Application of Knowledge Management in Indian Libraries

Anita Chhatwal
Librarian
Sri Guru Gobind Singh College, Sector-26, Chandigarh-160019 (India)
Tel: (91) 9855101044
anita_chhatwal@yahoo.co.in

Abstract

In the present knowledge economy, knowledge has emerged as the fundamental reserve not only for commerce but also for society as a whole. Knowledge stimulates the energy for corporations, innovations, assets creation and productivity. Knowledge needs to be created to flow among workers, workgroups, and across complete organization. Importance of knowledge can be perceived from fact that knowledge has been considered to be the fifth critical resource in open market conditions after land, labour, capital and enterprise. It is the next paradigm shift in computing following the evolution of data processing and information management.

Knowledge Management is an interdisciplinary business model that has knowledge within the framework of an organization as its focus. It is embedded in many disciplines like business, economics, psychology as well as libraries and information centres. In the era of digital technology, knowledge management has become essential for libraries to gain greater satisfaction from users. The libraries face challenge from various commercial organizations who have entered into the field of information services. Therefore libraries must strive to provide right information to the right clientele at the right time with the right expense of financial and human resources and in right form. Knowledge management tool can help the libraries to meet these challenges. Knowledge management in libraries helps in creation of knowledge bases, exchange and sharing of knowledge, explicit processing and implicit disseminating of knowledge.

This paper explores the phenomenon of knowledge management from the point of view of library professionals, need, types, components, principles and benefits of knowledge management are discussed, highlights the driving forces behind knowledge management, challenges are given as it is not a perfect recipe. Finally, it explains the application of knowledge management in libraries and information centres in India.

Introduction

In the epoch of knowledge economy, information is considered to be the fourth critical resource in open market surroundings after men, money and materials and Knowledge is perceived to be the fifth factor of production after land, labor, capital and enterprise.

The significance of Knowledge Management (KM) has been documented by the organizations all over the globe. Having origin in several disciplines like simulation, organizational behaviour, information management, the origin of Knowledge Management rented from the business world took place in 1980's. It is defined as the process for enabling individuals within an organization to share information and knowledge effectively in order to save the time and make better decisions.

In the library context, the prior role of libraries has been the store house of documents with closed access but over the years the focal point has changed from collection management to knowledge management. Knowledge Management in libraries encourages and generates an environment as well as means for the exchange of knowledge between the library professionals, reinforce modernism, and initiate the passion for learning, thus making the knowledge applied to the activities of the library competently.

Concept and Definitions of Knowledge Management

Davenport et al categorized Knowledge Management into four broad perspectives[1]:

Creation of Knowledge Repositories

- Knowledge Repositories are created to store both knowledge and information habitually in a documentary form. These repositories fall into three categories:
- External knowledge repositories such as competitive intelligence.
- Internal knowledge repositories such as research reports and product oriented marketing materials.
- Tacit knowledge repositories, such as discussion databases.

Upgrading Knowledge Access and Transfer

Access and transfer of information must be upgraded and enhanced. Technologies such as video conferencing systems, document scanning and sharing tools and telecommunications networks are some of the examples.

Augmenting the Knowledge Atmosphere

For more effective knowledge creation, the environment needs to be more conductive.

Administer Knowledge as a Positive Feature

To recognize the value of knowledge to an organization by administering knowledge as a positive attribute.

According to Gartner Group "Knowledge Management is a discipline that promotes an integrated and collaborative approach to the process of information asset creation, capture, organization, access and use."[2]

P. Galagan[3] proposes that the Knowledge Management is a process:
- Generating new knowledge.
- Accessing knowledge from external sources.
- Representing knowledge in documents, databases, software and so forth.
- Embedding knowledge in processes, products, or services.
- Transferring existing knowledge around an organization.
- Using accessible knowledge in decision-making.
- Facilitating knowledge growth through culture and incentives.
- Measuring the value of knowledge assets and the impact of knowledge management.

Knowledge management is "an audit of intellectual assets that highlights unique sources, critical functions and potential bottlenecks which would otherwise hinder the knowledge flow to the point of use". It protects intellectual assets from decay, seeks opportunities to enhance decisions, services and products through adding intelligence, increasing value and providing flexibility. e-Zest defines knowledge management as "the process by which information is used to create something actionable".[4]

Arun O. Gupta, Senior Director Business Technology, Pfizer Ltd describes Knowledge Management as a practice that addresses the need for information that is required for making effective decisions. If this information is structured, the same can be translated into knowledge by applying a set of predefined rules. For example, comments on discussion boards can be converted into useful FAQs[5]

Types of Knowledge

The following characteristics can be attributed to knowledge
- Created with dynamism
- Intrinsically linked to people
- Pre-requisite for human action

The other categorization of knowledge is:

Knowledge Psychology
Knowledge psychology differentiates between declarative and procedural knowledge.
- **Declarative Knowledge:** Also described as knowledge of something or "know what" refers to facts and objects.
- **Procedural Knowledge:** It is described as process knowledge or "know how" refers to the way cognitive processes and actions are performed.

Structuring Knowledge According to Articulability

It focuses on whether or not knowledge holder is aware of the knowledge and can thus articulate it.

- **Explicit Knowledge:** A knowledge that is consciously understood and can be articulated is known as explicit knowledge. In other words, knowledge the "knower" is aware of and can talk about. Explicit knowledge promotes equable, consistent organizational responses. Explicit knowledge is used in the design of routines, standard operation procedures, and the structure of data records. These forms of knowledge can be found in any organization

- **Tacit Knowledge:** Tacit Knowledge is the knowledge the "knower" is not aware of. It can only-if-at-all-be elicited and thus articulated, with great effort and the use of special observation or interview techniques. Tacit knowledge includes hands-on skills, best practices, special know-how, and intuitions. Traditionally the transfer of Tacit knowledge is through shared experience, through apprenticeship and job training.

Knowledge Holder

It differentiates between individual and collective knowledge

- **Individual Knowledge:** Knowledge held by one person is called individual knowledge. It is not dependant on a specific content and is controlled by the individual concerned.

- **Collective Knowledge:** Knowledge that is relevant in a specific environment is called collective knowledge. It can include individual knowledge, knowledge shared by everyone.

<div align="center">

Need for Knowledge Management

</div>

In the present scenario, every organization needs to manage their knowledge assets in order to get maximum benefits. In order to capture information for knowledge generation and to provide quality services to the users, there is a need to implement Knowledge Management in libraries and information centres. This need crops up due to the following reasons:

- Cutthroat market rivalries
- Rate of modernization is accelerating
- Loss of knowledge due to increase in mobility among staff
- The employees holding valuable knowledge is reduced due to competitive pressures
- Knowledge based competitions between various organizations
- Availability of less time to get your hands on knowledge
- Majority of work is based upon innovative knowledge

<div align="center">

Components of Knowledge Management[6]

</div>

1. People management – recognition of the skills of people
2. Process management – links into the identification and deployment of practices may be associated with business process reengineering.

3.   Information management – knowledge, and not just information and data, should be available from wherever it is needed to all those authorized to receive it. The language should be simple and appropriate making both input and output easy.

The five enablers for knowledge creation are vision, strategy, structure, system, and staff.

Principles of Knowledge Management

According to Thomas H. Davenport[7], the ten principles of knowledge management are:
- Knowledge Management is expensive
- Effective management of knowledge requires hybrid solutions of people and technology
- Knowledge Management is highly political
- Knowledge Management requires knowledge managers
- Knowledge Management benefits more from maps than models, more from markets than from hierarchies
- Sharing and using knowledge are often unnatural acts
- Knowledge Management means improving knowledge work process
- Knowledge Management access is only the beginning
- Knowledge Management never ends
- Knowledge Management requires a knowledge contract

Benefits of Knowledge Management

- Superior market condition
- Stability of organization is maintained
- Organizations become more profitable
- Efficiency of administrative services in organizations is increased
- Service to the customers is improved
- Communication capability between knowledge workers is improved
- Ensure that efficient knowledge workers continue to work in the organization.
- Skills to build up most recent market focused strategic plans is enhanced

Besides above mentioned benefits, some other benefits of Knowledge Management as observed by Santosus and Surmacz[8]:
- Foster innovation by encouraging free flow of ideas
- Improve customer service by streamlining response time
- Boost revenues by getting products and services to market faster
- Enhance employee retention rates by recognizing the value of employees' knowledge and rewarding them for it
- Streamline operations and reduce costs by eliminating redundant or unnecessary processes.

Driving Forces behind Knowledge Management

Those who are engaged in managing knowledge are driven by the forces of competition, demands of market place, innovative management practices and accessibility of Information technology. There are two types of Driving Forces behind Knowledge Management:

External Driving Forces

Most of the organizations function in the atmosphere which is beyond their control as their success is subject to the external forces that they must live with and respond to as best they can to survive. Some of the external forces emerged these days are:

i)   **Global Business Competition:**

Earlier, there were few product alternatives, whereas now days, it has become a global phenomenon that the products are created in one country and are assembled in another country. The products and services that were formerly available in the developed countries are now made accessible in less developed or developing countries too thereby leading to cut-throat competition where only those who are most effective ad efficient in operations, marketing and creation of products and services could survive.

ii)   **Complicated Clientele**

Client organizations increasingly demand for those products and services that support their success and would serve the customers leading to customer satisfaction in their own country. To survive in the era of high quality and quick response, the organizations must perform better than their competitors by understanding customer needs.

iii)   **Complicated Competitors**

Organizations are constantly providing innovative products and services by adopting new technologies. Therefore, to survive, the organizations need to built competitive expertise by adopting these changes and be at par with them.

iv)   **Complicated Suppliers**

Suppliers are regularly improving and trying to innovate their services to deliver their products. The enterprises must understand their innovations.

Internal Driving Forces

Many types of development within enterprises have created opportunities for managing the knowledge.

i)   **Barriers in Organizations Effectiveness**

The effectiveness of the organization is affected by certain restrictions at workplace. The barriers have been removed by execution of certain improvements in organizations like investment in technological advancements, hard work of personnel, organized, accurate, timely and complete flow of work, automation of routine tasks have taken place in the organizations. Barriers have moved from perceptible and substantial sites to knowledge-intensive work areas that require better understanding and expertise.

ii)   **Advancement of Information Technology**

Advances in information technology include groupware for collaborative work, knowledge encoding for knowledge bases, performance support systems, natural language understanding and advanced search engines.

iii)   **Understanding Human Cognitive Functions**

Work behavior of people is the epitome of any successful organization. Therefore, professional understanding of cognitive aspects of knowledge-understanding, mental models and associations affect the decision making in an organization.

Challenges of Knowledge Management in Libraries and Information Centres

- Quality of library services is crucial in knowledge society
- Providing access to overt knowledge in the form of documents, their skills in understanding users needs, their knowledge of information sources, their skills in organizing information and developing databases.
- Set up a culture of sharing of knowledge and dissemination of information
- Create knowledge Management System
- Aid in implementing best practices
- Providing easy access to international best practices
- Providing support services
- Proceed with Knowledge Management practices within libraries.

However, the challenge is how to acquire and share the relevant knowledge that can advance practice, policy and thought[9].

Application of Knowledge Management in Library and Information Centres in India

With the revolution of ICT, globalization, economic competition, many libraries in India are realizing the importance of Knowledge Management these days. Although it is still in infancy stage, but the concept of ICT tools, Knowledge Management Systems, Internet, web resources, digital libraries etc. is gaining momentum gradually and have made a drastic change in the existing library services. The role of libraries in this era needs to be a learning and knowledge centre for their users where "people and ideas interact in both real and virtual environments to expand learning and facilitate the creation of new knowledge".

Taken up as a major challenge, the Knowledge Management should include:

Innovation Management
It means management of production, diffusion and transfer of knowledge and library and information network systems build by the related institutions and organizations. It includes three aspects:
- **Theoretical innovation**: To enhance and extend the practical and theoretical fields of library and information science by keeping the track of the most recent developmens.
- **Technical innovation**: Manage the network system related to technical innovations. While transforming from conventional libraries to e-libraries, the technical facilities to support knowledge management may be build.
- **Organization innovation**: Create a set of effective organizational management systems as per requirements of e-era to support knowledge management activities.

Dissemination Management

To acquire knowledge is a difficult process for knowledge creators because there is a massive amount of knowledge users and the knowledge is restricted by various objective and subjective conditions and thus the knowledge creators donot have much time and energy to look after the users of knowledge. In such cases, libraries play the role of knowledge supplier and try to disseminate information through diverse channels and media such as internet and e-mail. The knowledge management in libraries can be strengthened by:

- Enhancing the collection development and resources of libraries and strengthening the development of document information resources
- Imparting uninterrupted training to the library staff thereby strengthening the quality of workers in the libraries
- Strengthening dissemination of knowledge.
- Preventing cyber crime while providing online dissemination of information.
- Ensuring security of operation of networks

Application Management

Libraries should attach importance to provision of services for people to acquire knowledge and achieve maximum functions and efficiency of knowledge information. Knowledge services based upon high speed information networks should carried out by:

- Setting up virtual libraries
- Setting up of digitized knowledge services
- Digitizing resources of the libraries

Human Resources Management

This is a starting point to train high quality specialized talents and to revitalize the library undertaking. Expert knowledge is possessed by library staff and users, both inside and outside the libraries. Such abundant expertise should be valued, shared, inventoried, indexed, and updated to be made searchable and accessible through e-databases. Rewards and incentives should be provided to those staff members who have expertise knowledge share their experiences through writing, publishing, lecturing, and tutoring. Libraries should also provide continuous staff training to all staff members. Libraries should also encourage the transfer of knowledge and experience from experienced staff to new staff members. Special interest groups and chat rooms can be created through intranet.

Conclusion

A considerable commitment is required to implement knowledge management in any organization especially libraries. Research and development of knowledge, creation of knowledge bases, sharing knowledge between users and library staff, explicit processing of implicit knowledge and sharing of such knowledge are some of the important areas under discussion which needs strengthening in near future.

Knowledge Management facilitates libraries to convert the stored data and information into knowledge and then disseminate only the relevant knowledge to its users. Knowledge Management provides access to elusive resources which help the librarians to work competently and efficiently. Knowledge Management is the blend of

acquisition, classification, and storing, indexing, dissemination of knowledge by taking advantage of people, process and technology in such a way that the library accomplishes the mission of user's satisfaction. Knowledge Management encourages bond amid libraries, libraries and users, reinforce knowledge internetworking, and accelerate knowledge flow. Libraries are moving from collection management to knowledge management to digitization. To achieve a competitive advantage in an unpredictable atmosphere, libraries must learn to master the art of knowledge sharing and knowledge management. Libraries should be excellent in quality, process efficiency and productivity, should be technology-savvy and must be extremely responsive to user needs.

References

[1] Davenport, Thomas H., DeLong, D.W., and Beers, M.C. (1998). "Successful Knowledge Management Projects," *Sloan Management Review 39*,no.2:43-57.

[2] Bair, Jim. (1999). "Knowledge Management is About Cooperation and Context," Gartner Advisory Services Research Note (May 14).

[3] Galagan, P. (1997). "Smart Companies (Knowledge Management)," *Training and Development 51*,no.12: 20-25

[4] KM. (n.d.). In *e-Zest Solutions*. Retrieved August 29, 2009 from http://www.e-zest.net/knowledgemgmt.html

[5] Gupta, D. (2005, February) Collecting and sharing knowledge. *Network Magazine*. Retrieved November 11 2009 from http://www.networkmagazineindia.com/200502/coverstory09.shtml

[6] Binwal, J. C. (2001). Knowledge management. *IASLIC Bulletin, 46*(2), 65-78

[7] ibid

[8] Santosus, Megan and Surmacz, Jon. The ABC's of Knowledge Management. Retrieved on November 5, 2009 from http://www.cio.com/research/knowledge/edit/kmabcs.html

[9] (Wang, Shouhong. Knowledge Maps for managing Web-Based Business. Industrial Management and Data Systems 2002: 102 (7), p.357-364