

KNOWLEDGE SHARING IN INSTITUTIONS OF HIGHER LEARNING

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ABSTRACT

Since things changed promptly in this new economy, the concern is not only on how much you acquainted with, but also how promptly you can apply and capture what you have learnt. In various ways, knowledge sharing is visualized as an academic institutions' natural activity. The academics number of conferences, seminars, workshops and publications is far exceeding any other signifying the eagerness, profession and kindness of academics to share knowledge. This paper presents a brief review on the significance to explore key ideas for higher education research. The paper summarized knowledge sharing technologies that can help to create, capture, organize access and use the intellectual assets of the organizations. In addition, this study presents a brief review about knowledge management and sharing in Institutions of Higher Learning, reasons for applying knowledge management principles in Institutions of Higher Learning.

1.0 INTRODUCTION

Knowledge is today regarded as a factor of production together with land, labor and capital. As the world moves towards a 'knowledge-based economy', knowledge is being considered as the main driver of this new economy. The success of economies in the future is going to be based on how companies or organizations acquire, use and leverage knowledge effectively (Bircham-Connolly, et al., 2005). On the other hand, understanding the concept of knowledge has become a dilemma due to the lack of theories on the subject (Willem, 2003). This is mostly due to its intangible nature, which makes it very difficult to quantify. As such, organizations may find it difficult to manage knowledge effectively. Therefore, more research is needed in this area so that a framework can be developed to guide future research. Within the overall knowledge management domain, a critical area that needs more attention is knowledge sharing. Knowledge sharing is embedded within the knowledge-processing scope where knowledge is generated and put to use (Shapira et al., 2005). Effective knowledge management strategies must emphasize the role of knowledge sharing to achieve maximum results for organizations.

2.0 KNOWLEDGE

What is knowledge? According to the Oxford Dictionary (1997, p. 419), knowledge is defined as "(1) awareness, familiarity; (2) person's range of information, understanding (of subject); (3) information; (4) sum of what is know". Whereas Bhatt (2002) said that knowledge can be a very difficult concept to define. Knowledge is a word we all use it in everyday in our life. According to Allen (1998) "how you define knowledge determines how you manage knowledge".

According to Davenport and Prusak (1998,p.5) Knowledge is actually " *Knowledge is a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information It originates and is applied in the minds of knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.*" According to Lang (2001, p.46), "knowledge is both produced and held collectively rather than individually, in knit groups, or communities practices."

However, the researcher's beliefs that knowledge is fluid as well as formally structured; it is sensitive and therefore hard to capture in words or understand completely in logical terms. Knowledge in Institutions of Higher Learning is neither individually owned nor static, but embedded in individual employees (academic staff, non academic staff and top management), project teams, faculty, and university. It also resides in trading systems, business operations, innovation systems, thus it is dynamic and fluid in organizational processes and practices.

2.1 Types of Knowledge

Knowledge classified into tacit knowledge and explicit knowledge (Nonaka & Takeuchi, 1995). Explicit knowledge is defined as information can be formulated in words or symbols and therefore can be stored, retrieved, copied and transferred into such as written documents or computer files to be used in any time (Hansen 1999). Whereas tacit knowledge defined as that knowledge has not been explicitly formulated and therefore cannot stored, retrieved, copied and transferred because it related highly to the individual (Fleck, 1996). Polanyi (1966, p.4) summarized the basic nature of tacit knowledge in the phrase “We know more than we can tell”. Whereas Nonaka (1994) notes that the tacit knowledge comprises two components: technical and cognitive. The technical component refers to the "know-how" or informal personal skills in crafts and the cognitive component of the individual referred to the deep-rooted beliefs, ideals, values, patterns and mental models. The researcher notes that the cognitive component, while difficult to define and formalize, shapes the way we see the world. Jasiruddin et al. (2005) had summarized the differences between the tacit knowledge and explicit knowledge as shown in table 1.

Table 1: model of difference between the tacit and explicit knowledge

Features	Tacit Knowledge (i.e skills and experience of employees)	Explicit Knowledge (I.e document, codes, tools)
Content	Non-codified	Codified
Articulation	Difficult	Easy
Location	Human Brains	Computers, artifacts
Communication	Difficult	Easy
Media	Face-to-face contact, storytelling	Information Technology and other archives
Storage	Difficult	Easy
Ownership	Organization and its member	Organization

2.2 Knowledge creation and Conversion

The communications between tacit and explicit knowledge are called knowledge conversion. During the conversion process, explicit and tacit knowledge expand in both quantity and quality (Nonaka, 1991). There are four knowledge conversion modes - socialization, externalization, internalization, and combination (Nonaka, Toyama, & Konno, 2000). The knowledge creation and conversion processes are modeled below in the figure 1. According to Nonaka (1995, p.61) "knowledge is created and expanded through *social interaction between tacit knowledge and explicit knowledge*"

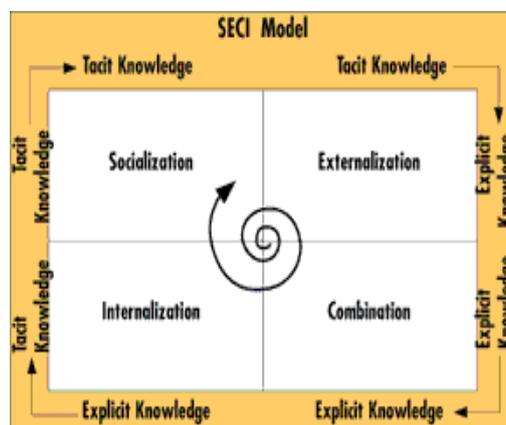


Figure 1: Nonaka’s four modes of knowledge creation

Socialization (tacit to tacit)

Socialization consists of the shared formation and communication of tacit knowledge between people. Sharing knowledge is regularly done without ever producing explicit knowledge. This type of tacit knowledge sharing begins between people who have a common culture and can work together proficiently. Therefore the sharing of tacit knowledge is connected to ideas of collaboration and communities. A typical activity where tacit knowledge sharing in IHL can occur is a employees (academic staff, non academic staff and top management) meeting during which experiences are described and discussed, with much communicated between the lines.

Externalization (tacit to explicit)

By its nature, tacit knowledge is not easy to convert into explicit knowledge. During conceptualization, elicitation, and finally articulation, usually in collaboration with others, some proportion of a person's tacit knowledge possibly captured in explicit form. Typical activities in which tacit knowledge is captured as the first step towards the conversion are in dialog among (academic staff, non academic staff and top management) members, in responding to interview questions or through the elicitation of stories.

Combination: (explicit to explicit)

Explicit knowledge can be shared in meetings, through documents, e-mails, etc., or via education and training. Using technology to manage and search collections knowledge explicit is well recognized. On the other hand, there is a extra chance to foster creation of knowledge, specifically to improve the collected information in some way, for example by reconfiguring it, accordingly that it is more usable.

Internalization (explicit to tacit)

So as to act on information; individuals have to understand and internalize it, which includes creating their own tacit knowledge. Upon reading documents, they are able to some extent re-experience what others earlier learned. By reading documents from many sources, they can create new knowledge by combining their existing tacit knowledge with the knowledge of others. Nevertheless, this process is becoming more challenging because individuals have to manage ever-larger amounts of information. A typical activity would be to study and read documents from a number of different databases by an employee who needs to learn with regard the previous pass of the task he is now given.

Wan and Ruzaini (2006) pointed out that there are four major knowledge component identified in the Institution of Higher Learning environment. The components are

- Best Practices of Business Processes,
- Decision Making Support Knowledge and Executive and Strategic Knowledge generated from Knowledge-based Enterprise Application,
- Knowledge generated from Document Resource Center,
- knowledge generated from e Learning System and knowledge generated from Knowledge Portal.

3.0 KNOWLEDGE MANAGEMENT (KM)

It is difficult to define the knowledge management, because there are many schools of knowledge management can bring up different scope of meaning (Yahya & Goh, 2002). Each school has his perspective to define knowledge management because they have different background, understanding. Knowledge management is necessary for organizations to do with infrastructure capabilities, including the rise of powerful network, and communication. Knowledge management becomes important Attention in both academia and industry. This is clear from the drastic increase publications linked to KM (Nonaka & Aben, 2001). The real meaning of knowledge management is to supply strategies to get the right knowledge to the right people at the right time and in the right format (Rigallo & Valente, 2002).

Knowledge Management is the management of knowledge that can improve a rage of organizational performance characteristics by allowing a company to be more intelligent acting (Jay, 1999). KM had a pervasive presence in the recent research and it is well recognized as a possible contribution to the success of the organization and a determinant of sustained competitive advantage. KM Organization adopted as a main area of intervention, recognizing intellectual capital as an asset that can be harnessed to create value for stakeholders (Takeuchi & Nonaka, 2004). Knowledge management is "*The broad process of locating, transferring and more efficiently using of locating information and expertise within an enterprise*" (Offsey, 1997 p113).

So, knowledge management (KM) a set of management activities aimed at designing and influencing processes of knowledge creation and integration including processes of sharing knowledge ,has emerged as one of the most influential new organizational practices.

4.0 KNOWLEDGE SHARING

Knowledge sharing is part of the knowledge management system of an organization (Abdel-Rahman & Ayman, 2011). Holsapple and Joshi (2002, p.91) describe the operational objective of KM as to *"ensure that the right knowledge is available to the right processors, in the right representations and at the right times, for performing their knowledge activities (and to accomplish this for the right cost)"*. Knowledge sharing and knowledge management are not similar. Knowledge sharing is one method for both making sure that knowledge is available and delivered at the right time. Additionally, knowledge sharing can save time and improve quality by providing appropriate solutions to clients.

It is difficult to give an all-around definition of knowledge sharing. Many researchers have their definitions from their own point of view. Based on these definitions, sharing of Knowledge is the main part in the subject of Knowledge Management (Fengjie et al, 2004). Knowledge sharing becomes a factor to obtain and maintain a competitive advantage, and improved business performance (Choi and Lee, 2003). Sharing knowledge is not merely a neutral exchanged of information but it affects distribution of power, working relationships, models of influence and changes how individual identify their responsibilities (Willet, 2002). Lee et al (2000) defines knowledge sharing as activities of transferring or disseminating knowledge from one person, group or organization to another.

Although researchers have devoted increasing awareness to knowledge sharing in organizations in recent years, moderately little research has focused on the performance implications for task units within organizations (Haas, 2006). Providing and deploy effective strategies to support knowledge-sharing actions is very important, yet it is realizable by understanding the factors that make easy the knowledge transfer process (Chaudhry, 2005). Knowledge sharing is considered as the central key to the success of all knowledge management strategies (Chaudhry, 2005). For an organization, knowledge sharing is the act of capturing, organizing, reusing, and transferring experience-based knowledge that reside within the organization and making that knowledge available to others in the business (Hsiu-Fen, 2006). The promotion of knowledge sharing within a firm depends to a large degree on changing employee attitudes and behaviors to make them willing to share their knowledge (Jones et al., 2006).

According to Jayanthi and Sanni (2007), the main causes for applying knowledge management in Institutions of Higher Learning are:

- All Institutions of Higher Learning possess a state of the art modern information infrastructure.
- Sharing knowledge among academic staff, non academic staff, students, course, programs, placements and administration is usually done in all Institutions of Higher Learning.
- In general, the academic environment is seen as confidence in the sense that no one may hesitate or be afraid of publishing knowledge.
- Any Institutions of Higher Learning will look forward for its abreast strategic position in their continuous ratings by news papers and business magazines for competitive advantage.
- Each institute wants to improve the level of information and knowledge sharing and its internal documentation management
- There is an increased demand for new strategies that help Institutions of Higher Learning meet external and internal demands.

4.1 Benefits of Knowledge Sharing

- Knowledge Sharing is about breaking down barriers within the organization.
- Raised competitiveness and responsiveness for research grants, contracts, and commercial opportunities.
- Decreased circle time for research.
- Reduced attachment of research resources to administrative tasks.
- Controlling of previous research and proposal efforts.
- Enhanced both of external and internal services and usefulness.
- Enhanced administrative services related to learning and teaching with technology.
- Interdisciplinary syllabus design and increase facilitated by navigating across departmental boundaries.
- Enhanced effectiveness and efficiency of advising efforts (to integrate fragmented efforts currently undertaken by faculty, academic support staff, student services staff, and student affairs staff.
- Enhanced ability to support the trend toward decentralized strategic planning and decision making .Better information leads to better decisions.
- Improved sharing of external and internal information to reduce superfluous efforts and lessen the reporting load plaguing many institutions today.

- Improved ability to develop new and market-focused strategic plans.
- Shared knowledge from a diversity of elements to begin to create a “learning organization” which is open to market trends.

4.2 Knowledge sharing technologies

Organizing the knowledge of the organization and enabling access to it are critical to employees' ability to effectively use knowledge that is scattered across the company (Logan, 2006a). Without technology most knowledge sharing practices would be less effective (Riege, 2005) and technology can help to create, capture, organize, access and use the intellectual assets of the organization (Coakes, 2006). It is important to remember that it is a vital enabler but should never alone be the primary driver of a knowledge management or sharing initiative (Tsui, 2005; Coakes, 2006). Traditionally the benefits of technology have been seen in transferring explicit knowledge but advances in technology are enabling more and more sharing of tacit knowledge also (McKenzie & Winkelen, 2004).

According to Rasmus (2003), currently more or less any technology that can be used to support knowledge creation, transfer or codification defines itself as knowledge management technology, which has led to confusion over the technology market for knowledge management. Multiple technologies can be used to support knowledge management, but technology is rarely unique for the purpose of knowledge management only (Gartner, 2006a; Logan, 2006a, 2006b; Rasmus, 2003; Riege, 2005). It is important for the organization to integrate an infrastructure that supports various types of knowledge transfer (Riege, 2005). Knowledge sharing technologies are summed up in Table 2.

Table 2: Knowledge sharing technologies

Knowledge Sharing technologies	Authors, Year
Email	(Hwang & Kim, 2007; Rusli & Mohd, 2007; Burns, 2007; Osunade et al., 2007; Ting & Majid, 2007; Thakur, 2007; Abdullah et al., 2006)
World-Wide-web (Internet)	(Burns, 2007; Osunade et al., 2007; Leeuwen & Fridqvist, 2002; Kim & Lee, 2006; Riege, 2005; Kamal et al., 2007; Ting & Majid, 2007; Van & Fridqvist, 2002; Fengjie et al., 2004; Minna & Pekka, 2007; Parirokh et al., 2006)
Database Management Technologies	(Coakes, 2006; Park et al., 2004; Kim & Lee, 2006)
Content Management Systems	(Coakes, 2006; Park et al., 2004; Tsui, 2005; Gartner, 2006a; Logan, 2006a; Ting & Majid, 2007)
Decision Support Systems	(Park et al., 2004; Thakur, 2007)
Groupware Software	(Riege, 2005; Park et al., 2004; Sahibuddin et al., 2006; Han & Anantatmula, 2006)
Business Intelligence Technologies	(Riege, 2005; Tsui, 2005)
Collaboration Tools	(Coakes, 2006; Rasmus, 2003; Kim & Lee, 2006; Gartner, 2006a; Tsui, 2005)
Discussion Groups	(Kim & Lee, 2006; Logan, 2006b)
Online Discussion Forum	(Ting & Majid, 2007; Thakur, 2007)
Video Conferencing	(Ting & Majid, 2007; Osunade et al., 2007; Han & Anantatmula, 2006)
Web Conferencing	(Thakur, 2007; Abdullah et al., 2006; Han & Anantatmula, 2006)
Shared Space Collaboration Tool	(Ting & Majid, 2007)
Enterprise Information Portal	(Ting & Majid, 2007; Chaudhry, 2005; Abdullah et al., 2006)
Document Management System	(Ting & Majid, 2007; Abdullah et al., 2006; Sahibuddin et al., 2006).
Data Warehousing	(Ting & Majid, 2007)
Search Engine	(Ting & Majid, 2007; Osunade et al., 2007; Abdullah et al., 2006)
Taxonomy Generator	(Ting & Majid, 2007)
Enterprise Resource Planning	(Ting & Majid, 2007)
learning Management System	(Ting & Majid, 2007; Burns, 2007)
Customer Relationship Management System	(Ting & Majid, 2007)

Mobile Technologies	(Ting & Majid, 2007; Rusli & Mohd, 2007; Burns, 2007; Ting & Majid, 2007; Han & Anantatmula, 2006)
Short Messaging Service (SMS)	(Rusli & Mohd, 2007; Osunade et al., 2007; Thakur, 2007)
Audio and video messages	(Thakur, 2007)
Mobile Computing	(Rusli & Mohd, 2007)
Communities of Practice (CoP)	(Rusli & Mohd, 2007)
Virtual Teamwork	(Derballa & Pousttchi, 2004)
Lessons Learned Database	(Derballa & Pousttchi, 2004)
Virtual / Augmented Reality	(Derballa & Pousttchi, 2004)
Multimedia technologies	(Burns, 2007)
Virtual Learning Environments	(Burns, 2007)
Networked Learning	(Hodgson & Reynolds, 2005)
Digital Repositories (DR)	(Doctor, 2006)
Learning Object Repositories	(Doctor, 2006)
Blogs	(Osunade et al., 2007)
Online Communities	(Osunade et al., 2007; Kamal et al., 2007)
Mailing Lists	(Osunade et al., 2007)
Online Databases	(Osunade et al., 2007)
Storytelling	(Kamal et al., 2007)
Online Chat (ICQ, MSN, Messngwe, etc.)	(Ting & Majid, 2007)
Face-To-Face	(Ting & Majid, 2007)
Intranet	(Van & Fridqvist, 2002; Thakur, 2007; Chaudhry, 2005; Kim & Lee, 2006; Riege, 2005; Sahibuddin et al., 2006; Han & Anantatmula, 2006)
Extranet	(Thakur, 2007)
Intelligent Agent	(Abdullah et al., 2006; Sahibuddin et al., 2006).
Expert Finder	(Derball & Pousttchi, 2004)
Information Retrieval Technique	(Sahibuddin et al., 2006).
Data Mining Tools	(Sahibuddin et al., 2006).
Relational and Object Database system	(Sahibuddin et al., 2006).

6.0 CONCLUSION

The literature that has been analyzed provides evidence that knowledge management should have significance in Institutions of Higher Learning. Knowledge Management is a process to identify ways of recognizing and archiving knowledge assets within the Institutions of Higher Learning that are derived from the academicians of various departments or faculties. In addition, knowledge sharing is simply about transferring the dispersed know-how of academicians more effectively. In this study; knowledge sharing is based on the experiences gained internally and externally in the Institutions of Higher Learning. The basis of knowledge management is knowledge sharing. On another hand, knowledge management brings together three core organizational resources; people, processes and technologies to enable an organization to use and share information effectively. Today, there are various types of technology and software developed for the purpose of knowledge sharing. It varies from desktop tools to enterprise applications. However, there are many common or referred technologies used for the purpose of knowledge sharing, some of which are also being researched and studied by various researchers.

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