CHAPTER VI
SUGGESTIONS, SUMMARY
AND
CONCLUSION
6.1 INTRODUCTION

The definitions, conceptual framework, and components of Knowledge Management have been reviewed in detail in the initial chapters. The previous two chapters have covered the data analysis of the study, findings and the interpretations of the opinions of the KM department people, and the opinions of the other employees of the organization. The study has been unique since it has studied the gaps in KM implementation by comparing the opinions of the KM department people who plan and implement the KM initiatives and the opinions of the other employees of the organizations who are the actual users of these initiatives. The opinions of the respondents have been analysed and several issues have emerged. The results show varying levels of significance. Organizations which are able to reduce these gaps will be able to reap the benefits of Knowledge Management, failing which the KM programme in an organization becomes a futile exercise.

This chapter will provide suggestions based on the results of the study. These suggestions when implemented will help organizations to understand and implement KM programmes better and harvest better results for the individuals and the organization. Based on the study, a Knowledge Management model has been drawn up which shows the various components that make up the Knowledge Management system in the organization.

6.2 SUGGESTIONS

6.2.1 CONDUCT A KNOWLEDGE AUDIT ACROSS THE ORGANIZATION

This is the first step for any organization which wants to practice Knowledge Management. A good Knowledge Audit will help identify the level of knowledge assets within the organization, the type of knowledge available, type of knowledge missing or required in the organization, concentration and spread of different types of knowledge, core knowledge points, knowledge experts in various fields, extent of knowledge sharing, and the level of motivation for knowledge sharing. This will give the senior management
a background on the knowledge position and concentration of knowledge in the organization, and a basis for planning a good Knowledge Management strategy.

Several good Knowledge Management consultants are available who offer professional services and conduct Knowledge Audits. Several online surveys are also available for conducting Knowledge Audits.

6.2.2. STRONG TOP MANAGEMENT SUPPORT

No KM programme will be successful without the continuous motivation, encouragement, and support from the top management. The top management should support the KM initiatives put forth by the KM department and motivate employees to participate by continuously involving them in these activities as well as recognizing and rewarding the employee’s efforts. The results show a very highly significant difference in the opinions of the KM department people and the other employees. The difference is mainly due to majority of the KM department people's opinion being ‘strongly agree’ and the other employees opinion being ‘agree’. This difference can be bridged if the top management in all organizations could be more involved in the KM process.

- DEVELOP A GOOD KNOWLEDGE MANAGEMENT STRATEGY TO CREATE A KNOWLEDGE ECOSYSTEM

A good Knowledge Management strategy is one where it is aligned with the Business strategy of the organization. This is a role essentially for the top management and the Chief Knowledge Officer. Once a Knowledge Audit is completed, the CKO will have a clear picture of the organization’s knowledge assets, the concentration and spread of knowledge in the organization, and the gaps in knowledge sharing. The CKO then needs to plan a KM strategy and put forth KM initiatives which will align and match the organization’s business needs. The vision and mission of the KM system should be similar to the vision and mission of the organization. This will help in building a proper knowledge sharing culture.

- CUSTOMIZE KNOWLEDGE MANAGEMENT TO THE NEEDS OF THE ORGANIZATION

There is no ‘one size fits all’ in Knowledge Management. Every organization is different in its composition of people, jobs performed and their needs. The KM strategy should be
planned to fit the specific needs of the organization. The base model can be chosen and modified as per the needs of the organization.

- **INTRODUCE KM AT ALL LEVELS IN THE ORGANIZATION AND INTEGRATE THE KM SYSTEM WITH WORK**

The top management should explore every avenue as an opportunity for knowledge sharing. The CKO will have to draw up a good KM strategy in consultation with the various departments and integrate this with work so as to make it easy for the employees to contribute and share knowledge.

Introducing KM should be done at all levels to get the maximum benefit. There can be plenty of several Communities of practice across the organization, irrespective of the work people are doing. Many Communities of practice are formed just out of interest. Krish Ashok, Head of Innovations, during one of his presentations at the k-community said that certain queries in India on Java was continuously being answered by an employee in UK, who was not on a Java project. The employee was passionate about Java and was an expert. This helped them to identify Java experts in particular areas across the globe.

The KM strategy should include a framework of the infrastructure, technology, KM activities for the people at different levels in the organization, starting from the top management. The timeframe for initiating each of these activities should be clearly worked out. A regular evaluation process with metrics should be integrated with the KM activity software itself.

- **COMBINE KM ACTIVITIES WITH ACTIVITIES AND FUNCTIONS OF OTHER DEPARTMENTS**

KM should not be treated only as an exclusive, independent activity. Sometimes, it would be good to club with other department activities. The required results can be achieved by fitting in the requirements of KM into the requirements of the department and capturing all that is required for the department. The knowledge so captured can be scrutinized by the experts of these departments and used in the knowledge transfer whenever needed.
• **TOP MANAGEMENT SHOULD BE MOTIVATING ALL THE TIME.**

The top management should be fully involved with the KM initiatives and activities of the KM department. They should recognize and celebrate knowledge with the employees which is a major motivation for employees to do better.

Regular interactions with the employees will clear doubts from their minds regarding the objectives and need for Knowledge Management in the organization.

The top management should try to personally recognise the KM champions. The active involvement of the leadership and the top management boosts the morale of the organization. In Mindtree, the CEO and the CKO are very much involved in the KM programme. Whenever there is a KM champion to be applauded, the CEO and CKO, personally walk upto the employee and declare him a KM champion. The employees look forward to such encouragement from the top management when their efforts are lauded. Similarly, in Infosys, the KM champions get to interact with the Chairman and CEO and get their slot of time on the in-house TV. These events build the confidence in the employees to participate better and to get noticed which helps the employees in building a better career profile.

• **TOP MANAGEMENT SHOULD INCREASE THEIR PRESENCE ON THE SOCIAL MEDIA**

CEOs and top management should take some time to provide comments and active feedback to blogs of employees and make it a multi-dimensional flow of knowledge. This will encourage the employees to be more active and share their ideas, thoughts, and works. The involvement of the top management is a morale booster as they feel the top management knows the realities of the ground level.

• **USE KM FOR ORGANIZATIONAL RESTRUCTURING**

The KM audits, regular KM evaluations, Social network analysis, and the various KM metrics will clearly show the distribution of knowledge across the organization. Assigning of teams based on knowledge requirements, expertise, and project needs will be easier since the knowledge levels of each individual employee will be known. The organization will be able to provide the best team for every project.
• **KM BUDGETING**

The greatest support and motivation that the top management can provide, echo most KM personnel is a good KM BUDGET. Budgets will have to be provided for the technologies, both hardware and software, for the success of the initiatives, events, rewards, and brand building which will all lead to an indirect increase in the revenues of the organization.

6.2.3 OPEN COMMUNICATIONS

Communications is the basis for knowledge sharing. Whatever is the mode of communications, it is essential for organizations to create several avenues for communications both formal and informal. Whether it involves physical, face to face communications, or through the virtual social media, more and more communications should be encouraged. Communications leads to the capturing and sharing of knowledge at all levels.

- Communications with experts,
- Communication with peers,
- Communication through mentoring,
- Using of buddy system training,
- Informal discussions,
- Meaningful Dialogues
- Water cooler chats,
- Tea time breaks, and
- Social media and social communication networks.

6.2.3.1 CONVERSATIONS

Human conversations are still the best form of communications. These can be Planned and Unplanned. A casual topic over a cup of tea is as good as a planned discussion on a subject for knowledge sharing. Exchange of knowledge, thoughts, views, opinions and ideas happen which is essential for knowledge sharing. Organizations should harness Conversations as a part of Corporate culture.
6.2.4 EDUCATING THE KNOWLEDGE WORKERS

People, Knowledge workers, and Employees is used interchangeably in KM. For KM to be successful, the employees should feel comfortable and confident that their knowledge is not taken away from them and they lose their major strength. The active participation of all the knowledge workers is primary for the success of KM.

6.2.4.1 EDUCATE THE KNOWLEDGE WORKERS ON THE VISION, MISSION, CORE VALUES AND THE CORPORATE CULTURE OF THE ORGANIZATION

A good way to begin promoting KM is by educating the employees on the strategic intent of the organization. Every employee from the CEO to the labourer should be educated on the vision, mission, core values, and objectives of the organization. The employees should have a sense of the belonging and pride for the organization they work for.

6.2.4.2 EDIFY THE CHARACTERISTICS OF BUILDING A KNOWLEDGE ORGANIZATION:

For any organization to become a knowledge organization, understanding the characteristics of a knowledge organization is necessary. The important characteristics of a Knowledge organization as studied in the study are Innovation, Knowledge sharing culture, Continuous Learning, Team work and Collective thinking, Organization Goals higher than self, Empowered knowledge workers, Employee Participation, Self-organized knowledge communities, Strong top management support, Open communications, Knowledge Networking, Integrating knowledge sharing into work, and Strong trust between employer and employees. The results of the opinions between the KM department people and the other employees of the organizations showed a very highly significant difference. While KM department strongly agree on most of the variables, the other employees only agree and therefore the results showed very highly significant differences.

This difference can be reduced by sending more communications highlighting these characteristics in the corporate website, intranets, emails, and holding regular activities. It is important for the organization when its employees consider their organization in very high esteem. It creates pride in the employees to work, participate, and contribute more for the organization they are working for. Employees are the heart, soul, and nerves of the organization. Knowledge Management programmes need the wholehearted participation.
of the employees to make it successful, and in the process, the organization attains success. This will happen only when the employees consider themselves a part of the organization and feel strongly for the organization.

6.2.4.3 EVANGELIZATION OF THE BENEFITS OF KNOWLEDGE MANAGEMENT ACROSS THE ORGANIZATION

There is no significant difference in the opinions of the KM department people and the employees regarding the benefits of KM. The noticeable factor is that no one disagreed with the benefits. On such a positive note, the management should promote KM across the organization. Mindtree, Infosys, TCS, and Wipro do a lot of brand building for KM within the organization. Publishing of benefits and success stories is done through posters across the office, in the intranets and their newsletters. The wholehearted involvement of the top management is seen recognizing and patronizing those who contribute and take maximum benefits from the KM system. The KM practicing organizations have benefitted directly or indirectly in the following ways-

- Faster and better decision making
- Enhanced productivity and service quality
- Sharing best practices
- Easy to enter different market types
- Innovation
- Increased market share
- Increase in the learning/adaptation capability of employees and continuous transformation of individual learning to organizational learning
- Better staff attraction and retention
- Enhanced collaboration within the organization
- Reduction in the communication gap in the organization
- Increased delegation of authority and accountability to individuals
- Better return on investment
- Improved methods and process of doing work
- Reduction in the time required by knowledge workers to learn work process
- Efficiency in resolving customer queries and enhancing of customers' satisfaction
6.2.4.3 ENLIGHTEN THE EMPLOYEES ON THE BENEFITS OF KNOWLEDGE MANAGEMENT FOR INDIVIDUALS

There are always a few employees in the organization who always think about the personal benefits of doing anything. These employees need to be reassured of the personal benefits of KM for individuals. Personal & Technical understanding, Critical Experiences, High levels of skills, General style of working, and Individual's personality are some of the important variables that affect an individual's career and work. Majority of the people in the KM department opined that they agreed that KM had an effect on the individuals in these aspects, while majority of the employees' opinion was neither agree nor disagree. This shows that there is a very highly significant difference in their opinions. To bridge this difference and make individuals feel that KM is beneficial to individuals, it is important to motivate the employees continuously. While some organizations motivate monetarily, some others use recognition as an important factor. Along with the organizational growth, the growth of the individual himself is paramount for the employee. In the long run, those employees who are satisfied that their interests are also taken care of by the organization, will contribute maximum to the organization.

6.2.4.4 KEEP THE KM LANGUAGE SIMPLE

Many employees are a little averse to new jargon and so are reluctant to use it. By keeping the language simple, employees are able to understand better. By integrating KM with work, these hitches can be reduced making it easy to document and share knowledge.

6.2.5 INTRODUCE KNOWLEDGE MANAGEMENT INITIATIVES THAT ARE INNOVATIVE AND INTERESTING

Knowledge Management initiatives need to be regular, consistent, updated, and innovative for the employees of the organization to participate in them. It should hold the employees interest and motivate them to get involved continuously. The results of the opinions between the KM department people and the other employees of the organization showed a very highly significant difference. While KM department strongly agrees on most of the variables, the other employees only agree, and therefore the results showed very highly significant differences. Organizations like Infosys, Mindtree, and TCS have several innovative activities to keep the employees continuously involved. These companies have created a strong KM system where the employees are enthusiastically
involved with whatever initiatives are introduced. The KM system is already integrated into their work and their intranets are highly active on the KM front.

Some of the steps that can be taken are

- Keep the processes simple.
- Integrate the formal processes of knowledge capture with the reporting of work. This will help cut down the time and reduce the extra burden of rewriting.
- Introduce as many informal initiatives which can be done as leisure activities.
- Introduce initiatives as games.
- Camouflage KM activities with learning activities and other job related activities.
- Reward KM initiatives with points which can converted into vacations and other incentives.
- Conduct regular events, activities and competitions and reward appropriately.

6.2.6 MOTIVATION

Information and knowledge is usually restricted to self, or Verbally communicated to other managers and team members, or Converted to documents/pages or Uploaded to the pre-existing knowledge storage system or is a combination of one or more of these. The understanding of how individuals store and share knowledge is important for planning strategies of knowledge sharing in the organization. The study throws up some important issues and learnings. Majority of the employees and people in the KM department are of the opinion that knowledge is restricted to self, sometimes and all the time. This is not good for Knowledge Management.

- INCENTIVES: Incentives play an important role in promoting KM in organizations. Knowledge sharing is not a natural feeling for many people. It has to be cultivated over a period of time. Knowledge is power in the mindset of most individuals. Many people feel that if they share knowledge with others, they lose control and get sidelined in the organization. Organizations have to reinforce confidence in the employees, that they will be duly rewarded and recognized for their contributions. Infosys provides K-currency as points for sharing. They also recognize the contributions of the employees in their in-house TV programmes, as well recognition by the Chairman or CEO for their contribution to KM.
• **REWARD AND RECOGNITION** are needed in the early stages to give a boost to the KM programme. Once KM becomes a culture, rewards are not needed. Then, only Recognition is needed to encourage the active participation of employees. It will be practiced as a part of work and will not be visible, but the benefits will be seen.

Among the three motivating factors studied Recognition received the maximum, very high and high, responses compared to Monetary rewards and Non-monetary tangible rewards. It can be inferred that though rewards are important, acknowledging and recognizing the contributions to KM is much higher, and so the management should make sure that whether big or small, recognition is vital for the success of KM.

Providing opportunities for sharing regularly and incentivising employees on sharing personal best practices will bring out the best in employees who want to be rewarded and recognized. Employees feel insecure about letting go of their knowledge as they consider it their stronghold in their jobs. They feel insecure of losing to others in career growth and at times of promotions. Organizations should build up the confidence level by providing incentives, rewards, and recognition wherever it is deserved. Knowledge sharing will increase only when the employees feel assured and confident that they are compensated for their efforts. This should be part of the organizational culture which needs high management support.

• **BUILD KNOWLEDGE CHAMPIONS AT ALL LEVELS**: KM is best for the organization if practiced at all levels. Knowledge Champions are the best brand ambassadors for KM.

• **BUILD UP KM BRANDING AND MOTIVATION** for knowledge sharing through
  o Special Events
  o Weekly programmes
  o Daily Captions on the Login Page
  o Posters
  o Newsletters
  o Noticeboards
• MOTIVATE BY HIGHLIGHTING EVERY LITTLE ACHIEVEMENT AND PARTICIPATION, not just super-achievers. Every little achievement needs to be recognized as the employee has put in his effort to improve.

6.2.7 EMPOWER KNOWLEDGE WORKERS

When employees are empowered, they lead the change. This change is more powerful when employees share their stories of success through knowledge sharing.

• ENCOURAGE EMPLOYEES TO BUILD THEIR OWN PERSONAL KM.
Every employee wants to build his own personal knowledge which becomes his major strength in his career. His personal growth is always his priority. Organizations have to work around the notion that the employee feels his personal knowledge is not compromised. Due recognition should be given to the employee for using his knowledge and contributing to the organization’s success. Social media tools like blogs, wikis, videosharing, podcasting, bookmarking, microblogging, social networking, Discussion boards, chats, mashups, and publishing are some of the ways that personal KM can be done by individuals. Organizations should create opportunities for creating personal KM within the organization.

• BUILD KM ON NEEDS AND ASPIRATIONS OF THE PEOPLE: Many times, people are sensitive and emotional. It is important to understand their needs. When their needs and aspirations are satisfied, they feel comfortable and their confidence in the organization increases and they tend to share more.

6.2.8 ENCOURAGE EMPLOYEE PARTICIPATION

• THE SOFTEST VOICE SHOULD BE HEARD. Not all soft spoken, shy, introvert people lack ideas. They are hesitant to come forward and express. It is important to hear them and maybe get some breakthrough solutions.

• COMBINE THE SOCIAL WITH THE PROFESSIONAL: To make KM interesting to employees, combine knowledge sharing sessions with picnics, and outings of teams where the rapport increases between team members making them more social and friendly.
• UNDERSTANDING THAT KM IS A NETWORK HELPING THE SEEKER OF KNOWLEDGE WITH THE PROVIDER OF KNOWLEDGE, NOT A CONTROLLER OF KNOWLEDGE: The organization should remove the misconception from the minds of the employees that it is a control system. KM departments help connect the right people when anyone has a query or problem and is in need of solutions.

• ENCOURAGE PEOPLE TO QUESTION: This increases the level of participation of the employees. When you run out of answers, it means it's time for new thinking.

• ENCOURAGE A CULTURE OF PARTICIPATION. KM is not just about building repositories. It is about knowledge seeking, sharing, creating and innovating. Several organizations have knowledge points for every activity of Knowledge Management. This encourages employees to seek, share, create, network, use, and contribute.

6.2.9 CREATING A KNOWLEDGE SHARING CULTURE

One of the main aims of Knowledge Management is to make Knowledge sharing a corporate culture. Only when knowledge is shared, will it multiply. According to Louis L'Amour, “Knowledge is like money: to be of value it must circulate, and in circulating it can increase in quantity and, hopefully, in value”.

Knowledge sharing by the employees needs to happen continuously as it builds up the organization’s knowledge in creating new ideas, and innovative products and services. It builds a competitive edge for organizations to build and maintain as well as increase its market share. The employees need to be motivated to share knowledge so that the value of the knowledge grows exponentially. From knowledge being restricted to self, employees need to be encouraged to communicate it to managers, employers, convert it to documents and have it uploaded. The solution most organizations have identified is to integrate knowledge sharing with work, where updating of the knowledge happens in the process of work itself.
- The top management should lead in this cultural change by planning a strategy for knowledge sharing.
- It should begin with sharing the vision and mission of the organization.
- They should get involved in the activities of knowledge sharing and motivate the employees.
- They should involve a lot on knowledge sharing on social media. Their presence, participation, and feedback motivates the employees. Follow the Leaders.
- The departmental heads, managers, and supervisors should be encouraged to be actively involved in knowledge sharing.
- Provide knowledge points for knowledge sharing and use them as performance achievements.

6.2.10 BUILDING COHESIVE TEAMS AND ENCOURAGING COLLECTIVE THINKING

Team learning is a highly effective way of knowledge sharing. While there are several apprehensions about team learning, the results of the study reinforces that team learning still remains highly effective. Knowledge Cafés, Bar camps, Open space, Fish bowl, Innovation games, Speed geeking, and Teach meet are some of the facilitation methods used in KM. These facilitation methods have a lot of flexibility without too many rules. They are face-to-face, interactive, de-stressing and a lot of fun. The Annexure 5 lists out several other team activities used in KM for knowledge sharing. These innovative group activities take out the monotony of everyday work and bring out the best practices in the organization. Majority of the opinions to these activities, both from the KM department people and the other employees, has been either effective or highly effective. There is no significant difference in their opinions.

Most of the projects in software companies are handled in teams. These teams work in unison in finding solutions through software. The organizations run on the collective thinking of its employees. The knowledge workers form the Collective Intelligence of the organization. It is the contribution of several heads put together that gives success to the organization through innovations and new products.
6.2.11 COLLABORATION

Organizations are no longer just looking at employees for knowledge capture. Every source, internal and external, is very important for Knowledge Management and innovation. Today, organizations are looking towards collaboration from all the stakeholders. Regular collaborative sessions can be conducted with customers, suppliers, peers, industry experts, and trade partners to discuss and share new ideas and information on building improved solutions and for innovations. Several of the Social media tools are largely used for Collaboration. They are Wikis, Blogs, Social Networking, Web 2.0, Discussion Boards, Chats or Instant messaging, Virtual Classrooms and Collaborative Learning Spaces, and Teleconferencing and Videoconferencing.

There is no one source, or one way to capture knowledge. Knowledge required for different aspects of the business, production, competition, market, and employees is available in different sources and in varying proportions. Customers provide direct feedback on the products and services and are the most important source of knowledge for the organization since they create the required demand and market for the organization. Competitors, Suppliers, Partnership alliances, Networks, and Trade associations provide a lot of the industry information ranging from what is available to what are the new products and services available in the market. They provide a lot of supplementary and complementary input needed for creating new knowledge. The Internet provides plenty of information of on-going products, services, and projects and is an reservoir of information, and the Academia plays an important role in providing knowledge through research. The trade associations provide the trends, benchmarks, and new developments in the industry. Except in the case of Trade associations which showed significant difference in the opinions of the KM department people and the other employees, there is no significant difference in the other sources Majority of the opinions were agree and strongly agree. Every source is important and contributes to the growth of knowledge in the organization.

6.2.12 UNDERSTANDING TECHNOLOGY AS AN ENABLER

Though KM is not all about technology, it does have an important place in KM as an enabler. In the nineties, Information Technology was misunderstood as the basis for KM. This lead to the failure of KM during the 1990’s. In the mid 2000’s when researchers, academicians, and KM practitioners had a rethink about KM, they realized that people are
the basis for KM, and process and technology are the enablers.

Technologies for KM get updated regularly. Some of the technologies currently in use across organizations are discussed in detail. They are:

- Internet, Intranet, and Extranet
- Data warehousing, Data mining, and Online Analytical Processing (OLAP)
- Artificial intelligence and Expert systems
- Knowledge based Management system (KBMS)
- Information Retrieval
- Electronic Publishing Technology
- Push Technologies
- Simulation tools
- Document management systems
- Decision Support systems
- Collaboration
- Groupware systems
- Database Management System
- Web Mapping tools
- Help Desk Technology
- Semantic Networks

Except Extranet and Content management systems which showed highly significant difference in the opinions of the KM department people and the other employees, all others showed that there was no significant difference in their opinions regarding the effectiveness, and there was no significant difference in case of satisfaction of the technologies used. Technology has helped Knowledge Management to a large extent. Whether it is knowledge capture, knowledge storage, knowledge creation, knowledge access, knowledge search/retrieval or knowledge dissemination, all these processes need technology to carry out the processes. Since all the software companies work with the technology for their products and services, these technologies do not become another added investment. Many of these companies create their own KM software based on their needs. Microsoft, Oracle, and Kreeo have KM software as their products. It is the non-software companies that need to invest into most of the technology. For software companies, they have to modify the existing software to suit their needs. The most popular among most companies is Microsoft’s Sharepoint.
According to Davenport (2002)\textsuperscript{2}, "your investment in technology in terms of both cost and effort should stay under one third of the total knowledge management effort – otherwise you are going wrong somewhere”. While technology is a great enabler in Knowledge Management, the emphasis has to be to encourage the people involved to participate and share in the knowledge creation.

6.2.12.1 CLOUD COMPUTING\textsuperscript{3}

A lot of the organizations have moved towards Cloud Computing. This reduces the space required for storage of your own servers and helps to cut down costs to a large extent. It is also been found to be IT flexible and very efficient. It reduces the capital costs of storage as well as the costs of the software updation, and the license costs for every new update. For organizations which are small and have lesser number of transactions and need less storage need not invest high amounts on servers, licenses, and updates. These are provided by the company that hosts these cloud services at a nominal fee. Software as a service (SaaS), Platform as a service (PaaS), Database as a service (DaaS), and Hardware as a service (HaaS) are the different services which are rented out by the host companies. Some of the SaaS applications include Customer resource management (CRM), Video conferencing, IT service management, Accounting, Web analytics, and Web content management. PaaS services include application design, development, testing, deployment, and hosting. Other services include team collaboration, web service integration, database integration, security, scalability, storage, state management, and versioning. Databases are repositories for information with links within the information that help make the data searchable. Some of the major providers are Microsoft's SQL Server, Oracle's Oracle Database 11g, Oracle Fusion Middleware and Oracle Enterprise Manager (Annexure). HaaS allows you to “rent” such resources as Server space, Network equipment, Memory, CPU cycles, and Storage space.

These are connected through the internet and so convenient for use by the employees working anywhere around the globe. These can be used with all devices like the mobile, and thin and thick computer devices.

Physical security is high as the data cannot be stolen and Data Security is also high because the servers crashing will be very low. Even the costs of repair and replacement will be borne by the host company.
6.2.13 USE OF KM TOOLS

At the start of this study, there were only 15 to 20 tools used for capturing and sharing KM. Some of them were computer-based and some of them were not. Today, there are over fifty tools and an equal number of techniques for knowledge sharing, and this number is increasing by the day. The few popular ones used for this study are After Action Reviews, Communities of practice, Knowledge Audit, Connections, Formal KM plan, Exit Interviews, Knowledge Centers, Knowledge Harvesting, Sharing Best practices, Peer Assists, Social Network Analysis, Storytelling, White papers, and Taxonomies. While there is no significant difference in the opinions of the KM department people and the other employees regarding the effectiveness of the KM tools except in case of satisfaction in the use of these tools; there is no significant difference in case of After Action Reviews, Communities of practice, Formal KM plan, Exit Interviews, Storytelling, and Knowledge Centers; significant difference in case of Knowledge Harvesting, Sharing Best practices, and Taxonomies, highly significant in case of Knowledge Audit, Connections, Peer Assists, and White papers; and very highly significant difference in case of Social Network Analysis. Every organization uses KM tools based on the popularity and usage among its employees. These vary from organization to organization.

Organizations are becoming more and more innovative and several new tools have been introduced. Annexure 5 has a complete list of the tools and methods that can be used for knowledge sharing. Organizations can use a combination of these tools based on their needs and the type of employee responses. They can also customize the KM tools as they grow to the next phase of KM practice in the organization.

- BUILD KM CONNECTIONS
  - Within the organization, people to people, communities within the organization, between departments, between teams, across other units, between interested individuals.
  - With academicians and researchers.
  - With consultants and practitioners.
  - Between organizations as communities of practice, bar camps, speed geeking, are organized regularly to share the best practices in Knowledge Management.
6.2.14 SOCIAL MEDIA TOOLS

In the last decade, social media has been gaining popularity and the younger generations are the major users of social media. Organizations should make optimum use of this media to reach out to their employees. While the results of the study show a very highly significant difference in the opinions regarding the effectiveness in case of Blogs, Peer to Peer, Ratings, Social Networking, Tagging, Video Sharing, Wikis, Informal groups, and Bookmarking; while Widgets, Mashups, and Podcasts showed a highly significant difference; and Micro blogging and RSS feeds showed a significant difference. With regard to the satisfaction regarding the use of the social media tools, there was a very highly significant difference in case of Blogs, Micro blogging, Peer to Peer, Ratings, Social Networking, Tagging, Video Sharing, Wikis, and Bookmarking; highly significant in case of Mashups and Widgets; and significant difference in case of Podcasts, RSS feeds, and Informal groups.

Organizations should create their own social media on their intranets. Blogs, Microblogging, RSS feeds, Tagging, Wikis, Videosharing, Rating, Peer to Peer, Social networking, Bookmarking, Mashups, Podcasts, Virtual gaming worlds, and Virtual social worlds can all be created on their Cloud, intranet as well as extranet. Large organizations will find it easier to keep their employees connected through social media.

Social media has transformed the way information is exchanged and communicated on the web. The younger generation today is glued to social networking sites like Facebook, Orkut, Linkedin, Ning, BigAdda, and academia.edu; microblogging sites like posterous, tumblr and Twitter; blogs like blogger; video sharing like Flickr, Dailymotion and YouTube; wikis like Wiktionary, Wikitravel, Wikisource, Wikiversity and Wikipedia; mashups like Tracktor, Poligraft, Thisknow, SongDNA and Trendsmap; and many of the news websites have RSS feeds, Tagging, Bookmarking and Widgets. Smaller organizations with the right amount of privacy and security can use these websites and platforms to get the external environment to interact and capture valuable knowledge from the external world also. The web world is totally connected and shared all over the world on a continuous basis. Companies should create highly interactive intranets with forums for chats, discussions, and interests sharing and cash in on this trend. A continuous flow of RSS feeds will keep the employees updated about the new developments in the organization.
• KNOWLEDGE NETWORKING is largely Knowledge Management since knowledge is exchanged. Many times people do not like to use the word “KNOWLEDGE MANAGEMENT”. For some it gives jitters, for some it is another management jargon, and for some it is a painful task. In such cases, using a different name will serve the purpose and objective of Knowledge Management. Some would like to call it NETWORKING, some would like to call it INTELLECTUAL DISCUSSION, and some would like to call it JUST CASUALLY TALKING. But from the KM point of view, if any of this has happened, then tacit to tacit knowledge sharing has taken place. Just encourage any form of knowledge sharing.

• ENCOURAGE INFORMAL NETWORKS

It has been observed in organizations that employees like to create their own informal groups. If the purpose of these groups helps in knowledge sharing, then they should be encouraged by the organizations. The build up to organizational knowledge sharing begins with the informal networks and over the years develops into larger formal networks when people become more and more acquainted with one another.

6.2.15 USE MEDIA EXTENSIVELY FOR KM

Media play a significant role in Knowledge Management. Verbal Information media, Non-verbal Information media, Multimedia, and Social Media were studied to identify which media had a higher impact on the employees. Verbal Information media is largely face to face meetings, conversations, dialogues, informal water cooler chats, and discussions over lunches, and telephone conversations. Non-verbal communication is in the written form, in documents, emails, and other written formats. Multimedia uses mediums of video, television and other electronic media. Social media is mainly internet enabled and interactive.

While the first three have been useful for communicating valuable information and knowledge, Social media has been a great source for interaction and knowledge sharing. While the impact of Non-verbal information media had the highest impact, all other media had a high impact. Social media had a very highly significant difference in the opinions of the KM department and that of the other employees. Verbal information
media, and Multimedia had a significant difference, and Non-verbal information media had no significant difference in the opinions of the KM department people and that of the other employees. Organizations should promote the social media which is popular among the younger employees. Younger employees use social media from their college level and are quite open in their views.

6.2.16 ENCOURAGING INNOVATION IN EVERYTHING

Organizations are able to survive when they are innovative. New products, new services, new processes, improvisations in product and services, all give a competitive advantage to organizations. The more innovative the organization, the higher will be the market share and survival for the organization. KM basically tries to increase this Innovation Quotient of the organization by

- Encouraging new ideas and innovations in everything. 'How can we make this better?' is a question that needs to be asked continuously.
- Encouraging employees to think differently.
- Increasing the flexibility and autonomy of employees to come up with new solutions cutting across all formal sequential task processing, if need be.
- Encouraging employees to think critically.
- Creating conditions and environment for innovation.
- Encouraging contribution of Knowledge nuggets everyday.
- Recognizing and Rewarding the contributors.

6.2.17 BUILD LEARNING MODULES ALONGWITH KM

Whether KM impacts Learning or Learning impacts KM may not be an easy answer, but both are mutually benefitted and add value to the organization. In some organizations both the roles of Chief Knowledge Officer (CKO) and Chief Learning Officer (CLO) are handled by the same person. In this study, the popular Watkins and Marsicks model is taken to measure the impact of learning. It covers all the important aspects of learning: Continuous learning, Inquiry and dialogue, Team learning, Embedded system, Empowerment, System connection and Strategic leadership. Majority of the opinions of both the KM department people and the employees was either 'strongly agree' and 'agree' and a tiny percentage was 'neutral' or 'disagree'. There is no significant difference in the opinions of the KM department people and the employees in this model
as well as impact on the other aspects of learning. Only in the case of ‘Enabling structures in terms of hierarchy and communication flows that facilitates learning’, there is a significant difference in the opinions. The results of the survey show that KM has a very high impact on the learning aspect for the organization. Learning should be further strengthened which is positive for the success of KM in organizations. Some of the suggestions are accompanied with good support which can be observed from the survey itself.

- **MAKING INFORMATION READILY AVAILABLE ON REQUIRED TOPICS FROM CURRENT PUBLICATIONS**
  Learning always needs to be in the present and for the near future as solutions need to be found for the immediate projects and problems.

- **MAKING INFORMATION REGARDING PROCESS DESCRIPTION EASY FOR UPLOADING TO THE DATABASES**
  This is a very positive indication that the employees and the organization are looking for easy and simplified processes. When processes are long and cumbersome, employees consider it an impediment and are reluctant to carry out such processes.

- **ENCOURAGING SHARING OF BEST PRACTICES AND REWARDING THEM WITH POINTS AN RECOGNITIONS**
  Motivating employees through challenges, recognitions, learning, and rewards will encourage them to knowledge sharing. Knowledge sharing is also about learning. There is a double benefit to the employee, both in rewards as well as personal growth.

- **ENABLING HARDWARE AND SOFTWARE TECHNOLOGIES ARE AVAILABLE TO SUPPORT LEARNING**
  Hardware and software technologies get obsolete very fast and new technologies need to be updated to keep the speed and pace of the market. Learning has to be a continuous process, and organizations need to encourage employees towards learning with updated technologies. Training and knowledge sharing both go hand in hand with learning.
• **SIMPLIFYING AND INTEGRATING THE PROCESS OF KNOWLEDGE CREATION AND CAPTURE.**
  Organizations should provide updated hardware and software technologies for Knowledge Management and knowledge sharing.

• **SHARING THE ORGANIZATION'S VISION ACROSS THE WORKFORCE**
  The employees are the best brand ambassadors for the promotion and success of any programme in an organization. And a programme like Knowledge Management and knowledge sharing needs the whole hearted involvement of the employees to become a success. Understanding the vision of the organization gives the employees a sense of attachment, purpose, and responsibility towards the organization.

• **BUILDING COHESIVE TEAMS IN ORGANIZATION WHICH FACILITATES SHARING OF EXPERIENCES AND INFORMATION**
  Working in groups and teams has a synergetic effect on the performance of the employees. Team work encourages the building up of ideas, where one idea leads to another and several perspectives, leading to holistic forward thinking. Such knowledge sharing helps in the creation of futuristic knowledge.

• **MOTIVATING EMPLOYEES THROUGH INCENTIVES ESPECIALLY RECOGNITION TO LEARN FROM EXPERIENCES**
  Not all motivation needs to be monetary. Recognizing an employee for his efforts and honouring him accordingly is an excellent motivation in a lot of organizations. These recognitions help them to grow professionally and are an acceptance of their contribution to the organization.

• **ENCOURAGING THE PROCESS OF LEARNING, UNLEARNING, AND RE-LEARNING**
  All learning needs to be current and for the future. With changes in technologies, management and environment, employees have to adapt themselves by learning, unlearning and relearning. Organizations have to encourage this attitude with the employees so that they build their skill sets to match the requirements of the organization and industry, otherwise the employees will become unemployable.
• INDUSTRY BEST PRACTICES ARE ALWAYS BENCHMARKS FOR EVERY ORGANIZATION
Organizations should encourage and facilitate employees to achieve benchmark performances in all aspects of their work. This will lead organizations to be market leaders and highly successful organizations.

• ENCOURAGE CONTINUOUS, INNOVATIVE LEARNING PRACTICES
This is a good learning practice as learning is always a continuous process. Learning never stops. Regular events, workshops, seminars, KM facilitation methods of Knowledge cafes, Bar camps, using Social media in Learning, Training, all bring a lot of variety to the learning process.

• BLEND FORMAL AND INFORMAL ACTIVITIES TO MAKE KM MORE INTERESTING
Most of the Corporate Training programmes are largely activity based. Learning becomes more interesting than just lecture based training.

• TRAINING SHOULD BE GIVEN WHEN THE LEARNER IS READY; NOT WHEN THE TRAINER IS AVAILABLE
Many organizations feel that Learning is effective when the learner shows interest in learning something new which is of interest to the employee. Since the growth of the employee depends on the performance of the employee, many employees chose to learn things which will build their skills and knowledge, so that they can perform better.

• ENCOURAGE PEOPLE TO QUESTION
Questioning leads to finding answers. When the employee runs out of answers, it leads to new thinking. This is the basis for new thinking and innovation.

• MAKING THE LEARNING PROCESS INTERESTING THROUGH GAMIFICATION
According to Ashok Krish, Head of Innovations, at TCS, Gamification is a great way for Learning, especially with the younger generation. The younger generation does not like monotony and gets bored very fast. They play a lot of online games,
and are quick at learning. Introducing new topics through games has been working well with TCS.

- **ENCOURAGE EXTERNAL ABSORPTIVE CAPACITY**

By sending employees to schools, colleges, research institutions, and interacting with experts in specific areas, rather than only internal flow of knowledge, the absorptive capacity of the employee and the organization can be increased. New ideas and innovative thinking happens when employees can apply the assimilated knowledge in a specific context.

- **BUILD RESEARCH MINDSETS**

Involving academicians and researchers as consultants within the organizations is important to build research mindsets. Practices across the industries when researched, give an analysis of the trends and the pulse of the industry. The learning derived from these interactions, helps the organization identify the directions and initiatives it should rethink.

### 6.2.18 KNOWLEDGE CAPTURE

#### 6.2.18.1 UTILIZE ALL SOURCES TO CAPTURE THE INFORMATION AND KNOWLEDGE VITAL TO THE FIRM'S SUCCESS

Knowledge is generally stored in the minds of the people, and/or in documents and/or in Information and Communication technologies. A few common areas such as Product Service Design, Purchasing, Finance, Workflow Management, Marketing and Sales, Logistics and Distribution, and Quality were chosen for this study. No significant difference was seen in the opinions of the KM department people and the other employees of the organizations.

The objective of Knowledge Management is for knowledge to be obtained from people's minds and be stored and shared through documents and/or Information and Communication technology systems, depending on the ease of accessibility whenever needed. Any method, tool or technique is considered apt and relevant as long as it serves the objective of knowledge sharing.
6.2.18.2 BUILD A GOOD AND UPDATED KNOWLEDGE REPOSITORY

- A knowledge repository is the reservoir of all the information and knowledge captured from across and outside the organization. Building a good repository is an essential aspect of Knowledge Management. It provides the first source of information for an employee. The search for a solution or an idea starts with a query. The employee will first search the repository for answers and solutions.
- The repository should therefore be of a high quality and updated regularly. Regular updation keeps the employee always looking for information always in the repository.
- Rewarding high contributors and high users motivates people to contribute and use the repository.
- Organizations should encourage and motivate employees to contribute to the knowledge repository all the time. The effectiveness of the repository is when both the contribution and retrieval from the repository is very high. Employees will contribute only when they get rewarded. But rewards should not be the only criteria for contributing to the repository.
- Contributions to the repository should be integrated with the regular day-to-day work routine. Every activity should be reported with the problem, and the process of solving it. This should be programmed into the day-to-day work routine of the employees. This will create an automatic repository of the tasks performed for solving every problem.
- Use all the KM tools and Social Media Tools to keep the employees engaged in KM all the time.
- Build Organizational Wikis. The most correct information and updated information relevant to the organization will always be found here.

6.2.18.3 BUILD A GOOD AND UPDATED ENTERPRISEWIDE KNOWLEDGE PORTAL

A good Knowledge Portal is a one stop workplace of the organization which includes links to all the portals, repositories, applications, search engines, technologies of knowledge capture, knowledge storage, knowledge retrieval, and knowledge dissemination. It is a point of user interface for the employee to information, services and applications. It should integrate all the functions, repositories, applications, and processes
which the employee is able to use whenever he needs it. It should be a network of all the people concerned; employees, experts, collaborators, and managers.

The knowledge portal should also integrate all the types of technology needed in KM. An assessment of the technologies needed should be made and a proper enterprise knowledge portal architecture should be drawn up with the help of experienced KM managers, IT experts, and KM consultants. Though several technologies are available in the market, all the technologies may not be needed in smaller organization, while larger organizations need to take cognizance of all the technologies and select the appropriate ones.

6.2.19 ENCOURAGING SELF-ORGANIZED KNOWLEDGE COMMUNITIES

Knowledge Communities is an excellent promoter of KM not only within the organization, but outside and across industries. Like-minded people with similar interests voluntarily meet and discuss on areas of interest and share knowledge with each other. Knowledge Management communities are highly popular globally and a lot of KM best practices are shared in these communities.

In India, we have KM India by the CII. K-Community of Bangalore, Pune, Chennai, Mumbai, and Delhi are all linked to KM India. These Knowledge Communities are free, voluntary, and open to all. These are managed by a group of KM practitioners and KM enthusiasts in a particular place. These include KM consultants, CKOs, KM managers, any KM personnel, Academicians, KM Researcher, or KM vendors. Meetings can generally be organized once a month. These k-communities are registered, free of cost, with KM India which is managed by CII. Meetings are conducted for about an hour or two, once a month or quarterly, based on convenience. The venues are sponsored by the members at their workplace.

- Members or Resource persons in the field of KM from around the world make presentations on the best practices in their area of KM research. Panel discussions are also conducted.
- Lessons learned, Successes and Failures of KM practices are all shared at these k community meetings.
- Bar Camps, Knowledge Cafes, and Confluences are also held by the members of the knowledge communities where everyone is invited.
- CII holds a KM Summit once a year where resource persons from across the world hold panel discussion and give presentations. At a KM Summit, the most current KM issues around the world are presented and discussed. Members from across the country get to interact and build their network.

6.2.20 BENCHMARKING OF BEST PRACTICES

KM in an organization will be successful only when it’s practices are the best in the industry. Constant interaction with the knowledge communities shows that when KM practitioners exchange best practices, organizations modify them and adopt it based on their needs. While it is important to understand that there is no ‘one size fits all’ type of KM practices, the basic practice, tools or initiatives adopted by some organizations can be modified by similar industries with suitable modifications. KM tools, Social media tools, Creation of Knowledge communities, Creation of Repositories, and Portals are common across industries, but every organization has modified them based on their need and their people.

6.2.21 DESIGN AND INTEGRATE KM PROCESSES INTO THE NORMAL FLOW OF WORK

Employees have an inherent dislike to doing anything outside of work. Since, KM is important for every function, for every department and at every level, the KM department should put their heads together with the respective departments and integrate the KM processes with the normal flow of work. This will simplify the KM processes and the employee will not have to spend excess time in documentation. The normal work processes will be programmed to add the information in such a way that the information will be automatically documented.

6.2.22 ENCOURAGE COORDINATION AND COOPERATION BETWEEN DEPARTMENTS AND ACROSS BUSINESS UNITS

Maximum benefits of KM can be obtained when there is coordination and cooperation between all the departments. KM is not restricted to a single department. Maximum benefits can be derived when the entire organization is linked through the KM department so that all the departments are coordinated to thinking in one positive direction. Organizations which use Information and Communication Technologies will have to coordinate with the KM department, IT department, and the respective functional
department to work out the software for the smooth flow of work information for documenting the knowledge using the KM processes.

Whenever some information is required by teams working on similar projects, they can quickly refer to this information and resolve their problems faster. Many organizations have their KM department coordinated with the Quality department of the organization. While in some organizations KM department is an independent department which coordinates the activities of all the departments.

6.2.23 KNOWLEDGE RETENTION

Along with a good Knowledge Management strategy, it is important to plan a good knowledge retention strategy as well. With the increasing attrition rate in knowledge based industries, organizations have been working very hard towards knowledge retention.

- Bringing in retirees as trainers and advisors to help train new employees. When an employee retires, he carries with him years of experience which is tacit knowledge. It takes several years for a new employee to gain that much of tacit knowledge.
- Creating a Mentoring system where the experienced employees are made to mentor juniors.
- Getting the experienced employees to hold training sessions for juniors and newcomers.
- Make the experienced employees "experts" and direct queries towards them.
- Create mixed teams of experienced employees, juniors, and new employees, so that knowledge sharing happens at the grass root level.
- Building a sense of competitive spirit for team accomplishments with experienced seniors as team leaders and rewarding the best team.

6.2.24 IDENTIFY THE BLINDSPOTS AND ERADICATE THEM

While there have been immense benefits in KM, organizations need to take account of the various problems that slowdown the KM process. The study concentrated on identifying the various impediments that challenge the successful implementation of KM in the organization. Several blindspots or impediments were identified and analyzed. The impediments which showed a very highly significant difference in the opinions were:
- **People complain that they do not have the time to share knowledge.** Projects are time bound. Many times, long hours at work can affect the work-life balance. The work pressures are very high on the employees leading to high levels of stress. The best solution is to integrate the Knowledge Management process into the work itself. This will document all work related aspects without having to work for longer hours.

- **The organization is divided into many divisions.** The larger multinational companies have too many divisions in many countries. They are also culturally different. Organizations have to balance a corporate culture which is all inclusive. This may be difficult in organizations which are spread over fifty to hundred countries. These organizations should be connected to each other through a single portal consisting of several repositories. The queries can be directed to experts or teams across all repositories by the KM department. The responses can be collected from all the experts and the appropriate solutions can be used.

- **People are afraid that sharing knowledge will make them less valuable to the organisation. Individuals are unwilling to share their own knowledge.** People have an inherent fear that they will be shunned and lose out, once they share their knowledge. It's a common perception that the knowledge they have learned and acquired is their job security which if shared will lead to losing their importance.

- The organization needs to create more confidence building measures to motivate the employees to share their knowledge. Organizations survive on the collective intelligence of the employees. Recognition for the contribution of knowledge will build confidence in the employees. Incentives and rewards are great motivators. Encouraging employees through knowledge champions will influence the others to contribute to the knowledge repository of the organization.

- **The organization is unaware of the importance of knowledge sharing.** Employees in several organizations feel that the management is not fully aware of the benefits of Knowledge Management. The organization needs to participate in events and conferences which showcase
some of the best practices of knowledge management. The organization should take the initiative and be proactive in encouraging employees into knowledge sharing by putting a proper KM team in place and building employee confidence for knowledge sharing. More efforts are needed on the part of the organization to give employees the confidence on the seriousness of its support to Knowledge Management.

- **Leadership (Top Management) does not care about sharing knowledge.**
  Many a times, senior management feels that people should do things on their own. They do not feel the need to motivate people to build a confidence among people for knowledge sharing. The employees' observation is a clear indication that the leadership and senior management should be more involved in building the Knowledge Management activity in the organization.
  The active involvement of the top management in creating a importance for knowledge sharing by actively motivating and participating in knowledge sharing activities boosts the confidence of the employees. Whenever Knowledge Management activities are conducted, the top management people should take time to interact with the employees. This will help the employees to open up.

- **We have significant legal constraints.**
  A very conflicting issue for all employees is how much of the information and knowledge can be shared and with whom. They are bound by legal contracts on confidentiality at the time of joining. This creates a psychological barrier for the entire knowledge sharing process. Intellectual property rights and clauses also are a deterrent to the knowledge sharing process. Organizations should encourage knowledge sharing within the organization without the hurdles of legal bindings. Employees are more comfortable sharing in a free environment than when there are too many legalities which put their jobs at stake and no employee would be willing to risk. Organizations should build the confidence of employees by not putting too many legal constraints and providing clarity in what information can be shared and what cannot be shared.
- **Fear of exposing weaknesses.**
  
  Every employee feels that he or she has some weaknesses. Due to low self-esteem and fear of ridicule, people hesitate to share their knowledge. Team leaders play an important role in getting everyone on the team to contribute. Infosys has a policy which says that even the softest voice should be heard which encourages employees to make contributions big or small. Mindtree, and TCS have made knowledge sharing compulsory by integrating it with work. For every job the employee is performing, they have to provide three to five new ideas which is linked to their performance.

- **Lack of common perspectives.**
  
  People hesitate to involve themselves into knowledge sharing when they feel they do not have a common perspective. Knowledge sharing is best done when there are several perspectives. It leads to new thinking and newer ideas. Organizations should encourage employees to share whatever views they have. Continuous new thinking is essential for innovations.

- **Non-aligned reward system.**
  
  Employees get discouraged when they do not get rewarded properly for their efforts. Recognition and rewards are an excellent medium for motivating employees into knowledge sharing. In the long term, as Knowledge Management evolves in organizations, they need to integrate it with work and the rewards should be linked with contributions and performance. Recognition should be given higher importance which motivates the employee to contribute to the knowledge repertory.

- **Lack of motivation.**
  
  Knowledge is intrinsic to every employee and is an important aspect of their job security. There is always a fear that knowledge shared is knowledge they have lost hold on.
  
  The organization needs to reassure the employees that when they share, they help create new knowledge which boosts new thinking and knowledge multiplies
Continuous motivation through recognition and reward points integrated to performance is a must to indulge employees into knowledge sharing.

- Lack of absorptive capacity.

The organization should be clear about the type of knowledge it is looking for, value it, assimilate it, and apply it for innovations. When valuable information is not put to proper use, employees lose interest in knowledge sharing leading to failure in Knowledge Management.

The organization should build up its absorptive capacity based on the employee’s level of education, It should also be clear on the areas that the organization wants to focus on and transfer knowledge accordingly. Ideas which are related should be grouped and discussed to assess their relevance and importance. The best ideas should be worked on for innovations.

- No formal communication; ad hoc only.

Formal communication always gives the stamp of professionalism and reiterates that the organization is serious about pursuing Knowledge Management. Ad hoc communication will not give the required emphasis and employees tend to take Knowledge Management casually.

In a professional set up, important issues in Knowledge Management should not be taken lightly. Formal communications will create seriousness towards Knowledge Management in the organization. Circulans, bulletins, newsletters, events, emails, and instant messages of Knowledge Management should be sent to all employees to make them aware of the importance of Knowledge Management and employee involvement.

- Lack of coordination between departments/divisions.

Larger organizations, owing to their size and spread, sometimes in different cities and countries, suffer coordination problem. The intranet, internet and the world wide web have reduced the distance and made the world a global village, but even today, the same solution to a problem which is solved in one part of the globe may not be accessible to another due to lack of coordination.

Knowledge Management bridges this gap and saves organizations, time, cost and
money. Organizations have to build better repositories and data mining tools to make such solutions easily accessible to every department that needs it.

- **Everyday use does not integrate into normal working.**
  Time bound assignments and projects always create work pressures and stress among employees. Knowledge Management activities have to be integrated with work. If employees feel that they are doing extra work for Knowledge Management, then they will not feel motivated.
  To reduce this misconception, Knowledge Management activities have to be integrated with work. Reports generated for work should be designed in such a way that they can be directly saved in the knowledge repository. HCL Technologies follows this system and the KM activities are clubbed with work and quality and have been able to get very good KM results alongside with organizational growth.

- **Systems too complicated.**
  When systems are complicated, they are a deterrent for people to use.
  Systems should be designed such that employees find it easy to work with. Integrating the KM systems with work will remove this mental block among the employees. Work systems can be programmed to include KM activities without the employee having to feel that it is an extra chore.

- **Lack of training.**
  Many times, employees are not fully well versed with KM activities. This can lead to employees not getting involved activities or doing it incorrectly. Training for KM activities should be clubbed with regular training on work related activities. The employees will then accept KM as a part of work itself. When employees treat it as a part of work and learn the importance of documenting and sharing, KM will be successful.

- **Not much of personal benefits.**
  Every employee has an underlying need to grow individually. A large majority of employees have a “what’s in it for me” attitude as they look for growth in their
careers. The organization needs to keep in mind that while individual employees work for the organization, they earn for themselves and look for quick growth in their careers. Recognition of the employees even in their smallest efforts is a great motivation. Appreciation letters, Honouring maximum Contributions and Retrievals, and Knowledge champions, add to the career graph of the employee.

- **Senior management was not behind it.**
  The major boost for KM activities has to come from the senior management. Their active involvement will add to the seriousness of the KM efforts in the organization. The MAKE award winning organizations have shown that their top managements have been actively involved and back the initiatives put forth by the KM department.

- **Unsuccessful due to technical problems.**
  Technical hiccups can be removed by use of good software. These hiccups can always be removed by bringing the vendor’s technicians being involved in the initial installation stages. Though Microsoft Sharepoint with updated versions was used by some organizations, most of the other software organizations had developed their own for knowledge sharing.

- **The systems are highly structured and lengthy workflow of content authoring, approval, and publishing.**
  Integration of KM with work will reduce the time taken otherwise for the documenting of KM activities. The process and systems should not be elaborate so that no aversion is created among the employees. Software programmes should be written in such a way that they automatically get saved in the repository and can be made available whenever a query arises.

- **KM system development is not mature yet. The concept is just catching up in our organization.**
  Some of the organizations where KM was less than two to three years old, the responses of the employees showed that KM was not much in use. The Brand building activity and the Awareness creating by the organization needs to be vigorous till the concept picks up well in the organization.
• **Lack of resources or funding.**

Any investment needs justification in an organization. One of the main problems of measurement of KM is there is no direct relation between the amount invested and the return on investment. This has resulted in the top management dissatisfied on the performance of KM. KM complements all activities in the organization. While the top management and the employees are fully aware that there is a contribution from the KM practices, they are not able to attribute the extent of growth due to KM. This leads to a low allocation of funds for KM activities. Investments on software, hardware, promotional activities, manpower and time is essential for getting optimum results. Unless the right investment and funding is done for KM activities by way of funds, resources and time, the organizations will not be able to reap the full benefits of KM.

• **Lack of understanding of KM.**

The branding of KM with full top management support and regular training is essential to make employees fully aware of the benefits of KM. Greetings from the top management, success stories, regular RSS feeds and updates of KM in the intranet, KM bulletins, training, bar camps, knowledge cafes, social media and networking will help build up the understanding about KM and its benefits to the individual and the organization.

• **KM model is not good.**

There were several employees who felt that their KM model was not good and so they were not participating well. The organization should relook at the KM model the organization is using and identify the reasons for the failure. It should make the necessary corrections and reintroduce the KM initiatives in a more acceptable manner to the employees.

• **Knowledge is difficult to locate, capture, and store.**

The employees felt that sometimes the knowledge they were looking for was difficult to locate or store for their needs. The KM department needs to programme the search and locate knowledge functions with simple meta tags which are very relevant. The capture process also needs to have a simple format so that the employees do not have to go through long structures.
• **Wait and see how other companies apply KM.**
  Generally, a lot of organizations like to follow the wait and watch policy. The first phase of KM was a failure since everyone believed that KM revolved more around Technology. Organizations invested a lot of money on Technology, but did not concentrate on people. No initiatives were taken to transfer tacit knowledge of the employees to explicit knowledge nor to motivate employees to share knowledge. The second phase of KM has changed its focus to people who are the center of the whole KM system. Knowledge is in the minds of the people and need to be shared in the organization. The late adopters of the KM life cycle are seeing the benefits enjoyed by the early adopters who are almost a decade into KM. They are carefully studying the practices in other organizations and slowly incorporating them.

• **KM is not practical.**
  Many times, employees feel KM is not very important to their work and so they don’t give time for it. When employees are not fully aware of the benefits of KM both for themselves and the organization, they tend to bypass KM activities. When employees feel KM needs extra time and attention, they procrastinate the KM activities. The top management and the KM department play an important role in evangelizing the benefits of KM both for the organization and the individual themselves. The KM department needs to integrate KM with work systems, design simple formats, use simple language and make it easy for the employees to share their knowledge by documenting it.

• **Our practice is already good enough.**
  Employees are also averse to trying new things, new ideas and resist things that need any extra effort. Once again, the top management should take initiatives to get the employees participating by involving themselves actively into KM activities.

The impediments which showed no significant difference in the opinions of the KM department people and the other employees of the organization were:
People are divided geographically and it is difficult to connect.

Today's businesses are becoming more and more global in nature. Keeping the global more acceptable culture in view, organizations will need to customize each division on the local culture of the division. “Think global, go local” will be the motto which basically takes everyone along in the organization.

More emphasis placed on explicit knowledge.

While explicit knowledge is easier to access and document, the deeper knowledge lies in the tacit which is in the minds of the people and difficult to access. People hold on the tacit knowledge which is their strength. Organizations have to find innovative ways to make people share their tacit knowledge. While the emphasis is on converting tacit knowledge to explicit knowledge, informal knowledge transfer should also be encouraged. Water cooler chats, Friends day out, Unit picnics and outings builds rapport, and friendships between peers and colleagues leading to better exchange of knowledge.

It is the mindset.

There is a very high consensus that the success of any initiative depends on the mindset of the people. The organization has to educate and train employees to keep a positive mindset for the initiatives and efforts that the organization is taking. Top management involvement, inter-department across the organizations, national and global competitions, recognitions, rewards, and continuous motivation associating KM with work performance will help the employees build a positive mindset towards KM.

6.2.25 UNDERSTANDING THE IMPACT OF CERTAIN EXTERNAL ISSUES

The external environment affects an organization directly and indirectly. The external environment will indirectly affect the KM practices in the organization also. The organization has no control over these external issues but has to adapt and make the best of these environments. The study also looked at the impact of some of these external issues which affect the organization’s business and KM in particular. There were varied responses from both the KM department people and the other employees of the organization.
• **Adapting to the changes in the knowledge driven economy**

The knowledge driven economy revolves around the concept of knowledge. Knowledge is the focus of all activities in the knowledge economy. The boom in KM is partly attributed to the current knowledge driven economy. As knowledge based organizations increased, the acceptance of knowledge as an asset became more important. Organizations started realizing that KM played an important role in managing the knowledge of the organization. The opinions also show a positive influence of the knowledge driven economy with no significant difference in the opinions of the KM department people and the other employees of the organization. The organization should readjust itself to the growing changes by adopting the positive initiatives to keep up with the growing changes.

• **Ecommerce and E-Business**

They are both products of the knowledge economy which have influenced businesses to a large extent. Though eCommerce and eBusiness are slightly different, they both use Information and Communication technologies and are internet based. Knowledge management makes it easy to capture, store, organize and share knowledge for eCommerce and eBusiness. The opinions also show a positive influence of the eCommerce and eBusiness with no significant difference in the opinions of the KM department people and the other employees of the organization. With the growing use of the internet, businesses based on the medium of internet, can reap benefits of Knowledge Management.

• **Changes in requirements of your customers**

With changing environments and changing market needs, customer needs also change. Organizations need to cater to the progressive changing needs of their customers. Tastes, spending power, technology, better features, convenience, availability, competition, durability and ease of use all keep changing with time. The opinions also show a positive influence of the Knowledge driven economy with no significant difference in the opinions of the KM department people and the other employees of the organization.

• **Potential for new ways of working with partners and allies.**

Collaboration is the new solution for Knowledge Management and knowledge sharing. Partnership alliances with suppliers and customers, Joint ventures, and Mergers and
Acquisitions are showing a growing trend within all industries. Working together in the entire supply chain will help organizations to benefit all. Matching the needs of the customers with the resources of the suppliers will help organizations make the optimum use of the Knowledge Management benefits and reduce time and costs.

- **Law of the Land and the culture of the operating country**
  Organizations operating in any country need to carefully understand and follow the law of the land and the culture of that place. There can be no compromise on the law of the land. In case of culture, it is important to create a positive blend of the corporate culture with the local culture. It is an highly sensitive issue, but needs to be attended with great sensitivity and care.

6.2.26 RESOLVING CURRENT KNOWLEDGE RELATED ISSUES

- **Reinventing the wheel**
  No organization can survive on one or two products and services for very long. Every product has a life cycle sometimes long and sometimes very short. The results show that the difference in opinions is not significant, and the majority of the responses are high and very high. The survival of an organization depends on the innovativeness of the organization to meet the growing needs of its customers. New products and services have to be continuously doled out to survive competition in the market. Every new idea is useful whether as a new product, new service, new process, or as a new simplified step in a process. All these add value to the organization’s competitiveness in the long run. Knowledge Management has to continuously channelize the collective knowledge of the organization to keep reinventing new products, processes, and services.

- **Knowledge sharing**
  Knowledge sharing gets reiterated again and again as it is critical to the KM process. Knowledge Management is largely about knowledge sharing. To get the best out of every employee, knowledge sharing is important. New ideas can initiate new thinking leading to innovations. The various KM tools, Social media tools, and KM facilitation methods when used with a positive mindset and the right motivation always bring out the best in people. Annexure provides a wide choice of knowledge sharing tools and methods to make the KM activities successful.
• Knowledge transformation

Knowledge transformation is critical to the organization in innovating new products and services. Knowledge accumulated is of no use and a waste, if it is not transformed into useful products and services. While contribution is an important process in knowledge sharing, so is the retrieval process. Knowledge retrieval leads to utilisation of knowledge for knowledge transformation. Organizations should recognise and reward retrieval of knowledge which leads to knowledge use. The organizations should provide environments where knowledge sharing happens on a continuous basis. Knowledge Management activities, tools, methods and processes are all designed to transform knowledge for innovations in organizations. Motivating the employees to use information from the repositories and transform them into innovative ideas, builds the competitive edge for the organization.

• Solving information overload

Information for the sake of information is useless for the organizations. Organizations should be able to convert it into useful knowledge. Information overload can only lead to waste of precious time. Filtering and organizing of information should be put in place right at the beginning. The filtering of information based on relevance and importance should be done by team leaders and project experts. The less relevant information should be archived for retrieving if it is needed later. This will help the organization make use of the right information at the right time.

• Innovation

Innovations are very important for the survival of organizations. Employees working on projects and teams continuously encounter new problems, come up with new solutions and contribute with new ideas of simplification and improvisation. These ideas lead to new thinking, improved processes, and better products and services. Organizations should encourage and motivate the employees to innovate continuously by recognizing and rewarding their efforts. Creating opportunities and environments for innovation will encourage the employee to think differently.
• Retention

An increasing trend seen in the organizations in the last decade is of very high attrition. People are continuously looking for change, for better prospects, for career growth, for work life balance, and for a variety of reasons. Organizations generally invest a lot of time, money and energy in training these employees. With high attrition rates, organizations face heavy losses both in terms of costs incurred as well as time lost in training new people for the jobs. This is critical for the organization as trained employees are the soul and heart of the organization. Organizations should motivate knowledge workers with challenging assignments and recognize and incentivize their efforts.

6.2.27 RESOLVING CHANGE MANAGEMENT ISSUES

• Rethink strategy and better planning.

The top management needs to do holistic thinking and plan strategies that will let them survive. They need to identify their core competencies and build strategies to make sure that the competitors are always at bay. A regular review of the SWOT analysis and the Five forces model with a strategic development model will help the organization to be abreast of changes in the marketplace and adapt accordingly.

• Identifying key business benefits.

Updation and regular reviewing of the business, strategy, and benefits is a must for every business to succeed and survive in the marketplace. Changing demand, changing competition, changing employee needs and work life balance, and changing environments all need to be regularly reviewed and new strategies need to be adopted with changing times. With renewed look at key business benefits, the organization can plan and focus accordingly on the emphasis of knowledge sharing in the specific important areas.

• Ability to divert time and other resources to analysis and development of improvements.

Encouraging and providing the facilities, resources, time, infrastructure and motivation for continuous improvisations builds a desire among employees for experimenting, new thinking and innovations. Organizations should identify employees with interests in
various fields and their creativity through work performances, competitions, events, workshops and other interactions and provide enough opportunities to develop improvisations.

- **The development of information and communication technologies.**

In the software industry, new and newer versions of software and technologies are updated very fast, and organizations and employees also need to update continuously with these changes. This requires organizations to invest continuously on updating their software and technologies to keep up with the competition as well as train employees to use these software and technologies. Learning and Knowledge Management need to happen simultaneously.

- **Developing groups and teams to manage their performance and development needs.**

With renewed focus and strategies, organizations have to build teams to manage their performance and development needs. Recruiting or promoting employees to fit the new job requirements and providing them with the right infrastructure to deliver the best solutions, products or services within the given time is a challenge which every organization has to face and manage.

- **Measuring the key issues.**

Metrics are an important part of the control function in management. Measuring the key issues will identify the gaps in performance and provide the direction in which the KM initiatives are headed. The metrics should be programmed into the Knowledge Management system so that they automatically get updated and the management is able to monitor, evaluate, and take necessary action immediately.

- **Better management of necessary improvements.**

As the business expands and the number of new projects come up, the organization needs to make necessary improvements to manage all the projects smoothly. Careful planning of the KM strategy based on location, project needs and the people involved is essential. The KM department after a careful KM audit will have to restructure the strategy to accommodate the necessary changes. To this extent, the KM strategy should be flexible to meet the necessary improvements needed to manage each and every project.
• Crisis management planning and coping with unforeseen consequences.

Organizations should have back up teams in case of crisis and unforeseen circumstances. Crisis management calls for sharp and quick thinking. The management should have all the information about employees, their strong areas and build the organization back up teams to take care of unforeseen consequences. Knowledge Management takes care of the much needed analysis of information at times of need. Many times, a particular problem in one unit of the organization will have been handled by some other unit in another unit elsewhere. Knowledge Management will provide the required information anywhere within the organization when needed.

• Development of a good incentive system.

Performance based incentives work as good motivators in organization. Incentives range from monetary to non-monetary rewards, reward points to paid holidays, recognition and appreciation letters, honouring and better appraisals, which are all important for employees to grow in their careers. A good incentive system is a motivator for employees to give their best to the organization. It boosts creativity and is an motivator for new thinking.

• Development of a new knowledge sharing culture.

A lot of motivation is drawn by employees from the internal environment and the culture of the organization. Organizations should make the culture of the organization interesting and positive for knowledge sharing in the organization. The top management has to lead in the process of knowledge sharing. They need to get involved in building the knowledge sharing culture by sharing the organization’s vision, mission and all activities which build up the desired organizational culture with employees.

• Better handling of the changes of economy, competition and business.

These changes are continuous and the organizations have to adapt themselves to survive these changes. Knowledge Management helps bring in plenty of new and innovative ideas which help organizations to survive and beat competition. Knowledge Management has helped organizations make the right decisions by providing the right information needed. An updated repository is a boon to every organization as it provides all the required
information. A good Knowledge Management system is a critical tool for the top management for handling the changes of economy, competition and business.

### 6.2.28 MAJOR ISSUES IN THE NEXT FEW YEARS

Applying the Mann-Whitney U test, the difference was found to be statistically significant on the positive side with majority of the opinions agreeing. Some of the major issues expected to emerge in the near future as per the respondents of both the KM department and the other employees of the organization are:

- **Adaptability**

  The changes in the knowledge economy and the technological developments are so fast that the organizations need to adapt themselves at a very fast pace. The world has become a global village. The new generation finds things boring faster than their earlier generation and so they switch jobs faster. This generally leads to a lot of tacit knowledge walking out of organizations. At the same time, employees are looking for faster growth and tend to lose interest and move out if things are not fit to their liking. The study results show a very highly significant difference with most of them agreeing.

- **Collaborations, Alliances, and Networking**

  Organizations continuously are looking for alliances and networking for mutual benefits. Based on their competencies, they build up on alliance partners to cut costs and become more competitive. The organizations have to reduce costs, improve quality, increase productivity and increase profits. Alliances and Networking, and Collaboration are the new business solutions around the globe. The study results show a no significant difference with most of them agreeing.

- **Reduced Costs and Higher productivity**

  Reduced costs and improved productivity builds a competitive advantage for organizations. Organizations undertake a variety of strategic measures to cut down costs. Knowledge Management will be able to identify areas where costs can be cut down and look for alternatives at lower costs without compromising the productivity of employees and quality of the products and services. The study results show a very highly significant difference with most of them agreeing with only less than one percent disagreeing.
• Quality

With more and more innovative products coming into the market, quality is an important issue for survival. The best products and services are always in demand. Clients will always demand quality and organizations have to go that extra mile in delivering quality products to beat competition. The study results show no significant difference with most of them agreeing.

• Responsiveness

The speed with which organizations respond to market demand and needs will help them gain competitive advantage. Organizations also need to be quick in response to the changes in the economy, technology and business. To survive competition, the organization needs to be constantly alert to what is happening in the environment. KM needs to be continuously updated to respond quickly to these changes as well as competition. The study results show no significant difference with most of them agreeing.

• Outsourcing

Outsourcing of some of the jobs reduces the burden of overhead costs and hassles of management. India is known as the Outsourcing Capital of the world. Business Process Outsourcing, Knowledge Process Outsourcing, and Legal Process Outsourcing have lead India to become a leader in Outsourcing. Educational qualifications, cheap labour, and good English speaking employees with high computer skills have led several multinational companies to open up outsourcing offices in India leading to gigantic cost reductions. This trend is still continuing. Organizations are able to deliver high quality knowledge products with some of the jobs being outsourced leading to ease in managing labour and higher profitability.

• Competition

Competition is not only local or national, it is global now. Every organization has to gear itself up continuously to tackle competition from multinational companies. KM provides new solutions to handling competition by identifying the best people in the organization, teaming them together to get the best results. The study results show a highly significant difference with most of them agreeing.
• **Change in technology**

In the software industry, technology and software are continuously changing. Updation on the changing technology is a major issue for software companies. Upgrading systems continuously and training people to use it requires regular investment of time and money. With technology becoming obsolete within less than a year sometimes, recovering the large investments depends on the speed of training the employees and getting projects completed within a short time. This does pressurise the employees and the employees. The study results show no significant difference with most of them agreeing.

• **Change the mindset towards knowledge sharing**

Inspite of a changed environment and progressive thinking, it is seriously observed that employees have a major mindset problem. The biggest mental block is the loss of losing the powerful knowledge when it is shared. I, me, mine, is still a very strong problem with employees and causes hindrances in knowledge sharing. Wanting to try something new only if it is beneficial to self is a major mindset that needs to be changed. It is a ‘what’s in it for me’ attitude which needs to be changed. The study results show a very highly significant difference with all of them strongly agreeing in the KM department and agreeing among the other employees of the organization.

• **The need to develop some new operations**

Continuous improvisations and innovative methods in performing some of the operations will reduce the delivery time of projects which results in efficiency and higher profitability. Improving and simplifying operations to achieve higher results will reduce time and costs. With simplified operations, employees will find work more easy and satisfying and their efficiency improves.

**6.2.29 DEVELOPING A WHOLE SYSTEM DESIGN APPROACH**

The concept of Whole system design can be applied for improving Knowledge Management. Whole system design looks at problems in its totality and not in isolation. It studies the impact of the problems on the entire organization and finds solutions for the entire organization. Knowledge Management integrates the entire organization, all the employees, all the divisions, all the departments, from all the functions, teams, and across all its units across the globe.
6.2.30 EVALUATION and METRICS

The evaluation of the performance of the KM initiatives is important to assess if the KM initiatives are having the desired effects for which they are designed. The various KM initiatives will have some effect on knowledge sharing. Well-designed metrics for measuring the initiatives should be put in place. Wherever the designed results are not met, the assessment of the reasons for the poor performance should be assessed and evaluated and corrective measures should be put in place. Good measurement systems help identify gaps in performance and plan out corrective measures.

Some of the general measurement parameters relating to People, Process, Technology, Repository, Balanced Scorecard, Employee Surveys and Return on Investment were analysed and found to generally ‘Effective’ to ‘Very Effective’. It was also observed that all the organizations had their own Self Developed Measurement Indices to measure the performances.

Some of the KM department people were of the opinion that all KM initiatives need not be measured. It is not necessary that every initiative will be 100 percent effective. But they are important in some areas. The success or failure of some of the initiatives is not based only on metrics, but are necessary to keep the process going and such initiatives should not be withdrawn even if they have very low response.

6.2.31 KM BUDGETTING

The budgets for KM varies with the size of the organization and the type of industry. The main investments will be on hardware, software and promotion of KM initiatives.

- **Cost of Hardware**
  This is a major technology based cost for KM. Computers, servers, and infrastructure costs for these hardware. This varies with the size of the organization. For software companies, the investments for KM on hardware will be to integrate with their work requirements.

- **Cost of Software**
  Different types for software are required for carrying the various KM initiatives. Every KM process requires different KM technologies. While several vendors are available with many KM products and services, large organizations have developed their own software, thereby cutting costs in the long run. Many
organizations also are vendors for KM software.
Cloud computing has brought down a lot of the hardware and software costs for
organizations. The user companies will get all the required services from the host
companies at a nominal fee.

- Promotional Costs
Heavy brand building and incentives in the initial stages requires organizations to
set aside a decent budget till the KM movement picks up and gets integrate with
work. Once Knowledge sharing becomes a culture in the organization, then these
costs will be very minimum.

6.3 BUILDING A KNOWLEDGE ORGANIZATION
A Knowledge Organization is an integration of all the characteristics that make an
organization, supported and complemented by KM tools, techniques, methods, Social
Media Tools, powered by adequate support and motivation from the Top Management,
and with the total participation of all the people of the organization.

While the onus of planning the initiatives is the duty of the KM department, it is the
responsibility of every employee to participate in these initiatives wholeheartedly and
make it a success. KM should be treated just like day-to-day work and the challenges of
KM should be also dealt in a similar manner.
The innermost circle basically means that People are the center of all KM activity. They are supported by Process and Technology as well as the various KM tools and Social Media tools. The outer circle identifies the several KM activities and characteristics that are achieved from KM practices.

6.4 The KNOWLEDGE MANAGEMENT Model

This model has been developed on the basis of this study. It combines the components of the KM system and takes a broad view of the other variables that affect Knowledge Management.

The Triangle represents the Organizational Pyramid with the Top Management heading the organization.

The outer Rectangle represents the Universe of the Organization.
People also known as Knowledge Workers are the most important component of the KM model. People constitutes the Top Management, Employees, Stakeholders and Collaborators, Industry, and KM practitioners.

The KM practitioners, include KM consultants who are individual consultants or consultancy firms, as well as academicians and researchers. Their contribution is very important for studying and understanding the performance of existing KM models and initiatives and creating new models and initiatives for organizations.

All the KM activities revolve around people. KM begins with people and ends with people.

The top management plans the strategy and continuously motivates and supports the KM process. They lead by actively involving themselves in all KM activities. This motivates the employees to also actively involve and contribute to the Knowledge Management system. The employees are the active participants in the KM process.

People form the External environment consists of all the stakeholders and collaborators, the industry, and the KM practitioners. The Stakeholders and Collaborators are customers, suppliers, middlemen, business partners, bankers, trade associations, and the industry. The customers collaborate in providing the knowledge for new ideas and the demand for new products and services. Their active collaboration will help create new knowledge for innovative products and services. The suppliers collaboration helps in the knowledge of the ground realities of available resources. The feasibility of new ideas is possible when the raw materials are available at the right time and in the right quantities.

KM practitioners are Consultants and the Researchers who help continuously by studying the KM practices and providing innovative solutions to the industry. The constant association and interaction of the KM practitioners and the researchers will help the organizations and industry to look for solutions beyond the industry also.

The Business partners may be the outsourcing partners, manufacturing partners or joint venture partners who play an active role in some process or activity in the supply chain process. Collaboration with business partners adds a lot of value to innovation as well as in the creation of new ideas. Trade associations are useful forums for collaboration. Conferences, events, workshops, communities of practice, k-communities for sharing industry best practices will help build the quality of knowledge management.
Technology and Process are the enablers in the Knowledge Management system.

**Technology** helps in knowledge sharing and building repositories. It helps in capturing the required information, grouping and organizing based on requirements, processing it to give results, transferring and sharing with the right people and in creating new knowledge. It facilitates the efficient handling of knowledge. Based on the need of the organization, a combination of these technologies can be chosen.

- Internet, Intranet and Extranet
- Data warehousing, Data mining, and Online Analytical Processing (OLAP)
- Artificial intelligence and Expert systems
- Knowledge based Management system (KBMS)
- Information Retrieval
- Electronic Publishing Technology
- Push Technologies
- Simulation tools
- Document management systems
- Decision Support systems
- Collaboration
- Groupware systems
- Database Management System
- Web Mapping tools
- Help Desk Technology
- Semantic Networks

**Process** is the next important component of the Knowledge Management system. Processes are needed in the different stages of the Knowledge Management system. Identifying the location of knowledge that is needed, Collecting the knowledge from various sources, then Selecting and Organizing knowledge based on need and use, Storing it in repositories and Retrieving and applying knowledge when needed and the Creation of new knowledge. Several KM models (Annexure) have been drawn based on these processes. These models can be used depending on what stage KM is in a particular organization.
Learning is a continuous complementary process of Knowledge Management. The organization is always in a learning mode. Updation on existing knowledge and the attainment of new knowledge is done through the Learning process. There are several overlapping areas in Learning and Knowledge Management. That does not mean that Learning and Knowledge Management are the same. Learning is done without knowing that Knowledge Management is taking place partly. Similarly, Knowledge Management is also happening without the employees being fully aware that some amount of Learning is taking place. Both ultimately lead to the acquisition and application of knowledge. But, Knowledge Management is much more than Learning.

Every organization has its own culture nurtured by the thoughts and actions of the top management and percolated down to the entire organization. In Knowledge Management, the stress is on Knowledge sharing. Knowledge sharing culture has to be introduced to an employee right from the first day the employee joins the organization.

Integrating KM with work, simplifies the process of knowledge sharing.

The KM tools includes the various KM tools, Social media tools, KM facilitation methods, KM techniques and KM measurement tools have to be integrated into the work system itself. Creating the necessary and appropriate tools that integrate with work will help save time and easily capture information which is appropriate to work itself. New ideas should be facilitated through workshops, events and competitions between employees as well the industry. The External environment of stakeholders, KM practitioners, and Industry should constantly.

6.5 FUTURE DIRECTIONS

With more and more organizations reaping the benefits of Knowledge Management, organizations which followed a ‘wait and watch’ policy are keenly adopting KM in their organizations. KM is no longer a misconception as being part of technology, but has been understood as largely of people. Several organizations in India outside the software industry have proved over the last few years, that KM is for all industries wherever people are working.

A lot of research studies are going on, on the subject of Knowledge Management. New initiatives are being tried continuously. In the last one decade, several new methods and techniques have been adopted. Several studies can be undertaken such as Comparative
and Effectiveness of these methods, across industries, Comparative studies between industries, Comparative studies between two or more companies to get a more in-depth understanding and the role of Knowledge Management. Since Knowledge Management is still evolving, several new studies can be conducted to make it more viable for practice in every single industry.

Collaboration is becoming very important in KM. New products and services are being invented and innovations are taking place with the collaboration of customers, suppliers and trade partners and stakeholders. Personal KM, Strategic KM, and Social Computing are some of the new areas that are gaining importance in Knowledge Management. With increasing benefits from Knowledge Management being observed, organizations have started to use KM in a lot of new organizations.

6.6 CONCLUSION

KM is still evolving. Along with the growing changes in economy, management, technology and business practices, KM will be rediscovered and re-defined several times over. Just like product life cycles, KM also follows a life cycle in the adoption process. KM is still at an Early Adopters stage in the Adoption Diffusion Curve, (Rogers, 1962) in India. The few multinational organizations and global companies have over a decade of KM practices in their organizations. While they have done a lot of experimenting of KM initiatives, they have integrated KM into the daily work routines of the employees. These organizations have also built good knowledge sharing cultures and built a comfort level for knowledge sharing for the employees. Knowledge practitioners believe that in the long run, KM should manage itself. Once the initial years of Knowledge sharing culture are introduced, KM systems are integrated into work, Automatic Metric systems are in place, KM should take care of itself. Employees should be able to add, correct, and improvise content voluntarily.

The survival of any organization is the innovativeness of the organization to build competitive edge over its competitors. The successful Fortune 500 companies have managed to remain on top because of their innovative culture. Knowledge Management aims to build that innovative culture by encouraging collaborative, learning, knowledge sharing culture in the organization. The employee should be inducted into this innovative, learning, knowledge sharing environment at the training stage itself. As the employee
grows in the organization, this culture will mould every employee in making their organization into a Knowledge Organization.

6.7 SUMMARY

This chapter summarizes and recapitulates the various aspects of the study and the conclusions. It provides suggestions for improvements in the practice of Knowledge Management in the organizations, so as to build a knowledge organization. It recommends two model based on the study. The first model is based on People as the center of all KM activity, and the second model, integrates, KM tools into work, alongwith the components of KM and Learning. This chapter also provides for future directions.