Knowledge Management in Indian IT Industries

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Abstract : The growth of knowledge management practices in India has been limited mainly in the service industries like IT,Consultancy,and some of the electronics and communication industries where innovation and redesigning of business processes are frequently practiced to gain competitive advantage . Customer satisfaction, retaining crucial talents , developing new modes of services are some major reasons of launching knowledge management programme. Collecting,storing and sharing are some important steps of handling ideas whereas creating and innovating new ideas of doing business are crucial to meet complex challenges.The success of KM is also based on implicit culture of the organization,the philosophy and belief of trust, giving people the continuous learning opportunities.

Key words: Innovation, culture, retention

1. Introduction.

There has been a total transformation in the world industrial scenario in nearly last two decades. Some of these changes were evident through shortened product life cycle, higher rate of new product development, quality of employee, flexible manufacturing system, training of employees increasing role of information technology, redesigning of business process and work flows etc. One most important reason behind all these development was value addition to the product or services. Knowledge which is an intellectual capital is also assumed as value creator and knowledge management is seen as a competitive tool for value creation and addition.   Knowledge is formalizing and also systematically organizing the experience and expertise that create new capabilities, enable superior performance, encourage innovation, and enhance customer value. The three fourth of world's corporate market value resides today in assets such as intellectual property, customer data, financial records, strategies and trade secrets. These assets are all knowledge based. Companies that top fortune 500 are the ones who have mostly adopted knowledge management strategy. Hughes Space and Communications, the world's largest manufacturer of communication satellites is constructing an internal "knowledge highway" to help its people avoid reinventing the wheel on highly complex, multi-year projects. The need and the positive application of knowledge management has spurred the development of software, systems and consulting services, knowledge data bases, knowledge exchange or centre of knowledge kind of repositories which are being more and more common phenomenon in IT and other services.

Anderson consulting has developed a knowledge exchange facility which connects almost all people of this company worldwide. This facility allows for a synchronous communication via a groupware product (Lotus note) the company is using it as a repository of firms knowledge and best practices that can be accessed from and point of the globe. At HCL HP (India) service engineers login case histories of customer problems solved by them in group software. This data- base is available to any service engineer in any part of India leading to reduction in solution time from 3 days to 4 hours. Earnst and Young, the renowned consultancy company has a cell called Centre for

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Business Knowledge which may be accessed by all their unit members to know the means and techniques of handling problems all over. McKinsey & Co. codifies a lot of knowledge in the form of Practice Development Network (PDNet).The visibility of the expert is important there. The Reliance Infocom which is a huge organization and growing in a very fast face through rapid investment in telecom and information technology business has provided opportunity to employees to learn and transfer their knowledge to others throughout the organization. Thus there have been quite a few companies who have been placing emphasis on storage and retrieval in an information based organization where people can share, learn and create knowledge. However the human aspect of knowledge management can not be ignored and the dynamics between individual and organizational learning is an important consideration and an approach which links the individual and the organization with learning process, systems, and technology which will benefit both in a reciprocal partnership will be the right requirement. However except for such assortment of success stories supporting the macro level contention that KM initiatives are undertaken for the purpose of better organizational efficiency and effectiveness, there is very few investigation in the area of knowledge management and competitiveness. There is a dearth of formal research in the area (Grover and Davenport 2001).

Indian IT industry has fetched an impressive growth in recent years. A recent survey by NASSCOM revealed that the domestic market grew by 24% and according to statistics country's software exports reached from 4.9% in 1997 to 20.4% in 2002 – 2003. It is expected that the IT Industry will generate a total employment of around 4 million people which accounts for 7% of India's total GDP in 2008. Software exports has major share in India's total exports as of 2004 – 2005 both software and services revenue grew by 32% i.e. 22$ billion and 28.5$ billions in 2005 – 2006.

2.What is Knowledge Management?

Knowledge and its Management have been dealt with many writers from the time it was first used by Wiig (1990) in a key-note address for the United Nation's International Labor Organization. There are number of interpretations and the term is gradually being more illusive. McKinsey Survey found that more successful firms had a better understanding of knowledge management and the need of it to be considered holistically throughout the organization.. Kluge, Davenport and Prusak (1998) gave in the following definition-:

"Knowledge is fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. In originates and is applied in the minds of knower's. In organizations, it often becomes imbedded not only in documents or repositories but also in organizational routines, processes, practices and norms." Alavi and Leidner (2001) defined KM system as "IT based system developed to support and enhance the processes of knowledge creation, storage /retrieval,transfer and application"Thus they considered IT as enabler of KM (Jennex2005)

Thus there are many other sources who perceived knowledge as intangible but very effective resource for organizational excellence and considered it as an asset which have enough returns if continuously renewed and practiced properly. Drawing from various sources then P. Wilson and Allan Cattell (2005) has suggested a definition like the following.

"Knowledge Management is the systematic process that supports the continuous development of individual group and organization learning and involves creation, acquisition, gathering, transmission transfer, and application of knowledge to achieve organizational objectives."

In a very simple note knowledge management is systematic handling and management of all information and data which are relevant to a specific business with its associated process of creation, diffusion, use and exploitation.

3. The Objective and Methodology of the Study

The main objective for conducting this study is to understand the basic reason for introduction, the management, and practice of knowledge as a tool for organizational effectiveness. Also the study focuses on the corporate culture and its importance on such introduction and maintenance. The study has been conducted in IT industries based at Kolkata and Hyderabad. There are altogether 194 software industries of which 148 are at Hyderabad and 46 at Kolkata. Data were collected from 20 companies which is 9.70%.

Questionnaire was prepared for IT Industry in which focus was given to receive data mainly on status, introduction, growth of KM and benefit accrued from such intervention also how the organization culture is congenial to such intervention to work successfully.

4. Evidential Report

Reasons for Launching Knowledge Management Programme

While probing into the reasons that triggered the IT companies to launch knowledge management practice, it was evident that gaining competitive advantage became the most important under the present globalised market scenario in IT industries in Kolkata and Hyderabad (80%). This is best done by satisfying and retaining customer. Retention of key talents or personnel is also an important reason for practicing knowledge management (75%) It may be noted that
retention continues to remain serious problem in most IT companies in India. But the problem is not just retention but retaining the talented employee. Some leave the organization for migrating abroad for higher studies or for the same reason in the country, and some leave for not being able to withstand the pressure. These cases are uncontrollable but others those who look for a similar post in different organization in the same industry, such cases are being minimized by both monetary and non monetary motivational ways. Monetory forms include salary increase, parks, benefits, equity options etc but the non- monetary ways are being considered more important by the organizations.   It has been proven beyond doubt that for programmer's and software engineer's motivation comes from teams and how better one can work collectively, their growth opportunity, opportunity to go abroad, updating skills etc..Identifying self with with an established company also motivates some of them. Other empirical evidence also suggests that motivating knowledge workers in the organizational knowledge process is possible but developing their loyalty to the organization so that they continue to work in the same company appears to be a problem (Hislop2005) .Thus the enriched person tries to get another job. Developing new and better services cost reduction, and improved image of the company are also other important reasons for launching the KM programme for the responding organizations.

Table 1.   **Reasons for Launching Knowledge Management Programme**

Sl no	Name of the company	Gaining competitive advantage	Improve customer retention/satisfaction	Retain key talent/expertise	Develop new services	Improved image	Avoid loss of key personnel
1	Tata Consultancy Services	√	√	√			
2	CMC	√	√	√	√		
3	IXIA	√	√	√	√		
4	Data Core India Pvt Ltd		√	√	√		√
5	Labvantage	√	√	√	√		
6	Wipro				√		
7	Ontrack Systems Pvt Ltd		√	√	√		√
8	Infovision Software	√	√	√	√		
9	Anshin Software	√		√	√		
10	Compare Infobase	√			√	√	√
11	R S Software	√	√	√	√		
12	Cognizant Technology		√	√	√		√
13	Usha Comm	√				√	√
14	Satyam	√	√	√	√	√	
15	Accenture	√	√			√	
16	Java Soft Tech	√	√				√
17	Infosys Technology	√	√	√	√	√	√
18	HCL Technologies	√	√	√	√		√
19	Oracle	√	√	√	*US Branch*		
20	IBM	√	√	√			√
	Grand Total = 20	**16 = 80%**	**16 = 80%**	**15 = 75%**	**14 = 70%**	**5 = 25%**	**9 = 45%**

2. Knowledge Acquisition and Sharing – Sources

In case of IT industry internal communication system plays a crucial role and primary source of gathering information for all IT companies. These companies have their own internal system called Intranet (JavaSofttech, Anshin Software, HCL Technologies, and Infovision Software etc) or Knowledge Exchange, (Infosys). Knowledge Exchange is a set of online discussion forum and knowledge management portal (K M Portal) which is a central repository for content are good sources of organizing, storing, sharing, collecting and discussion for which are in practice in Infosys . 80% (16 out of 20 organizations) information is collected through Websites. But websites are used mostly for updating or gaining knowledge which is important for the new employees or for any new events occurred. 55% refer to journals or magazines for updating and gaining knowledge which is a good source of enrichment. 70% i.e.14 organizations depend on past background or the history of the company. R.S.Software mentioned along with all these

sources they also have regular seminars from eminent personalities and client's visits and such academic discussions help them a lot to get enlightened.

Table- 2   **Sources of Knowledge acquisition**

SI no	Name of the company	Websites	Journal	Competitors	Internal communication systems	Past history	Others
1	Tata Consultancy Services	√	√	✓	√	√	
2	CMC	√			√		
3	IXIA	√	√	√	√	√	
4	Data Core India Pvt Ltd	√			√	√	
5	Labvantage	√	√	√	√	√	
6	Wipro				√		
7	Ontrack Systems	√			√	√	
8	Infovision Software				√		
9	Anshin Software				√	√	√
10	Compare Infobase	√	√		√		
11	R S Software	√	√	√	√	√	√
12	Cognizant Technology	√	√	√	√	√	√
13	Usha Comm	√		√	√	√	
14	Satyam	√	√		√	√	
15	Accenture	√	√		√	√	√
16	Java Soft Tech				√		√
17	Infosys Tecchnology	√	√		√	√	√
18	HCL Technologies	√			√		√
19	Oracle	√	√	√	√	√	
20	IBM	√	√	√	√	√	
	Grand Total = 20	**16 = 80%**	**11 = 55%**	**8 = 40%**	**20 = 100%**	**14 = 70%**	**7 = 35%**

3.Managing Ideas orInnovations

Almost all (95%) companies considered both collection and implementation of ideas are crucial stages whereas 45% practiced innovation as most important ingredient to success and competitiveness. IBM is committed to seeking, listening and acting on the new ideas of employees. An online collaborative tool called "thinkplace" provides an open collaborative forum for ideas generation and refinement. . One of the most renowned strategy thinkers Gary Hamel was of the view that it is time to usher in new management principle and all new principles should be based on high order innovation and achieves true engagement with human talent in the company. According to Hamel top three challenges business facing today are intensify competition, accelerated change and knowledge leveling. The pioneers like skyple, Google,

Apple and Dell practiced a lot of new ways of doing business thus made success and a healthy margin.

Table 3:

SI no	Name of the company	Ideas		Innovations
		Collecting ideas	*Implementing ideas*	
1	Tata consultancy Services	√	√	√
2	CMC	√	√	
3	IXIA	√	√	
4	Data Core India Pvt Ltd	√	√	
5	Labvantage	√	√	
6	Wipro	√	√	
7	Ontrack Systems	√	√	
8	Infovision Software	√	√	√
9	Anshin Software	√	√	√
10	Compare Infobase	√	√	
11	R S Software	√	√	
12	Cognizent Technology	√	√	√
13	Usha Comm	√	√	
14	Satyam	√	√	
15	Accenture	√	√	√
16	Java Soft Tech	*depend on the*	*project assigned and*	*situation arise*
17	Infosys Technology	√	√	√
18	HCL Technologies	√	√	√
19	Oracle	√	√	√
20	IBM	√	√	√
	Grand Total = 20	**19 = 95%**	**19 = 95%**	**9 = 45%**

Organization Culture and Knowledge Management

Success and effectiveness of an organization does not solely depend by the skills and competencies of its managers and employees, but to a large extent depends on organization's own background, and culture which intertwines the functions systems and practices.Researches in this field indicate that success culture which aims all employees at disciplined thought and disciplined action,also characterizes a high trust organization. Organisations with high level of trust are more successful in their use of KM than those with a lower level of trust. (Rebiere and Tuggle 2007) When asked almost all organizations were of the opinion that their organization culture helps promote knowledge gain and its application. However It was also understood that transforming towards a learning organization or imbibing right values or adopting a learning culture involve careful and sustained effort of top and middle level management. Infosys management always realized that they had a critical role in making the organization a 'knowledge based company'.So whether it is building the knowledge infrastructure, or knowledge creation, compulsory sharing or application ,or introducing the KMM model framework, the main effort and the strategic initiative came from top management. A few companies like Wipro,IBM, TCS, HCL,Oracle who have large setup with big turnover and good number of employees in different cadres, have been able to establish a culture through sustained performance and a group of employees with a sense

of optimism and belief in themselves and their organization. There people in almost all levels feel energized, motivated and willing to share and disseminate information between them.IBM has been cultivating a value driven culture to enable employees to share and contribute towards organizational success. It has also established a collaborative environment to support its culture of innovation, commitment to reinvention, renewal and change. Thus IBM also values empowerment, trust and and making the right decision to serve the clients, colleagues and community.

Measuring benefits-

When asked about the benefits received by the company ,a few could not give right answer either they were the units and the measurement is accrued in the head office level or some did not want to share the measurement part. Though the relevant matrix of measurement will vary depending on the objective of initiation but generally the criteria were cost savings, higher performance, and innovation, a learned group of employees, higher productivity and quality of work as primary benefits from such initiation. Among these all organizations mentioned about high performance, better teamwork, well-informed knowledgeable group of employees, and quality and productivity are some of the perceived benefits. Also creating and stressing continuous learning opportunities for people and encouraging and rewarding collaboration and team learning are some other action requirements for measurements.

Concluding remarks:

The data also show that the responsibility of introducing KM in most of the sample organizations lie on HR department. A few of them like TCS, Infosys, IBM, Oracle, and Satyam Computers have their learning centers or knowledge management team, who are responsible for strategizing to implementation. But basically it is the top management belief pattern, values and culture which either helps or makes it difficult to initiate and grow such practices in the organization. Stephen Denning mentioned "where knowledge changes the status quo, the culture of the organization can constitute a significant impediment to useful knowledge being shared".The organizations like Wipro, TCS, Seimen's Information Systems ,SSI Datametics, Techspan, IBM Global, Infosys, Satyam and Accenture have taken the lead by modelling their people processes as per the people CMM model which has been developed by Software Engineering Institute (SEI).It provides what an organization must do to improve and mature its people practices and to get appropriate results through surveys and other assessment methods. People also should have a shared understanding of what a knowledge driven company is all about and its impact. Thus knowledge management, if initiated and cultivated with all strategic intent and supported by the top decision makers is going to bring positive change in the organization-its people, process and practices.

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