THE IMPLEMENTATION OF KNOWLEDGE MANAGEMENT IN THAILAND: THROUGH THE BARRICADES

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ABSTRACT

The world in the twenty-first century is moving towards a more complex and dynamic environment so the way that an organization successful practiced in the past may not be applicable in the future. Many multi-national enterprises have already adapted themselves to the new management era, which is called "knowledge-based society", where knowledge is viewed as a source of sustainable competitive advantage.

They have put huge effort to search, select, organize, disseminate and transfer important knowledge to create their competitiveness. Thus, the role of knowledge management becomes critical in recent years and it should not be disappeared as so many management concepts did over the past several years. However, many previous studies showed that many KM initiatives failed because management did not understand the importance of KM process and elements. The intention of this paper is to identify major obstacles, which needed improvement for the success of KM implementation in Thailand. The conclusions emerging from the review and synthesis of existing literature indicated that obstacles of the KM implementation fell into cultural, structural, technological and human resource aspects.

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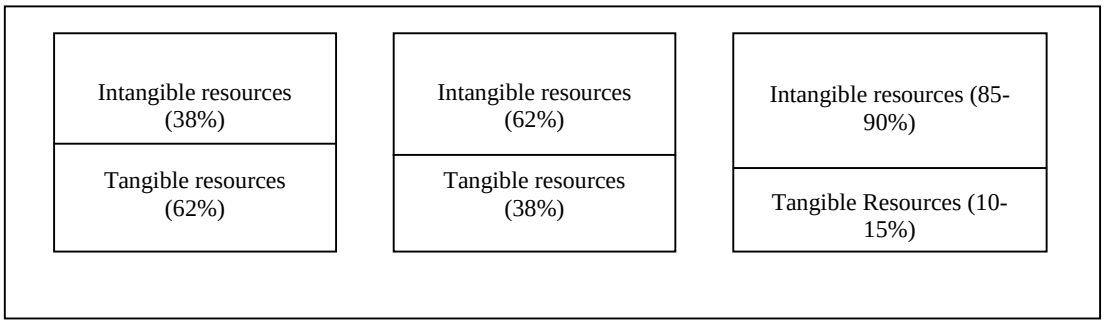
INTRODUCTION

Traditional economists cast the basic resources of production in terms of tangible resources such as land, labor and capital as potential sources of competitive advantage. However, the basis of organizational success has shifted from natural resources and physical assets to intellectual capital (Laszlo & Laszlo, 2002). Indeed, the wealth of nation no longer depends on its ability to acquire and convert raw materials but on the abilities to intellect its citizens. Not only the economists perceive this paradigm shift, but academics in other related areas of study also realize this phenomenon. They have recognized that the world in the twenty-first century is moving towards a global "knowledge economy" where the environment is complex and dynamic. They can no longer expect that the products and services that made them successful in the past will keep them viable in the future.

Figure 1: The effect of intangible and tangible resources on organization value



Source : Olve, N., Roy, J. & Wetter, M. (1999)

As the nature of work and competition changes, intangible resources are becoming more important as shown in figure 1. The value of tangible resources was previously recognized by several investors as major indicators to evaluate firm performance. They preferred investing in firms which owned considerable amount of tangible assets such as building, machinery, equipment, etc. However, the concept of firm valuation has been changed in 1990s. Investors started to realize that intangible resources would be more likely to produce a sustainable competitive advantage, which would result in long-term profits for shareholders (Olve, Roy and Watter, 1999). They, therefore, adjusted their portfolio and invested in firms emphasizing on the development of intangible resources. In the twenty-first century, it is more widely acknowledged that, in order to be competitive, firms have to sustain and constantly develop their intellectual capital and hence difficult for competitors to imitate (Black & Boal, 1994; Jackson, Hitt & DeNisi, 2003; Itami, 1987; Rao, 1994; Yodwisitsak, 2002). Intellectual capital is proved to be the only source of long-term success and competitiveness because every other aspect of an organization can be duplicated by others.

Knowledge is widely accepted as a key factor in creating competitive advantage. Quality human resources, then, become the most valuable asset of all knowledge-based firms. Their ability to create, use and share knowledge represents the possibility to achieve the greatest strategic advantage of the organization. A recent survey demonstrated that 80 percent of executives from 80 large companies in the US believed in the essential of managing knowledge to organizational success (Takeuchi, 1998). This was agreed by Carly Fiorina, CEO of Hewlett-Packard, who was convinced in the role of human capital by emphasizing that the greatest strategy, the greatest financial plan and the greatest turnaround was only going to be temporary if it was not grounded in people (Jackson, Hitt & DeNisi, 2003).

The objectives of this paper are to review the available literature on knowledge management (KM) and to identify major obstacles of KM in Thai organizations. The paper is divided into four sections. The first section will discuss on various definitions and forms of knowledge. The concept of KM will be presented in the second section. It is followed by the obstacles of KM in Thailand. Future research studies will be recommended in the final section.

DEFINITIONS AND FORMS OF KNOWLEDGE

The most important question with regard to knowledge management is "what is knowledge?". Helmers (1999) have defined knowledge as the accumulation of information and experience that allows people to react to new situations by synthesizing a response from past data and actions. Knowledge, therefore, cannot be considered as synonym of information or cannot be assumed to have the same meaning as data. The differences among data, information and knowledge should, then, be clarified in the first place.

Data comprises nothing more than facts, which can be either qualitative or quantitative in nature. Information is data to which meaning has been added by being categorized, classified, corrected and condensed. Information coded into symbols to make knowledge or, in other word, knowledge is the relationship of connected information. It is an amount of information that is necessary to function and achieve. Therefore, knowledge can also be described as something that makes both data and information manageable so it is only valuable if it is accessible (Beijerse, 2000; Laszlo & Laszlo, 2002). The following example will be clearly differentiated the meaning of data, information and knowledge. A number out of any background such as 1, 2 or 3 could mean anything. This is called "data". It becomes "information" when the data is arranged and the context is formed, for example, I was 30 years old or I was born in 1974. It can become "knowledge" only when it is used. If the information is stored in the computer mainframe or human brain and has never been used, it is not knowledge. If the customer profiles have been kept for several

years and have never been read, it would be classified as information. However, if that information is used, for example, by a salesman in launching sales program, it then becomes knowledge.

Kryshtafovich (2003) has identified knowledge as the high-quality information with the exception of assumed information because the latter has a probability to be the bad information. Therefore, knowledge has to be originated from accurate data since knowledge is derived from information as information is derived from data. Many organizations have tried to build up knowledge by setting up "coffee rooms" where employees can share data and information, which when analyzed and used, becomes knowledge.

Knowledge can be recorded in various methods such as documents, standard operating procedures, social relationships among organization members, standards of good professional practice, culture generated by organizational stories or shared perceptions of the way things are done around (Levitt and March, 1988). Because of its diverse sources, it can also be classified in various forms by different perspectives. The followings are the examples of the classification of knowledge.

The most common classification divides knowledge into explicit knowledge and tacit knowledge. Explicit knowledge can be formalized, codified, articulated and communicated in formal and systematic languages or codes, and set down in written documents (Kogut and Zander, 1992; Polanyi, 1973; Reed and DeFillippi, 1990). Tacit knowledge, on the other hand, is demonstrated through actions, embodied in personal experience and difficult to express through mere verbal instruction; individuals know it but cannot articulate it. It is passed along to others through direct experience. The importance of tacit knowledge is not more or less than explicit knowledge since it is often embedded not only in documents and presentations but also through person-to-person contacts (Davenport and Prusak, 1998). Even though, the concept of tacit knowledge and explicit knowledge is widely accepted, other forms of knowledge are also proposed by academics and practitioners.

Kirzner (1979) showed that knowledge can be classified into entrepreneurial knowledge and the knowledge expert. He argued that knowledge experts did not fully recognize the value of their knowledge or how to turn it into a profit. Nevertheless, the entrepreneurs might not have the specific knowledge of the expert but they recognized the value and the opportunity of that knowledge. They turned unemployed knowledge into practical knowledge.

Dierickx and Cool (1989) demonstrated that the underlying knowledge of a firm may be conceptualized as stocks and flows of knowledge. Stocks of knowledge are

accumulated knowledge assets that are internal to a firm; on the other hand, flows of knowledge are knowledge streams into the firm and assimilated over time to become stocks of knowledge.

DeLong and Fahey (2000) classified knowledge into human knowledge, social knowledge and structured knowledge. Human knowledge, being mostly tacit, is what individuals know. Social knowledge exists in relations among individuals and groups. It comprises synergetic knowledge, which is largely tacit. This form of knowledge is the result of working and learning together. Finally, structured knowledge is embedded in the processes and infrastructure of a social system so it is explicit and rule-based.

Gao, Li and Nakamori (2002) initiated three main parts of a knowledge subsystem, namely scientific knowledge, technical knowledge and managerial knowledge. Scientific knowledge determines which industry/industries the company can enter and it can be justified or falsified. Technical knowledge determines its status of long-term standing in the industry/industries. Managerial knowledge is at the core of organizational effectiveness and efficiency.

Since various experts have given different definitions of knowledge, it is essential to link those ideas and integrate them into a compromising entity. Despite the fact that the literature includes various classification of organizational knowledge, the most frequently used is the one that classifies knowledge into tacit and explicit knowledge, which is described in this paper as the core concept. The concept is used as an axis to link the different definitions of organizational knowledge (Table 1).

Table 1: The linkages of knowledge definitions to the core concept

Authors	Forms of Knowledge	Core Concept	
		Tacit	Explicit
Kirzner	Entrepreneurial knowledge	√	
	Knowledge expert	√	
Diericks & Cool	Stocks of knowledge	√	
	Flows of knowledge		√
DeLong & Fahey	Human knowledge	√	
	Social knowledge	√	
	Structured knowledge		√
Gao, Li and Nakamori	Scientific knowledge		√
	Technical knowledge		√
	Managerial knowledge	√	

The table shows that more than half of existing forms of knowledge are tacit, which is generated and transferred by the daily work experience and social interactions. In addition, cross-industry reports also supported the importance of tacit knowledge by showing that this form of knowledge shared almost 75 percent of corporate knowledge (Ho, 2004).

Since the knowledge sharing process is the continuous activity, firms need to facilitate the transfer of tacit knowledge. "KM", thus, becomes very important for every firm in order to develop and sustain competitive advantage.

WHAT IS KM?

Several academics have proposed the definition of KM in different views so the aim of this section is to summarize those views in order to obtain a mutual agreement amongst them.

Davenport and Prusak (1998), Seng et al (2002) and Wickramasinghe (2003) viewed KM as the process of creating value from an organization intangible resources. It is a conscious effort to get right knowledge to the right people at the right time so that people can share and put information into action in ways that improve an organization performance. Therefore, KM not only involves persons who produce information, but also persons who capture data at the source, transmit and analyze this data, as well as communicate information based on, or derived from, the data, to those who can actually act on it.

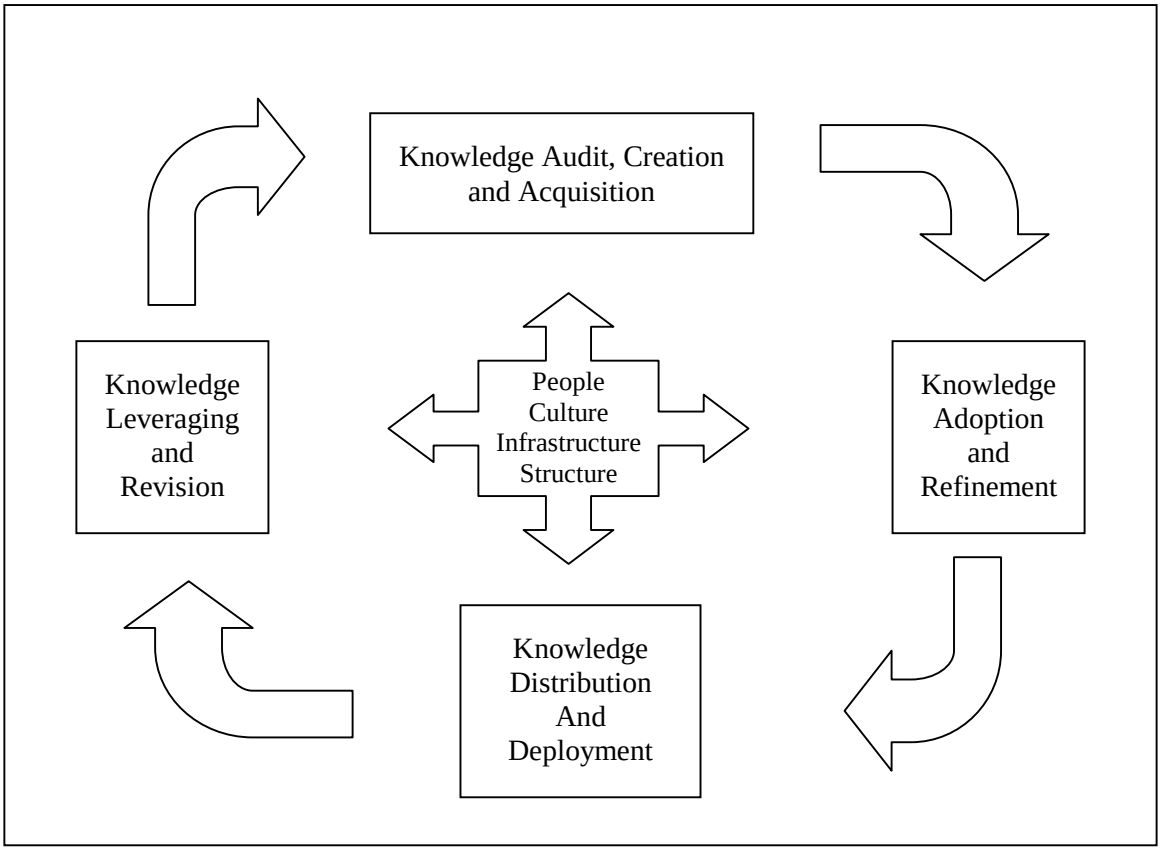
Beijerse (2000) viewed KM as the management of information within an organization by steering the strategy, structure, culture and systems and the capacities and attitudes of people with regard to their knowledge. It is widely accepted that it is worthless when an organization has many brilliant staff but their personal knowledge cannot be naturally articulated in organization knowledge. Thus, the basic aim of KM for an organization is to fully utilize all available knowledge, transfer significant knowledge and embody knowledge to enhance competitive advantages. This is achieved primarily by facilitating and motivating people via structure and systems in order to build-up appropriate culture, develop people capacities and stimulate their attitude to entrepreneurship.

Suresh (2002) viewed KM as a process that helps organizations find, select, organize, disseminate and transfer important information and expertise necessary for activities.

In order to avoid confusion of KM definition, this paper will define KM as the process of achieving organization's goals by creating value from the intangible resources, which is intrinsically existed in its human capital.

The next question with regard to knowledge management is "how to manage the knowledge?". There is no simple answer to this question. There were two models proposed by two independent researchers trying to answer this important question. However, neither model was complete and universally applicable. The model proposed here has been constructed based on the models previously described by Bhatt (2000) and Suresh (2002) with a slight modification (Figure 2).

Figure 2: Knowledge Manager – Process and Elements



Modified from: Bhatt (2000) and Suresh (2002)

- ***KM process***

To establish KM in an organization, considerations have to be emphasized on its process: knowledge creation and acquisition, knowledge adoption and refinement, knowledge distribution and deployment, and knowledge revision and leveraging. Each step in this process leads to the success of KM in an organization. Missing even one of

them would cause process failure because the loop is incomplete and the process will discontinue. The activities in each step will be explained below.

Knowledge audit, creation and acquisition needs not only to be undertaken during first step of KM program but also continuously evolving and emergent. It should identify and describe what knowledge already exists and future knowledge requirements of the enterprise. At this stage, the organizational members are forced to view reality in new perspectives. They have to generate new idea by breaking down rigid thinking and assumption. To maximize the impact of information collected and knowledge acquired, knowledge workers are being encouraged to share their best practices, new techniques and lessons learned with their colleagues, wherever they are in the organization. Therefore, this step requires complex interrelated changes in organizational culture and structure.

Knowledge adoption and refinement is initiated because of the difficulty to create knowledge from within. Many companies may choose a simpler route by acquiring knowledge from other sources and adapt it for internal use. At this stage, the organization members usually try to organize and transform the acquired knowledge into written material.

Knowledge distribution and deployment is also essential for the KM process. To what extent a firm succeeds in distributing knowledge depends on organization culture and organizational structure. However, an organization relying on traditional control and authority relationship finds it difficult to distribute knowledge since it will be relatively inflexible in distributing and sharing knowledge laterally and across the teams (Bhatt, 2000).

Knowledge leveraging and revision is important for current dynamically changing environment. This step will encourage organization members to leverage the unused knowledge. If the knowledge components are not regularly updated and revised, they will eventually be obsolete. Revision of knowledge is important because it will help the organizational members to realize the knowledge gap, which will in turn bring them to the first step - knowledge creation and acquisition.

- ***KM elements***

The process *per se* does not lead to success of KM. Cross-industry studies showed that up to 85 percent of all KM initiatives failed to achieve their business objectives since management did not realize the importance of KM elements (Ho, 2004). The model in Figure 2 is constructed on the assumption that the organization has already committed to initiate KM and top management has issued policies to facilitate KM process. This model describes the four major elements of the KM process which are people, culture, infrastructure and structure. Having great movie stars were very important for the film

success; however, the film production needed not only the great movies but also supporting teams such as novel writer, director, make-up artist, costume designer, etc. Likewise, there is no such "a solo great movie star" in the success story of KM. In other words, all 4 elements are equally important.

Several supportive success factors, which were indicated by many studies, were mainly linked to soft issues – organizational culture and people (Chase, 1997). As mentioned earlier, knowledge, which is usually called intellectual capital, is a key factor in creating competitive advantage. In order to be successful, the company therefore requires quality human resources. For example, even though a company has built a good infrastructure but failed to invest in human resource development, those endeavors would be fruitless. However, quality organizational member is not the only element for KM success. The role of organizational culture should not be left out. The knowledge-sharing culture must be established in order to pass on individual knowledge to other members of the organization. For example, if a company has many qualified staff but they do not share their knowledge to others, organizational knowledge will not be developed.

Management should also design organizational structure which will facilitate information flows throughout the firms. Hierarchical levels need to be minimized to reduced filter, and hence enhancing the flow of knowledge.

The infrastructures are often taken into account when the term "KM" is intoned. Although KM is not the implementation of technology, it performs best when enable with sophisticated technology. Information technologies (IT) such as internets, intranets, Electronic Portals, web conferencing and data warehouse are the common infrastructures that support KM system. They are also perceived as main driving forces in sustaining firm's competitiveness. Huge investments are, therefore, being made in hardware and software to ensure that the information and knowledge is available within the organization to the people who need it. Most developing countries are required to actively engage IT diffusion if they want to catch up with the developed countries.

The need to better understanding of KM elements is increasingly important. Many KM initiatives were failed because management overlooked the consequences of KM elements. The essence of each element is not greater than others since they are inter-dependent. However, the limitation of each element is dissimilar in different environment which will be discussed in the next section.

OBSTACLES OF KM IN THAILAND

The fact that the advent of knowledge era has made the use of KM critical for organizational success has been widely perceived. Thailand must try to catch up with the

more advanced rivals in order to ensure future competitiveness. However, there is no master plan in finding ways to capture the intellectual capital assets since supportive success factors, as mentioned earlier, in each environment are unique. The KM in Thailand may not be as successful as other countries since it has to face with several major obstacles, which will be discussed as followings.

- ***Thai people***

People are viewed as one element of KM in the organization. As mentioned previously, whilst explicit knowledge cannot be self-developed, tacit knowledge can be extended by itself. Organization, therefore, has to put emphasis on the ability of its personnel to utilize available information and to build up competitive advantage. They must be encouraged to maintain awareness of what knowledge is, how to observe and identify valuable knowledge, how to collect the necessary information, and how to facilitate the KM process. Levinson (2000) supported the importance of personnel by stating that education of human capital is a necessary ingredient for the success in knowledge-based economy.

However, according to the World Competitiveness Report by IMD during 1995-2000, Thailand was grouped in the lowest quadrant due to lacking of Thai people who had ability to access and process information (IMD, 1995; 2003).

- ***Thai culture***

KM is highly cultural. Several western management concepts have been brought to Thailand during the past few decades. However, some of them were not successfully applied, as many researchers expected, since Thai culture is very much different from that of the Western. Without its understanding, academics and practitioners might lose their way to the successful implementation of western management concepts. Some of the Thai values which foreigners often find difficult to deal with were summarized as follow.

Rohitratana (2003) suggested that Thai employees usually assumed that their bosses possessed certain knowledge, wisdom and experience which go beyond their own capacity. The employees believed that power of individuals who were in higher hierarchical levels would be more than those who were in lower levels. This situation is not uncommon universally but, in Thailand, most people believe that it is a requirement for them to follow their superior's instructions. Thus, only those at the top could possibly make decisions and the employees will take the role of followers.

The same author also emphasized that "saving face" value is widely applicable in almost every organization in Thailand. Whenever there are any problems to be solved, the first criteria to consider is saving the face of the persons involved. Consequently, if someone did not agree with his/her friends, he/she usually avoided giving any criticism

because the person who had been criticized would have been perceived as losing face. The role of saving face is not limited to the above context. In many cases, a person wants to save his/her own face by not asking for any advice from others.

"Kreng jai" is another Thai value which foreigners often find difficult to understand. Komin (1990) and Holmes and Tantongavy (1996) defined it as the situation where there was the potential for discomfort or conflict but an individual tried to take another person's feelings into account. In Thailand, this behavior has been established for several decades and it becomes a root of social system which is widely applied everywhere

Bunyagidj and colleagues (2003) agreed with the other researchers and suggested that knowledge-sharing culture was essential to the success of KM implementation in Thailand. However, majority of Thai organizations did not pay much attention to such culture. The strong seniority culture, where the junior did not dare to speak out in front of the senior, was still considered as normal practice in Thai society. Thus, learning, which embraces the acquisition of existing and the development of new knowledge in order to improve organizational performance, will be obstructed.

- ***Infrastructure***

As mentioned earlier, technology has caused a major paradigm shift in the way information services are delivered. Even though organizations cannot achieve the implementation of a KM with technology alone, infrastructure, specifically IT, is required to obtain available information. It provides easy access to information and the knowledge resources with minimum time frame.

Southeast Asian countries are trying to catch up with their more advanced counterparts in the belief that an expansion of the information infrastructure will permit more efficient decision making and improve the country's competitiveness. However, the examination of the state of R&D by Lim (1999) disclosed that these countries still had a long way to go to catch up with the developed countries.

In Thailand, the rapid economic growth rate allowed an increasing number of Thai citizens to enjoy ready access to subsidized utilities that were monopolistically operated by Thai state enterprises (SE). Comparing to other developing countries, Thailand's infrastructure is much underdeveloped. For example, the number of telephone lines in the Bangkok Metropolitan Area (BMA) was consequently increased from 3.3 lines per 100 persons in 1992 to more than 10 lines per 100 persons in 2000; however, this number is still far behind other developing countries where the number is as high as 40 per 100 persons (Yodwisitsak, 2003).

In addition, Thailand also has the problem of the low level of computer literacy and low level of access to computers required for information processing as revealed by the International Telecommunication Union (ITU) in 2003 (www.itu.int). ITU initiated the first global index to rank Information and Communication Technology (ICT) access called Digital Access Index (DAI) which covered a total of 178 economies. The index covered variables in five areas, namely the availability of infrastructure, affordability of access, educational level, quality of ICT service, and Internet usage. According to the DAI, Thailand was categorized as a medium access country and had a score of 48/100.

- ***Organizational structure***

The importance of organizational structure in Thai private enterprises is not different from other countries. However, the situation in Thailand may be more intense since more than 95% of 850 thousand private enterprises in this country are small and medium enterprises where the owners normally run the business by themselves (Ngamsiripattanakul, 2004 and SMEs today, 2003). Being in the high-level position in the organizations, they usually make decision on their own or take advices only from their family members.

Worse, the situation in Thai SE is far beyond since they usually operate in centralized system and have multi-layered organizational structure. Several studies suggested that the outdated bureaucratic system and hierarchical structure, which obstructed flow of information and communication, should be replaced by other systems that could effectively and flexibly deal with the rapid changing environment (Parker, 1995; Smith et al., 1999 and Yodwisitsak, 2001 and 2003).

CONCLUSION AND RECOMMENDATION:

It was said who owned the information, had the power. The statement is valid even for today. Large multi-national enterprises have seen the importance of the information relevant to their business, and yet transformed the recorded information into knowledge. In other words, they try to transform themselves from data-based or information-based to knowledge-based organizations. The knowledge-based management has recently proved itself to be a key success factor for modern business organizations. Organization has to search, select, organize, disseminate and transfer important knowledge to create its competitiveness. Thus, the KM concept is required for any organization and should not be disappeared as so many management concepts did over the past several years. It is necessary for practitioners to completely understand both KM process and elements since missing even one of them will lead to failure.

Not many Thai organizations have successfully adopted KM concept. This situation is not unique in Thailand since several countries have faced with the same experience. Most organizations followed each step of KM process but ignored the essence of the elements. Even though some organizations realized the importance of KM elements, they failed to adapt the elements to their environment.

The future research question arising from this article is "how to successfully implement KM in Thai organizations?". The researchers should pay particular attention on cultural, structural, technological and human resource aspects. When this question is answered, the organization competitiveness will be improved.

REFERENCE

Beijerse, R. P. uit (2000), "Knowledge management in small and medium-sized companies: knowledge management for entrepreneurs", **Journal of Knowledge Management**, 4(2), 162-179.

Bhatt, G. D. (2000), "Organizing knowledge in the knowledge development cycle", **Journal of Knowledge Management**, 4(1), 15-26.

Black, J. A. and Boal, K. B. (1994), "Strategic resources: Traits, configurations, and paths to sustainable competitive advantage", **Strategic Management Journal**, 15, 131-148.

Bunyagidj, B., Prasopsukchokchai, N., Pornchanoknart, D. and Karnluan, P. (2003), "Thailand Experience: Pilot Project on KM Implementation", **Paper presented at The 3rd European Knowledge Management Summer School on 7-12 September 2003**, San Sebastian: Spain.

Chase, R. L. (1997), "The Knowledge-Based Organization: An International Survey", **The Journal of Knowledge Management**, 1(1), 38-49.

Davenport, T. and Prusak, L. (1998), "**Working Knowledge**", Boston, MA: Harvard Business School Press.

De Long, D. W. and Fashey, L. (2000), "Diagnosing cultural barriers to knowledge management", **The Academy of Management Executive**, 14(4), 113-127.

Dierickx, I. and Cool, K. (1989), "Asset stock accumulation and sustainability of competitive advantage", **Management Science**, 35(12), 1504-1511.

Gao, F., Li, M. and Nakamori, Y. (2002), "System thinking on knowledge and its management: systems methodology for knowledge management", **Journal of Knowledge Management**, 6, 7-17.

Helmers, S. A. (1999), "**Knowledge Management: Building on What We Know**", Boston, MA: The Harvard Computing Group.

Ho, M. (2004), "**Knowledge Management: Assessing Your Corporate Knowledge**", www2.cio.com.

Holmes, H. and Tangtongtavy, S. (1996**), "Working with the Thais: A Guide to Managing in Thailand**", Bangkok: White Lotus.

Itami, H. (1997), "**Mobilizing invisible resources**", Cambridge, MA: Harvard University Press.

Jackson S. E., Hitt, M. A. and DeNisi, A. S. (2003), "**Managing Knowledge for Competitive Advantage: Designing Strategies for Effective Human Resource Management**", San Francisco, CA: Jossey bass.

Kirzner, I. (1979), "**Perception, opportunity, and profit**", Chicago: University of Chicago Press.

Kogut, B. and Zander, U. (1992), "Knowledge of the firm, combinative capabilities, and the replication of technology", **Organization Science**, 3, 383-397.

Komin, S. (1990), "Culture and Work-related Values in Thai Organizations", **International Journal of Psychology**, 25, 681-704.

Kryshtafovich, A. (2003), "The Theory of Knowledge and its use in Knowledge Management practice", **paper presented at the 3rd European Knowledge Management Summer School**, 7-12 Sept 2003, San Sebastian, Spain.

Laszlo, K. C. and Laszlo, A. (2002), "Evolving knowledge for development: the role of knowledge management in a changing world", **Journal of Knowledge Management**, 6(4), 400-412.

Levinson, M. (2000), "Education for Technology And Technology for Education: The Dilemma of The New Economy", **Global Competitiveness Report 2000**, Oxford University Press, New York: USA.

Levitt, B. and March, J. G. (1988), "Organizational learning", **Annual Review of Sociology**, 14, 319-340.

Lim, Edward (1999), "Human resource development of the information society", **Asian Libraries**, 8(5), 143-161.

Ngamsiripattanakul, A. (2004), "BOI's policy to support SMEs" (in Thai), **Post today**, 2(368), B8. (Monday, 9th February, 2004)

Olve, N., Roy, J. & Wetter, M. (1999), "**Performance Drivers: A Practical Guide to Using The Balanced Scorecard**", West Sussex: John Wiley & Sons.

Parker, D. (1995), "Privatization and the internal environment: Developing our knowledge of the adjustment process", **International Journal of Public Sector Management**, 8(2), 44-62.

Polanyi, M. (1973), "**Personal Knowledge: Toward a postcritical philosophy**", New York: Routedge.

Rao, H. (1994), "The social construction of reputation: Certification process, legitimization, and the survival of organizations in the American automobile industry, 1895-1912", **Strategic Management Journal**, 15, 29-44.

Reed, R. and DeFillippi, R. S. (1990), "Causal ambiguity, barriers to imitation, and sustainable competitive advantage", **Academy of Management Review**, 15, 18-102.

Rohitratana, K. (2003), "How to use the Interview as an Effective Tool to Conduct Qualitative Research in the Asian Organizational Context", **Papers presented at The 2nd European Conference on Research Methodology for Business and Management on 20-21 March 2003**, Reading: UK.

Seng, C. V., Zannes, E. and Pace R. W. (2002), "The contributions of knowledge management to workplace learning", **Journal of Workplace Learning**, 14(4), 138-147.

SMEs Today (2003), 1(12).

Smith, A., Golden, P. and Pitcher, P. (1999), "The clock is ticking: surviving privatization and deregulation by utilizing the running time", **European Management Journal**, 17(4), 409-421.

Suresh, H. (2002), "**Knowledge Management: The Road Ahead for Success**", Coimbatore: PSG Institute of Management.

Takeuchi, H (1998), "**Beyond Knowledge Management: Lessons from Japan**", www.sveiby.com.

Wickramasinghe, N. (2003), "Do we practice what we preach?: Are knowledge management systems in practice truly reflective of knowledge management systems in theory?", **Business Process Management Journal**, 9(3), 295-316.

Yodwisitsak, K. (2001), "Success Factors for the Privatized Thai State-owned Enterprises: Telecommunications Industry", **Journal of Business Administration**, 94, 71-90.

Yodwisitak, K. (2002), "Balanced Scorecard: Concept and Implementation" (in Thai), **Journal of Business Administration**, 96, 61-73.

Yodwisitsak, K.(2003), "The Relationship of Success Factors for the Privatized Thai State-owned Enterprise in the Fixed-line Telephone", **Papers presented at The 6th Conference on Quality Management and Organizational Development on 1-3 October 2003**, Paris: France.

World Competitiveness Report, 1995, IMD, Lausane.

World Competitiveness Report, 2003, IMD, Lausane.

www.itu.int.