

Building the Participatory Librarianship Approach Through Knowledge Management Tool and Models

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Abstract

The technologies of the “knowledge Age” are transitioning from individual, isolated information systems and repositories to an expanded exchange and sharing of information in order to broaden the size and depth of knowledge available in individual and activities. Knowledge management is a strategy whereby the knowledge within an organization is treated as a key asset to be managed in the most effective way possible. The approach of Librarian and his technical skills to build a knowledge management system in the organization through collaborative or participatory outreach with user centric views are explained first. Secondly this paper enlists the various electronic utilities tools and models.

Keywords: Knowledge Management, Knowledge Management Model, Knowledge Management Tool

1. Introduction

In era of knowledge based economy and globalization of world economy a new opportunity emerged as a new management issue with their spectrum of information management, information technology, artificial intelligence, expert system, semantic web, neural network, cognitive sciences, mathematics and management theory, economics. It is playing pivotal role for those information centers, knowledge resource centers and enterprises that practices knowledge management, decision making on knowledge base and choose best option with logical and systematic order. It is expanding from new insights, vision, practices with fresh objective, mission, method and products. The problem and the solution based theory developed for knowledge management and learning. This article critically evaluates selected models of knowledge management and their tools.

Knowledge management encapsulate several discipline like Information Science, Information Technology, Informatics, Artificial Intelligence, Management theory, economics, organizational behavior, social science, epistemology, cognitive science, expert system, semantic web, neural networks etc. Knowledge management touches human behavior, attitudes, capacities, philosophies, models, operations tool and technology. It is required research of human resources, information resource centers and knowledge resource centers creates, process, store, transfer and how one can handle with these process with knowledge management model and tools.

Knowledge management output in the form of product should be more sophisticated and able to disseminate, need to include new capabilities to build products and services. Knowledge management has become a central management point throughout the world. Information Technology and Globalization of economy provide



opportunities to increase emphasis on personnel and societal intellectual resources in knowledge economy. Knowledge management is still in its infancy stage. Knowledge management is a strategy whereby the knowledge within an organization is treated as a key asset to be managed in the most effective way possible. Very fast growth in technology, increased quantity and complexity and the wide and easy access to information create a new demand for the computer. The technologies of the “knowledge Age” are transitioning from individual, isolated information systems and repositories to an expanded exchange and sharing of information in order to broaden the size and depth of knowledge available in individual and activities. According the leading researchers around the world by the year 2010, more than one trillion intelligent computing devices will be utilized in all aspects of the commercial environment. The concept of intelligence is built upon four fundamental principles, which include: Data, Information, Knowledge and Wisdom. Wisdom is also known as intelligence. Intelligence is a data that is the measures, map and symbols of the world, and is also information that produced by attaching meaning to data, data becomes information when it becomes to our decision-making process. Knowledge is the subjective interpretation of information in effort to recognize the application and approach to act upon in the mind of receiver. It attaches purpose and competence to information, resulting in the potential to generate action. Wisdom is embodies awareness, insight, moral judgments, and principles to construct new knowledge and improve upon one existing knowledge. Knowledge modeling packages are combinations of data or information into a reusable format for the purpose of preserving, improving, sharing, aggregating and processing knowledge to simulate intelligence. Innovation, progress and

prosperity all depends heavily on making right decisions. Knowledge model can have a data, information or outputs from other models as input. Knowledge model has the ability to be constantly and continuous monitored and improved. Knowledge models help us to learn from past decisions to assess present activities and just as important to preserve all domain expertise.

According A.C. Foskett,” Knowledge is what I know, Information is what we know”.

Merriam-Webster Online Dictionary, knowledge is “the sum of what is known: the body of truth, information and principles acquired by mankind”.

According Sunasee and Sewery, 2002,” knowledge is human expertise stored in a person’s mind, gained through experience and interaction with the person’s environment”.

According Rousa, 2002,” knowledge is information evaluated and organized by the human mind so that it can be used purposefully”.

According to T. Davenport et al. 1998 “knowledge is information combined with experience, context, interpretation and reflection. It is a high- value form of information that is ready to decisions and actions.”

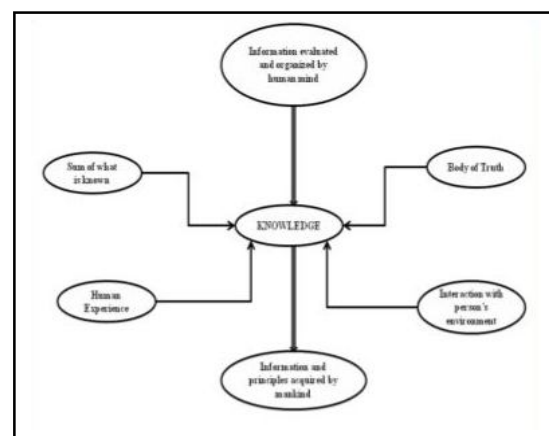


Figure: 1.1 Knowledge Management

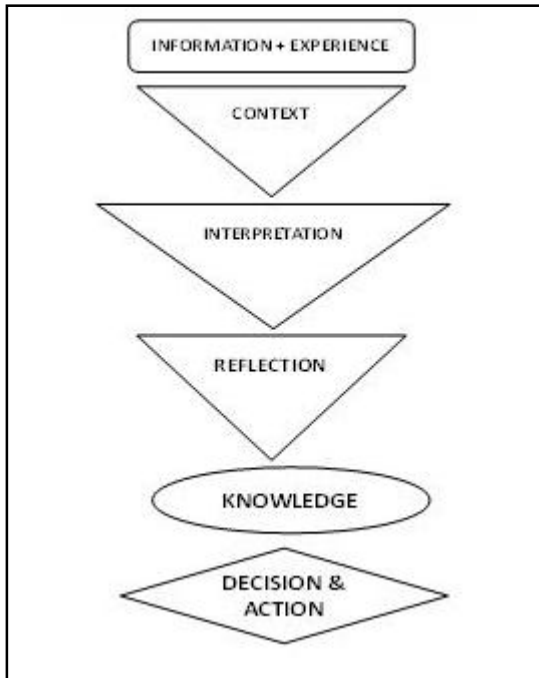


Figure: 1.2. Knowledge Management

Knowledge may be classified as follows:

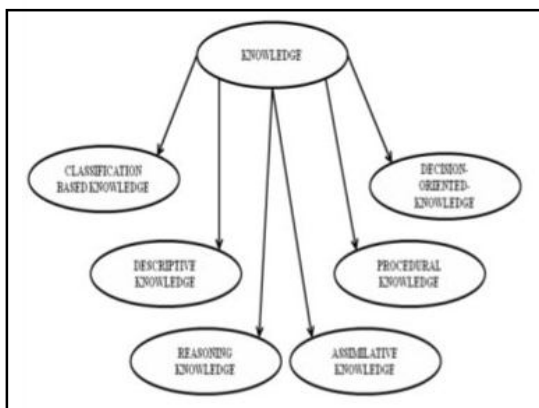


Figure: 1.3. Classification of Knowledge

2. Knowledge Management Tools

Knowledge management tool helps in the acquisition resources. For example PCPACK contain a no. of tools to help the knowledge engineer for analyze structure and store the

knowledge. Software storage and indexing systems can also facilitate the re-use and transfer of knowledge from one application to others. Software systems that make use of ontology are under development to provide automatic analysis and structuring of knowledge. Knowledge management tools are results of research project of knowledge engineering. Its purpose is to identifying the next generation of technologies for corporate to create, manage and extract knowledge from their knowledge base assets and to integrate components of technologies to create and to make a complete approach to knowledge management. Some knowledge management tools and its components are given below:

2.1. LPCUBE

It is an Indian product with PKM collaboration and DM components. It helps discover performance gap, identify right solution, train the taskforce and manage change towards complete transformation.

2.2. AKT-TECHNOLOGIES

It is a list of knowledge tools to ease the bottlenecks of acquiring knowledge, Modeling knowledge, Reusing knowledge, Retrieving knowledge, publishing knowledge, maintaining knowledge.

2.3. KNOWLT

It is a comprehensive command, control and communication, platform that allows enterprises to easily see and manage their data, organization from one location regardless of their geographic location.

2.4. WIKI MARIY

A tool for comparing wiki features.

2.5. UNYTE: Collaboration tool.

2.6. GLIFFY: A free visual collaborative tool.

2.7. INKSCAPE: Open space vector drawing tool.

2.8. VYEW.COM: Visual collaboration.

Knowledge Management Tool And Its Components

Sl.	KM Tool Components	Description
1	3STORE	-uses MYSQL to store its raw RDF data
2	ADAPTIVA	-a user-centered ontology building environment
3	AKTIVE DOC	-supporting knowledge management
4	AKTIVE MEDIA	-ontology based cross-media annotation
5	AMILCARE	-an adaptive information extraction tool to support document annotation for the semantic web
6	AQUA	-system which answer questions written in English
7	AQUALOG	-natural language question answering system
8	BUDDYSPACE	-instant messaging with custom map visualization
9	CASD	-tool for producing system architecture diagrams
10	CLASSAKT	-a text classification web service for classifying documents
11	COCKATOO	-a knowledge acquisition tool
12	COMPENDIUM	-semantic, visual hypertext tool for real time meeting capture.
13	CONCEPT TOOL	-a system to model, analyze, verify, validate, share, combine and reuse domain knowledge base
14	CONREF	-a service discovery system which uses ontology techniques
15	CSAKTIVSPACE	-a smart browser interface for semantic web application
16	D3E	-structured documents into interactive sites
17	DOME	XML editor
18	EPREP	-uses text extraction to automatically
19	EXTRAAKT	-extracting ontology from knowledge base
20	FLIFE	-maintaining life-cycle patterns in ontology development
21	FLOODSIM	-semantic web technologies

22	FOXTROT	-user profile in ontological terms
23	GATE	-scalable open source infrastructure
24	IF-MAP	-ontology mapping method
25	I-X PROCESS	-collaboration of human and computer agents
26	K-SEARCH	-information retrieval and visualization
27	MAGPIE	-interpretation of web documents
28	MELITA	-using an adaptive information extraction engine
29	MYPLANET	-to create personalized version of a web based newsletter
30	NMARKUP	-helps user build ontology
31	ONTOCOPI	-uncovers communities of practice by analyzing the connectivity
32	ONTOPORTAL	Navigation of large semantically powered portals
33	R EVYU	-it is a website to write reviews
34	REFINER++	-create and maintain their own knowledge base
35	RETAX+	-to help a taxonomist to create a consistent taxonomy
36	SIMMETRICS	-open source extensible library of distance metrics
37	WEBONTO	-supports the browsing, creation and editing of ontology

Table: 2.1 Knowledge Management Tools and Its components

3. Knowledge Management Models

Knowledge management model is a combination of data or information into a reusable format for the purpose of preserving, improving, sharing, aggregating and processing knowledge to stimulate intelligence. Knowledge management models cover basic knowledge and information related activities such as gathering, structuring, storing and publishing. Knowledge management models are the one which are used for the organization best to collect, store and analyze knowledge to have an advantage over their competitors. On the basis of four entities of knowledge are can compare the

knowledge management model like completeness, connectedness, congruency and perspective and purpose. Completeness means check how much relevant knowledge is available from given sources. The sources of knowledge may be tacit (informal) or explicit (formal).

Various types of knowledge management models are as follows:

3.1 Network Models

It is a network of acquisition, sharing, transfer. Competencies include empathy, facilitation networking via telephony and Internet tools.

3.2 Cognitive Models

Knowledge is any organization asset that requires careful captures, representation, storage, measurement, preservation and dissemination. It focuses on reuse, replication, standardization and weeding of outdated routines. It uses for finding the correct balance between exploration and exploitation of many organizations.

3.3 Community Models

It's recognize the close relationship between self-organization, continuous learning and informal exchanges for knowledge stewardships.

3.4 VON KROGH and Ross Model of Organizational Epistemology

It is distinguish between individual knowledge and social knowledge, how and why individual within an organization came to know, how and why organization as social entities come to know, what counts for knowledge of the individual and organization.

3.5. The Nonaka And Takeuchi Knowledge Spiral Model

Nonaka and Takeuchi (1995) studied the success of Japanese Companies in achieving creating and innovation. The most famous model is the SECI Model by Nonaka and Takeuchi, 1995. He believes that knowledge is created dynamically and has to be processed effectively. It supports that knowledge creation is spiral process and not linear or circular. Knowledge is created through four processes:

These are four models of knowledge conversion:

3.5.1. From Tacit Knowledge to Tacit Knowledge- the process of socialization-face to face natural, social interaction

3.5.2. From Tacit Knowledge to Explicit Knowledge- the process of externalization

3.5.3. From Explicit knowledge to explicit knowledge-the process of combination

3.5.4. From Explicit knowledge to tacit knowledge- the process of internalization

3.6. The Choo Sense Making Knowledge Management

The Choo has discovered a model of knowledge Management that stress sense making, knowledge creation and decision making. This model concentrates that how information elements are selected and subsequently fed into organizational actions. Weick (2001) proposes that sense making in organizations consists of four integrated process-

3.6.1. Ecological Change

3.6.2. Enactment

3.6.3. Selection

3.6.4. Retention

3.7. The WIIG MODEL for Building and using Knowledge

Wiig (1993) approached his knowledge management model with the following principle:

In order for knowledge to be useful and valuable, in organized form, knowledge should be organized differently depending on what use will be made of the knowledge. Knowledge organized within a semantic network can be accessed and retrieved using multiple entry paths that map into different knowledge tasks to be completed. Some useful dimensions to consider in Wiig's knowledge management model include:

- 3.7.1. Completeness
- 3.7.2. Connectedness
- 3.7.3. Congruency
- 3.7.4. Perspective and purpose

3.8. The Boisot I-Space knowledge management model

It is based on the concept of information good that differs from a physical asset. Effective knowledge sharing requires that senders and receivers share the content as well as the coding scheme. Boisot (1998) proposes the following two key points:-

The more easily data can be structured and converted into information the more diffusible it process.

The less data has been so structured requires a shared content for its diffusion, the more diffusible it becomes.

The activities of codification, abstraction, diffusion, absorption, impacting and scanning all contribute to learning.

3.9. Complex Adaptive System Models of Knowledge Management

The Intelligent complex adaptive systems knowledge management theory views the organizations an intelligent complex adaptive system. i.e. The ICAS MODEL of knowledge management (e.g. Beer, 1981, Bennet and Bennet, 2004).

4. Implication of Knowledge Management Models

Models help us to put the disparate pieces of a puzzle together in a way that leads to a deeper understanding of both the pieces and the assemble they make up. The knowledge management models key role is to ensure a certain level of completeness or depth in the practice of knowledge management: a means of ensuring that all critical factors have been addressed. It is not only enable a better decision of what is happening but also help provide a better prescription for meeting organizational goals. Knowledge management models help to explain what is happening now and they provide us with a valid blueprint or road map for getting organization where they want to be with their knowledge management efforts.

5. Conclusion

Knowledge management models and tool provides a whole new momentum and direction of knowledge disseminating centre and corporate leadership and practices. It needs to new effort to adopt and implement by both resources generators and users. By being a careful articulated, fabricated, cognitively, socially and technically knowledge management model become more easy to use and operations by generators and knowledge disseminators and in workplace.

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