

Using Cognitive-Semiotic Model for Capturing Tacit Knowledge: Case Study of Indonesian Traditional Massage

^{1,2}Radhitya Purnama and ²Tamara Adriani Susetyo-Salim

¹Department of Library and Information Science, Faculty of Humanities,
Universitas Indonesia, Depok, Indonesia

²Department of Library and Information Science, Universitas Indonesia, Depok, Indonesia

Abstract: The purpose of this research is trying to analyze traditional knowledge using Cognitive-Semiotic Model in one of Indonesia traditional massage therapies. Indonesian massage techniques are re-noun for its diversity and unique character that does not only emphasize the therapy on the physical aspect but also the spiritual beliefs aspect which support the healing process itself. There are anxieties if the diversity of this type of knowledge is not well preserved and it will eventually extinct. Therefore, this type of knowledge requires the right approach to capture, not only on the dimension of physical techniques but also the spiritual values that live behind it. Cognitive Semiotic Model is one approach to capture knowledge at the individual level which produces three dimensions of knowledge which are the sensory dimension, the coded dimension and the theoretical dimension. This study attempts to use this approach to capture how one massage practice in Indonesia is carried out by Bapak Tarman, a masseur from Klaten. The result from this approach provides deeper dimension than technical description of knowledge and can provide a better understanding of the transmission of knowledge. One concern is that the person who captures the knowledge requires in-depth expertise on the field that he wants to capture to generate knowledge in the third dimension knowledge or the theoretical dimension.

Key words: Knowledge management, traditional knowledge, capturing knowledge, cognitive-semiotic, traditional massage

INTRODUCTION

Indonesia is a big nation with a big assets, not only in form of natural resources but also in form of cultural resources which resides in various cultural practices. Globalization poses a threat of extinction for those practices if it is not managed correctly. One of trends in managing knowledge is a practice of knowledge management which is usually practiced on business organization.

Knowledge Management (KM) emerges because of the awareness that the company assets not only limited on the tangible assets but also included the intangible assets such as knowledge in the minds of people of the organization and that knowledge is not only in the form of explicit knowledge alone but included also the tacit knowledge. As Barclay and Murray said that KM is a business activity that has two main aspects, namely treating the knowledge component in business activities as things that are explicitly reflected in the form of strategies, policies, procedures of work throughout the

organization level and connects between the intellectual assets of organization both explicit (recorded) and tacit (know-how). Tacit knowledge is knowledge that is scattered in the minds of every person which has not been poured in an explicit form of obvious physical media such as study, books, audio recordings, video audio recording and so forth (Dalkir and Liebowitz, 2011).

Forms of traditional knowledge dominated by a form of tacit knowledge and usually passed down from generation to generation through oral tradition or direct teaching. Hence, in this information age, KM is needed to keep the tradition of innovation of organizations (Indonesia as a nation), the creation of new knowledge as well as the preservation of that knowledge.

KM has a cycle that describes how knowledge can be captured for later reuse for the good of the organization. Dalkir made a synthetic from various cycle created by KM experts and integrated it into a cycle consisting of three steps starting from capturing knowledge, sharing and dissemination of knowledge and acquisition and application of knowledge (Dalkir and Liebowitz, 2011). The

problems already turn up on the first stage which is the stage of capturing the tacit knowledge. Some experts argue that tacit knowledge can only be shared through conversations while others expert give a more compromised argument by categorizing tacit knowledge to the kind that could be captured and those that couldn't (Kingston, 2012).

As known by us, tacit knowledge has different dimensions of knowledge which already explicit. Exploration of tacit knowledge arises from the belief introduced by Polanyi in his book tacit dimension that we can actually know more than we can tell as understanding the new knowledge paradigm could lead us to know something 'bigger' if we do not limit ourselves to scientific skepticism that confine themselves to the certainty of material to achieve universal truth such a view is therefore not see a social practice in any empirical dimension but more than that there is meaning in a social practice that can be taken through a particular discipline (Polanyi, 1996).

Those characters of tacit knowledge then produced various studies on methods of capturing tacit knowledge. One of it is a Cognitive-Semiotic Model for capturing individual knowledge which is introduced by Sjarbani (Sjarbaini, 2009). This study tries to describe the opportunity for capturing tacit knowledge of a traditional massage treatments by Bapak Tarman through cognitive science and semiotics approach applying cognitive-semiotic elaboration models in capturing dynamic knowledge that exist on an individual level.

Literature review

Traditional knowledge: Traditional Knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity (WIPO, 2010). There is another related term that usually used to this kind of knowledge with a different emphasis which is indigenous knowledge and traditional cultural expression.

Capturing tacit knowledge: Capturing knowledge is an activity to gather information and knowledge then create a new knowledge. Capturing tacit knowledge also could be define as a process of capturing the experience and expertise of individuals within an organization and make it available to anyone who needs it (Dalkir and Liebowitz, 2011).

Naturally, people inside organization do individual learning through interaction with members of other organizations. That mean there is a process of transmission of knowledge from tacit to tacit among

members of the organization that strengthens the organization itself. The potency of those tacit knowledge then result the need for acquired it for organization learning needs.

Tacit knowledge is usually located inside the heads of each person and is not found either in the explicit form of information, like book, database, file organization or any other tangible form. Sometimes someone says what he knows without realizing that what he says is the tacit knowledge that has some value for organization. Dalkir noted that tacit knowledge had a several excellence compare with an explicit one even when it is hard to articulate and convert into words, like the fact when the knowledge is more difficult to articulate it into a concept mean that those tacit has a more value than those more easily articulated. And tacit knowledge is not like explicit that tends to represent the final product are explained about know-how included the process within results the end product (Dalkir and Liebowitz, 2011). So, there is vary category in knowledge based on how degree of difficulty in articulate it wich are explicit knowledge is knowledge that already has an explicit form by written down it into words, picture, or documents, symbolic experiential knowledge which is knowledge that the owners know that they possess it and it is in the form of words and concepts so it tend to be easier to convert into an explicit knowledge, non symbolical experiential knowledge is a knowledge that gained through experience but not in a symbolic form but more in a perceptual or physiological. The owner knows that they have the knowledge but it is difficult to convert it into explicit knowledge and last true tacit knowledge which is knowledge that the owner does not know that they have it (Kingston, 2012).

Those knowledge variety explain conversion difficulty level from tacit to explicit. In general, all the tacit knowledge can be made explicitly by using the codes or marks agreed between the parties that want to take advantage of the tacit knowledge but then, the success of message transmission will depend on how far code could represent an object or the knowledge itself and the ability of user or learner in interpreting those codes. To take a maximum benefit from a knowledge (Sjarbaini, 2009) offers a model that using cognitive-semiotic approach which was made based on how humans interpret something.

Cognitive-Semiotic Model to capture knowledge dynamics at the individual level: Cognitive-Semiotic Model was developed by Larissa Sjarbani to capture the dynamics of knowledge, especially individual knowledge, so then the knowledge could be diffused successfully. This model has a combination foundation of cognitive

science and semiotics approaches. Intelligent behaviour in using signs and symbol is a reason for using a cognitive science as an approach, addition of semiotics is to give an explanation about nature of signs and symbols that underlie discussions on mental representation.

Therefore, to consider the importance of learning process of its users, the representamen (one of Peirce terminology of triadic semiotics) of the knowledge need to be able disseminated knowledge matching with the needs of its users. This approach deal with intelligent behavior, in how person could gain knowledge in the proper and best way and equipped with semiotics attention to the nature of the sign, both approaches generate models of three dimensions in acquiring knowledge, namely.

Sensory knowledge: Is a type of knowledge based on the first dimension of Charles Sanders Peirce semiotics essentially relying on sensory and based on perception. There is no mediating sign for this knowledge, it is completely dependent on its context and can only be transmitted through imitation (direct instruction, job training, learning practices) from person to person, it is kind of knowledge that difficult to verbalized and in particular this knowledge can only be used in practice.

Coded knowledge: The second knowledge is based on the second semiotic dimension this dimension use codes to refers an object or an experience. Coded knowledge allows for the transfer knowledge without the presence of that to which this knowledge refers. The essential difference with sensory knowledge lies in the fact that coded knowledge does not have to be applied through physical action in order to be communicated. Code is not limited to verbal language. Image, video or other multimedia are also code which can represent knowledge. The code needs to be learned, therefore it's needs to give introduction to the code user in organization. Knowledge which is encoded as a representation has less context dependent than sensory knowledge, therefore, the transfer process can be done easier because of the knowledge which is encoded can be accessed at any time without the presence of the owner of that knowledge. It should be understood that code like language sometimes only understood by certain groups and potentially cause a miscommunication because the ambiguity meaning of code.

Theoretical knowledge: This third knowledge type structures puts the knowledge into perspective. It is a dimension of knowledge which is useful to know the essence from a concept. It is determines and analyzed relations and difference between one concept to others. This understanding cannot be covered up by only using

coded knowledge. Theoretical knowledge is making coded knowledge structured that emphasizes on the structure and reason. Theoretical knowledge essentially structures, it structures the coded knowledge and it therefore presupposes coded knowledge, it also has a predictive power. It provides a means to conduct an experiment of thought which coded knowledge does not provide (Sjarbaini, 2009).

MATERIALS AND METHODS

Method used in this study is a qualitative research. Gorman and Clayton (2005) define it as a process of enquiry that draws data from the context in which events occur. With an inductive approach, this study describes the process of a particular phenomenon from the perspective of those who participate. Data collection was conducted through interviews and observations from Bapak Tarman traditional massage practice as the phenomena and the data was interpreted using Cognitive-Semiotic Model.

RESULTS AND DISCUSSION

Tarman traditional massage: Tacit knowledge which this research was studying using Cognitive-Semiotic Model is a traditional massage knowledge of Bapak Tarman. He was born in Bayan, Klaten 68 years ago (actually, he admitted that he did not remember the date of his birth and only guess that his birth year was 1948). His origin does not affect his massage techniques because he said that he learnt his therapy techniques from no one. He said:

“Pokoknya tangannya udah, kayanya udah biasa aja, itu tangan tangan si kayanya dapet petunjuk kayanya...sinyal, oh ya ini ya, ditanyain, pasiennya bilang ya itu... ya itu pak cocok”

He has been working as a masseur since he was young. He claimed his ability to cure others is a gift from God that he got from his special birth. When he was born his mother's labor was not typical. The pregnancy duration was 12 month, instead of 9 month and he was born in a cowshed. He also born in a special date, 11th which represent the ability to cure people based on primbon calendar (Gunasasmita, 2009).

Migrating to Jakarta around 1970s, he started his massage practice in the capital city applying door to door method in offering his service, before started to settle down and opened a practice at his house in

Srengseng. Aside from his primary job as a masseur, at his early living in Jakarta, he sold cakes and became a becak driver. As time goes by his massage service becomes more popular among local communities. Its popularity spread by mouth to mouth promotion from his satisfied customers. As a result he focused on his massage therapy to make a living. Although, he only offers massage services in practice many of his customers are also asked for spiritual advice that he gladly provides.

Sensory knowledge of Tarman massage: Some parts of Tarman massage techniques could be converted into coded knowledge or even become theoretical knowledge. Many books have been made to convert tacit knowledge of massage into explicit knowledge which could be accessed by anyone who wants to learn a massage technique. Massage techniques that have been theorized, e.g., Swedish massage techniques, Japanese massage, tuina or Chinese massage, infant massage, reflexology, acupuncture or acupressure massage, massage vascular (full-blooded), massage nerve and various other massage (Sukanta, 2007; Wong, 2011). So, there is great potency to convert Tarman massage technique to become a theoretical knowledge.

Although, many things could be theorized (e.g., meridian points and its relationship with the anatomy of the body and point nerve), much of the massage knowledge could only be transmitted through direct teaching or through direct practice as they relate to the feel and techniques calibration which are difficult to change into code such as the amount of pressure or massage point adjustment related to the differences patient's body shape (weight and height). Additionally errors in practice could be immediately corrected by the teacher.

Transfer of knowledge through direct teaching has several times attempted by Tarman. From some of his pupils, there is only one person who can inherit his ability to cure through a massage, his successful for learning those skills not only obtain due his cleverness but also Supported by his good intention, effort, talent and gift (in spiritual matters) to perform such treatment ability.

Coded knowledge of tarman massage: Coded knowledge is knowledge at descriptive level. For example we can see in the description of cultural artefacts in the Digital Library of Indonesia Culture. Fabric Motif of a particular area, could be described with the words and images that represent that fabric motif. Similarly with those, if we want to convert tacit knowledge of Tarman massage into coded knowledge, we should try to change the tacit knowledge to understand other people through the codes are available and conventionally agreed.

This is the second dimension of semiotics, when the object (actuality) represented or separate from the sign in the form of code. The substitution of actuality with the code could use a variety of media codes. It could be verbal description of how Tarman massage process. Descriptions could be explaining step by step of massage process. Starting with a full-blooded or pressure to a particular nerve points, began at the shoulders, neck and head. Then the muscles of patients are stretched by means trampling the patient from back, thighs, calves, until the soles of the feet and the last he will do the sorting veins that exist in the body, from the back, thighs, legs, chest, head and last the face.

A more detailed description could be done using code terms in the study of traditional massage therapy. We also could use photographs to show the points that need to be treated. For more detail description, we could use video to represent Tarman's massage techniques (in Peirce concept, relation between a motion picture as a sign and massage technique as object of knowledge is an iconic relation).

Something that should be understood is that we could make a more detailed description use more specific code but if we did that, only limited group of people who could understand those description. Conversely if we use a common code, the more broad audience could understand the description of such knowledge (Fiske, 1990).

Theoretical knowledge of Tarman massage: Theoretical knowledge is a structured theory that seeks to reduce or even eliminate the arbitration of a code. Hence, the use of the codes on the dimensions of the theory is limited to a particular group. Theoretical knowledge is to know the essence of the concept (object or event). It's also relating captured knowledge concept with other concepts (Sjarbaini, 2009). Structured knowledge of Tarman massage knowledge could be made by comparing the Tarman massage concept with other massage concept that already known, for example compared with acupuncture massage or reflection. Knowledge of massage acupuncture or reflection itself has already theorized and able to distinguish it is techniques with others massage techniques. It is also able to answer 'why' question such as why we should press certain meridian points in order to heal some symptoms (causality). On technical aspect, study and capture of Tarman massage knowledge, should be conducted by person who have a deep understanding on massage techniques. Other aspect like values that lives behind it is belief (Roland Barthes called it as a myth) need also to explore and reviewed, because the success of this traditional therapy is supported with patient confidence

of spiritual power that Tarman have. It is not solely from the physical approach but also mentally. It is also could be a distinguish aspect that differentiate Indonesian traditional therapy compared with other treatments, especially modern one.

Interview revealed the values that Tarman holds as he born in a special way based on primbon give him a great confidence (as an excess) to treat others and it is also affect customer who have a similar flow. Belief that he embraced could be categorized as a doctrine called Islam Abangan. Distinguish aspect of these beliefs compared with an orthodox Islam (the actual term was never used in Islam but sometimes experts used it to refer to Islam based on the Quran and Hadith) is that abangan could be categorized as a group who believe in Islam but not to practice worship as exemplified Quran and Hadith. Currently, the value of Islam embraced most of the community is based on the value Quran and Hadith. Hence, the practice of spiritual that is close to kufarat and superstition often rated as an astray practice (Saleh, 2001). As a result, the belief in a spiritual massage therapy is also wear off, resulting in a shift of the value held by customer that only see Tarman therapy in it is physical aspect.

CONCLUSION

One of the reasons why KM is done by organization is a concern that valuable tacit knowledge inherent to a person within the organization will be lost if that person is not part of the organization anymore. In order to make the most of that knowledge, it is necessary to capture the valuable knowledge using the right method. Specific character of particular knowledge sometimes constrains the knowledge to be presented in its original form through direct teaching. This knowledge is the sensory knowledge. However, the need to communicate such knowledge requires the knowledge to be encoded in a certain way. The nature of arbitrary code generates meanings and perceptions varying among readers of the code. Therefore, Cognitive-Semiotic Models provide third level in capturing individual knowledge into a structured theoretical knowledge in which arbitration of meaning from a code is attempted to be eliminated. In the case of Tarman traditional massage, we could then produce those three dimensions of knowledge to meet the learning needs of various users.

RECOMMENDATIONS

To generate the third dimension of knowledge or a theoretical knowledge it is necessary to involve people who possess deep understanding or expertise in the knowledge field. This requirement also applies to people who want to learn the theoretical knowledge of

certain field. Therefore, in order to create an effective KM there is a need to cooperate with various parties who possess certain ability, especially in the first phase of the cycle KM which is capturing knowledge, we need to cooperate with an expert, so that, the code generated from capturing process is a code based on the quality of coherence and good structure.

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