KNOWLEDGE MANAGEMENT THROUGH TECHNOLOGIES AND PROFESSIONALS: SOME ISSUES

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Abstract

The ultimate aim of this paper is to highlight the necessity of technology and role of professionals in effective Knowledge Management. The paper also discuss the Knowledge management System along with all the related areas e.g. Knowledge Sharing, Knowledge Management Education, Differences in emphasis between KM and Traditional Library & Information work, Role of Human Resource Management (HRM) in Knowledge Management (KM) and Building employee Commitment through HRM Initiatives etc.

Keyword : Knowledge Sharing, Knowledge Management Education, Virtual Library, Knowledge Management System.

1. Introduction

Rapid and extensive advances in technology, particularly in the area of communications, have had a considerable impact on the way organizations operate and opened pathways to access vast amount of information. Information however is static unless knowledge is applied to translate it into something meaningful and with the potential to actionable. The ability to share knowledge, to develop ideas, and to become more innovative is increasingly important for Research & Development activities, business and the range of technology available now provides to conduit for knowledge to flow through the organization to enable to sharing to occur. Technology is frequently used as "just an enabler" but it can also be identified as a value adder. Consequently, the professional has to play a vital role to invent the knowledge by supplying information as per requirement.

2. Knowledge Management (KM)

Knowledge Management (KM) is defined as a systematic and organized attempt to use Knowledge (K) within an organization to transform its ability to store and use K to improve performance. Beveren (2002) expresses that KM strategy is a cornerstone for improving performance in organizations. Yogesh Malhotra States that KM caters to the critical issues of organizational adaptation, survival and competencies in face of increasingly discontinuous environmental change. Hlupic, Pouloudi, and Rzevski (2002) suggest that KM would give organizations the operational ability to identify their strengths and weakness, bring out the hidden potential of the employees, to understand and response as perceived by the end customers.

The "big idea" with KM is that in fast moving and increasingly competitive world, an organization's only enduring source of K. the major challenge of managing K lies more in capturing and integration than on creation. Jimmy and Li argue that KM is the process of capturing organization's collective

expertise wherever it resides and distributing it whenever needed to help produce the biggest payoffs. Indeed, K is of limited organizational value if it is not shared. Therefore, KM objective should be derived from organizational goals. KM success includes creativity, innovativeness, adaptability, sharing and reacting to changes. (12)

3. Knowledge Sharing (KS)

The crucial outcome of KS is the creation of new K and innovation that will significantly improve organizational performance. KS in its broader sense refers to the communications of all types of K, which includes explicit and tacit knowledge. Therefore, KS activity is crucial for organizational success because, many industrial nations today are faced with an ageing population, implying a graying workforce for many organizations. This has led to the requirement that the K that they have accumulated over the years they codified in some form and "passed on" before they retire. A prominent model has suggested by Nonanka and Takeuchi for the effective KS. They proposed the K spiral model that is concern with the conversion of tacit K to explicit K and vice versa. They also suggested four steps: Socialization, Externalization, Combination and Internationalization (SECI) by which KS can take place. (9)

4. Information and Knowledge

Information is data that has been processed into a meaningful form. Seen in this way, information is an assemblage of data in a comprehensible form capable of communication and use; the essence of it is that a meaning has been attached to the raw facts. The conceptual distinction between information and knowledge is therefore rather unclear, although the two terms tend to be used in somewhat different contexts. Increasingly, information is the word that is applied in the broad professional and technical contexts represented in such phrases as 'Information Technology' or 'Information retrieval' or 'Information Management'. It is thus used in general sense to encompass all the different ways of representing facts, events and concepts in both digital and analog systems, and in all media and systems. (5)

Knowledge is information evaluated and organized in the human mind so that it can be used purposefully. In this sense, the term can be equated with understanding. Again, The Knowledge is defined as a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizations routines, processes, practices and norms. As interest grows beyond information, calculation & imagination organization are looking to technology to progress toward the development of KM systems. The development of technology has taken the drudgery out of searching, analyzing and converting data into information to which K can be applied. Technology and knowledge however do not stand in isolation. The organization that promotes the value of K, skills and competencies of its people and recognizes the importance of technology is

providing well for its future. (2)

5. Differences in emphasis between KM and Traditional Library & Information work

Sl. No.	Knowledge Management	Traditional Library and Information work
1.	The addition of and many cases an emphasis on unstructured and informal information/knowledge.	Emphasis upon (indeed a limitation to) structured and formal information/knowledge.
2.	Emphasis on internal information and now increasingly external information but often-external information that resides with supplier and customers, not in the open literature.	Emphasis on information, external to the organization, the 'literature'
3.	An active role in corporate culture transformation and change agentry.	Neutrality within the organization.
4.	Information and knowledge sharing, in the context of a dense web structure.	Information and knowledge delivery, as a hub (Library) and spoke structure.
5.	A loose unformed poorly developed appreciation for information / knowledge structuring.	Syndetic structure, information structuring, taxonomies, cataloguing, classification…
6.	Knowledge of the context, organization, supplier, customer.	Growing external knowledge, but nit well recognized within the organization.
7.	An awareness of K as text, but coming from a background in non-textual information.	Information primarily as text, secondarily as numerical or graphic.
8.	Linking knowledge sharing with compensation policy.	Has never been involved with compensation policy. (6)

6. Virtual Library

Every college department and individual lecturers archive material in the form of journals and books related to specific topics. However, few systems to track departmental and individual repositories to facilitate research and budgeting. This component will do the following:

- Track research material within departments.
- Automate the lending of research materials to staff and students.
- Enable inventory and budget reporting.
- Assist lecturers in managing their personal resources (Journals, books and proceedings).
- Eliminate duplicate purchase of material.
- Reduce the workload of administrative and academic staff. (4)

7. Knowledge Management System (KMS)

A comprehensive Information & Communication Technology (ICT) platform for collaboration and Knowledge Sharing, with advanced knowledge services built on top that are contextualized and

integrated on the basis of a shared ontology, and personalized for participants networked in communities. KMSs foster the implementation of KM instruments in support of knowledge processes targeted at increasing organizational effectiveness. (10)

Information system can include either operative or directive and decision support information. Operative system provide system users with information necessary in workers' daily work, while directive and decision support systems provides system users with information that improves the quality of decision workers make in daily work. KMSs are system developed to manage K directly or indirectly to give support for an improved quality of a decision made in worker daily work, and as an extension, an increased organizational ability. A KMS typically includes the directive information for example, in guiding user's choice in a specific work situation. Such systems are often optional in the sense that users can deliberately refrain from using the systems and / or refrain from taking the directed action. Accordingly, users acceptance is crucial for the degree of usage of KMS. (1)

8. Knowledge Management Education (KME)

Against a great deal of debate about the future of information professionals on the one hand and KM as a profession on the other, the core educational issues relating to the skill and competencies that professional needs to acquire in order to provide effective solutions to the problems associated with KM. As K becomes a key strategic input, there is a need to have a broader understanding of the various KM processes that include K creation, capture, retention and transfer of knowledge sharing. As KM is a multidisciplinary profession, K professionals need to have a broader education that enables them to deal with a complex technological environment and the large amount of information generated every day, to encourage and promote K sharing activities and to ensure that the information and K acquired by the library is properly utilized and translated in to products and services.

9. Role of Human Resource Management (HRM) in Knowledge Management (KM)

Though Knowledge Managers can put system in place but it is the manpower and willingness on the part of manpower to share the tacit K that enables KM systems to work effectively. The motivation that contribute the K with the organization depends on the levels of the commitment of the workers have towards the organization and their perception about own role in the organization. Unless they are committed to the organization and strongly hold the feelings that both themselves and organization are complementary to each other, effective KM system will not work. Success of any KM initiatives largely depends on level of motivation of people and their subsequent active role in KM process. Most of the Knowledge in the organization is tacit in nature, though some people do not agree with the dichotomous classification of the K as either Tacit or Explicit. Tacit knowledge, either embrained or embodied is possessed by people and is often found difficult to codify it into explicit form. K is a resource occurred in human mind. So, the personal nature of the tacit Knowledge requires willingness on the part of the workers to share and communicate with others.

10. Building employee Commitment through HRM Initiatives

Effective KM largely depends on the employee motivation and commitment towards the organization. Employee commitment is found to be associated with other constructs like trust, psychological contracts and job satisfaction. Guest and Conway's model attempts to integrate constructs like commitment psychological contracts and job satisfaction. Psychological contracts represent the perceptions both the employee and the organization bring to the employment relationship of their internal obligations. Commitment to organization is an attitudinal consequence of the psychological contracts. A positive psychological contract means a positive / higher levels of commitment have their bearing on the behavioral consequences. Workers with high level of organizational commitment are less likely to leave, are more likely to be highly motivated and will be more willing to provide extra discretionary effort and be generally willing to share their K within the organization. There are five perspectives, which can be used to link HRM with KM. The perspective of 'best practices' facilitates KS and these practices can be used for any organization. Development, use and retention of knowledge capital in organizations are to some extent dependent on workers possessing some level of commitment to the organization in which they were working. So, HRM practices and policies play a role in deciding the employee commitment and motivation to share the knowledge within the organization. (7)

11. The Role of Technology in KM

Though KM is not about technology, it plays an important role in KM. The advances in Information and Communication Technology (ICT), the Internet revolution and the move toward information and K Society have emphasized the importance of K and the need for KM. Besides, Information Technology (IT) has improved the ability to store, access, manipulate and use of information in a variety of ways. However, technology cannot mandate human collaboration. If effectively used, it can only streamline work operations and improve communication between people. Collaborative applications such as e-mail, calendaring, scheduling, databases and threaded discussions promote K sharing and K transfer. Information management is only one component KM given that KM involves many human factors associated with K.

KM tools need to go beyond information management activities and focus on tools that will enable human communications and collaboration. This is because information management tools are only concerned with the management of explicit K and include tools for capturing, indexing, retrieving, and manipulating information where as KM technologies go beyond information management tools to include technologies designed to facilitate the management of other types of knowledge such as tacit knowledge. These technologies require human interactions at all levels and their main objective is to facilitate communication, collaboration and interaction that in turn will facilitate K transfer from one person to the other. (8)

12. Technology: Enabler or Value-Adder?

The organizations of world wide networks and new technology is "the catalyst which is forcing all organizations to re-evaluate what they know, what they do with that knowledge and how they continually add value to that Kin meeting changing and ever growing users need". While the cost of "keeping up" with technological developments has always been a problem for organizations that have made a strong commitment to technology, others recognize that they need to work smarter with that they have. If technology is just an enabler, what is that adds value to the organizations? According to Binney, what has emerged is the KM spectrum, in which he identifies KM applications and places them into "six common categories to establish the elements of the KM Spectrum".

The mapped KM applications as per the elements are as;

- Transactional - Order entry applications, help desk applications.
- Analytical - Data warehousing, customer relationship, DSS, MIS. management,
- Asset Management - Document management, Intellectual Property.
- Process - TQM, process automation, benchmarking.
- Developmental - Skill development & training.
- Innovation & creation - Communities, Virtual teams, networking.

The next stage of the process added to the various elements, enabling technologies:

- Transactional - Expert system, probability networks.
- Analytical - Intelligent agents, data analysis and reporting tools.
- Asset Management - document management tools, Knowledge Maps.
- Process - Workflow management, Process-modeling-tools.
- Developmental - Computer based training, online training.
- Innovation & creation - Search engine, Voice mail, Group ware.

The KM spectrum provides organizations with the means to identify their present positions and to make use of the framework to map their future investments in KM. The technology has provided the impetus for the growth of the information age. But it should not be regarded as a domain partner. The future will bring ever more sophisticated advancements in technology providing new avenues of exploration for seeking, creating and sharing knowledge. (3)

13. The Web-Based Knowledge Management Models

One individual does not create the content of KMS. The content collection and the access of the content is a collective behaviour. Therefore, the technological infrastructure installed must be able to facilitate the collective behaviour of KM. There are four web-based KM models. These models represent the current level of web-based KM. Nonetheless; these four types model may not represent all of the web-based KM models. These four representative models are as:

- Library model
- Attachment / Association model
- Directory model
- Press center model.

As the title of this paper in concern, out of the four above-mentioned models we like to highlights only the Library Model.

Library Model

This model enables content-based document searches. Under this model, a large collection of document is established. Both the attributes and the content of a document are indexed, in contrast to the traditional method where only the attributes of a document are indexed. The attributes of document may include title, subject, author name(s), publication (creation) date, number of pages and so on. Under this model powerful search functions are provided, where not only these attributes are searched, but also the content of the documents are searched. An example was provided by the IT Knowledge.com web site, which is a large repository of IT related books. The contents of the books are fully available. The chapters in a book are hypertext documents. Not only the attributes of the books are classified and indexed and can be searched easily, but also the chapter titles are also indexed by keyword and can be searched. This makes it possible to find a document with attributes. That does not meet a search criterion. (13)

14. Library professionals in Knowledge Management

The roles of library professionals are increasing at rapid rate in the work of collection, organization and dissemination of information. Information is an essential component of the all round development of the society as a whole. So, to ensure the maximum use of information, enough attention be devoted to the entire process from the information generation to its effective use. In knowledge production, information is used as input. Again, KM consisting of knowledge managers or professionals to perform the following functions as an Information:

- Generators
- Gatherers
- Recorders

- Processors
- Organizers
- Disseminators
- Retrievers
- Preservers
- Measurers
- Compilers(11)

From the above, it is seen that the library professionals has to take number of responsibility to the entire KMS. Now, it is very much common to all of us that the application of Information Technology (IT) and even Information communication Technology (ICT) is indispensable due to the several explosions in information society (population explosion, information explosion, technological explosion, knowledge explosion etc). Therefore, necessary steps (Education, Training, Orientation, Refresher, Workshop on continuing basis) are to be taken for the technological awareness (including its frequent changes) among the library professionals, so that they can easily & cordially cope themselves with the changing environment. To motivate the library personnel recruitment and promotion is to be made on bias-free as well as on the basis of all the relevant factors taking together instead of individual factor. The factors are may be performance, efficiency, academic qualification and seniority as the case may be.

15. Conclusions

It should always be kept in mind the different factors associated with the relevant system(s) for the proper utilization of the data, information, and knowledge what ever it may be. Enough attention be given for the development of the library personnel for the successful completion / execution of the plan of the organization. Unless otherwise performance development of the concerned personnel the technology alone fails to achieve target objectives. It may be state that, optimum combination of the entire component not only KMS rather any system is the helpful to cater the services as per the demand of the client. The main component of the KMS are Technology, Knowledge / information, Staff and Users. So, to run any knowledge organization in proper way it is essential to have required technological infrastructure, technologically sound staff, standard information / knowledge and conscious users community. To inform and update the professionals it is better to conduct the training and development programs after certain intervals and at the same time initiative is also to be taken for offering periodic users learning programme to make them familiar with the present technology.

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