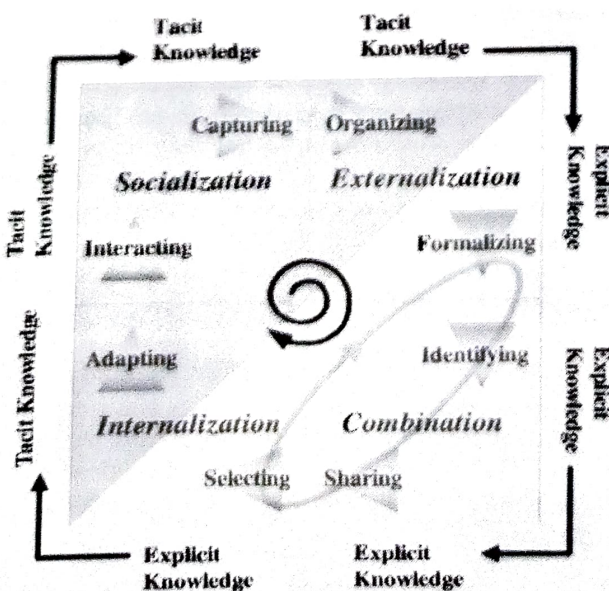
Knowledge management history started around World War II and in particular with the building of the fighter planes. Observers were led to note that building a second airplane took considerably less time and realized considerably less defects than the first. It was being noted that workers learned from their experiences. This phenomenon led enterprises in the fifties to begin to analyze and codify their observations. Organizations understood that the better and quicker they were able to manage the learning processes, the better equipped they were to pass on the tacit understandings that form the basis of how they operate. Organizations were beginning to understand that knowledge management is closely associated with the learning process.

Moving from knowledge management history to knowledge management today, many theorists are of the view that knowledge exists and grows within a composite structure of internal networks and research in this area has proved to be the most productive in terms of the development of knowledge management tools and techniques.

The recent curiosity in organizational knowledge has highlighted the issue of managing the knowledge to the organization's benefit. Knowledge management is purported to increase innovativeness and responsiveness (Huckbarth 1998). The majority of organizations believe that much of the knowledge they need exists inside the organization, but that identifying that it exists, finding it, and leveraging it remains problematic (Cranfield University 1998).

Nonaka and Takeuchi (1995) introduced the model of knowledge creation in their famous book "The Knowledge-Creating Company". According to Nonaka and Takeuchi, knowledge is created and transformed in an ascending process, or spiral, from the individual level to the group and organizational levels, and finally between organizations. This model talks about the interaction between tacit knowledge and explicit knowledge. A "knowledge spiral" is grounded in four complementary types of knowledge conversion: (a) from tacit knowledge to tacit knowledge, or socialization; (b) from tacit to explicit knowledge, called externalization; (c) from explicit to explicit knowledge, or combination; and (d) from explicit to tacit knowledge, or internalization.

**Figure 1.1 – The Knowledge Spiral**





Source: (Nonaka and Takeuchi 1995)

According to Schein (1999) the future belongs to people who use their heads instead of their hands. He points out how countries like Korea and Singapore are educating their workers to new standards and how international competition in near future will be defined in terms of advantage in knowledge, a nation creates.

In Tiwana's (2002) words the knowledge creation with the latest concept of CRM (Customer Relationship Management) in marketing with Knowledge Management and e-business. The author uses the term e-business because in today's world business is all about interned facilitated execution, coordination and management of business processes and activities.

Kumar and Mulchandani (2005) have made an effort to capture the innovation initiative launched by one of the leading information technology companies in India, Wipro. The paper discussed Wipro's innovation initiative, as a case study, explaining the contemplation behind the launch of the initiatives, the organizational preparations that preceded this launch and the structure and processes that were laid down for the pursuit of this initiative. Ten significant aspects of Wipro's experiences with the innovation initiative, highlighting areas of congruence with and departure from the existing knowledge in this domain were also discussed.

According to Liu and Tsi (2007) organizations that introduce knowledge management are able to improve 5 to 10 percent in performance in the customer, financial, and internal business process areas and 10 to 15 percent in the learning and growth areas which supports that knowledge management has a positive effect on operating performance. They concluded that organizations use knowledge management to improve upon the operating performance through shortened production processes, reduced costs, increased flexibility and improved product quality and service.

Hong, Kianto and Kylaheiko (2008) discussed the role played by organizational culture in knowledge

creation. Culture is important because a good part of knowledge has been learned as culture from old generations. Also tacit knowledge consists mostly of culture. Culture is a highly non-linear field of forces, a very strong integrator that is able to influence organizational behavior and knowledge management activities at different levels.

Rationale of the Study

Practice and research in Knowledge Management have stressed upon the Human Capital as an important component of the organizations intellectual capital; but not much has been done towards understanding the value addition made by intellectual capital. Earlier studies have focused on financial variables and roles and behaviors of the human resources. A need was perceived towards the study and understanding of imperatives of knowledge management – the organizational factors that influence knowledge creation and dissemination. A literature review indicated that there is a paucity of studies in the area of knowledge management and also that performance and innovation are the natural outcomes of knowledge management. Empirical research has shown that knowledge management can lead to improved performance through strategies designed to create an organizational learning environment, employee development, knowledge sharing, better product /service quality and the involvement of top management, implementation of creating a business culture that embraces knowledge management as a core value of the organization. In light of the above motivations, this research seeks to review the imperatives of the knowledge management in the Information Technology Companies across Delhi (NCR).

Research Objectives

The principal objective of the study aims to have an insight on the imperatives of implementing the knowledge management practices.

Research Methodology

Research Methodology	Details
Qualitative Research	This work will have the basis of a critical review of literature available in the respective field to give an insight into the research done and developed theories. This includes the examination of the bandwidth of KM literature from the basis of the standard books to the new references and with including papers and resources available on the internet
Interviews	The author used interviews to get an insight on the topics related to the current state of capabilities in relation to knowledge sharing in the assessed organization
Quantitative Research	The collecting of primary data using self-administered questionnaires will be combined

	with the results conducted from the qualitative research. To gather the input for the assessment one survey was designed to gather information about the capabilities for knowledge sharing in the team from participating team members and to understand the outcomes of implemented solutions which are part of the framework for knowledge sharing
<b>Experimentation</b>	The experimentation was used to gather insights of solutions as part of the framework to knowledge sharing and to get feedback from the team members about the acceptance of such defined solutions. The experimentation was based on the previous research topics and especially taken from outcomes based on qualitative research, interviews and quantitative research.
<b>Observations</b>	The method of observation and the insights of experts on this topic were used to gather information that is related to the evaluation of the outcomes of the experimentation phase of the project.

### Data Analysis

To study the of knowledge management practices thirty organizations have been selected. The selected organizations have been classified in three categories. Companies with low turnover (upto 5000 crores) are categorized as Group A, companies with turnover ranging from 5001-20000 crores (medium level) have been categorized as Group B and companies with turnover of more than 20000 crores have been categorized as Group C. The sample size is 270 with 3 employees from top level management, 3 from middle level management and 3 from lower level management in each organization. The demographic factors such as size of the unit, total number of employees, product category and markets served were taken into consideration. Well structured questionnaire has been used to collect the data which

has been designed after extensive study of literature. Five point Likert scale ranging from (5) 'strongly agree', (4) 'agree', (3) 'neither agree nor disagree', (2) 'disagree' and (1) 'strongly disagree' has been used to rate the response. The comparisons have been made using one way ANOVA. Based upon the annual turnover, the units were divided into three categories. During the study, following findings have been made:

**Imperatives of implementing Knowledge Management Practices:** There are various techniques that are being adopted by the organizations for knowledge creation. Effectiveness of each technique varies from organization to organization.

**Table I – Imperatives of implementing Knowledge Management Practices**

Imperatives	A		B		C		Overall		F-ratio
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Competition (market share)	4.62	0.49	4.29	0.70	4.75	0.44	4.54	0.58	1.07
Customer Relationship Management (changing needs of customer)	4.46	0.50	4.43	0.73	3.75	1.32	4.33	0.80	2.11
Organizational Performance (achievement of objectives)	4.38	0.63	4.43	0.50	5.00	0.00	4.50	0.58	1.58
Research & Development (Innovation, new product development)	4.38	0.74	3.86	1.00	4.25	0.84	4.21	0.87	1.10
Information & Communication Technology (latest technology)	3.47	0.93	3.17	0.93	3.85	1.25	3.45	1.01	3.01
Knowledge Sharing (collaborative work, best practices, reuse of knowledge)	4.56	0.56	4.37	0.49	5.00	0.00	4.58	0.53	3.29
Reduced Costs (appropriate pricing)	4.38	0.63	4.14	0.35	5.00	0.00	4.42	0.57	4.73
Employee Retention (avoiding loss of knowledge due to employees leaving)	4.31	0.72	3.86	1.00	4.25	0.84	4.17	0.85	1.08



## Conclusions

From table I, a comparison regarding Imperatives of knowledge management in A, B and C can be drawn as under:

1. Ever increasing competition is most crucial imperative in group A companies, closely followed by Knowledge Sharing and customer relationship management. This group has rated advent of information technology as the seventh factor responsible for knowledge orientation of organizations.
2. Customer Relationship Management and Organizational Performance are the most important stimulants for knowledge management in group B companies. Research & development and employee retention have been considered as equally important imperatives of knowledge management practices. Information Technology has been rated as the last important stimulant in this group.
3. Organizational performance, reduced costs and knowledge sharing have been rated as the most and equally important imperatives of knowledge management in group C companies. Competition has been rated as the second important factor whereas research and development and employee retention have been rated as the third important imperative. Competition and customer relationship management have been considered as the least important factors in this group.

Depending upon the extent of the agreement it can be inferred that the variables with highest level of agreement show the current **imperatives of knowledge management practices in IT industry of Delhi (NCR)**. The companies' business results from knowledge management initiatives and commitment towards the same has been impressive and the system can be further maintained so that the knowledge workers can fully leverage the collective expertise and output.

**Limitations of the study:** No research initiative is without certain limitations. This research will also have its own share of limitations. The possible limitations of research work can be:

1. The research study was conducted in 30 Information Technology companies across Delhi (NCR). This sample might not portray an accurate representation of the whole industry scenario on a national level.

2. The drawbacks like differences arising out of individual viewpoints, some biases on the part of the respondents have crept in.
3. Few respondents might have given incorrect information due to shortage of time, lack of interest or to conceal their identity.

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