The Study of the Relationship between Personal Knowledge Management and Innovation in Organization

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Abstract: Knowledge is becoming progressively more useful because management is taking into account the value of creativity, which enables the transformation of one form of knowledge to the next. The goal of this paper is trying to find an answer for this question: "Is personal knowledge management related to creativity and innovation inside organization or not?" In the surge of knowledge management, this research has concluded that personal knowledge management helps innovation inside organization. New management philosophies are aware that information is the result of knowledge evolution and that a solid network between intellectual effort and technological innovations is enlarging. The innovative efforts are also the right consequence of the investment in knowledge and knowledge in the development of new knowledge may propel companies into new business in more rewarding markets.
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1. Introduction

The changes in the world and the effects of globalization caused many things which required new strategies. It was the time the world divided between two powers, United State and Soviet Union. After Second World War and beginning of cold war, powerful countries started to fight each other with other tools. The other countries like Japan and European countries were rising and coming up to today. China, India as two very fast developing countries are providing a variety of products and services to the world. Also, European union as a source of knowledge and finance is created today to be able compete with giants like China and USA because Euro has many small countries with some limitation and all together increase their chances in today global economy. The other model of union is happen in Asia and called ASEAN and also Muslim countries have OIC. The effect of technologies should not be forgotten. IT and Biotechnology are 2 very important sciences that are used in people's daily life. A very good example of IT industry would be developing of India base on this industry. Another example regarding biotechnology would be the South American country named Cuba. This small country with all political problems is the world leading in Biotechnology industry. All these changes shown that the world is moving from industrial base economy to knowledge base economy, this change requires knowledge workers or skill worker. The concept of human capital popular because the value of the workers is evaluated base on the knowledge they have. Resource is one of the key factors of the productivity. Money, human, land and many other things are considered as resource. So the problem of many organizations such as countries is limitation of the sources to be productive enough. Lee Hsien Loong who is the prime minister of Singapore has speech in this regard on Aug 2005 and his speech written in Business week. He mentioned that due to the Singapore geographic situation and population and also economic resources then Singapore must look at new way to maintain the economic stability. Base on this he introduce the concept of creative economy which has no limitation in term of resources and depend on knowledge worker creativity out come as service or product. All type of organizations is trying to promote their product or services to clients. The problem of this competition is many organizations lost the opportunity and sometimes they are not surviving a lots every things. Last time people around the world just know cars made from 3 countries which are USA, Germany and Japan but today Korean cars are selling very well even in USA and TATA the giant Indian manufacturing is producing the cheapest car in the world with the price of the $2500. So organizations are looking for competitive advantage to be winner in this competition. Productivity is the objective of all type of organization activity. Any organization is looking for the way to be more productive and more effective, internally as well as outcome product or services. The problem of the objective is not all the strategies are working. Sometimes, the organizations don't know how to achieve this objective. Speed, quality and control the cost are elements of

productivity which is make the organization profitable. So the main question of research is "Is personal knowledge management related to creativity and innovation inside organization or not?"

Finally, the main objectives of this study is to find the relationship between skilled workers and creativity in the first place, and to study the innovation as the outcome of knowledge workers for the sake of organization as competitive advantage, in the second place.

2. Literature Review

Nonaka and his colleagues introduced the concept of tacit knowledge into knowledge management, and continue to be a principal reference point (as cited in Gourly). Tacit knowledge is a non-linguistic non-numerical from of knowledge that is highly personal and context specific and deeply rooted in individual experiences, ideas, values and emotions. In a departure from Polanyi, they distinguished between technical tacit knowledge which refers to ingrained schema, beliefs and mental models that are taken for granted (Nonaka & Takeuchi 1995).

Also, Tiwana (2000) define tacit knowledge as personal, context- specific knowledge that is difficult to formalize, record or articulate; it is stored in the heads of people. From organizational angle, Turban et al. (2007), describe tacit knowledge as the cumulative store of experiences, mental maps, insights, acumen, expertise, know-how, trade secrets, skill sets, and learning that an organization has, as well as the organization culture that has embedded in the past and present experience of the organization's people, process and value. Turban (2007) also pointed out that tacit knowledge is called ' sticky knowledge' because it may be relatively difficult to pull it away from its source. Debowski (2006) said:

> *"It can be difficult for people to explain how they apply their expertise to solve new challenges. Expert knowledge is hard to duplicate, replace or interpret, as it is grounded in a blend of experience, research and induction which may have been refined over many years."*

To solve this, Sanchez (2005), suggested that, working from the principle that knowledge is inherently personal and will largely remain tacit; the tacit knowledge approach typically holds that the dissemination of knowledge in an organization can best be accomplished by the transfer of people as "knowledge carriers" from one part to an organization to another. Nonaka and Takeuchi's model of knowledge creation (Nonaka & Takeuchi 1995) place tacit knowledge its heart, and suggests that organizations have to find ways of communicating and capturing tacit knowledge. Explicit knowledge is knowledge that can be shared with others. It can documented, categorized, transmitted to others as information, and illustrated to other through documentation, explanations and other form of sharing (Debowski, 2006) further explain that explicit knowledge is that component of knowledge that can be codified and transmitted in a systematic way and formal language like document, webs, email, charts. Clark (2004) found that explicit knowledge can be articulated into formal language, including grammatical statements as words and numbers, mathematical expressions, specifications and manual. Also, it can easily be processed by a computer, transmitter, transmitted electronically, or store in databases. According to Turban (2006), explicit knowledge has also been called 'leaky knowledge' because of the ease with which it can leave an individual, document, or the organization after it has been documented. Over the past several years there have been intensive discussions about the importance of knowledge within our society. Whit increasing emphasis on knowledge-based business rather than industrial base business, management is seeking way to get that knowledge under management remit. The goal is to manage this aspect of the enterprise in the same way as its physical and financial assets, charged with this are the new roles of "knowledge manager" or "Chief learning officers", with responsibility for creating the environmental and process for dealing with knowledge as a corporate asset. According to Gundry et al (1996) the knowledge management process involves:

- Capture
- Organization and storage
- Distribution, or better sharing
- Application or leverage

Knowledge creation or capture is the generation of new insights, ideas or routine . It may also be referred to as knowledge acquisition Holsapple and Joshi (as cited in Turban et al., 2007). Tacit knowledge and explicit knowledge are related to each other, they are not totally separated. without experience, we cannot truly understand .But unless we trying to convert tacit knowledge to explicit knowledge , we cannot use this knowledge and share it among the organization . Through this dynamic interaction between the two type of knowledge, personal knowledge become organizational knowledge and the organizational knowledge or intellectual infrastructure of an organization encourages its individual members to develop new knowledge through new experience. Nanoka and Takkeuchi (as cited in Gytere, 2007), propose a model of the knowledge creating process to understand the dynamic nature of knowledge creation, and to manage such a process effectively.

This model named SECI model. Initially a two dimensional theory of knowledge creation was proposed (Nonaka, 1994; Nonaka & Takeuchi, 1995). The first, or "epistemological", dimension is the site of "social interaction" between tacit and explicit knowledge whereby knowledge is converted from one type to another, and new knowledge created (Nonaka et. al. 1994; Nonaka, 1994). Four modes of knowledge conversion were identified in (Figure 2): tacit to tacit (Socialization); tacit to explicit (Externalization); explicit to explicit (Combination), and explicit to tacit (Internalization). After Internalization the process continues at a new 'level', hence the metaphor of a "spiral" of knowledge creation (Nonaka & Takeuchi 1995) often referred to as the SECI model.

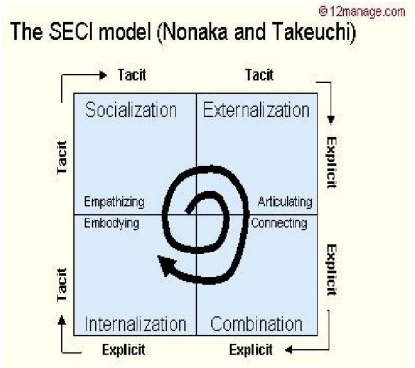

Figure 1. Knowledge creation process

To a great extent, PKM is about shifting responsibility for learning and knowledge sharing from a company to individuals and this is the greatest challenge for both sides. Companies should recognize that their employees are not "human resources", but investors who bring their expertise into a company. As any investors they want to participate in decision-making and can easily withdraw if their "return on investment" is not compelling. Creativity, learning or desire to help others cannot be controlled, so knowledge workers need to be intrinsically motivated to deliver quality results. In this case "command and control" management methods are not likely to work.

Taking responsibility for own work and learning is a challenge for knowledge workers as well. Taking these responsibilities requires attitude shift and initiative, as well as developing personal KM knowledge and skills. In a sense personal KM is very entrepreneurial, there are more rewards and more risks in taking responsibility for developing and investing own expertise (Efimova, 2004). He recommend that different perspective to overcome this challenges such as: From an individual perspective, I would start small, reflecting on existing personal practices and looking for opportunities to improve, probably focusing on personal information and relation management as a first step. According to Efimova (2004), being a company I would try to support grass-root approaches to KM, finding ways to ensure business results while allowing individual freedom and flexibility. From this perspective, approaches of distributed KM (for example, use of weblogs and wikis) look promising.

3. Methodology

Due to the nature of the time and resource constraints of this research, face to face interview is very difficult. Some part of the research with less availability of information was better to use interview for information collecting but in the other hand access to person in charge base on time limitation is not possible. Secondary data from other student is using in the data analyzing chapter. Also Meta-Analyzing is using from available student project. The investigation may constitute a threat to the organization and the members of that organization as some of the data can be 'sensitive'. Lee (1992, as cited in Thietart et al., 1999) pointed out that "the presence of a researcher is sometimes feared because it produces a possibility that deviant activities will revealed'. It is therefore imperative to underline that all management research is characterized by varying degrees of confidentiality. Thietart et al. (1999), especially in this case where data is not obtained first-hand by the researcher. However, the validity and reliability of the data can be dependable. This research therefore maintains some level of confidentiality and so. Some of the organizations shall not be named. Since the topic chosen by the researcher is covering some area that already has many available sources then there is a good opportunity for researcher to use this kind of research as source and do the literature review base on them. This type of research called secondary literature review. The best available source for this area is the MMU management department final project from faculty of management. Especially, a lot of materials are available about innovation in Malaysia. Is a type of research conducted because a problem has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects. Given its fundamental nature, exploratory research often concludes that a perceived problem does not actually exist. Exploratory research mostly is sing for personal KM because this is a new concept in the research area and not many sources are available at the moment. A good source to observe some information would be look at Singapore, in government policy and even private sectors. Practically there are many personal knowledge management application are available in Singapore that can be studied as case study.

4. Result

The following table shows the average of the mean and standard deviation obtained from the respondents' feedback on KM elements in the subsequent tables. This is to give a clear view of the level of these knowledge management's elements in different type of organizations.

Based on the mean and standard deviation obtained in the preceding tables, it can be seen that the knowledge management elements between elements and enabler adopted in different organizations have almost the same distribution.

Table 1. Tasnim (2007)

KM Enablers	Mean	Standard Deviation
Culture	2.92	0.86
Leadership	3.23	0.95
Information technology	3.24	0.86
Measurement	2.67	0.90

Table 2. Large Organization and SMEs

KM Enablers	Mean	Standard Deviation
Culture	3.99	0.87
Leadership	3.81	0.67
Information technology	3.36	0.71
Measurement	3.13	0.85

Table 3. Chong (2003)

KM Enablers	Mean	Standard Deviation
Culture	3.32	0.98
Leadership	3.55	0.93
Information technology	3.36	0.96
Measurement	3.02	1.08

Table 4. Extracted from raw data collected by Tasnum (2007)

KM Enablers	Mean	Standard Deviation
Culture	3.20	0.87
Leadership	2.90	0.90
Information technology	3.11	0.98
Measurement	2.56	1.00

Table 5. Descriptive Meta-Analysis

Study	Year	No	Category	KM Enablers identified	Mean	Standard Deviation	Total Mean	Total Standard Deviation
Extracted from raw data by Tasnim (2007)	2007	128	Large organizations	Culture	2.92	0.86	2.95	0.89
				Leadership	3.23	0.95		
				Information technology	3.24	0.86		
				Measurement	2.67	0.90		
Grald Goh Guan Gan	2006	3	Large and medium organizations	Culture	3.99	0.87	3.57	0.78
				Leadership	3.81	0.67		
				Information technology	3.36	0.71		
				Measurement	3.13	0.85		
Chong Siong Choy	2003	6	Large and small organizations	Culture	3.32	0.98	3.31	1.00
				Leadership	3.55	0.93		
				Information technology	3.36	0.96		
				Measurement	3.02	1.08		
Extracted from taw data collected by Tasnum (2007)	2007	21	Small and medium enterprises	Culture	3.20	0.87	2.94	0.94
				Leadership	2.90	0.90		
				Information technology	3.11	0.98		
				Measurement	2.56	1.00		

From the compiled average mean and standard deviation shown in the meta-analysis table 2.24, the leadership and the information technology enablers are the most significant in the large organizations. For the small and medium organizations, the culture and the information technology infrastructure enablers have a mean of above 3.00, which is above the medium level considering the Likert scale used for the measurement. As important as leadership and knowledge measurement in any organization, the SMEs seem to still be a an infant stage, with average means of below 3.00.

5. Conclusion

Knowledge and information derived from data are required for competitive initiatives such as improving customer satisfaction, developing new products and markets and providing faster response. The link between knowledge and systemic databases should be understood within the context of information resource management)McFadden and Hoffer. 1994). This mean that effective decision

making requires a rational selection of interrelated data and the possibility of these data being integrated into KM. A KM can lead managers to anticipate problems better and to experiment and innovate. Based on a good KM, managers are more able to analyze and evaluate environmental scenarios and adequate response alternative in the light of the global objective previous determined (Dutta and King. 1980). At this point, managers can desire to come to the best solution by selecting the alternative that best satisfies the achievement of global objectives. This means that they are deeply concerned with increasing competitiveness. A primary objective of this orientation in modern business organizations is to contribute to greater efficiency in achieving organization objectives. The innovative efforts include the search for, and the discovery, experimentation, and development for new technologies, new product and or services, new production process, and new organization structures. The consequence of these efforts is sometimes seen as a raw material of information industry. New management philosophies are aware that information is the result of knowledge evolution and that a solid network between intellectual effort and technological innovations is enlarging. The innovative efforts are also the right consequence of the investment in knowledge and knowledge in the development of new knowledge may propel companies into new business in more rewarding markets.

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