

Role and Challenges for Implication of Knowledge Management Technology on Business Outsources in India

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Abstract : The supply chain, for example, relies upon knowledge from diverse areas including planning, manufacturing, warehousing, and distribution. Today's volatile business environment demands a new attitude and approach within organizations—actions must be anticipatory, adaptive, and based on a faster cycle of knowledge creation. Knowledge management is so important to public sector organizations in part because of the prospective loss of employees due to an aging workforce. A recent GAO report indicated that a substantial portion of the federal workforce would become eligible to retire or will retire over the next five to 10 years, and that workforce planning is critical to ensure that agencies have sufficient and appropriate staff to account for these retirements. In addition, high staff turnover, lack of adequate training, and a tendency to maintain the status quo, further impact and impede the success of knowledge retention and growth. Oftentimes, when people leave an organization, they take a wealth of knowledge about their jobs with them. Knowledge management attempts to secure and replenish the learning experiences, as well as the work products, of the individuals who comprise an organization. Whether to minimize loss and risk improve organizational efficiency, or embrace innovation, knowledge management efforts and initiatives add great value to an organization. Some of the benefits of KM include: • facilitates better, more informed decisions; • contributes to the intellectual capital of an organization; • encourages the free flow of ideas which leads to insight and innovation; • eliminates redundant processes, streamlines operations, and enhances employee retention rates; • improves customer service and efficiency; and • leads to greater productivity. Such a volatile climate demands a new attitude and approach within organizations—actions must be anticipatory, adaptive, and based on a faster cycle of knowledge creation. Some of the current challenges businesses face include: • a growing emphasis on creating customer value and improving customer service; • an increasingly competitive marketplace

with a rising rate of innovation; • reduced cycle times and shortened product development times; • a need for organizational adaptation because of changing business rules and assumptions; • a requirement to operate with a shrinking number of assets (people, inventory, and facilities); • a reduction in the amount of time employees are given to acquire new knowledge; and • changes in strategic directions and workforce mobility that lead to knowledge loss. New products and innovations are increasing at a faster rate than ever before, along with evolutions in customer preference and need. Managers must no longer investigate their customers superficially; they must dig more deeply than surveys and feedback forms.

Key words: planning, manufacturing, warehousing, distribution, knowledge, organizational, evolutions

I. Introduction

Economic Development and Global competitive capacity depends on knowledge resources viz., people's knowledge, experience, education, training, professional networks, collaboration and innovation abilities. Other types of resources in this area include knowledge goods, intellectual capital, human capital, customer capital and market capital. These knowledge resources are the important factors for production in a Knowledge based economy. In recent years, e-learning contributed a lot to the people's knowledge resources. Emphasis was laid on the value of learning mediated by computing systems. E-learning has become a key element in the education environment and it represents the "foundation stone" of knowledge management. The economic success of countries is directly determined by the quality of learning systems, and human capital.

II. Definition

"Knowledge management is about enhancing the use of organisational knowledge through sound practices of information management and organisational learning."

Brooking

All the elements of knowledge management can be grouped as follows

- a. Leadership / management;
- b. Organization;
- c. Technology, and
- d. Learning.

Objectives of Knowledge Management

Knowledge management involves a strategic commitment to improving the organization's effectiveness, as well as to improving its opportunity enhancement. The objectives of knowledge management systems in practice are

- a. Create knowledge repository
- b. Improve knowledge assets
- c. Enhance the knowledge environment
- d. Manage knowledge as an asset

Implementation of knowledge management requires:

1. High-level commitment to change.
2. Human Resource of organization.
3. To and fro communication in the hierarchical structure of management.
4. Understanding among the staff.
5. Keeping track of the process of workflow in the organization.

Successful Knowledge Management Implementation

Acquisition and Creation of knowledge takes places from various sources such as Individual level, Group level, and Organizational level. Sharing of knowledge among stakeholders ensures in capturing, collating and creating specific, reliable, useful, up-to-date and timely knowledge. Organizations are today striving for improving their bottom line and therefore realize the importance of involvement of customers and suppliers as sources of product and service innovation. Strategic partnerships with customers are viewed as long-term proposition.

Process of Knowledge Management

- a. **Knowledge acquisition:** finding existing knowledge, understanding requirements, searching among multiple sources.
- b. **Knowledge creation:** research activities, creative processes in advertising, writing books or articles, making movies, etc.
- c. **Packaging:** publishing, editing, design work.
- d. **Applying or using existing knowledge:** auditing, medical diagnosis;
- e. **Reuse of knowledge for a new purpose:** leveraging knowledge product development processes, software development.

Dimensions of Knowledge Management

Knowledge Management is a holistic discipline that asks everybody to take personal responsibility and accountability for their knowledge. In other words, 'Knowledge

Management is for everyone'

To successfully implement knowledge management initiatives, it is necessary to consider, at least, 4 key dimensions of KM:

1. Personal Knowledge Management
2. Team Knowledge Management
3. Organizational Knowledge Management
4. Inter-Organizational Knowledge Management

Expected benefits from a KM program

1. Fostering information
2. Improved customer service by streaming response time
3. Enhance employee retention
4. Streamline operation and reduce cost by eliminating unnecessary operation
5. Increased revenues
6. Generate new wealth
7. Open new markets
8. Lift productivity and efficiency
9. Mitigate risk
10. Unleash new ideas and creativity
11. Develop and implement new business models
12. Enhance team collaboration
13. Better forecasting
14. Help in change management
15. Extend global reach and scope

Approaches to knowledge management

There is a broad range of thought on knowledge management with no agreed definition current or likely. The approaches vary by author and school. For example, knowledge management may be viewed from each of the following perspectives:

- a. Techno-centric: Focus on technologies, ideally those that enhance knowledge sharing / growth, frequently any technology that does fancy stuff with information.
- b. Organizational: How does the organization need to be designed to facilitate knowledge processes? Which organizations work best with what processes?
- c. Ecological: seeing the interaction of people, identity, knowledge and environmental factors as a complex adaptive system.
- d. Combinatory: Combining more than one of the above approaches where possible without contradiction.

III. Challenges of KM

Most of the challenges in knowledge management primarily stem from the types of knowledge reuse situations and purposes. Knowledge workers may produce knowledge that they themselves reuse while working. However, each knowledge re-use situation is unique in terms of requirements and context. Whenever these differences between the knowledge re-use situations are ignored, the organization faces various challenges in implementing its knowledge management practices. Some of the common challenges resulting due to this and other factors are listed below.

Data Accuracy: Valuable raw data generated by a particular group within an organization may need to be validated before being transformed into normalized or consistent content.

Data Interpretation: Information derived by one group may need to be mapped to a standard context in order to be meaningful to someone else in the organization.

Data Relevancy: The quality and value of knowledge depend on relevance. Knowledge that lacks relevance simply adds complexity, cost, and risk to an organization without any compensating benefits. If the data does not support or truly answer the question being asked by the user, it requires the appropriate meta-data (data about data) to be held in the knowledge management solution.

Ability of the data to support/deny hypotheses: Does the information truly support decision-making? Does the knowledge management solution include a statistical or

rule-based model for the workflow within which the question is being asked?

Adoption of knowledge management solutions: Do organizational cultures foster and support voluntary usage of knowledge management solutions?

Knowledge bases tend to be very complex and large: When knowledge databases become very large and complex, it puts the organization in a fix. The organization could cleanse the system of very old files, thus diluting its own knowledge management initiative. Alternatively, it could set up another team to cleanse the database of redundant files, thus increasing its costs substantially. Apart from these, the real challenge for an organization could be to monitor various departments and ensure that they take responsibility for keeping their repositories clean of redundant files

IV. Obstacles to KM Implementation

Lack of business purpose

Most organizations look at implementation of knowledge management program as an end in itself. Organizations need to look beyond implementation and to define ways of dealing with the pressing problems of the organization using knowledge management.

Poor planning and inadequate resources

Many companies focus their attention on the KM pilot project and forget about the roll out. Organizations need to make the plan the rollout and the pilot plant simultaneously to avoid loss of focus on the mail roll out.

Lack of accountability

Knowledge management initiatives peter out if accountability is not fixed on persons to implement the initiatives and see the end of it. Typically, knowledge management programs could be implemented by a core team dedicated for the purpose.

Lack of customization

Knowledge management is not a one-size-fit-all program. It works best when individual programs are tailored to the need of the individual users. It should also fit into the organization culture.

Reasons for Failure of KM

The problem with KM is that the people charged with introducing it into organizations were mostly front-line back-office people -- middle managers with a background in library management, IT or training. Few of them really knew how decisions were made and resources allocated in their organizations. The library people saw KM as a content management exercise. The IT people saw KM as a set of technology projects (intranets, extranets, and groupware). The training people saw KM as an e-learning vehicle. Senior managers were mostly unenthusiastic, worried that it would spawn more IT bureaucracy like e-mail, and not seeing any new value provided by it. Their hope, tragically, was that KM might automate some back office functions and allow cost savings. We might be able to understand the reasons for KM's failure if we looked through the eyes of senior managers, front-line employees, and customers, at the value of information to organizations. The diagram below shows how this looked in the days before ubiquitous computers say, in 1975.

So here we are in 2009, and the principal information flows in most organizations are still exactly what they were in 1975, as depicted in the chart above. What's changed?

- a. Instead of typed memos, instructions are now sent to employees by e-mail; performance data is sent back up to management by e-mail, or captured electronically automatically.
- b. Peer-to-peer conversations are still mostly real time and face-to-face or voice-to-voice (or IM); asynchronous conversations in e-mail threads are arguably the least effective. E-mail has allowed more conversation with colleagues outside the organization, and with young workers much learning occurs through such conversations, though IT security in most large organizations prohibits many of the social media used by young workers to communicate outside the organization, nullifying much of this advantage and creating considerable animosity.
- c. The library has been largely supplanted by the Intranet, but it is now much harder to find things and there are fewer information professionals able to help you find stuff, so searching takes longer and is less effective. The Intranet in most organizations is still used principally for the same two purposes: looking up policies and procedures, and directories. Most other Intranet content is unused or in some cases misused.
- d. E-mail has allowed a massive increase in the amount of work delegation between employees in most organizations. It is easier to delegate work when you don't have to face the person you're asking to do it, even though the chance of it being done well is less. E-mail also allows much more procrastination in organizations -- people send requests for information to others Friday afternoon,

as an excuse to put off working on a project until the next week. There is considerable evidence that e-mail has had a significant negative effect on productivity and work effectiveness, because there is no accountability to the sender for time of the recipients that has been wasted, and because it costs nothing to send an e-mail to an unlimited number of recipients.

- e. After a period of disintermediation (people doing their own on-line research instead of having librarians, assistants or information professionals do it for them) there has been a swing back to reinter mediated research, as most employees learned they lack the significant competencies needed to do quality research. Young workers tend to still do their own on-line research, but only until they find an appropriate intermediary and reach the level at which they are permitted to delegate research.
- f. Most marketing material is now sent by e-mail and also duplicated on the organization's public Internet site, but in these electronic forms it is mostly unread.

V. Difficulties in implementing a successful Knowledge management program

1) Getting employees– The biggest difficulty in implementing KM program is because companies ignore people and culture issues. It is a holistic approach to implement KM throughout the organization and not to fragment it. The best way to motivate people for this is by launching an incentive program but again the quality and the accuracy has to be considered.

2) Allowing Technology to dictate – It is not always the technical part that is workable but a right balance between technical and human angle has to be sorted out. Simply by implementing centralized DBMS, web portal, electronic message board purpose of implementing KM ever comes fertile.

3) Unclearly in goals / roles: - KM program should always be aligned with business goal so that delegation and responsibility charting can be done in an effective manner.

4) Energy and vitality: - It demands heavy participation, forecasting, immediate and reasonable decision making for an efficient KM program to flourish and give right results.

5) Feedback and follow up: - System approach teaches the right direction in which a KM program must be nurtured so that timely action, 2- way communication and adequate corrective action can be implemented in time. Knowledge Management (KM) comprises a range of strategies and practices used in an organization to identify, create,

represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizational processes or practice. An established discipline since 1991, KM includes courses taught in the fields of business administration, information systems, management, and library and information sciences. More recently, other fields have started contributing to KM research; these include information and media, computer science, public health, and public policy.

Many large companies and non-profit organizations have resources dedicated to internal KM efforts, often as a part of their 'business strategy', 'information technology', or 'human resource management' departments. Several consulting companies also exist that provide strategy and advice regarding KM to these organizations. Knowledge Management efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization. KM efforts overlap with organizational learning, and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge. KM efforts can help individuals and groups to share valuable organizational insights, to reduce redundant work, to avoid reinventing the wheel per se, to reduce training time for new employees, to retain intellectual capital as employees turnover in an organization, and to adapt to changing environments and markets.

VI. Research on Knowledge Management

KM emerged as a scientific discipline in the earlier 1990s. It was initially supported solely by practitioners, when Scandia hired Leif Edvinsson of Sweden as the world's first Chief Knowledge Officer (CKO). Hubert Saint-Onge (formerly of CIBC, Canada), started investigating various sides of KM long before that. The objective of CKOs is to manage and maximize the intangible assets of their organizations. Gradually, CKOs became interested in not only practical but also theoretical aspects of KM, and the new research field was formed. The KM ideas taken up by academics, such as Ikujiro Nonaka (Hitotsubashi University), Hirotaka Takeuchi (Hitotsubashi University), Thomas H. Davenport (Babson College) and Baruch Lev (New York University). In 2001, Thomas A. Stewart, former editor at FORTUNE Magazine and subsequently the editor of Harvard Business Review, published a cover story highlighting the importance of intellectual capital of organizations. Since its establishment, the KM discipline has been gradually moving towards academic maturity. First, there is a trend towards higher cooperation among academics; particularly, there has been a drop in single-authored publications. Second, the role of practitioners has changed. Their contribution to academic research has been dramatically declining from 30% of

overall contributions up to 2002, to only 10% by 2009. A broad range of thoughts on the KM discipline exists with no unanimous agreement; approaches vary by author and school. As the discipline matures, academic debates have increased regarding both the theory and practice of KM, to include the following perspectives:

- a. Techno-centric with a focus on technology, ideally those that enhance knowledge sharing and creation.
- b. Organizational with a focus on how an organization can be designed to facilitate knowledge processes best.
- c. Ecological with a focus on the interaction of people, identity, knowledge, and environmental factors as a complex adaptive system akin to a natural ecosystem.

Regardless of the school of thought, core components of KM include People, Processes, Technology (or) Culture, Structure, Technology, depending on the specific perspective). Different KM schools of thought include various lenses through which KM can be viewed and explained, to include:

- a. community of practice
- b. social network analysis
- c. intellectual capital
- d. information theory
- e. complexity science
- f. constructivism

The practical relevance of academic research in KM has been questioned with action research suggested as having more relevance and the need to translate the findings presented in academic journals to a practice.

Motivations

A number of claims exist as to the motivations leading organizations to undertake a KM effort. Typical considerations driving a KM effort include:

- a. Making available increased knowledge content in the development and provision of products and services
- b. Achieving shorter new product development cycles
- c. Facilitating and managing innovation and organizational learning
- d. Leveraging the expertise of people across the organization
- e. Increasing network connectivity between internal and external individuals
- f. Managing business environments and allowing employees to obtain relevant insights and ideas appropriate to their work
- g. Solving intractable or wicked problems

- h. Managing intellectual capital and intellectual assets in the workforce (such as the expertise and know-how possessed by key individuals)

Debate exists whether KM is more than a passing fad, though increasing amount of research in this field may hopefully help to answer this question, as well as create consensus on what elements of KM help determine the success or failure of such efforts).

Technologies

Early KM technologies included online corporate yellow pages as expertise locators and document management systems. Combined with the early development of collaborative technologies (in particular Lotus Notes), KM technologies expanded in the mid-1990s. Subsequent KM efforts leveraged semantic technologies for search and retrieval and the development of e-learning tools for communities of practice).

More recently, development of social computing tools (such as bookmarks, blogs, and wikis) have allowed more unstructured, self-governing or ecosystem approaches to the transfer, capture and creation of knowledge, including the development of new forms of communities, networks, or matrixed organizations. However such tools for the most part are still based on text and code, and thus represent explicit knowledge transfer. These tools face challenges in distilling meaningful re-usable knowledge and ensuring that their content is transmissible.

Software tools in knowledge management are a collection of technologies and are not necessarily acquired as a single software solution. Furthermore, these knowledge management software tools have the advantage of using the organization existing information technology infrastructure. Organizations and business decision makers spend a great deal of resources and make significant investments in the latest technology, systems and infrastructure to support knowledge management. It is imperative that these investments are validated properly, made wisely and that the most appropriate technologies and software tools are selected or combined to facilitate knowledge management.

Knowledge management and collaboration

Development of Web2.0 added new dimension to knowledge management process. The web-based collaborative tools, such as wiki, made it possible for corporate employees to continuously contribute and access information to / from central repository. Companies that implemented wiki-style knowledge base reported significant increase in productivity once the habit of contributing, sharing and accessing knowledge is instilled.

Virtual worlds further increased collaborative opportunities in the process of knowledge sharing. Unlike Web2.0 applications, in virtual worlds a team can work synchronously. The new generations of virtual worlds tools, allow the team not only meet and exchange ideas verbally, but document them by creating flow charts and diagrams of concepts, processes or procedures that are—explicitly or implicitly—are a part of the organizational knowledge base.

Conclusion

In the conclusion part of the essay and according to Authors, The knowledge is the necessary tool for the functioning of present industry. Therefore, knowledge management must be granted a major position in educational and training systems. It must become a compulsory academic discipline, with principles based on scientific research behavior/culture, processes, branding & marketing and collaborative technology. Most of what the KM department does now is trying to facilitate more effective conversations among people within the organization and with people outside the organization, including customers. They facilitate many meetings that use the virtual presence application, especially those that involve more than five people. In addition, the KM department conducts environmental scans and conducts research in areas the organization wants to focus on, and publishes and runs short video presentations on the results. They also browse the content of the aggregate of the Company Sectors of all employees of the organization, notifying managers and employees of content that may be worthy of follow-up, and they assist employees to manage their subscriptions to people's Public Sector content. And, when the organization holds sessions and conferences on strategy, risk, innovation or customer relationships, the KM department is on hand to do advance and just-in-time research.

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