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Chapter 1

BACKGROUND OF THE STUDY

1.1 Introduction

Knowledge is increasingly being recognized as the new strategic imperative of organizations. The most established paradigm is that knowledge is power. Therefore, one has to hoard it, keep it to oneself to maintain an advantage. The common attitude of most people is to hold on to one’s knowledge since it is what makes him or her an asset to the organization. Today, knowledge is still considered power—an enormous power in fact—but the understanding has changed considerably, particularly from the perspective of organizations. The new paradigm is that within the organization knowledge must be shared in order for it to grow. It has been shown that the organization that shares knowledge among its management and staff grows stronger and becomes more competitive. This is the core of knowledge management, "the sharing of knowledge (Uriarte, 2008).

Knowledge management as a conscious discipline would appear to be somewhere between five and fifteen years old. It evolved from the thinking of academicians and pioneers such as Peter Drucker in the 1970s, Karl-Erik Sveiby in the late 1980s, and Nonaka and Takeuchi in the 1990s. During that time, economic, social and technological changes were transforming the way that companies worked. Globalisation emerged and brought new opportunities and increased competition. Companies responded by downsizing, merging, acquiring, reengineering and outsourcing. Many streamlined their workforce and boosted their productivity and their profits by using advances in computer and network technology. However their successes in doing so came with a price. Many lost company knowledge as they grew smaller. And many lost company knowledge as they grew bigger—they no longer knew what they knew. Retrieved from: http://www.kmtalk.net/article.

Knowledge management is based on the idea that an organization’s most valuable resource is the knowledge of its people. This is not a new idea; organizations have been managing human resources for years. What is new is the best utilization of their
knowledge because to cope-up with the accelerated rate of change in today’s organizations and in society as a whole. Knowledge management recognized that today nearly all jobs involve “knowledge work” and so the persons who utilized their knowledge is known “knowledge employees” to some degree or another – meaning that their job depends more on their knowledge than their manual skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organization. Knowledge management is essential for facilitating the processes by which knowledge is created, shared and used in organizations. It is not about setting up a new department or getting in a new computer system. It is about making small changes to the way everyone in the organisation works. There are many ways of looking at knowledge management and different organisations will take different approaches (Servin, 2005).

Generally speaking, creating a knowledge environment usually requires changing organizational values and culture, changing people’s behaviours and work patterns, and providing people with easy access to each other and to relevant information resources. In terms of how that is done, the processes of knowledge management are many and varied. As knowledge management is a relatively new concept, organizations are still finding their way and so there is no single agreed way forward or best practice. This is a time of much trial and error. Similarly, to simply copy the practices of another organisation would probably not work because each organisation faces a different set of knowledge management problems and challenges. Knowledge management is essentially about people – how they create, share and use knowledge, and so no knowledge management tool will work if it is not applied in a manner that is sensitive to the ways people think and behave.

White Collar employees are obviously non-manual employees and are usually employed by firms to carry out innovative activities. Knowledge Worker is a member of the organization who uses knowledge to be a more productive worker. These employees use all varieties of knowledge in the performance of their regular business activities. Everyone who uses any form of recorded knowledge could be considered a knowledge worker. A knowledge worker is anyone who works for a living at the tasks of developing or using knowledge. For example, a knowledge worker might be someone who works at any of the tasks of planning, acquiring, searching, analyzing,
organising, storing, programming, distributing, marketing, or otherwise contributing to the transformation and commerce of information and those who work at using the knowledge so produced (Mohanta, 2005)

A Knowledge Worker is anyone in the organization who uses their brain at some point during the day to accomplish their tasks. We specifically include shop floor employees whose tacit knowledge is often part of the backbone of the organization. Knowledge Worker is a person who has been schooled to use knowledge, theory, and concept, rather than physical force or manual skill. The man/woman who puts to work what he/she has between his/her ears rather than the drawn of his/her muscles or the skill of his/her hands. Knowledge employees use their intellect to convert their ideas into products, services, or processes. A Knowledge worker creates knowledge, knows how to tap and share it across an organisation, and then reuses this knowledge whenever necessary – and he/she usually works against a deadline like yesterday.

Knowledge worker is a problem solver. He/she is a person who uses intellectual rather than manual skills to earn a living. He/she is an individual who requires a high level of autonomy. He/she is a manipulator of symbols; someone paid for quality of judgement rather than speed of work. He/she is a worker who uses unique processes. He/She is someone who possesses un-codified knowledge which is difficult to duplicate. He/She is a worker who sources between his ears. He/She is someone who uses knowledge and information to add to deeper knowledge and information (Dalkier, 2005).

Knowledge work is complex, and those who perform it require certain skills and abilities as well as familiarity with actual and theoretical knowledge. These persons must be able to find, access, recall, and apply information, interact well with others, and possess the ability and motivation to acquire and improve these skills.

1.2 Knowledge Management: An Overview

"Knowledge Management is the process of assembly a firm’s cooperative expertise whenever it resides — in database, on paper, or in people’s heads — and distributing it to where it can help construct prime payoff. (Smith, 2001) Knowledge management practices involve creating, storing, and contributing or disseminating tacit and explicit
knowledge of the organization. It is calculated that, up 95% of information is stored in tacit form of knowledge. This tacit knowledge is the raw material or energy for innovation and ingenuity which is the only spirited advantage a firm has to maintain in this changeable business environment. It is a demanding task for the companies to recognize this tacit knowledge and utilize it towards company’s assistance. Knowledge management systems help the companies to handle this tacit, which is otherwise hard to detain, by facilitating an environment of creating, storing and sharing knowledge. As defined by Malhotra “KM is a structure within which the organizations view all its process as knowledge processing, where all business processes involves creation, spreading, regeneration, and application of knowledge towards organizational sustenance and survival (Herchel, et al, 2000)” Knowledge Management contains following integrals parts:

- Using accessible knowledge from outside sources.
- Embedding and storing knowledge in business processes, products and services.
- Representing knowledge in database and documents.
- Promoting knowledge growth through the organization’s culture and incentives.
- Transferring and sharing knowledge throughout the organization.
- Assessing the value of knowledge assets and impacts on regular basis.

Thus in short, Knowledge Management is a strategy implemented by the organization to make optimum utilization of its knowledge and gain minimum organized benefits.

Knowledge Management concept is based on three pillars people, process and Technology. KM involves contribution and interaction of these three factors to improve the organizational efficiency. An organization can be termed as knowledge organization when it generates environment for its people to liberally exchange their information, views, expertise about various processes across different practical areas using technology as a tool, and thereby manufacture knowledge assets which results in growing the efficiency of an individual, process and as a entire of the organization. The goal of KM is to produce constructive returns on investment in people, process and technology.
1.3 Statement of the Problem

Knowledge Management has become one of the most important tools in the present day business world for ensuring continual success. Knowledge Management intensive companies like software and IT industries obviously realized this much earlier, but the same was not the case with heavy and labor intensive industries. Especially this is the case with steel industry. While the impact and effect of knowledge drain in small companies like software and IT industries are immediately and evidently noticeable this is not so with large and heavy industries, largely due to the inbuilt redundancy in manpower. The negative impact of knowledge drain is felt much later and by that time it would be too late to take any remedial steps. In spite of manpower redundancy, each person has a certain level of perception that is unique and limited to him. Unless that quality from the person is tapped, which is tacit in nature, there shall be certain loss to the company on account of losing the said person. This can be taken care of only by resourcing to implementation of Knowledge Management practices where upon tacit knowledge from the person can be suitably tapped and kept in repositories.

Integrated steel plant like the one in study, that is, Bhilai Steel Plant (BSP), being in the category of heavy industry, it faces this problem and hence needs to be addressed suitably. For this reason, the concerned subject was chosen for study.

1.4 Review of Literature

Lave and Wenger (1991) in their paper “Situated Learning: Legitimate Peripheral Participation” used first the concept of a community of practice knowledge management of white collar employees (often abbreviated as CoP) which refers to the process of social learning that occurs when people who have a common interest in some subject or problem collaborate over an extended period to share ideas, find solutions, and build innovations. It refers as well to the stable group that is formed from such regular interactions

Amidon (1997) pointed out that Economy innovation strategy for the knowledge economy is intended for managers who have practiced the best of quality and re-engineering management techniques and ready to transform their organizations with
the systematic notions of knowledge creation and application. He has provided a
sound, practical framework for instituting innovation strategy beyond the traditional
definition of flow of parts or finances. At the core it is an understanding of the dual
value of knowledge (content) and innovation (process) using 'real-time' learning as the
methodology. She introduced new managerial concepts such as: Value-System versus
Value-Chain, Strategic Business Network (SBN) versus Strategic Business Unit
(SBU), and Customer Success versus Customer Satisfaction.

Allee (1997) in his study has identified a unique and powerful road map for
understanding knowledge creation, learning, and performance in everyday work. The
author reframes current thinking by delving into the hidden world of knowledge
supporting both individual and organizational performance, laying the foundation for
the emerging art of knowledge management. From strategies for core knowledge
competencies to the key components of individual expertise, The Knowledge
Evolution zeroes in on the critical success factors for the knowledge-based enterprise.
What emerges is an approach to knowledge management of white collar employees
that is simple enough to communicate at every level of the organization, yet rich
enough to encompass all the complexity of modern enterprises.

Parbly (1998) on behalf of KPMG Management Consulting to evaluate the awareness
of knowledge management by different organizations and their current
implementation of KM The research also shows the benefits availed from knowledge
management implementations and future plans related to it. For the survey a simple of
100 UK companies with a turn over more than 200 million pounds a year was taken
and the respondents were among the top executives, finance and marketing directors
and those having the responsibility of knowledge management activities. The research
report begins with current awareness and initiatives of knowledge management
implemented by these companies followed by showing the statistics about the Cost of
Ignoring the knowledge. An analysis about the failure to store critical knowledge
effectively and failure to exploit the technological infrastructure is presented. The
report also presents satirical information about need for vision and strategy, investing
on knowledge, and full benefits for early adapters of knowledge management. In the
concluding parts the findings and conclusions drawn from the research are presented.
Davenport and Prusak (1998) in their book discussed the concepts such as knowledge generation, codification, and transfer; before looking more closely at KM and KM projects. The book presents a perfect balance between the theoretical and the practical knowledge. These include the dynamics of knowledge markets, the types of knowledge generation, and the factors involved in codification. For the practical side, the authors draw upon their extensive experience and examine issues such as the types of KM projects, success factors, the role of information technology, and different approaches to KM. The book serves as the hands-on resource of choice for companies that recognize knowledge as the only sustainable source of competitive advantage going forward. Drawing from their work with more than 30 knowledge-rich firms, Davenport and Prusak examine how all types of companies can effectively understand, analyze, measure, and manage their intellectual assets, turning corporate wisdom into market value. They categorize knowledge work into four sequential activities - accessing, generating, embedding, and transferring and look at the key skills, techniques, and processes of each. While they present a practical approach to cataloging and storing knowledge so that employees can easily leverage it throughout the firm, the authors caution readers on the limits of communications and information technology in managing intellectual capital.

Brian and Conrad (1999) in their paper explained that Knowledge management is not one single discipline. Rather, it is an integration of numerous endeavors and fields of study. They provided framework for characterizing the various tools (methods, practices and technologies) available to knowledge management practitioners. And also described the framework provides examples of how to use it, and explore a variety of potential application areas.

Robertson and Hammersley (2000) have focused on the role of people management. They found that too much reliance has been placed on technological solutions to KM to date. The authors emphasized the contextual nature of KM and the practices or system in support of KM.

Ambrosio (2000) in his study has pointed out that the most common error in implementing knowledge management system is failing to coordinate efforts between information technology and human resources. Starting with a low-profile project, not
changing the compensation scheme to reward teamwork, building the grand database in the sky to house all company's knowledge, and assuming someone else will lead the change are the other common errors during knowledge management implementation in the organization that cause failure in knowledge management of white collar employees efforts.

Natarajan and Shekhar (2000) in their publication have focused on the core processes of knowledge management and outlines a comprehensive practical framework that organization can use successfully. Real life case studies to emphasize on the practical knowledge rather than theoretical aspect of knowledge management. He presented invaluable insight derived from experience with knowledge management implementation engagement in variety of organizations. He also proposed frameworks, models and methodologies that are easily understandable, usable and provide practical approaches to implementing knowledge management in organizations.

Fernandes and Raja (2000) in their study have stated that the key to survival in today's chaotic business environments is the adaptive Computer Integrated Enterprise (CIE). Knowledge Management System is a sub-element of the CIE with a main aim to capture the knowledge available over cross-functional boundaries to make it possible, so that people who are not computer specialists can use such systems? Such a system can be achieved through Object Technology (OT). The step in implementing these objects in the CIE is opening channels of communication between remote objects, using Publish and Subscribe technology.

There are two approaches to knowledge management. The first approach is the Management of Information (MI) approach. Researchers and practitioners in this field tend to have their education in computer and/or information science. They are involved in construction of information management systems, MI, reengineering, group ware etc.

The second approach is the Management of People (MP) approach. Researchers and practitioners in this field tend to have their education in philosophy, psychology, sociology or business/management. They are primarily involved in assessing,
changing and improving human individual skills and/or behavior. To them knowledge is a process, a complex set of dynamic skills, know-how etc., that is constantly changing. They are traditionally involved in learning and in managing these competencies individually - like psychologists, sociologists or organizational theorists.

Alvi and Leidner (2001) presented a detailed review of knowledge, knowledge management and knowledge management systems with reference to various literature works by renowned authors. The literature review of knowledge management revealed the complex and multi faceted view of knowledge management. The article presents and review different definitions of knowledge and its forms. Further the articles discussed about organizational knowledge, knowledge creation process in the organization, knowledge management processes. The article also highlighted the role of IT tools in organizational knowledge management system.

Smiths (2001) in this study discussed various issues related to tacit and explicit knowledge in her article entitled. “The role of tacit and explicit knowledge in the workplace.” The article gives a detailed insight on knowledge, knowledge – creating companies and knowledge management. Methods to recognize, use, share, acquire and measure tacit and explicit knowledge are shown. The paper also presents ways to balance the use of tacit and explicit knowledge at the work place and also the ways to improve understanding of knowledge are presented. Practical examples of how tacit and explicit knowledge are handled by renowned companies like Xerox, Accenture, Ernst and Young, World Bank etc. are very well explained in the article. The paper concludes by suggesting the companies to recognize their tacit and explicit knowledge wealth and utilize it to solve problems, achieve goals and have a major competitive advantage. Organizations must create a work-centric environment to encourage sharing and sue of all forms of knowledge is also mentioned in the article.

Richard. et.al (2001) have discussed in their paper core issue of knowledge management that is the conversion of knowledge from one form to the other. The author presented a protocol for converting tacit knowledge into explicit knowledge. He mentioned the simple objective access protocol (SOAP) which is used in medical community. A sample of SOAP knowledge exchange protocol is discussed in the
article. The study conducted an experiment on 238 students with a mentioned list of eight hypotheses. The experiment tries to understand the effect of protocol used for conversion of tacit knowledge to explicit knowledge, using a proper statistical tool the hypotheses are tested and it is found that hypotheses are rejected. Thus, the article presents a detailed insight knowledge exchange protocols to be followed while converting one form of knowledge to another.

Tiwana (2001) in his research explained the basic concepts and the interrelationship of knowledge management, customer relationship management, and e-Business. He also said the guidelines for implementing knowledge customer relationship management (KCRM) which is the intersection of these three components. Issues such as Strategic alignment of business and technology strategies, Audit and analysis that help determine the present state of the relationship and knowledge assets of the business have also been dealt within this book. The process of assembling a boundary-spanning team for the KCRM implementation, Developing and understanding the technology plan or blueprint, Ensuring that KCRM systems are built with an eye on long and short term results, aligning leadership, change management, and corporate culture with the KCRM strategy. He also explained the evaluation, measurement, and refining the success of the KCRM initiative.

Sveiby (1998) has pointed out in his paper that is based on the management of information (MI) approach to achieve a knowledge transfer system that is focused on the power of encapsulation, inheritance and polymorphism of Object Technology involving assimilation and exhibition phases. The assimilation phase is essentially conceptual and oriented towards the creation of objects, whereas the second phase is more operative and technology dependent.

Assimilation aims at providing an abstract, expressive, and rigorous representation of the considered process to determine the objects. In this phase, it is important to look at the whole system, to identify its objects, and to understand how the different subsystems will have to cooperate to achieve their goal. The assimilation sub-phases are object representation and data assimilation. This phase shifts the assimilation phase into the software domain, and it includes representation of data, and communication and exhibition of data. The exhibition role performs these tasks i.e
Listen for reports based on categories, Receive canonical-form reports, Display the reports to the user. Each user runs the same program, but receives a different subset of reports by subscribing to a different set of categories. Each report carries information in only one direction - from the transmitting objects to any number of users. The assimilating programs do not receive any information from the users.

**Gamble and Blackwell (2001)** in their publication captioned “Knowledge Management” presented a logical and methodical theoretical foundation of knowledge management, while including practical examples, stories, quotes, and so on throughout the entire book. They provide an in-depth look at knowledge and KM, including its relationship to elements outside the boundaries of the firm, while maintaining a strong human focus without neglecting the effect of technology. The book also includes a questionnaire that companies can use to assess their KM aptitude.

**Marwick (2001)**, in his article presented a review of technologies that contribute to knowledge management solutions using Nonaka model of organizational knowledge creation framework. The extent to which knowledge transformation within and between explicit and tacit knowledge can be supported by the technologies is discussed, and likely future trends are identified. The aim of the paper is to provide an overview of technologies that can be applied to knowledge management and to assess their contribution in knowledge creation and knowledge sharing.

**Bhatt (2002)** has studied a new framework of knowledge management for exploring the difference between the individual knowledge and organizational knowledge and presented a set of management strategies to handle these two distinct kind of knowledge and how to transform an individual knowledge into organizational knowledge. The role of management in creating organizational knowledge is explained followed by mention of management strategies for handling individual and organizational knowledge. The paper concludes by arguing that part of knowledge is public and the other part of knowledge is private. The public knowledge is easy to manage but the private knowledge is very difficult to control. The author suggested for managing this private knowledge such as creating an environment of collaboration and informal coordination can result in controlling the private knowledge. Paper
further suggests that successful management of private knowledge can empower the overall organizational knowledge.

Bolloju et al (2002) in their research paper investigated an approach for integrating decision support and knowledge management process using knowledge discovery techniques. Based on the proposed approach, an integrative framework is presented for building enterprise decision support environment using model marts and model warehouse as repository for knowledge obtained through various conversions.

Fontain and Lesser (2002) in their research identified a number of road blocks that organizations typically face when implementing knowledge management programs. These roadblocks are failure to align knowledge management efforts with the organization's strategic objectives, creation of repositories without addressing the need to manage content, failure to understand and connect knowledge management into individuals' daily work activities on formal learning efforts as a mechanism for sharing knowledge focusing knowledge management efforts only within organizational boundaries.

Gupta and McDaniel (2002) investigated the link between the management of knowledge in contemporary organizations and the development of a sustainable competitive advantage. Five distinct hypotheses were developed, namely, Harvesting, Filtering, Configuration, Dissemination and practical implications for creating a competitive advantage in modern firms.

Yu (2002) highlighted in his paper that there is confusion on how to implement the knowledge management strategy successfully. Further he investigated and suggested possible ways to communicate the concept of KM are more effectively so that the km concept could be implemented more successfully. This could be possible through KM socialisation process which is to be carried out by the so called "opinion leader" who is presumably to be a more white collar person and be able to influence others in changing their perception and behaviour.

Magnusson and Nilsson (2003) in their research paper identified through a pan-European study of SMEs-practice (Small and Medium Enterprises) and with the
network organizations differentiated by degree of knowledge integration, three types of network organizations, namely Supply-chain Networks, Business Networks and Research-Networks and conclude that KM white collar employees activities in network organizations can be of an either facilitating or intervening nature and that the different network types display a generic pattern regarding the mix of KM activities.

Alstete (2003) has examined in his paper the perceptions of corporate managers regarding changes in security practices related to knowledge assets at their organizations in the light of increase in security and competitive intelligence threats. The paper finds that although the companies are aware of the value of knowledge asset management, the organizations have not increased security to guard the valuable corporate knowledge. Many corporate managers believe their company has a rudimentary understanding of the value of knowledge management today, but many companies have not implemented effective plans to protect their knowledge assets. Storage media, accessibility, types of knowledge to be protected, budget planning, inter and intra-organizational cooperation are some of the knowledge assets that need to be protected.

McKinlay (2003) has examined in his study the relationship between languages and attempts to codify and manage business knowledge. He argued that the tacit/explicit distinction is not the salient issue for knowledge modellers. Other issues seem more concerning like a dichotomy of developments in modern logic in the thirties and forties the distinction between logical syntax and natural language and issues arising out of the translation and reduction of natural language.

Rajakannu (2003) investigated KM Initiatives the infroect. The study showed that the Wipro launched its KM System named TecNet in April 2002. TecNet acts as repository of technical documents, evaluation report and best practice documents which will ensure availability of information to the developer community of Wipro. This aims at reducing rework and ensuring better and quicker completion of development and technical projects.
Background of the Study

Bergeron (2003) in his publication aimed to examine the approaches to knowledge management that contributes to corporate competitiveness. The book illustrates the practical business aspects of Knowledge Management in an easily understandable language. There are eight chapters covering key technical, cultural or economic issues of the technology. Some of the chapters are knowledge organization, Knowledge worker, Process, Technology, Solutions, and Economic. The book ends with providing suggestions for further reading on the topic.

Bhattacharya and Chaudhary (2004) discussed different aspects of Knowledge Management and its applications in their paper. They have identified various challenges faced by the organizations while implementing the knowledge management process. Further they explained various types of Knowledge Management initiatives in different sectors of India such as corporate level organizations, R and D initiatives, financial level initiatives and Academic level initiatives and also the role of knowledge management in Library is explained.

Kim (2004) has presented a method for building the knowledge requirements which are the architecture for the effective knowledge management of white collar employees’ systems. The method is decision making oriented. The rationale of the method is introduced first. Then, the notations, grammars and processes of the method are presented. Further, the method is applied to building a knowledge model for a shipping company.

Gumus and Hamarat (2004) have described in their paper on perceptions of tourism managers on knowledge management level in Canakkale. An empirical study was conducted via survey to seek how managers evaluate current knowledge level of their organizations. Items relating knowledge processes, enabling factors for KM culture, technological and socio-cultural issues in organizations were used as a format for the study. For successful and viable outcomes of KM, many factors play important roles. However, some of those are out of influence of the organization while some are internal and can be arranged. Ability to deliver desired service paradigms, ability to act timely, capabilities of employees, innovativeness, work levels links to strategy and direction, ability to create, ability to solve unexpected issues, effectiveness of
enterprise systems, procedures and policies are some of the basic factors for effective knowledge management of white collar employees.

Delmonte and Aronson (2004) in their paper explained the leveraging knowledge based on effective communicating teams, and interdepartmental trust, than on information technology. The relationship between social interaction within an organization and knowledge management system success have been tested by measuring two aspects of social interaction: interdepartmental connectedness, and interdepartmental conflict the results of which indicate that there is a significant relationship between both factors and knowledge management system success.

Malhotra (2005) in his study described comprehensively the theory, research, and practices on knowledge management and developed a framework that contrasts existing technology-push models with proposed strategy-pull models. The framework explains how the "critical gaps" between technology inputs, related knowledge processes, and business performance outcomes can be bridged for the two types of models. Findings suggest superiority of strategy-pull models made feasible by new "plug-and-play" information and communication technologies over the traditional technology-push models. Critical importance of strategic execution in guiding the design of enterprise knowledge processes as well as selection and implementation of related technologies is explained. His work is the first comprehensive analysis relating to KM and its integration into enterprise business processes for achieving agility and adaptability often associated with the "real time enterprise" business models. It constitutes critical knowledge for organizations that must depend on information and communication technologies for increasing strategic agility and adaptability.

Fotache (2005) examined the intricacies of KM of white collar employees and tries to find whether it is another fad like so many fads desperately demanded in management theory or like few buzz-words the management would like to have some buzzwords heard over the last three decades: strategic planning, competitive forces, SWOT (Strengths, Weaknesses, Opportunities and Threats), Quality Circles, Total Quality Management (TQM), Learning Organization, Business Process Re-engineering (BPR), knowledge management of white collar employees, Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Supply Chain
Management (SCM) etc. He also examined as to what extent is knowledge management, technology, management, sociology and other social sciences are related.

Jennis (2005) in his study has given collection of 20 case studies investigating the implementations of knowledge management practices. The study includes cases from many different countries like Australia, Austria, Bahrain, China, Egypt, Germany, Great Britain, Hong Kong, India, New Zealand and the United States. Variety of business situations are presented including banking, engineering, government, consulting, manufacturing, military, project management, software development and public utilities. The study also consists of twenty chapters covering all the issues related to KM and different types of cases.

Indu (2006) has conducted a study of KM system in Infosys and applied Knowledge Management Maturity (KMM), Following topics were covered as a part of the case study, they are: background note about the company and its evolution, Infosys’ Intranet based learning components, the launch of Knowledge shop a knowledge portal, improving the functions of K SHOP, knowledge creation and knowledge sharing, using advanced KM systems. The case study presents satirical review showing the benefits of KM which includes an average 5% improvement in productivity in specific software development projects. At last, the study concludes that the company identifies KM as one of the three leadership areas along with collaborative and convergence technologies. Infosys firmly believed that in the light of changes in the business environment, managing, knowledge effectively remained a key contributor to the success of the company.

Hosono (2006) in his research article discussed the role and importance of KM system development process. He investigated that how sharing of knowledge among the team and project managers is crucial towards the success and efficiency of the project at the Fujitsu Company. Further he introduced the implementation of Project WEB, which is a support tool of Solution NET.

Elia and Hassan (2006) in their book covered many facets of knowledge management which are as people, tools, and procedures. The book also explains KM
implementation process i.e. how to capture it, how to transfer it, how to share it and how to manage it. The book also explains the use of computer for capturing and sharing tacit knowledge and network that transfer tacit and explicit knowledge. The book is organized in five parts where Part I covers the basic concepts, Part II covers Knowledge Creation and Capture, Part III covers Knowledge Codification and System Implementation, Part IV covers KM system tools and portals and last Part V deals with Ethic Legal and Managerial issues.

Andrade et.al (2006) in their research paper proposed a reference model of KM in the field of software engineering. The authors argued that, software engineering is a field where knowledge and experience plays a fundamental role. In this discipline changes are particularly fast and new method and techniques constantly appear which are required to modify or refine the existing knowledge. In this scenario KM strategy can prove very beneficial for improving the efficiency of software engineering process. The authors have presented a formal scheme that is able to represent, capture and transmit the relevant organizational knowledge as well as Meta knowledge required during the software development process to persons involved in software development process. This will ensure that the each person involved in the software development process will have quick access to the best knowledge at the right time, hereby it results into overall efficiency. Finally, the paper concludes by listing out the improvement occurred after implementing the proposed scheme.

Singh et.al (2006) explained in their study KM strategies and processes of identifying, capturing and leveraging knowledge to enhance competitiveness. They suggested that KM practices are needed in Indian manufacturing organizations, which are going through a major transition in this area.

Nissen et.al (2006) in their paper have focused on knowledge management and system design from three integrated perspectives: 1-reengineering process innovation, 2-expert systems knowledge acquisition and representation, and 3-information systems analysis and design. They integrate these three perspectives in a systematic manner, beginning with analysis and design of the enterprise process of interest, progressively moving into knowledge capture and formalization, and then system design and implementation. The study offers an integrated approach that covers the
gamut of design considerations from the enterprise process in the large, through alternative classes of knowledge in the middle, and on to specific systems in the detail. They develop an amalgamated KM life cycle model. They classify and analyze a number of extant KM systems and practices. The resulting classification elucidates several informative similarities and differences between the diverse sets of systems and practices. They identify two primary factors: 1-the organization and 2-the nature of knowledge underlying the task. Finally, they conclude by illustrating how current systems and practices and their corresponding developmental methods can be mapped to our amalgamated KM life cycle model.

Gerald et al. (2006) conducted a multiple case study to understand the effect of culture on knowledge management. The paper presented a detailed scholarly review about knowledge, KM and its implications. Authors have conducted a research based on MSC (Multimedia Support Corridor) status companies in Malaysia. After a detailed review of few case studies it is found that there are number of significant culture KM enablers within the Malaysian context. Collaboration, mutual trust, learning, leadership, incentives and rewards are the culture factors that act as enablers of KM process of the organization. The research proposes a new variable kiasu-ism which is inhibitors to KM. Further research on Kiasu-ism is suggested by the authors to understand its implications in KM initiatives in Malaysian’s organizations.

Lahir (2007) in his publication entitled “Knowledge Sharing: An Introduction” collected and organized research articles and case studies in his edited book. His compilation includes the research articles which help to understand the concept, approaches and role of the KM in the organization. The book also describes the experiences and cases of the KM practices in various organizations. He enlightens about the general trends in the different organizations regarding knowledge sharing. The case studies dealt in the book relate to KM sharing in select organization of corporate sector.

Reddy (2007) in his research work explained the basic concept of knowledge management unique focus on global KM practices. He also identified the linkages among the knowledge management, talent management, Strategic management, Change management and outsourcing of business activates. He also suggested the
techniques and methods used by different organization for the problem solving, conflict resolution and facing turbulence though knowledge management.

Cader (2007) in his study found that biotechnology industry is differentiating between data, information and knowledge and with the help of new knowledge, the biotechnology industry is able to innovate and market new products and services. A Knowledge Management System (KMS) model has been used to show how the various components within the KMS are coordinated and integrated to best achieve organizational objectives in the engineering and biotechnology industries. The KMS model is also used to show how customer-focused organizations use knowledge to market innovative products and services.

Jung, et al (2007) in their article mentioned architecture for integrating knowledge management system (KMSs) and BPMSs, based on a comprehensive framework, to combine the advantages of the two paradigms. Their study extended the concept of process knowledge to expand the scope of traditional knowledge in the KM perspective and change the handling method of knowledge, and classified it into three types. Then, it suggested how the functionalities of existing KMSs and BPMSs must be extended to support the three types of process knowledge while satisfying the lifecycle requirements of both knowledge and business processes. By identifying comprehensive requirements along with a cogent framework based on KM and BPM lifecycles, the proposed architecture will provide a basis for research and development of process-oriented KM systems. With well-defined knowledge types and functions required when knowledge is created, used, and evolved, process-oriented KM systems can manage important corporate knowledge about business processes in a unified manner.

Tseng (2008) in his paper has studied the relationship between information technology and KM. He concluded that even though, IT is the foundation for managing knowledge assets, leaf it is merely a tool to assist in the implementation of KMS. The key to implementing KM is the people themselves.

Finn and Togeir (2008) in their research paper did a systematic review identifying empirical studies of KM initiatives in software engineering, and discussed the concept
and presented the major findings which showed a significant role of KM in the organizations.

Aurum and Danesngar (2008) discussed current KM practice in software engineering process in two Australian Companies. The two companies were selected where KM practices are applied in their software development work. The paper highlights various KM practices and processes used in the software engineering process. The paper also mentions various enablers of KM process in terms of leadership, technology, culture process and measurement. It is found after the study that, software develops belief in the usefulness of knowledge sharing but the software developers had a limited utilization of the KM systems. Various technology enablers of KM used at the companies were personal networks, informal network, groupware etc. The authors suggest that, there is a need to formalize the knowledge sharing system at these organizations. It is also discovered from the study that the tools and techniques needed for KM system were not only inadequate but also a uniform KM model was not established in both the companies. It is found that leadership is considered as the top most enabler of KM practices and personal network technology also plays a vital role in knowledge sharing.

Chao and Shing (2008) in their paper found the effect of knowledge accumulation capability on organizational innovation. They also made an attempt to find that interaction among external environment, organizational cultural and knowledge accumulation ability will influence organizational innovation. Their research results indicate that the capability to obtain knowledge can positively and significantly affect administrative and technical innovation. External environment and organizational culture have significant interaction effect with knowledge accumulation capability on organizational innovation.

Yang et.al (2009) in their study evaluated the selected KM models and identified that the present models of KM fail to recognize the knowledge such as values and visions, they view KM in a linear or cyclic process and fail to identify the multidimensional nature of knowledge and proposed a inter taken Hall. The research findings highlight the implication of holistic knowledge for human resource development. The study contains description of three knowledge facets – implicit, explicit and emancipator
knowledge. Knowledge of an individual is viewed in three new forms, Effectual knowledge, and Conceptual Knowledge and Perceptual knowledge. These three forms of knowledge act as the base of holistic theory of organizational knowledge and continue to describe the Holistic KM model.

Dragoss and Alexandrus (2009) in their study have presented detailed descriptions about few widely used KM models and explained their usefulness, advantages and disadvantages. The article gives an introduction to KM models in its beginning followed by a detailed insight about various models such as Von Krogh and Roose model, Nonaka – Takeuch model, “Choo” model, “Wiig” model besides model and Boisot the Adaptive Bennet model. Detailed description of each models is presented. The article concludes by summarizing the features of each model.

Liana et.al (2009) in their paper state the role of Web 2.0 tools for managing knowledge at individual and organizational levels” and also the use of Web 2.0 tools for personal knowledge management(PKM). Including formal and informal communication, collaboration and social networking tools. It was found that this new PKM model facilitates interaction, collaboration and knowledge exchange on the web and in organizations. The paper includes the concrete examples of practical implementation of Web 2.0s and create awareness and understanding of Web 2.0 and its role in PKM.

Albers (2009) has emphasized on the importance of knowledge capturing, acquiring and sharing in the organization and for this organization needs to implement KM system. The paper presents step by step a simple approach for implementation of KM in an organization by considering key elements related to KM such as KM team, KM strategy, knowledge assessment and audit, information technology assessment, and project plan and measurement systems. The author also mentions some best practices, common pitfalls, lessons learned and success factors throughout the implementation process.

Parag (2009) has given a detailed insight on KM practices implemented by Indian organizations and supplied a new KM implementation framework wherein human factor is an unfortunate taken while not considered by other frameworks. This new
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proposed framework puts emphasis on providing training to the employees, giving them incentives and rewards for sharing their tacit knowledge. Major objective of the paper is to learn current KM practices.

Elin (2010) has considered a qualitative case study carried out a Microsoft Norway. The main aim of the present study was to understand role and benefits of KM in Information Management and learning in an organization in the knowledge based society. The findings of the thesis shows that, KM provides large amount of information to the employees, this information can be a source of stress for some employees. Employees must adopt some strategies to cope with this information. The study also explores the relationship of information management and learning. There is also a notion about corporate culture in relation to KM strategies. Finally, the thesis concludes the findings that KM is an integrated part of the corporate culture as well as normal work practices.

Gaye (2010) conducted a formal study of 342 managers knowledgeable about their company’s usage of knowledge and collaboration technologies. The research is conducted by Ziff Davis Enterprise Research by using online questionnaire. Questions related to the knowledge management, collaboration tools and document management techniques sued by the organization were asked. The results generated revealed trends about the relationship among KM, collaboration tools and documents management systems. The trends revealed that the organizations which used KM and collaboration tools in combination achieved their goals in short span of time. Thus the research concluded that the fusion of KM with collaboration tools creates a knowledge sharing system offering tangible benefits and improving organization’s overall performance.

Singh and Soltani (2010) conducted a study related to management in Indian companies in their article to identify and KM awareness level and implementation strategies of KM practices in Indian IT companies. A sample of 10 companies has been selected from North region of India and data was also collected using secondary source. During the study various phases of KM such as knowledge generation, knowledge codification, knowledge transfer and knowledge application were taken into account. Authors suggested the ways to improve knowledge sharing culture of
the organization and the HR practices must be aligned with KM so as to gain maximum benefits.

Gerardo and Silva (2010) discussed the implementation KM process in the software development process. The authors argued that during the software development process each person gain knowledge and experience; these knowledge and experience can be reused in other projects to improve the efficiency of the software development process. The authors suggested a model for identifying and capturing this knowledge and experience of an individual and making it available for reuse and accessed and also storing the lessons learned from the projects which may help in improved efficiency of future projects. Knowledge and experience gained during the software development process are normally not given much importance, by suggesting this model for software engineering. The authors claim that knowledge and experience identification and capturing becomes integral part of the software development process and hence brings improvement in the development process of the software.

Prusak (2010) in his paper examined that Knowledge management in business sector is the fast track route to leveraging the intellectual capital in the organisation. He covered the key areas of KM identifying knowledge in an organization and knowledge based incentive plans to promote and facilitate knowledge sharing and innovation in Shell Oil, British Aerospace, Dow Chemical and World Bank.

Claudia and Marc (2010) investigated in their research two different approaches. First' presenting case studies on the United Nations Development Programme (UNDP), the UN Economic Commission. Second, evaluation of the progress of the respective approaches by using common test criteria for KM implementation established in the literature. They found that all the institutions covered in this contribution have passed the stage of information management and have put active systems in KM place. However, a structured and systematic management of implicit and external knowledge can be found to lesser extent. Only a few intentional organizations like UNDP or the World Bank have pushed their KM systems to integrate internal and external, explicit and implicit knowledge. The results show clearly that most international organizations still show much room for improvement regarding their information and KM system.
Ibrahim and Rowley (2010) in their paper have made an attempt to understand the knowledge management policies and strategies and knowledge sharing in the public sector especially in four UK police forces. They conducted semi-structured interviews with ten police officers in three police forces, and in the national policing improvement agency. Questions focused on knowledge management strategy, strategies for encouraging staff to share and exchange knowledge, and any challenges in these areas.

Ganesan and Pandyan (2010) in their article argued that knowledge management governance plays a vital role in KM strategy and its planning and implementation. Their research seeks to show how a federated and self governance framework enabled effective KM strategy, planning and implementation in a captive offshoring unit in India. Their research also showed that a KM program, driven by a federated governance for strategizing and a self governance for implementation, results in successful adoption, practice and sustenance of organization – wide KM. In addition self governance has also helped the organization to achieve an efficient single person driven KM function to manage the entire KM program.

Arangana and Laskhmi’s (2010) studied KM activities undertaken by the IT companies, its need and the advantages gained. The article includes introductions to the concepts of KM, KM component, functions of KM, tools used for knowledge management, need for KM in IT organization, challenges faced by IT organizations in implementing KM, study of various IT companies implementing KM. The study argued that IT organized should maintain their intellectual capital that is the knowledge of their employees which is very important is implementing KM.

Sengupta et.al (2010) argued that in the FMCG sector, effective KM takes on a new dimension. An interactive knowledge management solution plays a critical role in the building of strong customer relationship. Social and Collaborative KM (SCKM) enables organizational intelligence namely in the form of KM using Web 2.0 Solutions and Microsoft SharePoint. The paper suggests that, FMCG companies implement the concept of SCKM to get an insight into what their consumers feel about their competitor’s products. This gives the FMCG companies an insight into what new needs and wants consumers now expect to be fulfilled.
Chaudhuri (2011) conducted a study of Indian IT companies situated in Kolkata and Hyderabad in his research paper to understand the basic reason for implementing KM practice. The study also focused on the corporate culture maintained and its importance. A sample of 20 companies out of 194 companies in Kolkata and Hyderabad region for the survey was taken. The survey was conducted by using a questionnaire. With the help of questionnaire the following data such as Reason for launching KM, Knowledge Acquisitions and Sharing sources, Managing ideas and Innovations were gathered for all the 20 IT companies. The relationship between organization culture and KM was also presented. The concluding remark shows that according to the data collected it is found that the majority companies such as TCS, IBM, Infosys, Oracle, Satyam etc. have a well established KM system and the KM initiatives have proved beneficial for these companies. The success of KM is also based on implicit culture of the organization, the philosophy and belief of trust, giving people the continuous learning.

Nicholas and Cerdan (2011) stated the relationship in their study of KM and innovation and performance of the organization. The paper aims at showing the effects of KM strategies on organization’s innovation and performance ability. The authors discussed that organizations fail to realize the real benefits of KM practices. Their study IS based on survey of 310 Spanish organizations. The findings of the study show that the KM strategies including codification and personalization have direct or indirect impact on organizations innovation and performance capabilities. The KM practices increase innovation capacity and thereby increases the overall performance indirectly. The KM practices also directly affect the organizations performance in different dimensions.

Fuat and Ayse (2011) in their study explained how the organizational researchers use the concept of tacit knowledge in an organization they concluded that tacit knowledge as a crucial concept may help linking individuals’ understanding, skills, organizational routines and capabilities.

Toit and Steyn (2011) in their article explored the role of KM strategy to achieve a South African technology-oriented enterprise’s business strategy. The link between KM and the business strategy was viewed as the crux for successful KM in any
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enterprise. The purpose of the empirical survey was to determine the relationship between the KM function and the business strategy at the enterprise. A questionnaire survey was conducted and the respondents were of the opinion that KM plays an important role in the enterprise's strategies, policies and practices. When implementing a KM strategy, the prioritisation of KM activities as well as their integration with other business processes, should be an important management focus area.

Fisheer (2011) in his article shaded light on the crucial initiation stage of service innovation in professional service firms (PSFs) by individual professionals and the implications for KM. He conducted a case study of Price Water House Coopers AG (PWC) which is one of the big four accounting and consulting firms. He found that entrepreneurial opportunity recognition is a suitable framework to explain the initiation of service innovation PSFs. Prior knowledge, alertness, and search are identified as bases for the recognition of opportunities and hence the initiation of service innovation in PSFs. The knowledge management should raise the alertness of individual professionals to be engaged in opportunity recognition and also provide a fruitful environment to enable active search for opportunities on the basis of relevant prior knowledge at hand.

Carneli and Vasile (2011) in their article aim to study some aspects regarding a knowledge management system and a user model which will be implemented in training process of the students. They also presented some features and the personalization in a KM system. The purpose is to develop ontology for the user modelling in this context and later to use this in a multi agent system for the knowledge management.

Jane et al (2011) examined in their study the decisions making capability in daily business practice which may help avoiding the consequences of ill-informed decisions. They suggested a framework to guide organizational decision about how KM can contribute to better decision making capability.

Mishra and Bhaskar (2011), in their study explained that how KM practices are carried out in learning organizations and also tried to find out how learning
organizations carry out KM practices and further they identified whether there are any specific KM attributes that differentiate high learning organizations from low learning organizations. Their findings shed some light on different themes of KM existed in low and high learning organizations and how they differ in their KM attributes in terms of knowledge creation, knowledge sharing, knowledge upgradation, and knowledge retention.

Ayse and Gunesel (2011) crucially reviewed the integration of two main concepts KM and Organization Learning Capability in a holistic approach so that managers can utilize for organizational innovativeness. The authors constructed a KM framework reflecting the steps of KM life cycle which is facilitated by Organizational Learning Capability with a view point to increase organizational innovativeness. The study presents practical implications for the managers and executives. Further, authors have suggested that the managers must realize the value of knowledge based entitled in order to accomplish organizational innovativeness to establish and maintain a KM system in order to ensure the effective processing of the incoming knowledge. The importance of organizational learning capability should be realized because innovation depends on learning how to use incoming knowledge. Lastly, it is suggested that KM and Organizational Learning Capability (OLC) should be considered as complementary to each other and also efforts should be taken to integrate OLC into the KM system.

Donate and Canales (2012) in their research paper suggested that a firm could perform better by establishing a coherent and integrated knowledge strategies depending on the objectives pursued and the understanding of KM by managers, the use of KM tools, and organizational aspects to support knowledge strategies implementation. They emphasized that the way an organization approaches, KM has major implications on the development of their strategy and the outcomes of KMS application. Four types of KMS are thus described based on the empirical analysis i.e., proactive, moderate, passive and inconsistent, each of them having different effects on business performance and innovation limited to high rate innovation industries. The conception of KMS presented a powerful approach that can lead an organization to achieve further innovation and higher levels of business performance,
potential to produce optimal results in terms of technological innovation and business performance.

Isabel et al. (2012) in their paper aimed to identify and discuss the barriers and facilitators to four processes implied in KM (i.e. acquisition, creation, sharing and transfer). Technology socio-organizational and individual barriers and facilitators are also considered. They argued that the strategies to fight negative features of organizational life for improving KM process are potentially different from those seeking to promote positive qualities with the same aim. A fruitful perspective for studying and improving KM processes may be to look for the constructive decision emerging from positive and negative features of organizational life.

Ricardo et al. (2012) in their paper examined the mediating role of knowledge acquisition between social capital and innovation for firms located in science and technology parks (STPs). Knowledge acquisition fully mediates the relationship between social capital and firm innovation. Moreover, social capital at the firm level has a significant influence on both knowledge acquisition and innovation.

Lovrekovic (2013) has provided in his study an explanation of general business operations as it was used to be during the industrial revolution. Moreover, the advantages and disadvantages at the point when the world entered the industrial revolution have been discussed, as well as how these advantages and disadvantages are being viewed today. In his paper he argued that the industrial way of conducting business operations is not feasible nowadays and has further discussed about the changes that have occurred during the transition to the knowledge economy. He concluded with the observation that Knowledge management is the only concept that promotes progress in society while providing organizations with the key to survival and development in today’s highly competitive marketplace.

Thakur and Sinha (2013) have defined Knowledge management in their study as a systematic process for creating, acquiring, synthesizing, learning, sharing and using knowledge and experience to achieve organizational goals. They emphasized that a proper flow of information is essential for the growth of every organization. Knowledge management is a necessity that can make all the difference between
survival and an early demise. Today majority of business organizations have knowledge management program in one or another form. Indian business organizations are also feeling need of new business paradigms. Many organizations in India have started knowledge management initiatives.

Oliva (2014) pointed out in his study that Knowledge management is characterized as an important management tool to add value to products and services of companies and thus allow them to become more competitive and unique. In his paper, he discussed about the barriers and practices associated with the knowledge management of large Brazilian companies. As a conceptual framework, the author adopted the main theories on Knowledge Management to extract the barriers and practices included in the literature aiming to confirm them through quantitative research with managers from large Brazilian companies. Based on the responses obtained, the author conducted several multivariate analyses including descriptive analysis, factor analysis, cluster analysis and multinomial logistic regression. In addition to presenting the main barriers and key practices associated with knowledge management, his result has also presented a model for the evaluation of the level of maturity in knowledge management based on the practices adopted by large Brazilian companies.

Wu and Chen (2014) have identified in their study that the impact of knowledge assets on business process capabilities is mainly through the mediating role of knowledge process capabilities rather than through the direct path between knowledge assets and business process capabilities. They further indicated that the four evaluative indicators for organizational performance have revealed different levels of realized performance in terms of both financial and non-financial performance. Alternatively, knowledge process capabilities as an important mediator may not be able to directly create final performance and should be in a process of first developing business process capabilities for physically performing business activities.

1.5 Research Gap

The literature review presented here has given a theoretical framework for this study. It also contributes new knowledge by providing a better, clearer and more complete understanding of the topic. Each of these research strategies is a researchable topic
because the same or similar variables can be explored in the related literature. This review completes the critical analysis of the literature on the relationship among knowledge management strategy, enablers, process capability, and performance. Knowledge management is a new concept and it is still evolving. It is still at an infancy stage in our country and knowledge management cannot be ignored and sooner or later a firm has to become aware of this concept and its implementation to sustain competitive advantage. In India penetration of knowledge management is limited to few organizations that too in some sectors only.

The earlier studies were oriented towards knowledge management practices in information technology, manufacturing and allied industries. Hardly any research has concentrated on knowledge management in public sector companies especially in white collar employees in India. Further no research has been envisaged about knowledge management in regard to employee perspective throughout the country. Hence this study is first of its kind. The knowledge climate in Bhilai Steel Plant has not been debated in previous research works. The same is focused in this study. Though knowledge sharing has been widely addressed in previous studies, no work has focused it in a public sector undertaking. Therefore this study focuses on the same.

1.6 Significance of the Study

The present study is conducted on "Knowledge management practice in public sector undertakings with special reference to Bhilai Steel Plant. It takes into consideration the impact of Knowledge Management practice from employee's point of view on their efficiency, organizational commitment and job satisfaction and from organizational point of view on the operational efficiency, financial performance and innovation skills of the organization. The study is highly significant from both employee and organizational point of view of public sector undertaking especially Bhilai. Knowledge management is a recent development in public sector undertaking with the changing economic scenario the public sector undertakings are now putting their consideration on managing knowledge because knowledge if not effectively handled can be a serious threat. The conclusion and suggestions of the study will be of great significance to the employers of bhilai in particular and public sector
undertakings in general to make their Knowledge Management practice more effective to enhance their employee's efficiency and satisfaction. A satisfied employee is committed to their goals and objectives towards organization which will ultimately enhance the operational efficiency of the organization, the organization will be more innovative in its practices which will result to improve the financial performance of the organization which is the end result for any organization. Present study highlights the significance of Knowledge Management as the most differentiating factor in today's competitive world to make an organization better than other. It will of great help to the policy makers of knowledge management practice to modify their practices to best suit the employees and the organization both.

1.7 Objectives of the Study

1. To analyze the perception of employees on the Knowledge Management practices across gender, age, Experience and designation.
2. To assess the impact of Knowledge Management practices on Operational Efficiency of the Bhilai Steel Plant.
4. To assess the impact of knowledge Management practices on the Innovation Efficiency of the Bhilai Steel Plant.
5. To assess the impact of knowledge Management practices on the Employee Efficiency of the White Collar Employees.
6. To assess the impact of Knowledge Management Practices on the Communication Skill of White Collar Employees.
7. To assess the impact of Knowledge Management Practices on the Job Satisfaction of white collar employees in the Bhilai steel Plant.

1.8 Hypotheses of the Study

The hypotheses formulated for the study have been summed on the basis of the variables that have observed for undertaking the present work. The researcher has selected seven variables out of which one is independent variable and the other six are dependent variables. Out of which three variables are taken from organizational point
of view and the other three are from employee's point of view. The hypotheses of the study are as follows:

1. \( H_0_1 \): There is no significant difference in the perception of White Collar Employees on Knowledge Management Practices across age.

2. \( H_0_2 \): There is no significant difference in the perception of White Collar Employees on Knowledge Management Practices across gender.

3. \( H_0_3 \): There is no significant difference in the perception of White Collar Employees in across experience.

4. \( H_0_4 \): There is no significant difference in the perception of White Collar Employees in across designation.

5. \( H_0_5 \): There is no significant impact of Knowledge Management practices on Operational Efficiency of the Bhilai Steel Plant.

6. \( H_0_6 \): There is no significant impact of Knowledge Management Practices on the Financial Performance of the Bhilai Steel Plant.

7. \( H_0_7 \): There is no significant impact of knowledge Management practices on the Innovation Efficiency of the Bhilai Steel Plant.

8. \( H_0_8 \): There is no significant impact of knowledge Management practices on the Employee Efficiency of the White Collar Employees.

9. \( H_0_9 \): There is no significant impact of Knowledge Management Practices on the Communication Skill of White Collar Employees.

10. \( H_0_{10} \): There is no significant impact of Knowledge Management Practices on the job satisfaction of white collar employees in the Bhilai steel Plant.

1.9 Research Methodology

The present study is based on both primary and secondary data. It has been is conducted in two phases. The first phase deal with developing an appropriate research framework with facts and theories accessed from literature survey on Knowledge Management, the library and archives of Bhilai Steel Plant, various journals and books and through internet access, keeping in view the differences in approach for a knowledge intensive firm and a heavy manufacturing industry like Bhilai Steel Plant. The behaviour pattern of the knowledge employees under the existing complexities in BSP, the diversity of work requirements depending upon the department or sub-unit
for whom these people are working have also been taken into consideration. The aim is to develop the framework, which can be used to meet the research objectives.

In the second phase of the study, people from various departments of Bhilai Steel Plant have been approached with framed questionnaire. The methodology adopted for carrying out the present study has been largely based on the primary data collected through well designed questionnaire served on a selected group of respondents to elicit the required information.

1.9.1 Questionnaire Design:

The questionnaire was prepared on Likert’s five point scale and the respondents have been asked to tick the relevant satisfaction/dissatisfaction agreement. It consists to measure the personal information of the respondents which include their age, gender, designations, and work experience in order to get the overall background of the employees for reaching the conclusion. It also contains close ended questions which are concerned to elicit information about the perception of the employees that have direct emphasis on the hypotheses of the study. The questionnaire contains total of 31 statements which measure the seven important variables taken under study. While taking the advice of the experts of the study the questionnaire has been divided into three sections: A -It consists of 7 statements which measure Knowledge Management Practice which is the independent variable of the study and the other is Section-B from organization point of view it consist of 12 statements grouped into three variables that are the dependent variables of the study i.e. operational Efficiency, Financial Performance and Innovation and the last one is Section-C from employees point of view which consist of 12 statements grouped into three variables that are the dependent variables of the study i.e. Employee Efficiency, Organizational commitment and Job Satisfaction. Each variable consist of statements relevant to get the appropriate response from the white collar employees of Bhilai Steel Plant.

1.9.2 Determination of Data source:

The data source for the responses to the questions has been the Bhilai Steel Plant personnel themselves. For secondary the data, the archives of BSP, various libraries,
books, journals, internet, and other such avenues were approached where the data and information was available.

1.9.2.1 Primary data:

Survey has been conducted on the basis of samples of white collar employees to collect Data using the self administered questionnaire to understand how the white collar employees at Bhilai Steel Plant collective by perceive the KM practices and its services to the organization, the value of KM and the extent of time needed to devote towards KM and how KM benefits employees and organization both. The framing of the questionnaire has been done suitably to cover all aspects of KM under study.

1.9.2.2 Secondary data:

Secondary data has also been used for referring the conceptual aspect and literature review collected from various sources like published annual reports of Bhilai Steel Plant, books, journals, magazines, periodicals, research reports, previous work done related to the subject and the Websites. Besides the secondary data such as Bhilai Steel Plant performance figures, techno-economic parameters, man-power position and variations over a period, profit figures, installation and commissioning dates of important shops, achievement highlights and activities in KM area have been collected from the library and archives of BSP and various reports, documents and journals published by the company, past and present, which subsequently were used in arriving at certain conclusions.

1.9.3 Sampling Plan:

Universe:

In the present study all the white collar employees in Bhilai Steel Plant are considered as universe of the study. BSP being as an integrated steel plant it has all the facilitating major units for its core production like Coke Ovens, Sintering Plants, Blast Furnaces, Steel Melting shops, Continuous Casting Units, Various Rolling Mills like Rail and Structural Mill, Blooming and Billet Mill, Merchant Mill, Wire Rod Mill and Plate Mill. These units have support facilities like Maintenance Units, Research and
Quality Control Laboratory, Auxiliary Units like Power Plants, Compressed air and Water Supply Departments, Stores and Purchase Department, Safety and Industrial Engineering Department, Design and Drawing Department, Transport and Diesel Department, Finance and Accounting, Personnel and Administration, Training and Development Department, Projects Department, Materials Management Department and so on.

As the collection of entire data from all the white collar employees in the universe is not possible so a sample of employees from the Bhilai Steel plant has been selected for data collection for the study.

1.9.4 Sample:

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole. Samples are collected which are defined as the set of respondents (people) selected from the large population and statistics are calculated to make inferences about the whole population for the purpose of the survey.

For the study samples have been taken since it is not possible to cover whole industry on account of impediments of time, finance and other resources required for the purpose. Hence samples of white collar employees from top and middle level have been chosen for the study so that it can do justice with research work done.

1.9.4.1 Sample Size:

The sample size has been selected to cover most of the departments and people, giving a fairly closer representation of the entire universe. Based on the pilot observations, the sample constituted people from executive category and from the senior most non-executive cadre. For the analysis part, the sample has been sub divided into groups. Persons from Senior Manager to General Manager were taken as senior executive cadres (Top Level), persons from Junior Manager to Manager Cadres were taken as executive category (Middle Level) the total strength of these categories works out to be about 3722 and hence a sample size of about 500 and above persons has been considered a good representation. Executive Directors and Managing Director have not been taken as they are the highest authorities and are responsible for
framing of policies, rules and ensure implementation through others who have been covered under this study. The final valid responses in each category worked out to be as follows: Top Level is 148 and Middle Level is 377 and the total sample is 525.

Sampling Procedure: The sampling is based on Stratified Random Sampling.

The sample chosen for the analysis of the data is shown in the table below. The table clearly depicts the total number of questionnaires distributed, total number of questionnaire completed, average response rate in percentage and method of distribution of questionnaires. The sample for the present study has been collected from the universe. A total of 600 questionnaires were distributed out of which 525 were received, this yields a total of 87.5% response rate. The overall response rate was encouraging. From the table given below we see that from the Top Level response rate is 80% and Middle level response rate is 90.8% which shows an excellent response.

1.9.5 Statistical Tools Applied:

Cronbach Alpha Test of Reliability is used to test the reliability of data collected. Further Independent Sample t-test, One-Way ANOVA and Simple Linear Regression Test has been applied to test the hypotheses framed under study and the findings and observations have been analyzed and evaluated to derive pragmatic recommendations in the form of suitable suggestions.

1.9.6 Limitations of the Study

Limitations are always there in any study. This research also has some limitations which have been mentioned as follows:

- The study is purely based on primary data obtained from the questionnaire, annual financial reports of the company, websites and various published sources. Therefore, findings of the study are subject to accuracy of such data collected from these sources.
Background of the Study

- Performance analysis does not depict those facts which cannot be expressed in terms of money, for example, efficiency of employees, reputation and prestige of the management.
- The data taken for analysis covers only a period of 5 years i.e., from 2008-09 to 2012-13. Hence, findings are limited to this period only.

Moreover the researcher is an external evaluator of Bhilai Steel Plant hence, the inside view of Bhilai Steel Plant is beyond the purview of Researcher.

1.10 Plan of the Study

The first chapter deals with the introduction of the study. It explains how valuable the knowledge management is to an organization. It also briefly defines the relationship of knowledge management to white collar employees. Further the chapter covers the statement of the problem and reviews briefly the literature available on the present study. From the review of literature research gap has been found on the basis of which objectives have been set and hypotheses have been framed to achieve these objectives. The Scope, significance of the study and limitations faced during the study has also been discussed. The research methodology adopted for the present study has also been explained to provide the organization of the study.

The second chapter discusses the concept of Knowledge management in relation to white collar employees in Bhilai Steel Plant. It further covers the components of knowledge management and the knowledge management process of white collar employees. It also explains the significance of knowledge management in relation to white collar employees.

Third chapter is devoted to the profile of Bhilai Steel Plant clearly stating its structure, number of employees. It also provides a clear picture of the Bhilai Steel Plant in brief.

Fourth Chapter provides in detail the questionnaire responses. It explores the necessary personal profile information about the respondents taken from the white collar employees of the Bhilai Steel Plant which include their gender, age, designation and working experience in the Bhilai Steel Plant. It further explains the reliability of the data and the hypotheses tested by the application of the various statistical tools.
Background of the Study

The results of the hypotheses test have been interpreted and reasons have been provided for accepting and rejecting the hypotheses set for the study.

Fifth and last chapter discusses the major findings of the study on the basis of the results of the data analyzed. On the basis of these findings, specific suggestions to the employer of the Bhilai Steel Plant and general suggestions for all the Public Sector Undertakings have been given. These suggestions will be helpful to the policy makers to reframe their knowledge management practices to benefit the employees and organization both. A conclusion has been drawn on the basis of the findings. The directions for the future research have also been given.

After having an introductory idea about the present study, in the next chapter, the researcher has made an in-depth study of the conceptual frame work of the subject matter i.e. knowledge management.
1.11 References


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