The Analysis of Knowledge, Knowledge Management and Knowledge Management Cycles: A Broad Review

Jawad Kayani  
Federal Urdu University of Arts, Science and Technology, Islamabad Campus, Pakistan  
Email: jwdkayani@gmail.com

M. Qamar Zia  
Federal Urdu University of Arts, Science and Technology, Islamabad Campus, Pakistan  
Email: Mqamarzia@yahoo.com

Abstract

Knowledge is a vital asset for any organization. There are two types of knowledge, tacit and explicit knowledge. Knowledge management has become a serious topic in the last decade. Knowledge management turned into an essential part of the organization due to high importance. The common stages of the knowledge management process are storing, gathering, structuring, sharing, controlling, generating, distributing, codifying, using and exploiting. The main purpose of this study is to examine the knowledge, knowledge management and knowledge management cycles and how they are playing vital role in managing the knowledge. Knowledge is prestigious entity and organizations cannot survive without knowledge because it's offering lots of benefits in the professional world.

Keywords: Knowledge, Knowledge Management, KM Cycles

Introduction

Knowledge

Knowledge is a conceptual viewpoint, and accurate estimation with an account (Plato, 347BC). “A dynamic human process of justifying personal belief toward the truth called knowledge” (Nonaka and Takeuchi, 1995). “A fluid mix of framed experiences, values, contextual information and expert insight called Knowledge” (Prusak, 1998). “A capacity that builds on information extracted from data or the set of expectations that an observer hold with respect to an event called Knowledge” (Boisot, 1998). Knowledge is a vital asset (Chase, 2000). There are three forms of knowledge, first form refers knowledge is prearranged in entities and tangible structures. Second form refers knowledge refers to ideas and concepts. Third form refers distribution of linguistic formulations, theories, and models (popper, 2000). Head of countries and executives need the tacit knowledge (Goldberg, 2005). Research based knowledge is unsuccessful in guiding policy and practice (Department of Trade and Industry, 2001). The interaction of vital people and their departments can play a key part in knowledge creation/construction in the organization (Nonaka, 1996). Explicit knowledge encloses the
words/terminologies, diagrams like tables & graphs, or photographs/snaps (Collins, 2001). Explicit knowledge is scientific or intellectual facts or information that is expressed in proper language, like instruction manuals, arithmetical/statistical expressions/terminologies, copyright and patents (Smith, 2001). Tacit knowledge is an individual type of knowledge, which acquire from through experience (Augier, Shari and Vendelo, 2001). Tacit knowledge can be competitive edge because it's tougher to specify, duplicate, and share (Meyer, 1997). There are two categories of knowledge: tacit knowledge and explicit knowledge (Nonaka and Takeuchi, 1995). Knowledge develops the mentality of freedom (Hegel, 1831). Knowledge is a key source for s maintainable competitive edge (Grant, 1996b; Nonaka et al., 2001). Practical/useful Information which based on experience called knowledge (Leonard-Barton, 1995; Leonard and Sensiper, 1998). Organizational knowledge produced from associated people of the organization (Zarag et al. and Saa, 2006). Knowledge turn into crucial for organizations to carry on internal and external change in their surroundings (Davenport and Prusak, 1998; Jarrar, 2002) and to achieve the benefits (Lee, 2000). Knowledge is a real organizational resource (Drucker, 2002). Knowledge increment leads to production opportunities plus create the unique opportunities for every single firm (Penrose, 1959).

Knowledge Management

Decision makers must consider the knowledge management because it is important for organizational survival and competitiveness (Goodman and Chinowsky, 1997). Knowledge management looks are a big motivation for organization (Carrillo, 2000). Managing knowledge is an old issue (Roos et al., 1997). Knowledge management is the one of the modern areas of research in the last decade (Kalpic and Bernus, 2006). KM has extensive significance because its explain administrators/managers' concerns and builds attentiveness of knowledge as a cost-effective plus point (Spender, 2002). Knowledge management process consists of four processes including capturing, arranging, refining and shifting (Awad and Ghaziri, 2004). The stages of knowledge transfer are parallel to the stages of the knowledge management process: arranging, distribution, adapting, using, generating, defining, and gathering (O'dell, Grayson and Essaides, 2003). KM process contains phases: make/create, store/retrieve, shift and use (Alavi and Leidner, 2001). Km conceptualizes through ideas, assumptions, perceptions and models (Earl, 2001; Kakabadse et al., 2003). Companies in Japan achieved the success at the international level due to organizational knowledge creation ability (Gupta and Govindarajan, 2000). Organizations must place, make, distribute and apply organizational knowledge to maintain competitiveness (Zack, 1998). Knowledge cannot completely transfer during conversation (Polanyi, 1958).

Knowledge Management Cycles

Knowledge making/building is an unstoppable process which has several elements including the idea generation, grasping new models and mixing the theories/concepts for new processes (Jashapara, 2004). There are several KM cycles exists: Meyer and Zack (1996), Bukowitz and Williams (2000), McElroy (2003), and Wiig (1993).
Meyer and Zack KM Cycle (1996)

This cycle has been derived from the design and development of information products. Meyer and Zack (1996) tied the vital stages of knowledge repository with own KM Cycle Stages. There are five stages of Meyer and Zack KM Cycle.

![Diagram of Meyer and Zack KM Cycle]

**Figure. 1**

**Acquire**

Get the raw data from various sources. Keep the following things in mind when trying to obtain the data: intensity, precision, scope, cost, significance, management and suitability.


Refinement

Refinement means insert value, reorganization, relabeling and indexing both. Refinement can be physical or logical.

Storage/Retrieval

A vital stage of this KM cycle because it creates a connection between the first two stages. Storage of information can be physical (hard notes, files) or digital (soft files, database).

Distribution

Distribution means providing information to users through various mediums (emails, telephone, fax, letters).

Use

Use the obtained information in the daily operations of group and organization for better future output.
The Wiig KM Cycle (1993)

**Build**
Acquire, analyze, recreate, synthesize, codify, model, organize the new or/and existing knowledge.

**Hold**
Remember, accumulate, implant, record in repositories of knowledge for future use.

**Pool**
In people
In tangible forms (e.g. books)

**Use**
In work context
Embedded in work processes

**KM systems (intranet, database)**
Groups of people brainstorm

---

*Figure. 2*
Pool

Coordinate, accumulate, renovate, generate, access, retrieve the knowledge.

Use

Complete tasks, survey, describe, select, scrutinize, create, evaluate, decide, execute the knowledge.


Knowledge Production

Organizational Knowledge

Knowledge Integration

Business-Processing Environment

Distributed Organizational Knowledge Base

Figure. 3

Knowledge Production

Solution of problem about existing knowledge tries to find out through the formulation, codification and evaluation.

Knowledge Integration

Solution of problem or/and new knowledge introduced in organizational settings through the following ways: transmit, search, educate, share.
The Bukowitz and Williams Cycle (2000)

Get

Obtain the information which is required for decisions and problem solving.

Use

Apply the new obtained information in everyday work to improve the organizational operations and output.

Learn

The Process to gain knowledge from several experiences to construct the organizational competitive edge/value.

Figure. 4
Contribute

Learned knowledge shared by employees/staff across the whole organization to improve the operations.

Assess

Assessment phase deals with individuals, groups and organization level. Assessment means the review of intellectual or corporeal assets (e.g. Information, knowledge) against the future needs of individuals, groups and organizations.

Build/Sustain

Build the new intellectual or corporeal assets if current intellectual assets will not fulfill the future needs and if current intellectual assets will fulfill the future needs then sustain them.

Divest

Get rid of worthless intellectual or corporeal assets.

JQ Incorporated KM Cycle

Discover/Determine

Obtain/Get

Filter/Refine

Share/Supply

Utilize/Apply

Storage/Stock

Delete/Remove

Figure. 5
Discover/Determine

Find out the desired information from available sources and determine the target. Source of information can be primary or secondary.

Obtain/Get

When desired information discovered then get the target information from predetermined sources of information.

Filter/Refine

Analyze, reshape, reform and relabel the new obtained information.

Share/Supply

Provide the filtered information to individual, groups and entire organization.

Utilize/Apply

Implement the shared information in work activities in organizational settings to improve the operations and overall output.

Storage/Stock

Save the information in different mediums (databases, files, notes) for future needs.

Delete/Remove

Divest the worthless/useless information from records, databases.

Benefits and Detriments Of Knowledge Management

Benefits of Knowledge Management

- Enhances the effectiveness business processes.
- Brings consistency in all activities and operations.
- Improves the communication internally and externally.
- Can be a source of competitive advantage.
- Opens new markets.
- Provides the solution of the problem(s).
- Saves the cost and time.
- Improves the profitability of the organization.
Detriments of Knowledge Management

- Resistance to new KM systems and related technologies in organizational settings.
- Hard to keep up with pace of knowledge change.
- Inability to meet the expectations of the organization.
- Expensive KM systems and technologies are required to manage knowledge.
- Specialized training and education is needed to manage KM systems and technologies.

Conclusion

Knowledge and management of knowledge became a vital concern for organizations in the last couple of years because it offers lots of vital benefits including competitive edge, improvement in the business processes, increase in the communication, saves money and time of organization which enhances the overall productivity. Today without knowledge management organization cannot survive in the market. The common stages of the knowledge management process are storing, gathering, structuring, sharing, controlling, generating, distributing, codifying, using and exploiting. The knowledge management cycle is a continuous process where information is identified, obtained, refined, shared, used, stored and divested. The above KM cycles highlight how knowledge is managed in the organizational environment. KM offers several key benefits to organizations.

References


