RESEARCH DESIGN

In this chapter, an attempt is made to present brief introduction about research methodology in management, review of literature, significance and need for the study, objectives, scope of the study, Hypotheses of the study, research methodology, limitations of the study and future contribution of the study on Knowledge Management.

Knowledge Management has been recognized as an essential component of a proactively managed organization. The key concepts include converting data, organizational insight, experience and expertise into reusable and useful knowledge that is distributed and shared with the people who need it. Knowledge Management addresses business challenges and enhances customer responsiveness by creating and delivering innovative products or services; managing or enhancing relationships with existing and new customers, partners and suppliers; and administering or improving more efficient and effective work practices and processes. Effective solutions are aligned with the organization's business strategy and result in enhanced individual and organizational performance. Several factors that contribute to the importance of managing knowledge are referenced below:

**Competitive Advantage** - Knowledge can be an organization's most competitive advantage. Wealth results when an organization uses its knowledge to create customer value by addressing business problems. "A firm's competitive advantage depends more than anything on its knowledge, or to be slightly more specific, on what it knows - - how it uses what it knows - and how fast it can know something new."

**Technology** - Because of the tremendous advances in technology, enormous amounts of information can be disseminated to people regardless of their
geographic location or time zone. The speed of transmission and frequency in which this information is received requires an adaptable, skilled and educated workforce. From a knowledge management perspective, the complexities associated with these technological changes will cause us to think differently about the manner in which people learn whether it is inside or outside of the classroom.

**Organizational Change** - Due to organizational changes, restructuring, mergers and acquisitions, companies have lost some of their valued history and cultural norms. An organization's ability to create, acquire, process, maintain and retain old and new knowledge in the face of complexity, uncertainty and rapid change is critical.

**Enhanced Decision-Making** - Learning from and applying past experiences can accelerate the completion of future work and enhance the decision-making process.

**Workforce Demographics** - An aging workforce, coupled with retiring baby boomers and the loss of intellectual capital or institutional memory are creating a new sense of urgency for organizations. Although predicting employee separations is at times challenging, knowledge transfer is vital to sustaining critical business functions. While many employees may continue employment beyond retirement eligibility, these employees will inevitably leave the workforce.

**Brief Introduction to Research Methodology**

Methodology can properly refer to the theoretical analysis of the methods appropriate to a field of study or to the body of methods and principles particular to a branch of knowledge. In this sense, one may speak of objections to the
methodology of a geographic survey (that is, objections dealing with the appropriateness of the methods used) or of the methodology of modern cognitive psychology (that is, the principles and practices that underlie research in the field). In recent years, however, methodology has been increasingly used as a pretentious substitute for method in scientific and technical contexts, as in the oil company have not yet decided on a methodology for restoring the beaches. People may have taken to this practice by influence of the adjective methodological to mean "pertaining to methods." Methodological may have acquired this meaning because people had already been using the more ordinary adjective methodical to mean "orderly, systematic." But the misuse of methodology obscures an important conceptual distinction between the tools of scientific investigation (properly methods) and the principles that determine how such tools are deployed and interpreted.

Methodology includes a philosophically coherent collection of theories, concepts or ideas as they relate to a particular discipline or field of inquiry.

**Methodology** can be:

1. "the analysis of the principles of methods, rules, and postulates employed by a discipline";
2. "the systematic study of methods that are, can be, or have been applied within a discipline";
3. "a particular procedure or set of procedures."

**Definitions of Research methodology**

1. Methodology can be defined as: "the analysis of the principles of methods, rules, and postulates employed by a discipline".
2. The way in which the data are collected for the research project.
3. Studies the sources and nature of the Federal tax law and of its legislative, administrative and judicial explanations and interpretations,

4. It is all of the techniques, methods and procedures adopted in terminology work to carry out terminology research.

Research Methodology is a way to systematically solve the research problem. The scope of research methodology is wider than that of Research methods. While discussing the Research Methodology, the methods of Research a discussion on the logic behind these methods is also necessary. The research is conducted to study the different KM practices in Indian IT industry. And suggestions are made where ever necessary.

REVIEW OF LITERATURE:

Dr. B. Rathan Reddy (1998)¹: ‘Knowledge management’ In this book, author Dr. B. Rathan Reddy tries to explain on basic concepts of Knowledge Management and also a unique compendium on Global Knowledge Management practices, resonating successful case studies in the Business World. This book also gives valuable information about the basic concept of Knowledge Management with its ingredients; Human Resource Management verses Knowledge Management, Learning Organizations, Technology and KM, Knowledge Management through innovation cross functional approaches to KM.

The author has made an effort to explain the link between Knowledge Management and Talent Management, Strategic Management, Change Management, Outsourcing of Business activities and work-life balance through tapping women potential and Business leadership. Finally this book is all about Knowledge, how to capture it, how to use for business development, how to create competitive advantage through cross-functional areas.
Ganesh Shermon²: “Knowledge Human Resource Management” In this book he tries to explain an outcome of industrial and consulting work essentially in integrating Knowledge Management with Human Resource Management. The author Ganesh Shermon desired to see HR professionals practice strategy, structure and people interventions in sync with Knowledge oriented perspectives and attitudes. The chapters of this book contain ideas, templates, project plans and methods for implementing a knowledge oriented HR function in an organizational context.

Amrit Tiwana³: ‘The Knowledge Management Tool kit” In this book, the author Amrit Tiwana tries to explain importance of knowledge in the following manner ‘in the quest for sustainable competitive advantage, companies have finally come to realize that technology alone is not that. What sustains is knowledge. It is in unchaining knowledge that lies in your company's people, processes, and experience that the hope for survival rests. The author reminds about Peter Drucker’s warning years ago, but it’s only now that companies have finally woken up to the value of managing their knowledge and bringing it to bear upon decisions that drive them up or out of existence.

The Knowledge Management Toolkit will provide us with a strategic roadmap for knowledge management and teaches us how to implement KM step by step. Technology should not always be mistaken for computing technology; the two are not synonymous.

Archna Shukla⁴: “The Knowledge Management Architecture” This book focuses on how organizations can both develop and sustain competitive advantage by managing Knowledge. It talks about major issues and critical factors involved in the implementation of a successful Knowledge Management programme. Unique feature of this book is that ‘it is based on the first hand observation and is therefore thoroughly practical in its orientation. The four case
studies presented by the authors Archana Shukla and R. Srinivasan demonstrate subtleties of managing Knowledge in various context and at different levels. This includes multi-product and multi-location companies which are faced by rapid changes in their operating environments. Deployment of IT as an important ingredient is not alone sufficient for successful Knowledge Management. Instead, based on the empirical evidence, they stress the importance of a culture of Knowledge sharing and critically of complementary systems as being equally essential.

Overall this book provides an integrated and holistic understanding of Knowledge Management by aligning Knowledge strategy with corporate strategy; the authors propose a pragmatic approach for designing Knowledge Management architecture which can be successfully applied in any organizational setup.

Madhukar Shukla⁵: “Competing through Knowledge” In this book the author Madhukar Shukla describes how organizations can use knowledge and learning as a strategic weapons to transform their operating paradigms. Beginning with a discussion on the radical changes taking place in the Indian Business environment to meet the need for Indian organizations to develop learning capabilities; the first part of the book provides a framework to understand knowledge based competition. The second part details six cases of organizations which have encouraged learning and have utilized knowledge as competitive asset. Generalizing from these cases which as also serve as bench marks, the third and last part discusses the architecture of a learning organization and the qualitative shift required in the organizational paradigm.

This book is an attempt to share this emerging perspective with management professionals—the practicing managers, consultants and academicians. In many ways as we have learned more about knowledge based
companies, the architecture of an emerging organizational form becomes clearer. The second insight was that the competitive environment was actually and qualitatively changing not only around the world but also in India. The forces of change were so complex that one could not relay on the past as a guide to the future. So in the emerging scenario, organizations needed to create or learn new knowledge before they could apply it.

C.R. Kothari⁶: “Research Methodology” In this book, the author explains about adoption of appropriate methodology which is an essential characteristic of quality research studies irrespective of the discipline with which they are related. This book provides the basic tenets of methodological research. To make researches familiar with research methods and techniques. In the context of planning and development, the significance of research lies in its quality and not in quantity. The need for the researcher is to pay due attention for designing and adhering to the appropriate methodology throughout for improving the quality of research.

Paul G. Kaponya⁷: “The Human Resource Professional” Tactics and Strategies for career success” In this book the author addresses the very special tactics, strategies and modes of behavior the Human Resource Management function demands of those who want to succeed in a field that faces a work environment roiled by rapidly changing technology, increased domestic and global competition and an ever changing workforce.

Elias M.Awad & Hassan M. Ghaziri⁸: “Knowledge Management” In this book, author explains about knowledge: how to capture it, how to transfer it, how to share it, and how to manage it. KM is growing rapidly. More and more companies have built Knowledge repositories, supporting such K varieties as customer K , HR mgmt K, & the like. Even new job titles have appeared – from
K developer, to K facilitator, to Corporate K officer. By all accounts KM is becoming a necessary feature of today’s business culture.

Dr. B. Rathan Reddy⁹ :”Effective Human Resource Training and Development Strategy”. In this book author explains about training and development as one of the important aspects in the fastest growing industries today. The understanding of this term in terms of diagnosis, prescription, designing, implementation and evaluation is not widespread. The main objective is to develop creative capabilities among the employees.

H.C.Mruthyunjaya¹⁰:”Knowledge Management”. In this book author explains about the book is divided into ten chapters the book elaborates on the concepts, theories and principles governing knowledge management. Beginning with history and evolution of knowledge, its growth and impact on the society, it further explains the role of knowledge management towards Corporate Social Responsibility(CSR).The chapters on Managing competitiveness and managing Knowledge Force discuss how innovative business strategies can help in achieving new landmarks and how the employees of an organisation can turn into a knowledge force to churn out profit and to achieve success.

Dhiraj Sharma¹¹: “Information Technology for Business”. It presents text of this book deals with the concepts and applications of IT in the areas of business management. It also covers both the functional and cross functional areas of modern IT based management. It throws light on the basic concepts related to the functioning of computers for system analysis and design, database management, internet etc.

V.Nilkanta S.Ramnarayan¹²:”Managing Organisational Change”. In this book the authors explain the organizational change in terms of three generic process- growth, transformation and decline. This book is richly illustrated with
examples from both Indian and international practice. The authors examine the core values and discuss the ways in which the organizations can nurture value based change.

ARTICLES ON KNOWLEDGE MANAGEMENT

Wendri R. Buleowitz and Ruth L. Williams\textsuperscript{13}: ‘The Knowledge Management Field book’ (2000).

This article contains case studies as well as a structured process for thinking about knowledge management, designed to help managers build a detailed action agenda. The authors' Knowledge Management Diagnostic is an invaluable tool for identifying organizational knowledge strengths and weaknesses; it also contains extensive practical exercises and action agendas for transforming KM from theory into practical competitive advantage. For every manager and strategist concerned with generating organizational knowledge and using it more effectively.

Henry Mintzberg\textsuperscript{14} ‘Musings on Management’ – Harvard Business Review – July-Aug 1996: Management is a curious phenomenon. It is generously paid, enormously influential, and significantly devoid of common sense. At least, the hype about management lacks common sense, as does too much of the practice. It really says im-practice, because the problems grow out of the disconnection between management and the managed. The disconnection occurs when management is treated as an end in itself instead of as a service to organizations and their customers.

This article talks about few companies which are developing measurement systems to improve their management of their intangible assets. These measurement systems align individual actions with organizational strategies and anticipate financial outcomes to avoid negative and enhance positive outcomes.


One intriguing aspect of the authors' analysis is that believing middle management, now typically thought to be the deadweight, expendable part of the corporate structure, is critical to staying on the cutting edge. Top management may encourage the "creative chaos" that keeps Japanese companies innovative, but middle management is the engine that drives it.

**Gene Bellinger**\(^{17}\) ‘Knowledge Management – Emerging perspectives’ (2005) and ‘The Knowledge centered organizations’ and ‘The effective organization’.

This article talk of wisdom which arises when one understands the foundational principles responsible for the patterns representing the Knowledge and wisdom even more so than knowledge tends to create its own context. These foundational principles are universal and completely context independent.


This is path breaking article on building "learning organizations" -- corporations that overcome inherent obstacles to learning and develop dynamic ways to pinpoint the threats that face them and to recognize new opportunities. Not only is the learning organization a new source of competitive advantage, it also offers a marvelously empowering approach to work, one which promises that, as Archimedes put it, "with a lever long enough... single-handed that can move the world."
Dr. Yogesh Malhotra\textsuperscript{19}, Brint Institute ‘Knowledge Management in inquiring organizations’ (1997)

Despite increasing sophistication of KM technologies, it is observed that increasing failures of KM technology implementations (Malhotra, 2004b), the sections of this article discuss how such failures result from the knowledge gaps between technology inputs, knowledge processes, and business performance. The specific focus of the analyses is on the application of KM technologies in organizational business processes for enabling real time enterprise business models.

Debra M. Amidon\textsuperscript{20}, Founder and Chief strategist, ENTOVATION INTERNATIONAL ‘The Momentum of Knowledge Management. (1996)

The crux of this article says that ‘today there is an emerging 'community of practice' which transcends any function, sector, industry or geography. Participants include theorists and practitioners from education/learning systems, economics/finance, quality/benchmarking, human resources, information/internet technology and R&D/innovation strategy and more. The concurrent engineering, agile manufacturing and re-engineering initiatives are all coming to a common theme’.


Here the authors show how KM can provide a wide range of benefits, such as quality management, learning management, anecdote management, building institutional memory of best practices, performance support systems, and supply
chain integration. KM ties together historical data of an organization, and can be used to generate lessons as well as analyze "what-if" scenarios.

Davenport, T. Knowledge management case study: knowledge management at Microsoft. Austin, TX: University of Texas, (1997)

The case study in this article takes into account the nature of the outsourced process by exploring the performance of BPO relationships through the lens of information processing. The information processing view of the firm characterizes firms as information processing networks with limited information processing capacities that are faced with different levels of uncertainty in their task environments. The objective of the firm is to design the right structure that facilitates the right amount of information needed to cope with task uncertainty and achieve desired performance.

Sangameshwaran Prasad, “Knowledge Management”; Indian Management, May, (2003) - The author presents his views about KM as Knowledge Management has been in existence in our society ever since the discovery of language. Human beings learnt how to communicate and knowledge transfer took place from father to son, teacher to pupil, from educated to the uneducated through various means as written form, songs and dances or by folklore. As long as society was not widespread, these different tools and techniques served its purpose of facilitating the transfer of knowledge.


The main text of this article is to discuss the problems of IT sector. Being in the service sector of Indian economy, like banking, advertising, hotels & tourism, the main asset of IT business is its intellectual capital. But the major problem is the increasing turnover of this asset. Every day the IT companies witness the
experience asset walking out and experience asset walking in. Hence, whether or not many IT organizations admit it, they face the challenge of sustaining the level of competence needed to win contracts and fulfill undertakings.

**Kathleen Foley curly & Barbara kivowitz**

This guide provides a practical plan and road map to start the knowledge management process. Walk through all the stages - assessment, planning, deployment, and valuation and gain specific action steps for putting it all together to expand core competency and win competitive advantage.

**DeepakChawla, Himanshu Joshi**

The purpose of this paper is to study Knowledge Management (KM) implementation in Indian manufacturing, IT and IT Enabled Services (ITES) and power generation and distribution companies. Various dimensions of KM, namely: process, leadership, culture, technology, and measurement are compared across the three industries to understand the differences in KM practices. Samples comprised 17 responses from ITES, 32 from manufacturing and eight from power generation and distribution organizations.

**Alavi, M., and Leidner, D.**

The main aim of this paper is to define Knowledge Management Systems. Prior to this, it is necessary first to define knowledge and knowledge management. Knowledge is a broad and abstract notion that has defined epistemological debates in western philosophy since the classical Greek era. Since this article has
an applied (rather than a theoretical or philosophical) orientation; the author adopted the working definition of knowledge, based on the work of Nonaka and Huber (1991)

SIGNIFICANCE OF THE STUDY

In the light of the above introduction of Knowledge management, it is very clear that the Indian IT industry is facing severe competition from MNC’s. The competition among Indian software companies is also very much challenging. To meet these challenges, Knowledge management is considered as a key successful factor (KSF). With the escalation of standards in quality, the IT companies are forced to change their management perspective including their vision, mission and the goals. Because of the impulsive shift in the paradigm, today the Indian IT industry is competing in the realm of survival of the fittest.

A success case of an IT organization requires knowledge creation, sharing, storing that enhances a better knowledge management environment. Knowledge management – how organizations track, measure, share and make use of intangible assets such as an employee’s ability to think fast in a crisis – is increasingly important in a fast-changing knowledge society. Organizations have always managed knowledge, even if they did not use the term knowledge management.

NEED FOR THE STUDY

There is a need to have acumen to understand knowledge management better and to find various means to measure it and spot the best KM practices in
IT Industry so that companies can manage better. This research focuses on the current state of knowledge management as an organizational process in IT Industry. There is a necessity to understand the impact of KM methods and tools that are being developed in IT industry. As the domain of economic benefits of knowledge management practices is very vast, the focal point of current study is on KM policy formulation, KM strategy development and implementation, Role of Information Technology on KM in IT industry.

**SCOPE OF THE STUDY**

Research focuses on the three basic components of knowledge management in IT industry. The research implications of Knowledge management are intended primarily for IT organizations. This thesis is restricted to two top IT organizations i.e. Infosys and Wipro. The study covers all the important areas of Knowledge management in IT industries. Further the study is confined to KM policy creation, KM strategy development and implementation, Role of Information Technology on KM in IT industry. The organization is chosen based on the condition that it runs a formal knowledge sharing program aimed at sharing knowledge and benefiting from it.

The study is mainly focused on the Indian IT companies, because the IT industries in India have grooming potential with more knowledgeable human recourses. The study is focused on the Multi National Companies, because the standards of the company in terms of infrastructure and potential managerial practices to achieve result oriented work which will add the research survey in a better way. Further the study is focused mainly in the southern part of India, because the IT industry is concentrated more in this region. Hyderabad and Bangalore cities are selected for the study as they are major cities for IT solutions in southern part of India.
OBJECTIVES OF THE STUDY

1. To understand Knowledge Management practices in IT Industry across the Globe and India in specific.
2. To examine the perceptions of the respondents of sample organizations on the Knowledge management policy.
3. To analyze the reflection of the respondents on the KM strategy development in the responding organizations.
4. To explore the opinions of the respondents on KM strategy implementation.
5. To assess the role of IT on the KM practices in the sample organizations.
6. To offer suitable suggestions to the sample organizations to improve KM practices.

HYPOTHESES OF THE STUDY

**H0:** A well designed KM policy will not enhance the effectiveness of KM practices in the sample organizations.

**H1:** A well designed KM policy will enhance the effectiveness of KM practices in the sample organizations.

**H0:** A good KM strategy development and its implementation will not have a greater impact on organizational effectiveness.

**H2:** A good KM strategy development and its implementation will have a greater impact on organizational effectiveness.

**H0:** There is no influence of Information Technology on the effectiveness of KM practices.

**H3:** There is influence of Information Technology on the effectiveness of KM practices.
**Research Methodology:** In pursuit of above mentioned objectives the following methodology is adopted.

**Sources of Data:** The study relied both on primary and secondary data.

**Primary Data:** A well structured questionnaire has been used in the study. The structured questions take a form of questionnaire where the respondents were asked to fill out a form on how they perceived various aspects of knowledge Management initiatives in the selected companies. This comprised primary data.

**Secondary data:** The secondary data on the topic have been collected from globally renowned HRM text books, empirical research papers, sample firm HR manual, annual reports, internet information, published theses, dissertations, internationally acclaimed HR journals, Magazines, and New bulletins, News papers, micro-films on the topic.

**About the Questionnaire:** Questionnaire was divided into two parts. Part 1 is designed to collect personal profile of the respondents such as age, sex, designation, educational qualifications, experience and technical qualifications.

For the purpose of an in-depth data, the various statements were divided into five sections. Part 2 contains statements covering various organizational aspects such as KM Policy awareness and its familiarity, KM strategy development and its implementation, Knowledge Management & IT interface.

Questionnaire contains a series of statements with prompt alternative responses. It consists of closed statements in the sense the respondents must select their response to each statements from those available rather than their own. Statements require response on a Likerts 5 point scale from 5 representing
strongly agree through 3 the uncertain response to 1 representing strong disagreement. Where ever necessary, statements with dichotomous responses were also included for data collection.

**Sample Design:** The Study basically relied on visiting the sample companies in Southern India to know the realities of Knowledge management.

From the renowned Fortune 500 Companies operating in Andhra Pradesh two major companies Wipro and Infosys are selected for the study. From overall 500 employees of Wipro, a sample of 150 employees has been picked randomly. Out of 550 employees of Infosys a sample of 150 employees are selected for the study. Thus the sample technique adopted is Simple Random sampling.

**Data Processing:** The collected data has been edited, coded, transcribed, classified, and tabulated. The study used SPSS package.

**Data Analysis and Interpretation:** The processed data has been analyzed with factual data collected to draw appropriate inferences on the topic. Data collected was analyzed and interpreted through percentages, mean scores. The statistical tools and techniques like non-parametric tests have been employed to arrive at suitable findings and inferences. Hypotheses have been tested by conducting Chi-Square Test.

**LIMITATIONS OF THE STUDY**

1. The study concentrated on two IT majors i.e., Wipro and Infosys located in Hyderabad, Andhra Pradesh.
2. Although, Indian corporate are slowly realizing the importance of KM in IT industry hence the study is confined only to these companies.

3. An honest, sincere, and humble attempt has been made to measure KM outcomes of the sample firms.

4. In spite of the best efforts made, it was not possible to get 100% free and frank opinions and the written responses. It is on the account of the fear psychosis of the respondents.

5. The findings of this research may not be generalized to the IT industry as a whole, as the KM policy and practices of the organizations is rather unique.

6. Since there are only two organizations involved in the study, any relationship found can only be indicatives of a possible trend rather than definite casual link.

REFERENCE PERIOD

The study was commenced on 12.05.2007 and to be closed at 30.11.2011. Altogether the time duration of the present research programme is four and half years.

CHAPTERIZATION

The study is presented in the expected to have the following chapters for effective documentation and presentation of findings of research.

CHAPTER -I

INTRODUCTION TO KNOWLEDGE MANAGEMENT: This chapter includes the concept of Knowledge, Management, types of Knowledge, brief history of Knowledge Management, definitions, significance and need of
Knowledge Management and finally Artificial Intelligence in Knowledge Management.

CHAPTER – II
COMPANY PROFILE: This chapter explores sample organizations i.e. Infosys and Wipro. It talks about introduction and birth of company, profile of the founder, nature of business and financial results.

CHAPTER – III
RESEARCH DESIGN: This chapter explains research methodology, research design, significance of the study, research tool, objectives, scope of the study, review of literature, sampling and data collection methods, statistical tools applied, limitations of the study and its future contribution.

CHAPTER - IV
KNOWLEDGE MANAGEMENT POLICY AWARENESS AND ITS FAMILIARITY: This chapter gives a brief introduction about Knowledge Management policy and its awareness. It also explains how the Knowledge Management Policy and Awareness and its familiarity affects the organizational effectiveness.

CHAPTER – V
KNOWLEDGE MANAGEMENT STRATEGY DEVELOPMENT & ITS IMPLEMENTATION: This chapter includes the meaning of KM strategy and examines the process of developing KM strategy and its implementation. It presents the opinions of employees on KM strategy development and implementation.

CHAPTER – VI
KNOWLEDGE MANAGEMENT AND INFORMATION TECHNOLOGY INTERFACE: This chapter presents analysis on Information Technology and its impact on Knowledge Management practices in the sample organizations.
Further it presents the analysis on the integration of Knowledge Management practices with Information Technology.

CHAPTER – VII

FINDINGS AND SUGGESTIONS: In this chapter an attempt is made to present the significant findings on KM initiatives in Indian IT Industry with reference to Infosys and Wipro. Further it presents suitable suggestions with respect to KM practices of the sample organizations.

FUTURE CONTRIBUTIONS OF THE STUDY:

The study may be extended to other important industries where Knowledge management plays a significant role in achieving their strategies such as Pharmaceutical Industry, Insurance, Banking, Education and Hospitals.

References:

3. Archna Shukla ;“The Knowledge Management Architecture”Sage Publications,2002
4. C.R. Kothari “Research Methodolgies”

9. Dr. Yogesh Malhotra, Brint Institute ‘Knowledge Management in inquiring organizations’ (1997)


