A Significant Role Of Knowledge Management To Improve The Service Sector Industry

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INTRODUCTION

Competitive advantage is important for a company's performance in emerging markets. Many companies lose sight of competitive advantage to grow and compete with domestic and global competitors. Thus, many companies try to gain it from managing knowledge. However, while the companies have to leverage their knowledge internally and externally to create and sustain a competitive advantage, they have to face many problems to manage knowledge. This thesis takes a critical look at problems and barriers of managing knowledge as well as how the service companies use knowledge management to improve their efficiency. At the present, many companies have to face high competition. Some struggle to implement corporate strategies to respond to existing markets. To gain high benefits, these companies use knowledge management to compete with other companies. Knowledge management is very important for all kinds of businesses, because it can help the companies improve their services, increase the quality of the products, reduce cost and shorten the turn around time for their customers. However, the major challenge of managing knowledge in the companies is capturing and integrating knowledge to share among all organizational members (Grant, 1996). The successful company has to gain the ability to collect, store, and distribute specialized knowledge to create and sustain competitive advantage (Davenport and Prusak, 1998; Grant, 1996). As markets and organizations become more global, the traditional knowledge creation and transfer - such as face-to-face contact, job rotation, and staff training programs may prove to be too slow and less effective (Alavi and Leidner, 1999). The need to develop more efficient means has led to implementing information systems that are designed specifically to facilitate coding, combining, and applying of organizational knowledge (Alavi and Leidner, 1999). Knowledge management has been used in most product-based companies, and it has also extended its use to the service sector. However, there are not many studies looking closely to explain the situation in the service industry, while the service sector is growing continuously . Thus, it is necessary to understand the situation and how the service sector develops the knowledge management strategy. Knowledge management can play an important role to make companies compete productively. This paper attempts to explain why knowledge management is essential for service companies and show how the service companies use knowledge management to gain competitive advantage. The main problems and barriers that service companies might anticipate during the knowledge management implementation are discussed in the present paper.

OBJECTIVES OF THE STUDY

There are three main objectives for this paper :

1. The study presents the aspects that help to create and sustain successful management of knowledge work.

2. The study focuses on the utilization of knowledge management for the company in the service sector.

3. The further aim is to analyze the problems faced by organizations to handle knowledge management and how the companies in the service sector should handle these problems.

LITERATURE REVIEW

There are different sub topics of literature review, which are discussed in the forthcoming paragraphs :

☸ **Service Industry :** Service industry is the an industry which involves the provision of services to other businesses and also directly to customers . Activities are mainly concerned with providing services, rather than tangible objects for the benefit of the end users and/or other industries. It includes insurance banking and finance, provision of gas,

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electricity and water, health care, transport, communications, entertainment, retailing and wholesaling, and central and local government (London Borough of Richmond upon Thames, 2005; the Geographical Association Fieldwork Code of Practice, 2006; WordNet; Wikipedia). The economy is developing rapidly and significant changes in the economic structure is progressing. Therefore, the importance of the service industry in an economic system has been increasing steadily so as to become one of the principal drivers for most developed countries' economy. The services' sector is now of central importance to advanced economies, and hence, studying the concept of knowledge management to enhance the understanding of this sector would be necessary.

☸ **The Concept Knowledge :** Knowledge is quite different from data and information in nature, although sometimes, people use the three terms interchangeably. (Becerra - Fernandez, Gonzalez & Sabherwal, 2004).

DATA

The Data consists of facts, results from observations and explorations and doing experiments. For alone data, it just shows raw numbers or claims, so it does not have meaning by its own. However, data is still needed for any organization. It is important for workers and companies, because it is the raw material for analysis to create information. For example, sales order is just data; it does not have meaning for anyone if it is not transformed to other things that have meanings. Although data does not have meaning or goal, it is easy to be captured, stored, transferred and communicated by using electronic or other media (Davenport & Prusak, 1998; Becerra-Fernandez et al., 2004).

☸ **Information :** Information is a part of data. It generally involves about transforming, sorting and organizing raw data to gain a more meaningful indication of patterns in the data that information has an impact on people's decision or behavior (Becerra-Fernandez et al., 2004). For example, after transforming a sales order into daily sales, a daily sales report can be used to give meaning for a manager to make a decision about what to do next.

☸ **Knowledge :** Becerra - Fernandez et al. (2004) judged knowledge to be at the highest level in a hierarchy, with information at the middle level, and data to be at the lowest level. According to this view, knowledge cites to information that enables action and decisions, or information with direction. Davenport and Prusak (1998, p.5) give another definition of knowledge. *"Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices, and norms."* Knowledge helps producing information from data or more valuable information from less valuable information. Thus, knowledge is basically similar to information and data, although it is the richest and deepest of the three, and is consequently, the most valuable. This aspect of the relationship between data, information, and knowledge is represented in the Figure 1 (Becerra-Fernandez et al., 2004), exploiting theoretical knowledge, creativity and social skills (Newell et al., 2002).

SOME POSSIBLE PROBLEMS IN KNOWLEDGE MANAGEMENT

☸ **Space And Time Limitations :** While advancements in computers and technology have helped people to link with each other, people are also concerned about geography affecting them in the new knowledge economy. The emergence of virtual spaces does not decrease significance of a physical space (Kimble et al., 2000). Even though people have the fast pace of technology to communicate, and the ability to transfer data across distances, they still want to be in contact with others in person by gathering together for events, hand shaking and hugging (Sherron and Boettcher, 1997). Time is another factor that needs to be considered, because virtual communities or online societies make people work with their colleagues anytime, anywhere. For example, an employee can work at four o'clock in the morning with other employees from other continents (Kimble et al., 2000). Another aspect of time is obsolete knowledge. Although sharing knowledge over time is seen as important, people should not overestimate past knowledge. Knowledge from the past cannot always serve as a basis for the work of today; things can change quickly and radically in innovating industries (Barnard, 2005).

☸ **The Lack Of Face-to-Face Communication :** In many cultures, the face-to-face meeting is the perfect example for the meeting of minds. When people physically meet each other, communication is smooth and sound. However, the space and time limitations in online society make face-to-face communication impossible. Knowledge Management researchers support the presence of other members in the community, which is the important key for knowledge creation and sharing. Today, people have a lot of activities to do, such as working and learning from other parts of the world. In order to solve the problems, they can use technologies such as video conferencing to create a telepresence that they can communicate anywhere and anytime. They can create virtual teams to work efficiently, having face-to-face communication where they can overcome the issue of trust and ambiguity surrounding in the virtual world (Hildreth et al., 1998; Kimble et al., 2000).

☸ **Language And Cultural Barriers :** It is not only the physical distance and time difference limitation problems that members in online society have to confront, but they also have to face other obstacles to communicate with each other, such as language and cultural barriers. They have to confront the language barrier, which can hinder interaction in an online society, where the companies can find people from different countries and different languages. Although people normally use English to communicate or do business worldwide, many people do not have the ability to understand and communicate in English (Van den Branden, 2001). Therefore, language can be a cause of a barrier that hinders people in an online society to transfer and share their knowledge with others. When people have to share knowledge with someone from another culture, they have to use additional effort (Barnard, 2005). Culture may also hinder people in an online society to create and share knowledge with each other. People who come from different parts of the world may have different cultures, behaviors, goals, and motivation that makes it difficult for them to communicate and get knowledge from what other people try to explain.

☸ **The Problem With Trust :** Trust has played an important role in knowledge sharing. It plays a more essential role when it has to be created in an online or virtual environment. Handy (1995) has emphasized the importance of trust in an online society. He considers that trust can develop when people are not complete strangers to one another. He also maintains that establishing trust is hard if people have not worked together before, or they have no face-to-face contact. People increase the sense of trust that allows them to create new knowledge and share that knowledge with other people in the community through good relationships.

☸ **Low Level Of Teamwork :** Online communication in virtual communities differs from face-to-face communication. As mentioned above, due to the space and time limitations, the lack of face-to-face communication may result in a problem with trust, identity and commitment in online societies. These can make people feel reluctant to share their knowledge and work together. Knowledge that is not shared will lose its relation quite quickly. There is an evidence that the environment that supports trust, care, and personal networks among employees is one of the most important conditions for high level of collaboration, knowledge creation and knowledge sharing (Nonaka, Von Krogh and Ichijo, 2000; Kimble et al., 2000).

KNOWLEDGE MANAGEMENT SHARING

Knowledge has become one of the important components of many companies. The companies face the challenge about using and creating knowledge. When the technology that has been used to manage knowledge grows fast, it means that the knowledge can be collected, stored and accessed to improve jobs. While human knowledge may be an organization's most valuable asset, much of this knowledge has never been shared. Harnessing critical knowledge and using it to create a common vision and objectives can move an organization closer to a high-performance workplace. Many researchers maintain that it is essential to create a knowledge sharing culture as part of the knowledge management strategy (Harris, 2006).

☸ **The Importance of Sharing Knowledge :** Now-a-days, the creation and application of new knowledge is essential to the survival of most companies. There are many reasons why knowledge sharing is important, which are as follows: (Gurteen, 1999):

☸ Intangible products - ideas, processes, and information - are growing in the share of global trade from the traditional, tangible goods of the manufacturing economy.

☸ The application of new knowledge is increasingly important in the society. The continuous innovation process will sustain the competitive advantage.

☸ Increase in turnover of staff. People do not take a job for life any more. When they leave an organization, their knowledge is gone with them.

☸ Large global or even small geographically dispersed organizations do not understand what they know in the whole picture. Expertise learnt and applied in one part of the organization is not leveraged in another.

☸ Fast changes in technology, business and society can cause knowledge to become obsolete. As things change so quickly, in some companies, their knowledge base declines. As much of 50 per cent of what the staff knew five years ago is probably obsolete today.

☸ **Barriers Of Knowledge Sharing :** These are some barriers that obstruct companies to transfer knowledge in their companies . Davenport and Prusak (1998) give barriers affecting knowledge transfer in companies and they also give possible solutions for each barrier. Some of the knowledge sharing barriers and the solutions to the same are as follows :

☸ **Barriers**

☸ Lack of trust;

☸ Different cultures, languages and frames of reference;

☸ Lack of time and meeting places; narrow ideas of productive work;

☸ Status and rewards go to knowledge owners;

☸ Lack of absorptive capacity in recipients;

☸ Belief that knowledge relates to specific groups;

☸ Intolerance for mistakes and lack of help.

☸ **Solutions**

☸ Build relationships and trust by balancing between virtual and face-to face meetings;

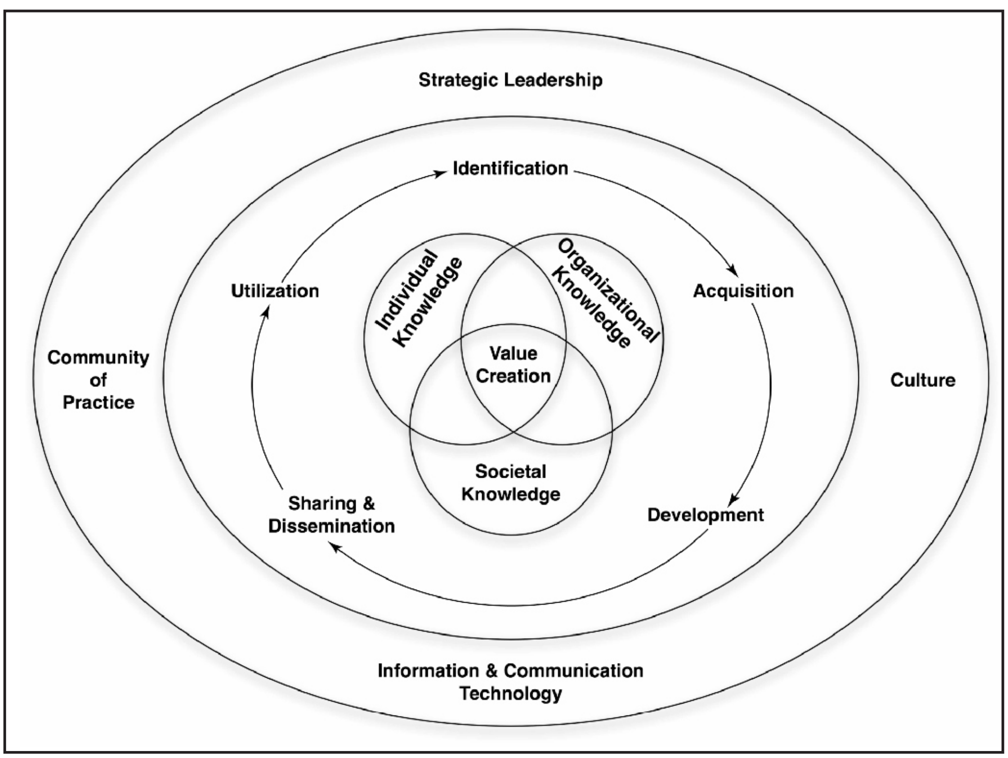
☸ Confirm that the communication's approaches support knowledge transfer;

☸ Create common ground through team work, job rotation and other types of collaborative working;

☸ Establish time and places for formal and informal knowledge sharing;

☸ Evaluate performance and provide rewards for those who share and reuse knowledge;

Figure 1 : Knowledge Management



Source : www.Knowledge management.com

☸ Educate people on the advantages of flexibility; employ for openness to ideas;
☸Establish an environment where quality of ideas are more important than the state of source;
☸Tolerate and reward errors, force creative collaboration and help a person learn from these.

☸**Culture Definition :** Many researchers have given different definitions of culture from past to present. Tylor (1871) cited about culture in his book, Primitive Culture that culture is, *"that complex whole which includes knowledge, belief, art, law, morals, custom, and other capabilities and habits acquired by man as a member of the society."* Matthews (2001) defines culture as the system of shared beliefs, values, customs, behaviors, and artifacts that the members of the society use to cope with their world and with one another, and that are transmitted from generation to generation through learning. UNESCO (2002) defines culture as, *"the set of distinctive spiritual, material, intellectual and emotional features of a society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs."*

ORGANIZATIONAL CULTURE

In every organization, we can see the application of the 20/80 rule. Knowledge providers make up for 20% of the workforce, as they possess experiences and insights that are beneficial to the organization. The remaining 80% are consumers of this knowledge (Desouza, 2002a). The providers are often reluctant to share and transfer knowledge, as they fear that doing so will make them less powerful or less valuable to the organization (Desouza, 2003a, 2003b). Between departments, we also find knowledge barriers, in which one group may not want to share insights collected with the other. To help alleviate some of these issues, the management should strive to provide incentives and rewards for knowledge-sharing practices. A highly successful approach is to tie a portion of one's compensation to group and company performance, thus motivating employees to share knowledge to ensure better overall company performance. Additionally, Foucault (1977) noted the inseparability of knowledge and power, in the sense that what we know affects how influential we are.

KNOWLEDGE MANAGEMENT AND THE ROLE OF CULTURE

Knowledge management is a new branch of management for the company to gain competitive advantage by combining people, processes, information, and technology together. It focuses mainly on the management of change, uncertainty, and complexity (http://www.brint.com/km/). The companies can obtain knowledge by identifying, extracting and capturing the knowledge so that the companies can utilize it effectively. Malhotra (1997) describes it as: *"Knowledge Management caters to the critical issues of organizational adaptation, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information-processing capacity of information technologies, and the creative and innovative capacity of human beings."* Sveiby (2001) identifies two broad categories of knowledge management: the *first* is how to use information and technology; the *second one* focuses on how to manage people. The first approach, which is the management of information, considers knowledge as objects that can be managed by information management systems. The main goal of this approach is to increase access of information through improved methods of access and reuse of resources such as database, hypertext linking. The key solutions are new developments in IT. This approach will work by using technology to control information. The second approach is the management of people, which considers knowledge as a process - a complex set of dynamic skills and know-how that is constantly changing. This approach focuses on assessing, changing and improving human individual skills and/or behavior. The goal of this approach is to make people share their knowledge.

Newell et al. (2002) also divide the approaches to manage knowledge into two ways. One is the ICT (Information and Communications Technology) -based approach or the cognitive model, and another one is the ICT- led approach or the community model.

KNOWLEDGE MANAGEMENT IN HOSPITALS

Knowledge Management in hospitals is considered important. Hence, an enterprise-wide initiative should be carried out, making any knowledge repository accessible to all employees without regard to which department or group generated it. A key dimension of organizational culture is leadership. A study conducted by Andersen and APQC revealed that one crucial reason why organizations are unable to effectively leverage knowledge is because of a lack of commitment of top leadership to sharing organizational knowledge or there are too few role models who exhibit the desired behavior (Hiebeler, 1996). Studies have shown that knowledge management responsibilities normally fall with middle managers, as they have to prove their worth to the top-level executives. This is a good and a bad thing. It is a good thing because normally, middle-level managers act as liaisons between employees and the top-level management, hence, they are best suited to lead the revolution due to their experience with both frontline, as well as higher-level authorities. On the other hand, it is negative, as the top-level management does not consider it important to devote higher-level personnel for the task. However, this is changing. Some large companies are beginning to create the position of the Chief Knowledge Officer (CKO), which in time will become a necessity for all organizations. A successful knowledge officer must have a broad understanding of the company's operations and be able to energize the organization to embrace the knowledge revolution (Desouza & Raider, 2003). Some of the responsibilities must include setting up knowledge management strategies and tactics, gaining senior management support, fostering organizational learning, and hiring required personnel. It is quite conceivable that healthcare enterprises will start creating the positions of chief knowledge officers and knowledge champions. Top management involvement and support for knowledge management initiatives should not be underestimated. This is of pivotal importance in hospitals, as their key competitive asset is *medical knowledge*. Knowledge transfer and dissemination of knowledge in the hospital, once stored centrally, needs to be made available for access by the various organizational members. In this manner, knowledge assets are leveraged via diffusion throughout the organization. One of the biggest considerations here is security. Only authorized personnel should be able to view authorized knowledge. Techniques such as the use of multiple levels of passwords and other security mechanisms are common. However, organizational security measures also need to be in place. Once the authorized users get hold of the knowledge, care should be taken while using such knowledge, to avoid unscrupulous practices. Moreover, employees need to be encouraged to follow basic security practices, such as changing passwords on a frequent basis, destroying sensitive information once used, etc. Ensuring security is a multi-step process. First, the individual attempting to access information needs to be authenticated. This can be handled through the use of passwords, pins, etc. Once authenticated, proper access controls need to be in place. These ensure that a user views information for which he or she has the permission. Moreover, physical security should also be ensured for computer equipment such as servers and printers to prevent unauthorized access and theft. Disseminating healthcare information and knowledge to members outside the organization also needs to be handled with care. Primarily, physicians, clinics, and hospitals that provide optimal care to the patients use health information. Secondary users include insurance companies, managed care providers, pharmaceutical companies, marketing firms, academic researchers, etc.

RESULTS

The service industry is complex, and involves highly specialized professional knowledge (Nah, Siau and Tian, 2005). In the case of WISECARE, it is categorized in the health care service sector. The project utilized knowledge management by allowing nurses to communicate and compare their current practices and patient outcomes across Europe. Knowledge management was brought into the health care service industry with two major goals: Kearney et al. (2000) stated that adopting knowledge management in health care services allows complicated issues such as patient-care problems to be addressed. Collaboration in information of many hospitals like WISECARE project helps to gain access to larger groups of nursing staff with varying skills and abilities. The pooling of human resources in this way can expand nursing knowledge that will have an impact on better patient care. In addition, acquiring larger patient sample sizes with diverse locations and several care procedures also prevents the delay in replicating the studies. The resource sharing prevents unnecessary work that can produce considerable cost, which leads to a gain in financial benefits (Kearney et al., 1998). Involvement in a collaborative project like WISECARE offered not only the chance for nurses to learn, but also the opportunity for the nursing profession to develop (Kearney et al., 2000). As participants came from different educational backgrounds and had acquired diverse working experience, mutual learning and sharing are often an outcome of knowledge sharing. Knowledge management has initiated the new way of learning. The traditional way of learning is through didactically driven educational programs and through personal experience. This has moved away to the notion of life-long learning (Kearney et al., 1998). According to Nah, Siau and Tian (2005), knowledge management is very essential for the financial service industry. Many financial services companies including HSBC utilize knowledge management as the way to improve their communication with their customers and among their staff.

They adopted online knowledge-sharing activities - such as creating a virtual community, which involved both customers and the company's staff to contact in an interactive way. HSBC managers expressed a desire to obtain a competitive advantage from information itself. Even though the vast amount of information flow and intense customer contact are received daily, it will not make a strong impact for the service companies, unless knowledge-sharing activities are developed. The company designed the state-of-the-art information technologies to help managerial and professional workers to process the information. The infrastructure helps reducing the overload of information by filtering only the necessary information (Alavi and Leidner, 1999). In addition, developing knowledge management in the organization will help eliminating old or wrong data that is no longer recognized as valid knowledge (Alavi and Leidner, 1999). Knowledge management leads to cost reduction, increased sales, personnel reduction, higher profitability, ensuring consistent proposal terms for worldwide clients. For example, the financial service companies now offer service transaction via the Internet. HSBC is successfully developing this method. The firm benefits as it is faster, cheaper, and easier to customize than traditional methods. To increase customer loyalty, many studies suggest the need to build a strong virtual community. This is indicated as another way of obtaining good knowledge-sharing mechanisms. In the financial service industry, this makes a strong case for developing the systematic customer services. Generally, the service-based organizations often compete in their sectors based on their ability to solve complicated problems and provide solutions for customers. These companies tend to organize themselves by attracting and retaining knowledgeable employees. Sustaining professional employees is very crucial for achieving competitive advantage in the long term. From the first case, participants in WISECARE project are nurse staff and many nurse managers in Europe who are well-educated and professional in their career paths. While vast amounts of health-related knowledge and information are generated from them, keeping up with this developing knowledge is their full-time job. Within the WISECARE projects, the participants realize that if the nature of the collaborative relationship is not supportive of individual group members expressing their fears and uncertainties, both the project and the individual will suffer. It is essential that team members reflect on why they feel the way they do and discuss these feelings with the team. The concepts of mutual respect and acknowledging cultural differences are integral to the project and these have allowed management teams to deal with any sensitive cultural issues. In addition, it comprises of fairness and transparent evaluation. From the WISECARE project, knowledge sharing means that the experiences of the every day work are shared among others and are explicitly available for others. In traditional organizations, knowledge sharing is often done locally when teams are working together. Information technology will extend these kinds of experiences across boundaries of nursing units, hospitals and even countries. While taking care of patients, all nurses in the network can evaluate their work and results, can give some advice and can use others' experience for their own work. Working and learning becomes the same experience because of their immediate transparency. When some of the partners are integrating research results that prove to be effective, these can be easily adopted by the others in the network, allowing anxieties to be viewed and frustrations to be expressed, and so managed sensitively and appropriately. Those clinical sites participating in the project were committed to the theory of knowledge sharing. Thus, there were few problems associated with obtaining support from colleagues about the process of knowledge sharing. WISECARE and HSBC faced two major problems, which are as follows:

1) Handling Information Management : It is essential for the companies to ensure that they have standardized information that is obtained from the same method throughout the companies (Kearney et al. 2000). The big organizations like HSBC and WISECARE need information that is comparable with other branches or other sites so that all the information can be measured in the same way. As the geographical distance between branches or sites made frequent meetings for all those involved impossible, email has become the effective tool for communication, particularly for the group of people with the difference in their native languages. However, depending only on a main medium such as the email can cause a problem when the system is down. The variety of communication methods available to the staff such as electronic mail, telephone, facsimile and post appears to ensure adequate communication.

2) Cultural Differences : In most large multicultural organizations such as HSBC, the culture within and between subsidiaries will be varied. Each subsidiary may manage their organization differently. For example, in the WISECARE project, health care services in France, Italy, Greece, and Belgium have high formalization, hierarchy with overall control held by one person; whereas Sweden, Denmark, the United Kingdom, and the Netherlands have another management style. Their leaders have considerably less control as hierarchy, power and status are downplayed, and the focus is on tasks, merits and business (Kearney et al., 1998). This has implications for conducting a meeting and organizational culture. To cope with the difference in culture of each department or subsidiary, the company will need to ensure that the understanding of managing knowledge is the same in all departments and subsidiaries. In the case of WISECARE, the top management needed to understand how to utilize it more effectively and allow the time for their staff to become familiar with the new system, because the staff had to gain access to all resources in the organization, which led them to make the right decision at the right time. Before applying knowledge management, the managers and staff, especially in the IT department, need to be certain that they are ready to take part in the program; otherwise the organization will face some problems. IT department of HSBC spent time and energy to support the rest of the staff in the company to teach them the importance of knowledge management. In addition, the differing expectations of individuals within the companies can cause conflict of interest. The mutual concept needs to be addressed since the first stage.

CONCLUSION

Traditionally, management consulting and professional services firms have been considered knowledge-intensive firms and ,therefore, interested in knowledge management (Alavi and Leidner, 1999). However, knowledge management is not just for consulting and professional services firms. Knowledge has currently been recognized from other industries as the company's main asset. In cases of WISECARE project and HSBC, the advancement of information technology gives new ways to create knowledge and opportunities to improve the ability to manage and utilize knowledge. Via the Internet, information about a company can be revealed to the public and information about customers, suppliers, and markets can be gathered easily (Nah, Siau, and Tian, 2005). However, these advantages may cause some challenges to the company as it may become overwhelmed by the volume of information and may not know how to use it for the company's advantage (Alavi and Leidner, 1999). The present paper highlights the importance of developing knowledge management, which is increasing in productivity, creating a new way of learning, improving communication and gaining efficiency. The paper also focuses on how the service companies are applying the knowledge management. However, some problems such as the difference in culture, the availability of facilities, and the standardized information can occur during the implementation. Both WISECARE and HSBC recognized, evaluated and tried to confront their problems in different ways. In general, this paper concludes that the advantages of developing knowledge management outweigh the disadvantages. The paper has gained reliability from using many sources related to the case studies, including web sites, journals, and books to cross check the data. It has also acquired the validity from finding the same common problems and barriers between the two cases. The researcher believes that recognizing the potential of knowledge management will encourage other companies to develop this system. However, the difference in applying the knowledge management depends on the type of employees, history, structure and culture of the company. The key is making sure that people, particularly in the top management, understand the advantages of knowledge management and what makes it useful. The future research should determine the ways to overcome these problems and should examine how knowledge management benefits other service sectors such as education, traveling and transportation to understand the whole picture of the service industry.

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