

The Problems and obstructions against the implementation of Knowledge Management at Ramkhamhaeng University

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ABSTRACT

This study aimed to document the Knowledge Management attempts at Ramkhamhaeng University as well as to identify problems and obstructions regarding the implementation of Knowledge Management. Delphi technique was used in order to gather information from 18 experts. The first group consisted of 6 administrators. The second group consisted of 6 instructors. The third group consisted of 6 staff from the administration units. All informants had more than 10 years' tenure with the university, some were from the beginning. They had witnessed the development of the university and possessed accurate information about the university. In-depth interviews were performed with each expert. The information was compiled under the framework of Knowledge Management, i.e., knowledge acquisition and creation, storing, distribution, and application. Questionnaire was drafted from the information obtained. This questionnaire was presented to the all informants to rate their agreement with the items using 5-point Likert scale. The researcher analyzed the answers and included the medians and inter-quartile range of each item into the questionnaire. This questionnaire was resubmitted to the experts so they could reconsider their original rating and rate the questionnaire for the second round. Data from the second round were analyzed and reported.

Keywords: Knowledge Management, University, Thailand

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อรวบรวมข้อมูลการดำเนินงานทางด้านการจัดการความรู้ของมหาวิทยาลัยรามคำแหง ตลอดจนตรวจสอบปัญหาและอุปสรรคในการดำเนินการในด้านการจัดการความรู้ งานวิจัยนี้ใช้เทคนิคการเก็บข้อมูลแบบเดลฟาย โดยขอข้อมูลจากผู้เชี่ยวชาญ 18 ท่าน ประกอบด้วยผู้บริหาร 6 ท่าน อาจารย์ 6 ท่าน และ พนักงาน 6 ท่าน ผู้เชี่ยวชาญเหล่านี้มีประสบการณ์ทำงานกับมหาวิทยาลัยมากกว่า 10 ปี บางท่านปฏิบัติงานให้มหาวิทยาลัยมาตั้งแต่เริ่มก่อตั้ง ดังนั้น ผู้เชี่ยวชาญเหล่านี้มีความรู้เกี่ยวกับการดำเนินงานในมหาวิทยาลัยอย่างถ่องแท้ ผู้วิจัยรวบรวมข้อมูลจากการสัมภาษณ์แบบเจาะลึกกับผู้เชี่ยวชาญทั้ง 18 ท่าน ข้อมูลที่ได้ถูกนำมาเรียบเรียงภายใต้กรอบแนวคิดของการจัดการความรู้ คือ การสร้าง การจัดเก็บ การเผยแพร่ และการประยุกต์ใช้ความรู้ เพื่อสร้างเป็นแบบสอบถาม หลังจากนั้นผู้วิจัยนำแบบสอบถามชุดนี้กลับไปให้ผู้เชี่ยวชาญให้คะแนนความคิดเห็นแบบ 5-point Likert Rating Scale คะแนนที่ได้ถูกนำมาวิเคราะห์เพื่อหาค่า Median และ Inter-quartile Range คะแนนเหล่านี้ได้รับการบันทึกลงในแบบสอบถามและนำกลับไปให้ผู้เชี่ยวชาญพิจารณาให้คะแนนอีกครั้งหนึ่ง ข้อมูลที่ได้จากการเก็บคะแนนรอบที่สองนี้ถูกนำมาวิเคราะห์และนำเสนอเป็นรายงานการวิจัย

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INTRODUCTION

Knowledge creation is a powerful driver for modern organizations (Drucker, 2007). Toffler and Toffler (2006) described that the world is shifting in the third wave of information era. Kaplan and Norton (2004) supported that knowledge was gaining more importance than the physical factors of production. With proper knowledge, organizations could deliver the much needed quality to customers and win the marketplace. Hence, it is essential that organizations should seek to manage knowledge properly. Individual employee accumulated information and knowledge through their works. Knowledge is the foundation of skills and competency. Such knowledge should be pooled in order that organizations could respond to customers' needs better. Knowledge Management (KM) concept was introduced for such purpose (Nonaka, 1994). Fernandez, Gonzalez, & Sabherwal (2004) suggested that KM is a process in drawing out knowledge resided in individuals and turn them into the form that could be shared with others in the organization. Sharing of knowledge could turn an organization into a knowledge community (Raza, Kausar, & Paul, 2007).

Ramkhamhaeng University (RU) has been implementing KM concept since 2005. This project aimed to examine the KM attempt of Ramkhamhaeng University (RU) among personnel in the academic and administrative units. Knowledge regarding the problems against KM implementation would lead to a better deployment of KM strategies in the future.

LITERATURE REVIEW

Knowledge resulted from values, experience, and an understanding about the environment (Davenport & Prusak, 2000). People used these as the basis to interpret new things they encountered. Knowledge resides in people and culture. Individual employee in organizations accumulates knowledge through their education and experience in work. It is important that knowledge of an individual employee be shared with others in order to attain synergy and effectiveness in operations. Keeping knowledge within one personnel would yield little benefit to the organization.

KM is a tool that assists in the knowledge and information process (Davenport and Prusak, 1998). A properly managed knowledge system could enhance organization's sustainable core competencies. KM is the process to organize and prepare important knowledge for personnel when and where it is needed.

Knowledge is classified into tacit and explicit (Awad and Ghaziri 2004; Choo, 2000). Tacit knowledge refers to personal insights, experience, and intuitions (Duffy, 2000). It is not organized so it is difficult to express and formalize. This kind of knowledge is personal and is difficult to delineate to others. Explicit knowledge refers to knowledge that is structured and documented (Duffy, 2000). This

type of knowledge can be readily read or shared with others. Much knowledge for academic purposes is compiled into explicit forms such as books, video tapes, audio tapes, and others while some knowledge among the administrators were exchanged through face-to-face communication basis and were not recorded in an explicit form. Markus (2001) argued that only explicit knowledge could be processed by information technology. Hence, an important step in KM is to make tacit knowledge explicit.

Knowledge Management

Gordon (2005) and Smith, Collins, & Clark (2005) agreed that KM was related to the creation of a learning culture where organizational members gather knowledge and share it with others. Freeze and Kulkarni (2007) supported that expertise, lessons learned, policies, procedures, data, and knowledge documented are important intangible knowledge assets that organizations could leverage upon. KM is a cultural and organizational issue rather than a technological issue (Brand, 1998). For example, Ardichvili et al., (2006) found that cultures high on power distance tend to share less knowledge, in spite of available technology. Fernandez, Gonzalez, & Sabherwal (2004) defined KM as "doing what is needed to get the most out of knowledge resources" (p. 2). KM aims at tapping and utilizing tacit knowledge of all employees in the collective level. Dyer and McDonnough (2001) provided empirical evidence suggesting that KM influenced the improvements in the individuals, processes, products, and organizational performance level. They also found that top three reasons US firms use KM were (a) to retain expertise of employees, (b) to enhance customer's satisfaction, and (c) to increase profits. Nonaka and Takeuchi (1995) suggested a model to transfer tacit knowledge into explicit knowledge. This model is named the SECI-Knowledge Conversion Process Model. The model describes that individual employee captures explicit knowledge from his/her exposure to external sources such as customers, suppliers, competitors, the public, and etc. This knowledge is linked and combined with current personal frame of reference to create personal understanding of the issue or know-what. This is still an explicit knowledge until it is exercised when the person comes across similar situation or context. After practicing the knowledge learned, that knowledge is internalized into personal experience and wisdom, i.e. tacit knowledge or know-how. The new tacit knowledge, then, is socialized through dialogue with others and organized into explicit knowledge for further externalization.

Previous research suggested various steps for the management of knowledge. Marquardt (1996) suggested knowledge acquisition, creation, storage, and transfer. Demarest (1997) suggested knowledge construction, embodiment, dissemination, and utilization. Probst, Raub, & Romhardt (2000) suggested knowledge identification, acquisition,

development, transfer, storing, and utilization. And lastly, Turban & Aronson (2001) suggested knowledge acquisition and creation, organization and storage, distribution, and application. These steps help converting knowledge from external sources to be internal. In this paper, the steps were combined into 4 steps, i.e. knowledge acquisition and creation, storing, distribution, and application. Greiner, Bohmann, & Krcmar (2007) suggested there are relationships between the implementation of KM programs and business strategy. The KM processes should have a strategic focus in order to have a scope on selective information and knowledge that are relevant to the strategic decisions.

Knowledge acquisition and creation

Knowledge acquisition and creation is a dynamic social process through the interaction between tacit and explicit knowledge (Nonaka et al., 2000). Tacit or explicit knowledge can be captured from external sources or cross departmental sources through activities such as benchmarking, conferences and seminars, meetings, mass media, etc. This knowledge is learned and synthesized with existing knowledge to create new sets of knowledge. The new sets of knowledge are organized into new sets of explicit knowledge in the organization or department. This process includes the transfer of tacit knowledge from one person to tacit knowledge of others as in case of apprenticeship. It can be the transfer of tacit to explicit (externalization), explicit to tacit (internalization), and explicit to explicit knowledge. The acquisition and creation of knowledge is a social construct resulted from the interaction among data, information, knowledge, wisdom of personnel, and environment (Faucher, Everett, and Lawson, 2008).

Knowledge storing

Knowledge created or acquired should be organized into categories. These categories can be either memorized among staff or documented. The storing of knowledge should take into consideration the accuracy and convenience in retrieval. Electronic devices can be of great help in this process as Fernandez, Gonzalez, and Sabjerwal (2004) had described that modern technology enables the KM process. Information Technology enables the implementation of KM in sorting, storing, and retrieval of large amount of information as well as to distribute them. Hall (2000) emphasized the need to use codes that personnel are able to interpret, the ability of personnel to decode stored knowledge is crucial for transferability of knowledge. Williams (2006) argued that knowledge is dynamic and is subject to change. Knowledge stored should receive periodical review and updated. KM is not simply about recoding knowledge but needs to address which piece of knowledge is implicit and the way to derive benefits from such knowledge, hence, the process is more important than the content (Gao, Li, & Clarke, 2008).

Knowledge distribution

Organizations should devise methods to disseminate information to relevant personnel in an appropriate and timely manner. Planning for communication system is essential, for example, internal memo, reports, bulletin board, training, briefing, or grapevine, etc. The organization should distribute knowledge rather than recommendations based on the knowledge across individuals, groups, departments, or organizations in an effective manner to enhance creativity and innovation (Alavi & Leidner, 2001). Socialization facilitates the dissemination of tacit knowledge while formal communication facilitates the exchange of explicit knowledge. Knowledge distribution might become a power play in organization (King, Kruger, & Pretorius, 2007). Those who possess information or knowledge might choose to withhold some in order to increase their power in the organization. The organization culture is an important factor in smoothing the process of knowledge distribution.

Knowledge application

Knowledge distributed should be utilized else it becomes useless, if not bothersome. Personnel in organization should infuse knowledge received into their normal operations and decision processes so it becomes their tacit knowledge. The application of knowledge might come in the form of giving direction or routines in operation (Grant, 1996). Persons who have knowledge might direct the action of others without transferring the knowledge underlying the direction. Moreover, knowledge can be formed into procedures, rules, and norms that guide behaviors in the future. The attaining of competitive advantage is through competent knowledge application based on good judgment and decisions (Gronhaug, Ottesen, 2007). Competencies could be developed through knowledge application process (Lustri, Miura, & Takahashi, 2007).

A CASE STUDY OF RAMKHAMHAENG UNIVERSITY

Many high school graduates could not enter into higher education system. The government issued a Royal Act to establish Ramkhamhaeng University in 1971. The main purpose was to create a place where high school graduates could further their study. As an open university, the entrance examination was waived and the tuition fee was much lower than other universities. All students who graduated from high school were welcome into the system. They could study in any field offered by the university with little restrictions. Since then a large number of students applied to study with RU. In order to cope with such number of students while the facility is insufficient, RU pioneered Thailand's first long distance learning. Classroom-based instructions were offered. These classes were broadcasted through radio and television to provide accessibility to students. The long distance learning was developed into video conference through

television satellite broadcast in 1996 (Ramkhamhaeng University, 2007).

As of 2012 RU operated 23 regional campuses, 40 regional examination centers and 47 regional academic services centers throughout Thailand. Through the long distance system, several programs could be opened for Thai people living in 31 countries. 41 centers were coordinated in order to provide service and examination facilities for students abroad. RU opened 12 faculties, two institutions and one graduate school that offered 194 programs to students. Moreover, the Institute of International Studies at the main campus handled foreign students from more than 50 countries. Furthermore, RU had two IT coaches equipped with computers and satellite dish which brought the internet and computers to serve some 60,000 people in 70 provinces in the rural areas (Ramkhamhaeng University, 2012).

In the same manner that organizations classified personnel into line and staff (Kreitner, 2004), RU classified personnel into academic and administration units (Saengsook, 2007). The academic was controlled by external government agencies: The Commission of Higher Education (CHE) and The Office of National Education Standards and Quality Assessment (ONESQA). These two agencies had the duty to supervise educational standards in Thailand (National Education Act, 1999; Royal Decree, 2000). In the attempt to submit report to ONESQA, academic knowledge and operations were documented. Once the knowledge was documented, they could be shared with others in the form of explicit knowledge. However, different from the academic document such as books or reports, knowledge in the administration was diverse and complicated. The hand-on experience and knowledge was discussed and shared only in the unit level not across the university as in case of academic knowledge in which books, notes, and articles could be read by others explicitly.

METHODOLOGY

This research project was an exploratory research. The objective was to examine the problems and obstructions against the KM implementation in the university with the focus on the administrative personnel. Delphi technique was utilized to elicit the data. Participants were personnel who had long tenure because they witnessed the KM process at RU. Personnel in the administration, faculty, and staff levels were purposively selected in order to collect information from the top and middle management as well as lower level employees. Each group comprised of 6 informants. The participations were voluntary. Personnel participated in the administrator group were the president, vice presidents, deans, and directors. 6 professors who had more than 10 years' tenure were recruited to provide insight about the KM implementation in the academic units. 6 staffs from 6 departments, also with more than 10 years

tenure, were recruited to share their perspectives regarding the KM in the administrative units. In-depth interviews were performed with each informant. Information elicited relating to KM were classified into four themes, i.e., (a) Knowledge Acquisition and Creation; (b) Knowledge Storing; (c) Knowledge Distribution; and (d) Knowledge Application. Information were analyzed and a scale consisted of the item derived were drawn. The scale consisted of two parts, part one was about KM activities at RU and part two was about the problems. This scale was evaluated by five experts in the KM field to verify the face and external validity. Adjustments based on the experts' comments were made. The final version was brought to the 18 informants to complete using 5-point Likert scale. Median and Inter Quartile Range (IQR) were calculated for each item. The Medians and IQR's for each item were reported together with the items to the informants again in the second round. The informants had a chance to review the Medians and IQR's and revise their answers. The data obtained from the second round were compiled and analyzed.

RESULTS

Knowledge acquisition and creation

During the establishment period, the classrooms and number of instructors could not accommodate such large number of students. Hence, some of the sections were broadcasted through closed-circuit television. One instructor could teach students in many sections at the same time. In the academic part, qualified instructors were drawn from various universities. They brought with them tacit knowledge into RU. In the administrative part, distance learning and registration system were created. Personnel with computer knowledge were recruited to handle the technical tasks. They also brought tacit knowledge into RU. Furthermore, the large number of examination papers created the need to bring in computer grading system. Knowledge in this aspect was acquired from suppliers of the system. This computerized system later was utilized in registration and other tasks as well. Apart from hired personnel, consultants were also hired to set up the administration system. These personnel performed their tasks and accumulated tacit knowledge through their experience in the university. Some of the knowledge was codified in the forms of manuals and memorandum. Standard working procedures were set up so that personnel in all regional centers could provide services to applicants and students in the same manner. Many training programs for personnel were organized such as English, Japanese, Chinese, typing, computer packages application, and others. The information technology such as satellite, fiber optic, as well as the internet was utilized to communicate with students and personnel. In short, a lot of knowledge was imported from outside, procedures and trainings were offered so personnel acquired the knowledge. In addition, research funds

and scholarships were offered so personnel were motivated to create knowledge within the university. Many personnel took RU's scholarships to study abroad and brought more knowledge into RU.

Knowledge storing

Regarding the storing of academic knowledge, the university supported instructors to compile their materials in the forms of handouts, sheets, and texts. Texts for all subjects were created. Moreover, the teaching processes were recorded in video and audio media. These media were available for television broadcast in scheduled purchased time slots. Students can borrow these media to study at their convenience. On the administrative side, manuals for regulations and procedures were written. Students' statistics were stored in microfilms. Databases and online system were created in order to store information. RU invested a huge amount of funds in the mainframe computers. Hence, knowledge storing could be performed efficiently. Research projects were published in RU's journals as well as faculty's periodicals. Information were published and filmed. All information was stored in the main as well as regional campuses.

Knowledge distribution

Meetings with personnel both in the academic and administrative units were used as a major tool in informing work process, news, and other information. Personnel were trained to perform various types of tasks apart from their own. Moreover, announcements were made through circulations, announcement boards, and voice cable broadcasts. News and regulations were repeated through these mixed media in order to attain full coverage of personnel's exposure to the university's information. Moreover, trainings and seminars were organized in order to make sure that personnel in the main and regional campuses would follow the same practices in administration works. All publications including memorandum and thesis were distributed to all centers. Furthermore, free and sponsored public mass media were also used in order to relay knowledge to personnel in regional centers throughout the world. RU also rent satellite time slot in order to broadcast own programs both for academic and administrative purposes. All personnel and students had ID in order to access the information stored in the main servers through the internet. Activities were organized to create rapport among personnel in different departments so as to create network among personnel in RU.

Knowledge application

Personnel were involved in the designing of their work processes. Hence, they shared the same understanding in the work processes. The involvement and participation made them utilize the knowledge obtained from the university. Manuals and other information in the computer system could

be retrieved effectively in order to respond to questions or problems encountered under the same policy and guideline. Personnel in the centers around the world could request for information from the main campus through either the internet or long-distance telephone. Applied research projects in order to investigate problems and solutions to work flow were commissioned. The information was utilized to solve problems in the operations. Monetary and non-monetary rewards such as academic titles and pays for titles were offered in order to motivate personnel to utilize their knowledge. Journals and periodicals were published in order to provide outlets for personnel to exchange their interpretations about the policy, rules and regulations. Personnel could learn from others. Furthermore, academic titles as well as academic position pays were offered so as to motivate personnel to develop themselves and use the knowledge. Budgets were allocated in order to facilitate the application of knowledge such as computer, equipments, internet, and etc. Personnel were sent to attain various internal and external training courses so they could utilize knowledge in their works. Research grants and funds were also offered to allow personnel to pursue their research projects.

Problems and obstructions

The experts commented that RU's personnel did not have genuine understanding about the implementation of KM. They did not realize the importance and the approach to practice KM nor the KM's support facilities. Furthermore, personnel in different departments did not cooperate with each other. They did not want to share their knowledge with others but rather keeping themselves isolating from others. KM was considered extra works and was not assimilated into the work culture. Personnel focused only in their jobs on hand rather than learning information of others. In addition, some personnel were not capable in using modern IT technology to assist in their works. Lastly, many personnel who had been working with RU for a long period of time prefer not to change their familiar and usual ways of work and prefer not to learn new things.

DISCUSSION

In the establishment period of the university (1971-1982), RU priority was to create the overall system to facilitate the registration as well as teaching processes. Many problems were encountered. Personnel were busy getting things in line. The KM activities were mainly knowledge creation. A lot of knowledge was imported into the university through consultants, suppliers, and instructors. Most of the stuff was performed manually. Hence, other KM activities, i.e. knowledge storing, distribution and application were performed at a lesser extent than knowledge acquisition and creation.

The following decade (1983-1993) marked the era of IT system. RU had expanded rapidly. The original manual system could not accommodate the huge number of students both academically and administratively. RU installed IT system. The IT system required knowledge to be codified and stored. Tacit knowledge in individuals was compiled and organized systematically for unification in the form of explicit knowledge.

During 1994-2007, RU knowledge system was well established. More IT infrastructure was installed such as the university-wide wireless internet system. Libraries in the main and regional campuses were linked as well as other university's libraries. Support systems were established to support the distribution and utilization of knowledge throughout RU. However, problems regarding personnel's resistance to change persisted throughout the period.

The work load for KM led to several problems. Many personnel did not understand the significance of KM and reasons for them to participate. KM was considered extra work load. There is a need for administrators to support the implementation of KM. The administrators should create awareness and understanding in KM. The knowledge about KM should be offered to all personnel through internal communication and training. Sharing the knowledge about KM would help personnel to understand their roles and the way they should work and develop.

Knowledge in the information system is also important. Without proper knowledge and skills in using the IT and equipment, personnel cannot utilize knowledge stored in the database system for research or work practices and they cannot upload information to share with others or email. There should be a change agent to stimulate personnel to learn about IT system and how it can help them in their works. Opinion leaders should be located among the personnel and convince these opinion leaders to promote the use of new technology among colleagues.

The university should provide necessary and comfortable facilities for personnel such as a study room, internet access, and IT equipment that will facilitate the acceptance of KM process. If it is difficult or troublesome, personnel are not likely to accept them. The database should be organized in a user-friendly format.

Monetary and non-monetary rewards should be used to stimulate the acceptance of KM. Reward is a tool to motivate personnel to work toward it. Moreover, by offering rewards to certain behaviors, the university can communicate to personnel that these behaviors are preferred and valued. With similar understandings, personnel would share RU's vision and culture.

Activities such as sport or educational trips should be organized to create rapport among personnel in different departments. This would reduce the barriers among departments and help

solving the territorial problems and enhance the sharing of information.

Manuals and Quality Assurance (QA) programs should be established in order to systemize work processes. These would help to unify the work systems. Departmental operation plans could help to align personnel towards the same direction. More importantly, objective measurements for these works process and plans should be created to gauge the progresses and deviations.

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