Knowledge Management as the Catalyst of Human Resources Development in Higher Education Institute [1]

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Abstract

Knowledge management is the process of managing and empowering knowledge assets optimally for organizational excellence. This article discusses the relevance of implementation of knowledge management as a catalyst in the development of human resource capacity at the higher education institute. Analysis methodology used is a qualitative analysis by examining the relationship between variables conceptually based approach to causal effectual analysis. The analysis shows that the development of human resource capacity in the universities need to implement knowledge management.

Keywords: Knowledge Management, Capacity, Catalyst

1   Introduction

Higher education is an institution that has a core task in knowledge development. It is relevant to discuss the existence of Higher Education, by reviewing the role of knowledge in human life, in which the knowledge tend to be even stronger position when observing portrait of the world's current economic condition, which presents the various paradigm shifts. The condition can be observed in the last two decades, in which the face of the world has greatly changed rapidly. In that time, the world of

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[1] The paper has been presented at International Conference on Islam in Malay World (ICON-IMAD II), 6-7 Nop 2012, Kuala Lumpur, Malaysia

services has taken two-thirds share of the gross national product and employment (Purnomo, 2006).

Some people call the new world today, as the economical knowledge. It was reinforced by the economic paradigm that places the birth of knowledge as the key success factors for organizations. Knowledge always has a sense of power: the power to survive, power to adapt, and the strength to face the harsh environment (Buckman, 2004). In other words, knowledge is the most strategic and learning is the most substantial capabilities. Orr and Persson (2003) state that organizations have realized that in order to be able to compete in the rapid development of market conditions, it needs to develop competencies and knowledge in the organization.

Prusak (2001) stated that researchers in the field of sustainable competitive adventage have come to the conclusion, that there is one thing that can make the organization competitive, i.e. how to use what you already know (knowledge), and how this knowledge can be used to create new knowledge in fast manner. Placement of knowledge is the important capital for the organization emphasizing the importance of the implementation of knowledge management in any organization, including universities.

This paper discusses the role and implementation of knowledge management strategies as a catalyst in the development of human resource capacity at the college. Several previous studies (Cranfield and Taylor, 2008; Kidwell, 2000; Yeh, 2005) suggests that knowledge management is very appropriate to be used in education and provides a huge benefit in the process of creation, distribution and storage of knowledge to improve the performance of the college.

2.   Literature Review

Though it is not exactly like the company, the business of education is also knowledge, but rather than knowledge, it is science. Science is not just an important asset for an educational institution, but it is also a strength and excellence. Therefore, educational institutions require knowledge management. Petrides and Nyugen (2006) suggested that educational institutions demonstrate a great need for improved knowledge-based management systems. We already find that there are many formal and informal administrative processes, information-sharing patterns, work incentives, information, and other work practices that have flourished over time, yet these can also critically impede organizational and systematic information flow and knowledge exchange.

Knowledge management grows as a new discipline that creates many definitions, approaches and frameworks. There are several definitions of knowledge. Among them Davenport et. al. (1998) states, that knowledge is a high value of the information that can be used for decision-making and implementation. Meanwhile, Laudon and Laudon (2006) state, that knowledge is an attribute of the individual and the collection of attributes for the organization. Furthermore, Davenport and Prusak (1998), stated knowledge is a fluid mix of framed experience, values, contextual

information, expert insight and grounded intuition that provides and environment and framework for Evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower's. In Organizations Becomes Often it embedded not only in documents or repositories but also in organizational routines, processes, practices and norms.

Furthermore, Nonaka and Takeuchi (1995) divided knowledge into two categories, namely:

1. **Tacit knowledge**, a knowledge that is not documented by the organization, but that exists in the minds of the employees of the organization. It is usually an informal, not documented and unstructured. It can be values, perspectives, and cultures. Based on its dimensions, tacit knowledge is divided into:
    a. Dimensions of a technical nature, the things that are informal and difficult to explain based on know-how, because it is associated with the talent or the talent possessed and different on each person, who then becomes the expertise (skills).
    b. The cognitive dimension, i.e. matters relating to perception, schemes, models that are taken for granted.
2. **Explicit knowledge**, a knowledge that is documented. Explicit knowledge can be expressed formally using a system of symbols, and can be easily communicated or disseminated. Explicit knowledge can be object-based, or regulations (words, numbers, formulas), or even physical objects (such as tools, documents and models).

Of the two categories of knowledge above, we can conclude that tacit knowledge is something abstract, and become the property of individual typically and distinctively, as well as a force for an individual to carry out the work, or to interact with the organization. Meanwhile, explicit knowledge refers to knowledge that has been codified in the form of symbols, or a physical object that can be exchanged or combined with each other (Subroto, 2006).

The knowledge management value creates cycle, beginning with the process of resolving issues in the implementation of the performance of an organization. In this process, the organization is not only processing information from the outside in order to solve the problems it has, and adapt to a changing environment. But the organization actually creates new knowledge and information from within the organization, in an attempt to define the problems and solutions in the process, as well as to rebuild the environment (Nonaka and Takeuchi, 1995). Therefore, the key to knowledge creation lies in the conversion of tacit knowledge (Subroto, 2006).

There are four models of knowledge creation, as described in the conversion process knowledge through the SECI model (Figure 1.), Through the interaction between tacit and explicit knowledge, namely: (1) From tacit knowledge to tacit knowledge, which is also known as socialization, (2) from tacit to explicit knowledge that is also called externalization, (3) from explicit to explicit knowledge named as a combination, and (4) from explicit knowledge to tacit re-called internalization.
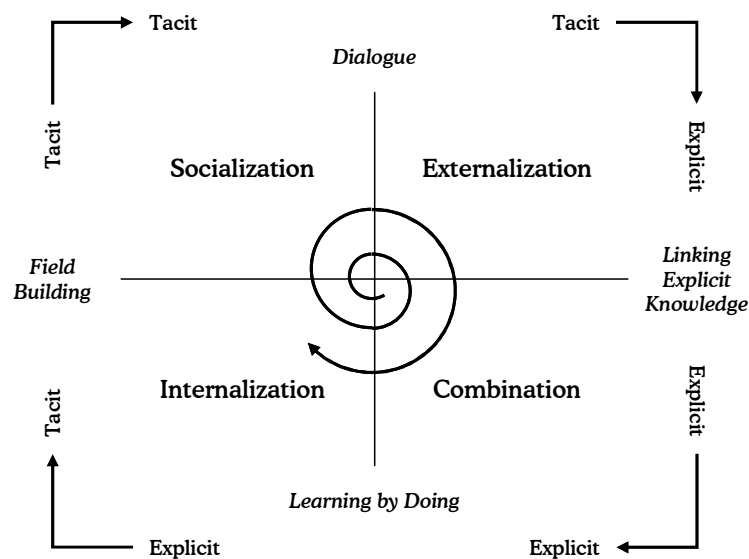
Figure 1. Knowledge Spiral (Nonaka and Takeuci, 1995)

New knowledge is born as a result of the conversion of tacit knowledge into explicit knowledge. According to Choo (1998) in (Subroto, 2006), the benefits of this knowledge creation are:

1. The organization generates new knowledge in ways that increase its ability to share or convert tacit knowledge of the organization's members. For that the individual members of the organization involved in a dialogue with each other face to face, working together in a group to reflect and solve problems together;

2. The organization operates the new concepts that can be applied to produce something new, or to improve bargaining position, or allow the organization to function more effectively. The organization spreads out and transfers new knowledge into and out of its sides, as well as generates the knowledge to all parts of it.

Furthermore, according Santosus & Surmacz (in Sangkala 2007), knowledge management is a process where a company created values and intellectual assets and knowledge-based assets. In line with that, the Santosus and Surmacz (Indrajit and Djokopranoto, 2006) explain that knowledge management is the processes through roommates' organizations generate value from their intellectual and knowledge-based assets. Most often, generating value from such assets involves sharing them among employees, departments and even with other companies in an effort to devise best practices.

While Jennex (2005) gives the definition of knowledge management is the practice of Selectively applying knowledge from previous experiences of decision making to current and future decision-making activities with the express purpose of improving the organization's effectiveness. Sveiby (2001) asserts that knowledge management is the art of creating value from intangible assets (knowledge assets).

Knowledge management is the art of creating value. Moreover, Bergerson (Sangkala, 2007) explains that "knowledge management is a systematic approach to managing intellectual assets and other information so as to provide a competitive advantage for the company." Knowledge management focuses on the exploitation and development of knowledge assets in the organization with the foresight and organizational objectives. Knowledge management manages two types of knowledge, namely tacit and tacit knowledge as documentation and subjective knowledge.

Subroto (2006) stated that successful organizations are those that have characteristics, such as the ability to consistently create new knowledge, then quickly spread to the entire network of the organization. The success of knowledge management in value creation will work effectively when implemented as a strategy. This organization was formally construct knowledge strategy as one part of its business strategy.

In order for knowledge management to take place effectively, which essentially will be greatly affected by people and relationships between people, it needs to develop a new environment and a different working culture. This new culture called by Davenport and Prusak (2003) as the knowledge culture. Environmental or cultural construction constitutes a essential part in the implementation of knowledge management.

3   Methodology

The analysis conducted in this study is a qualitative analysis by reviewing the conceptual relationship between variables based on causal effectual analysis approach. The author acts as a participant observer, the analysis is done by observing and evaluating the various phenomena that occur on the object of research, and then carrying out the discussion of the phenomenon based on the logic of the author who later confirmed the theoretical framework in the literature and / or research results that are relevant to the main topic of this study.

Unit analysis approach discussed by Hlupic et. al., (2002) who called the three main elements in the implementation of knowledge management, namely: people, technology, and processes. This article focuses on human resource capacity building at universities on three key elements, namely: (a) the human element of the behavioral aspects, (b) the use of information technology in supporting the development of knowledge management activities, and (c) element of the process.

4   Discussion

Knowledge management is not just a knowledge management process, but a process of knowledge-based management, which goal is to create tools and environments that support the process of creation, storage, dissemination and application of knowledge within an organization. Knowledge management is a systematic effort to

encourage and facilitate the flow of knowledge within the organization so as to accelerate the process of organizational learning.

The above statement is in line with the opinion of Petrides (2004) which states that knowledge management is an approach to integrate people, processes and technology in designing, capturing and implementing intellectual infrastructure of the organization. The approach not only covers the design and implementation of information systems but also involves attitude change management, organizational behavior and policy. It is intended that the people in the organization can develop the ability to gather information and share knowledge that will ultimately drive improved services and employment outcomes.

Furthermore, Chowdhury and Ahmed (2006) explains that knowledge management is a discipline that promotes an integrated approach to identify, capture, evaluate, and disseminate regain all the organization's information assets. Those assets include databases, documents, policies and procedures, as well as the expertise and experience of knowledge workers who have not been identified.

Meanwhile, Clarke (2006) describes the basic elements of knowledge management is to facilitate the creation, storage, distribution, identification, acquisition, utilization and measurement of information, as well as new ideas in order to achieve strategic objectives. Basically, knowledge management is a link between the activities of learning, change and innovation. Technically, knowledge management emerged as boost technology that allows people to record in the form of text, writing, and images and so on. Knowledge management can also be said as a technique to build learning environments, where the people in it have been motivated to learn, utilize existing information, and eventually wanted to share the knowledge they produce (Nugroho and Muchtar, 2006).

Based on the descriptions above, a conceptual relationship can be drawn that the implementation of knowledge management is a strategic approach for improving human resource capacity in higher education institutions.

4.1 Aspects of Human

Ndela and Toit (2001) stated that human resources is the heart of organizational knowledge creation because person is the subject creating and disseminating knowledge. In addition, the human factor constituting the key to knowledge sharing activities as the core of the knowledge-sharing activities is how to transfer the knowledge from an individual to others so that it will accelerate the process of organizational learning.

Wah et. al., (2005) states that an organization has to be able to create an effective knowledge sharing that must be supported by the skills of its people to create and disseminate knowledge. Choi (2002) suggests the activity of knowledge sharing requires people with an adequate level of competence. One's competence can be measured by the extent of his ability to complete the job. Competency levels are

depending on the professional knowledge, experience, natural talent and skills of the individual.

The implementation of knowledge management in an object of study resources competency based approach should be done well, considering the qualification of human resources on the research objects are in good condition, even gaining the third rank in the Islamic University of Indonesia. This is in line with the opinion of Brink (2001) which states that the level of competence of human resources will affect the activity of sharing knowledge because knowledge transfer can occur if the sources of knowledge creation are available.

However, based on the observation of the objects in the study, it can be observed that the results of ideas from many academicians stored in each individual resulted in the accumulation of knowledge (knowledge hoarding). Based on interviews with some lecturers, some internal and external things can be found that tend to inhibit the activity of knowledge sharing between individuals in the object of study, of which there is a paradigm of thinking that knowledge is power. So, that if it is spread out will cause people to lose the personal guarantees, limited time, and lack of respect for people who contribute their knowledge. For some cases, more academic community recognized academic expertise from outside the institution that is characterized by frequent invitation as speakers, while from within the institution, they rarely or even never get it to be the speakers for exploring material in accordance with their expertise. On the other hand, some academicians are reluctant to absorb information from other individuals due to self-esteem or embarrassment. It is also another finding many seniors are reluctant to ask the juniors for those reasons.

Knowledge hoarding behavior and not wanting to receive knowledge from others is a natural tendency that is difficult to change (Davenport and Prusak, 1998). The strategic in the implementation of knowledge management in university is a cultural change towards a culture of sharing knowledge. In this case Ramdhani and Suryadi (2006) state that the key to successful implementation of knowledge management is organizational culture. Therefore, in order to promote good behavior and create a culture of knowledge sharing, the university management should develop a mechanism to encourage the creation of conducive conditions to knowledge sharing activities among academicians resulting in increased capacity of their knowledge through knowledge flow (flow of knowledge), and science can grow and develop in a more accelerative way.

4.2   Aspects of Process

Based on the observation of the object of research, the sharing of knowledge among lecturers is not relatively well executed, while the students are in good condition. Brink (2001) stated that the conditions of knowledge sharing activities in an organization can be classified according to its nature, which can be seen from the side of motivation (the tendency to create a feeling of comfort among employees in the organization), culture (an attempt to improve the ability of organizations to act in

accordance with the cue from the environment), or instrumental (providing instruments to facilitate knowledge sharing activities).

Processing steps of knowledge sharing on the university begins by determining gaps in knowledge to know what is the most critical issues, such as the risk of loss of knowledge that can be caused by retiring senior lecturers or decreasing sources of knowledge. Furthermore, in order to reduce the risk of loss of knowledge, the university should encourage academicians to be interconnected (eg through mentoring, knowledge sharing forums, community of practice, expertise locator system) for the transfer of knowledge is considered valuable. Through the process of knowledge sharing it is expected for them to strengthen the relationship between the academic communities and to increase the sense of belonging to the community.

When associated with knowledge sharing behaviors, then there are several motifs that influence knowledge sharing behavior, as follows:
1.   Benefits; person would not be willing to share their knowledge he does not see any merit/benefits for himself (March and Garvin, 1997).
2.   Hoarding knowledge, people will tend to hoard knowledge when seeing that would threaten their power of authority and work assurance (Wong and Aspinwall, 2003).
3.   Altruism; people's kindness to share their knowledge without expecting reciprocity (Davenport and Prusak, 1998; Muller et. al., 2005).
4.   Conditional cooperation; people would be willing to share his knowledge if other people are also willing to do the same thing (Davenport and Prusak, 1998; Muller et. al., 2005).
5.   Reciprocal strategies; people are motivated to contribute their knowledge as they assume will receive useful knowledge from other people in the future (Muller et. al., 2005).
6.   Reputation; people will be interested in sharing knowledge if it is considered to improve their reputation (Muller et. al., 2005).
7.   Social norms: people will be willing to share their knowledge if it is consistent equivalent with the prevailing social norms (Muller et. al., 2005).
8.   Group identity; the higher group identity, the more willingness people to share their knowledge in the group (Muller et. al., 2005).
9.   Remuneration; people will be willing to share their knowledge when obtaining remuneration (Chaudhry, 2005; Muller et. al., 2005; Zhang et. al., 2006).

Andriessen (2006) described that Kelman (1958) developed a theory of social influence which distinguishes the type of social influence processes into three parts, namely:
1.   Social influences based fulfillment; one's behavior can be influenced by external drive, such as the urge to obtain rewards or avoid punishment. When translated into the context of knowledge sharing, the knowledge sharing behavior can be influenced by the possibility of a reward or as a regular assessment system that is associated with knowledge sharing activities.
2.   Based on the results of identification to another person; behavior may be motivated by a desire to establish or maintain relationships with others, the

desire to be accepted and valued by colleagues or managers, where the impetus came from the reactions of others.

3. Based on the results of internalization; someone will be motivated to perform a specific action based on the consideration that it is in line with the system of values espoused.

In the author's view, the above approaches are effective and efficient patterns that are used by the university in implementing knowledge management.

4.3 Aspects of Technology

The use of appropriate technology in educational institutions is e-education-based virtual communities. It is due to the virtual community that can provide information quickly and will always have novelty value because it involves members of the virtual community, and the cost of knowledge procurement is cheaper. The use of technology in educational institutions is expected to accelerate the level of knowledge of members in the organization to share knowledge, and bring blessings among member organizations due to information communication channels that are built for this purpose.

The presence of technology encourages the creation of communication to share knowledge more effectively, because it does not simply rely on human memory, but memory is aided by technological devices which are capable of more accurate and longer store information. In this context, Noegroho (2011) states the advent of communication technology is characterized by increasing number and variety of technology based on electronics technology. And more importantly, the presence of such technology enables the exchange of information from a lot of people to the others effectively and efficiently.

The capacity of the technology available in the object of research, in the author's opinion, has been sufficient, the capacity of which can be measured through: on-line network (intranet and internet), reliability of the data base, and flat form of other technologies to support the implementation of knowledge management. This is in line with the opinion of Wong (2005) which states that technology (especially information technology) is one of the keys to successful implementation of knowledge management and has a role that cannot be refuted. IT support for knowledge management processes can be developed so that it can be widely applied and integrated into an organization's technology platform (Wong, 2005). According to Brink (2003) the condition of an organization's technology contributes to the development of knowledge-sharing activities. The condition of technology in the context of knowledge sharing can be defined as the ability of IT to facilitate knowledge sharing activities (Brink, 2003).

Support from IT facilities has an important role in encouraging knowledge sharing activities in the organization. The development of IT is now possible to provide a convenient facility for the storage, retrieval and communication of knowledge (Lu et. al., 2006). For examples, the support from IT is facilitated through providing

groupware, online databases, intranets, and virtual communities (Lin, 2007). IT support is often a prerequisite for the success of knowledge management (Lu et. al., 2006), the IT role is to facilitate communication between employees without being limited by distance and time difference, support the flow of knowledge that can be accessed quickly and easily, and to facilitate cooperation among members organization (Yu et. al., 2004).

Application of knowledge management based on the object of study of information technology will provide many benefits and extra value. Information technology enables the search process and the delivery of knowledge to be more rapidly than other manual methods. However, for the purposes of the required, it needs human resources ready to use the system, because the good system can work and is used by individuals in the organization. Based on the observations, it can be observed that the academicians are unfamiliar to share their knowledge through technological devices.

Various facilities are utilized well on the object of research, but only used by a few people. The interest to share content in a database on-line seems to have become a habit, and it takes a touch of management to motivate and cultivate it. Based on consideration of the effectiveness and efficiency of the sharing of knowledge that can be bridged through information technology, the authors recommend that the entire academicians familiarize themselves with the facility to communicate technology.

Operationally, this can be done with the development of human resource capacity to understand the use of technology, and provision of technological devices that support these interests. Initiations of habituation to utilize on-line databases can be carried out by the Research Institute or the Computer Center, with the on-line publishing research results lecturers. On the other hand, the university management is required to reward lecturer's effort to publish scholarly work or ideas.

5   Conclusion

The implementation of knowledge management is one of the strategic approaches to increase human resource capacity in higher education institutes. Based on the observation result of the object of research, the implementation of knowledge management is impeded by some aspects, including: (1) the low policy support, (2) the low activity of scientific research and publication, (3) the low culture of knowledge sharing, (4) not having the development pattern of knowledge management integrated with the college strategic plan. The initiation of knowledge management implementation must be made through cultural and structural approach that focuses on the creation of culture, policy, and development of technological devices.

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