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IN THE MOVING TO KNOW: KNOWLEDGE EXPEDITION BASED ON TACIT LOCAL KNOWLEDGE IN THAILAND HEALTH CARE

Yuwanuch Tinnaluck - Walailak University - uwanucht@yahoo.com
Pierre Fayard - Université de Poitiers - fayard@iae.univ-poitiers.fr
Valla Tantayotai - Walailak University - valla@wu.ac.th
Kadigia Faccin[1] – Faculdade da Serra Gaúcha - kadigia@gmail.com

ABSTRACT

Innovative practices for collaborative knowledge generation are developing in Thailand, specifically in medicine. Instead of the classical one way vertical communication of information from scientific institutions toward non-specialists, one may observe the raise of practices, within which patients play an active role all along physicists and medical teams' implication. This new deal matches *tacit local knowledge* and needs from patients and their relatives, and *explicit global scientific knowledge* from health and care professionals within a transforming knowledge creation process useful for all the stakeholders. We call this process of knowledge construction in a collective way of "Knowledge Expedition", because is based on a shared interest of curing and caring, professionals and patients integrate new ways to be, including empathy, open-mindedness and doubtful attitudes in order to provide best conditions for creative communication process. To illustrate this growing trend, this paper will present results from two case studies in health care in Thailand.

Keywords: Collaborative knowledge process creation. Tacit Local Knowledge. Explicit Global scientific Knowledge. Knowledge Expedition. Helth Care.

RESUMO

Práticas inovadoras para a geração de conhecimento colaborativo estão sendo desenvolvidas na Tailândia, especificamente em medicina. Em vez da comunicação entre Instituições científicas e aqueles que não são especialistas acontecer de forma vertical, de uma maneira clássica, pode-se observar o aumento de práticas, dentro do qual os pacientes desempenham um papel ativo nas equipes médicas. Estas novas práticas combinam conhecimento local tácito, de pacientes e seus familiares, e conhecimento científico global explícito, de profissionais de saúde, dentro de um processo de criação de conhecimento transformador para todas as partes interessadas. Chamamos este processo de construção do conhecimento de forma coletiva do "Knowledge Expedition", porque é baseado em um interesse comum de cura e cuidado, onde profissionais e pacientes integram novas maneiras de ser, incluindo empatia, abertura de espírito e novas atitudes, a fim de fornecer melhores condições para o processo de comunicação criativa. Para ilustrar esta tendência crescente, este documento irá apresentar os resultados de dois estudos de caso na área da saúde na Tailândia.

Palavras- Chave: processo colaborativo de criação de conhecimento. Conhecimento Local tácito. Conhecimento científico global explícito. Expedição do conhecimento. Saúde.

[1] Corresponding author.

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1 INTRODUCTION

By now, people are familiar with explicit knowledge, which is fundamentally the product of scientific methods, worth globally, and results through formal research, education and workplaces. But, as regard as the issue of development, knowledge is not only put as explicit and tacit. It might be categorized into two different, but not contradictory, dimensions: global with worldwide value, and local in relation with the diversity of particular situations.

In healthcare settings, global knowledge is associated with formal modern scientific contents, by definition explicitly shared by disciplinary specialized communities. It comes in the forms of written books and journals, formal education and training. Scientific method is the key to evidence-based arguments, which dominated the healthcare system. Because of supremacy and efficiency of scientific knowledge, the tacit one is mainly under-appreciated and under-estimated in official healthcare practices. Though, numbers of instance show and demonstrate dynamism and quality of this kind of local-valued knowledge that has concretely brought to improvement of practices and satisfaction of recipients (Nonaka, 1994; Nonaka & Takeuchi,1995; Nonaka, Toyama, & Hirata, 2011; Nonaka, Kodama, Hirose & Kohlbacher, 2014).

First, it is local knowledge that is learnt through formal education and still heavily based on formal knowledge of science and technology in the same vein of global knowledge. New knowledge that is locally generated responsive to local circumstances and situations pays importance on written books, journal, and academic research. The growing interest in Knowledge Management also makes this local formal knowledge more inclusive of, and sensitive to, local contexts and relevant actors tacit knowledge (Gourlay, 2006; Nonaka, Toyama & Konno, 2000; Nonaka, 1994; Polanyi, 1966; Tsoukas, 2003). Another deeper local knowledge, and often excluded out of development context, is the so-called *Indigenous Knowledge* – IK, or Local Wisdom – LW. This IK is informal and tacit. It is rooted in a particular community, and is culturally unique to each community. It came from a set of experiences generated by people living in the community. It is context specific and embedded in people who generate it and use it within their everyday life. Hence, it is difficult to capture and codify this kind of non-formal knowledge. Since it is rarely recorded in written form, it is

mostly transmitted through imitation, demonstration, or initiation within cultural local contexts.

This nature of IK makes it difficult to accept as valid knowledge by outsiders, especially for the ones with modern science and technology educational background. Though tacit knowledge is important in global *and* local knowledge at both levels, it receives less recognition than it deserves. Epistemologically, mainly in the West where global knowledge largely comes from, explicit knowledge is more emphasized. Though, one may observe efforts to combine and integrate such local knowledge, whether it is local formal knowledge or indigenous knowledge, with mainstream global knowledge.

In the age of integration of economies, or globalization, science and technology are predominant and considered driving forces for development. This also means a new society of knowledge dubbed 'knowledge economy'. Researchers in development and communication fields point that what we need is a system for the communication of knowledge for social inclusion – a system that facilitates everybody's access to knowledge relevant to their needs in order to live a meaningful life in this larger global system (Fayard, 2010). In other words, communication would be the heart of democracy in the society of knowledge. The process of social interaction that encourages tacit knowledge to emerge is a desirable two-way communication to make creative dialogue breathing and to create new knowledge.

Therefore, this article intends to explain the collaborative process of knowledge creation from the combination of local tacit knowledge and explicit global scientific knowledge. In order to achieve this purpose, we use as object of this study the Thailand Health Care. This is not an easy task because it needs a self-transformation process to change from within to carry on their self-care with pleasure, not pressure. It fits to explain the stimulating impacts, and understanding how knowledge, both explicit and tacit ones, and human factors relate with each other and their contexts to co-create knowledge and lift the knowledge creation spiral. It is a new challenge that empowers communities with explicit knowledge.

2. THEORETICAL REVIEW

2.1 Nature of Knowledge

The communication of knowledge cannot be seen as a mere transmission of information, but it is a vast cultural and social process. According to Nonaka's (1994)

framework of Knowledge Creation, it is created by people through their own interactions between themselves, and with the environment. Hence, to understand knowledge, we must first understand the human beings and the interactive processes from which knowledge is emerging *(*Nonaka et al., 2014; Von krogh, Nonaka & Rechsteiner, 2012; Jakubik, 2011; Zboralski, 2009; Gourlay, 2006; Schultze & Stabell, 2004). Nonaka and his colleagues, continue that because human interactions are the source of knowledge creation, knowledge is subjective, process-relational, aesthetic, and created through practice.

Their view of knowledge and knowledge creation is people-centered and action-oriented. Their view is different from a mainstream perspective that would consider knowledge as absolute and context free. This knowledge approach is known as interpretive approach. The table 1 presents some of the main definitions of knowledge, according to this understanding.

The normative approach of knowledge understands it as an object that can be found outside the individual and can be stored, handled and transferred through Information and Communication Technologies (ICT). The normative approach is considered mainstream and dominates the organizational studies. On the other hand stand the interpretive studies, by believing that the tacit knowledge has a strong dimension, constructed through interaction. However, this approach is not the dominant one in the study of knowledge management area. The mainstream has oversimplified the nature of the organizational knowledge by privileging the explicit and individual nature over the tacit and collective nature of knowledge (Cook; Brown, 1999). The study of Scarbrough, Robertson and Swan (2005) points out that, in the analysis made during eleven years of publications (1990-2000), linked to the theme "Knowledge Management", only 13% of the 302 reviewed articles were related to human resources and practice of interaction, with most of them connected to information and management systems. This finding highlights an opportunity of research linked to studies aimed at observing patterns of interaction and dialectic.

Nonaka et al. (2008) strongly argue that it comes from a dynamic process, and cannot exist without human subjectivities and the contexts that surround human beings because truth differs according to who we are and from where we view it. Unless we understand the essential nature of knowledge, we cannot share it or use it, and, more importantly, create it effectively. David J. Teece summarizes in his foreword for the book Managing Flow of Nonaka (2008). “Subjective tacit knowledge held by an individual is externalized into objective explicit to be shared and synthesized. Tacit and explicit knowledge complement

each other. Knowledge is socially created through synthesis of the different views of different people…".

Characteristics	Authors
Knowledge does not lose value when used by many people, making it an infinite resource.	Nonaka and Takeuchi (1995)
Knowledge is the result of human interaction.	Peltokorpi, Nonaka and Kodama (2007); Balestrin, Vargas and Fayard (2008); Nooteboom (2008); Serenko et al. (2010)
Knowledge generates different assets/capital: patents, licenses, skills, routines — It is produced and used.	Nonaka, Toyama and Hirata (2011)
Knowledge is an irreversible transaction.	Takeuchi and Nonaka (2008)
Knowledge is related to processes.	Spender (1996); Teece (2007); Takeuchi (2008); Osono (2008); Nonaka, Toyama and Hirata (2011); Nonaka et al. (2014)
Knowledge is created through practice.	Nonaka et al. (2014); Von Krogh; Nonaka and Rechsteiner (2012); Jakubik (2011); Zboralski (2009); Gourlay (2006); Schultze and Stabell (2004)
Knowledge arises from series of value judgments — it is aesthetic and subjective.	Von Krogh; Nonaka and Rechsteiner (2012); Weick (1995)
Knowledge depends on its context.	Balestrin, Vargas and Fayard (2008); Bryceson (2007); Brannback (2003); Margaryan, Milligan and Littlejohn (2011); Fayard (2010)
Knowledge is created in a situated action.	Polany (1966); Nooteboom (2008); Riusala and Suutari (2004); Dimaggio (1997)
Knowledge emerges from dialectic.	Nooteboom (2008); Nonaka, Toyama and Hirata (2011)

Table 1: Characteristics of knowledge according to the interpretive approach.
Source: Elaborated by the authors.

Nonaka et al. (2001) specify two types of knowledge: explicit and tacit ones. Explicit knowledge can be expressed in formal and systematic language and shared in the forms of data, scientific formulas, specifications, manual, etc. It can be processed, transmitted and stored relatively easily. In contrast, tacit one is highly personal, and hard to formulize. Among some of its features are subjective insights, intuitions and hunches. It is deeply rooted in action, procedures, routines, commitment, ideals, values and emotions. It is difficult to communicate tacit knowledge to others. Moreover, it is perceived as having two dimensions. The first is the technical, which encompasses the kind of informal personal skills or crafts often referred to as know-how. The second is cognitive. It consists of beliefs, ideals, values,

schemata, and mental model which are deeply ingrained in us and which we often take for granted. This cognitive dimension of tacit knowledge takes an important role in shaping the way we perceive the world (Nonaka & Konno,1998).

The tacit knowledge is based on actions, procedures, commitments, values and emotions. According to Sensiper and Leonard (1998), Nonaka, Toyama and Hirata (2011) and Nonaka et al. (2014), the tacit knowledge is potentially exercised during the process of solving the problem . The tacit knowledge allows greater perception of ideas, stimulates creativity and has positive effect on business activities relying on creativity, such as innovation (Leonard and Sensiper, 1998).

There is a large theorical body that has given attention to the tacit knowledge of the individual (Gourlay, 2006; Nonaka, Toyama & Konno, 2000; Nonaka, 1994; Polanyi, 1966; Tsoukas, 2003), and some other studies have emphasized the quality of tacit knowledge (Doran, 2004; Koskinen, 2001; Noh et al., 2000; Nonaka & Toyama, 2007). However, according to Erden, Krogh and Nonaka (2008), the academic papers connected to the creation of knowledge rarely focus on the quality of the tacit knowledge of the group, which would distinguish different collective tacit knowledge and different practices applied by a particular group. The creation of knowledge is always seen as the "front-end" of innovations. Tacit knowledge has very important role in the success of innovation. In many cases, innovation is not a product of one person, but of the collective work of a group of people or a team. In order to be able to create something together, the collective tacit is of great importance for the team. (Erden, Krogh & Nonaka, 2008; Leonard & Sensiper, 1998).

2.2 The Process of Knowledge Creation

During the creation of knowledge, the contradictions that can't be resolved only through logical analysis are synthesized through practice. Thus, the activities of knowledge creation require individuals to think about the meaning of their actions and the following results, and use the results of that reflection to correct the action (Nonaka, Toyama, & Hirata, 2011). This process of action reflection then involves a continuous movement between subjectivity and objectivity. Thereby, the subjective experience of a person turns into knowledge through action and practice. In other words, the knowledge that emerges from the dialectical process depends on the context and the judgments of value (Weick, 1995).

This synthesis of ideas, produced through dialogue between the different ones, is called dialectic process of knowledge creation (Takeuchi & Nonaka, 2008). Dialectics is a way of thinking dating back to ancient Greece, and is strongly based on change and oposition. This is because, according to the dialectic trend, the change takes place only through opposition and even conflict. The starting point of the dialectical movement is the thesis; the next step, called antithesis, is the opposition or denial of the thesis. From the meeting of these differences, arises the synthesis.

The synthesis is nothing more than a new idea originating from the other two (Leonard & Sensiper, 1998). This, for Takeuchi and Nonaka (2008, p. 21), "[...] is similar to the dynamic process by which the company creates, maintains and explores the knowledge." The knowledge is dynamically created in its time, summarizing what appears to be opposites and contradictions. In short, the creation of knowledge is a synthesizing process, ie, "[...] several contradictions are synthesized through dynamic interactions between the individuals, the organization and the environment" (Nonaka & Toyama, 2002, p 997). Therefore, different people in a company, which in turn have different experiences and think differently, in a greater or lesser extent, may introduce new elements coming from their lives and experiences (Dimaggio, 1997).

In his study, Nooteboom (2008) points out that the lack of diversity, divergence between people, or the fact that they agree about everything, prevent the division of labor and the innovation within the company. For Nooteboom (2008), the value of the relationship's novelty increases with the differences between people, and, in interorganizational level, increases with the differences between the partners. During the process of innovation, cycles of divergent thinking are pursued by convergent thinking cycles (Leonard & Sensiper, 1998). The dialectical process provides an evolution of the existing knowledge.

3. METODOLOGY

In order to use tacit local knowledge in health care practice, ones must get to know the nature of knowledge in a deeper and extensive senses rather than limited to global scientific knowledge of established practices of evidence-based medicine. With the more recent emphasis of Knowledge Management in all sectors in Thailand, it leads to more attention of the roles of informal knowledge in health care practices, especially in local community settings. This eventually changes the way health care practitioners communicate with all

relevant parties. Practitioners and policy makers in science related field, including heath care find themselves increasingly obliged to communicate with different groups of stakeholders in society, living in different context and possessing different levels, or system, of knowledge. They have to take into account public interests and concerns about implications and impacts of scientific based practices and policies they deliver. To achieve the proposed objective, the field research was conducted using the following research sources:

Step 01: The first step consisted in developing the data collection instrument. The questions were based on reviewing the literature and were validated by professional experts. Table 01 lists the conceptual elements and dimensions of analysis used to conduct the case study.

Conceptual Elements	Dimensions of Analysis
Tacit local knowledge	Type of required knowledge; Ability of the partners; Turnover of partners; Type of alliance; Partners who collaborate once versus recurrent partnerships.
Explicit global scientific knowledge	
Collaborative knowledge creation process	To search for description of the Knowledge Combination Process according to the identification of the above written dimensions.

Table 01: Definition of conceptual elements and analysis dimensions
Source: Organized by the authors

b) Step 02: The second step was to choose the respondents needed to make the description of the experiences of the Thailand Helthcare case. A escolha do primeiro entrevistado foi intencional. A partir daí utilizamos a técnica da bola de neve para encontrar os demais. Thus, we conducted thirty in-person interviews with professionals related to the institutions listed in Table 2.

c) Step 03: The third step consisted of the collection of secondary data needed to contextualize the empirical object. In order to make the case description, we used other sources of data in order to show who were the main actors, the form of collaboration, as well as the coordination mechanisms used to manage the project.

SOURCE DESCRIPTION	Type of Source	MEANS OF COLLECTION
Diabetes Care Knowledge Management Network, , School of Nursing, Walailak University, Thailand.	Primary	Interviews
Permsook Community Hospital in Pha Khao, Leoi province, Northeastern region.	Primary	Interviews
Bung Kae Community Hospital, Nakhon Nayok Province, Central region.	Primary	Interviews
Documents	Secondary	Gathering documents during interviews
All local health personnel and villagers.	Primary	Interviews and observation.

Table 2: Data Sources for Research
Source: Organized by the authors

In short, to achieve the proposed objective the case study was investigated based on existing projects, by using documents, personal communication (formal and informal) with people involved and relevant to the issues of the study. A certain number of field trips will be done for observation of the activities and interviews of people in action on location in order to develop insights and inside information. Additionally, follow-up telephone contact will be made as needed Interviews with policy makers of the government sector, national research institutes and NGOs which work with local communities will be arranged to better understand the country's realities at macro level.

4 ANALYS OF THE RESULTS

4.1 Thai Case Studies in Diabetes Care

Diabetes is a major public health burden in Thailand. To face this challenge, the government sector and other authorities have initiated many corresponding programs and projects, but the efforts are not enough to handle the complexity of diabetes prevention and care (Tinnaluck, 2013).

Diabetes Care Knowledge Management Network or, in short, "Diabetes Care Network", structurally untied, has been formed since 2005. From the beginning, the network offered KM activities to bring health care personnel together in unusual styles of seminar and conference. They were encouraged to share their knowledge and experiences as well as their thoughts, feelings, values and social meaning they gave to their work. People involved were

aware of their meaningful contribution to make a difference for the patients together with their families, especially in the local contexts of Thailand rural community.

In the effort to run its diabetes prevention movement, Permsook Community Hospital in Pha Khao, Leoi province in the Northeastern part of Thailand, found a Buddhist monk with high educational background at graduate level, to be its supporter. The monk receives high respect from the community members and he was active to help people. The hospital team asks him to use the opportunity of every Buddhist monthly occasion called *Wan Phra*, or Buddhist day, which follows lunar cycle. Each month will have four Buddhist days. It would be a learning place about healthy food for the temple goers. The monk also offers the temple ground around the pond as exercise space. Registration system for participant is designed to record their "merit accumulation" as to exercise is a way of self-kindness. Exercise activities are offered to suit each age group – child, adult and senior. It emphasizes on the quality of life. Motivational rewards are given to the one with highest accumulative scores in each group.

"Thai way, local way", the national theme for health movements, is central to every activity they design. The team talks about contributing factors to its success that team members are not only very attentive and active to go into the community, they were also locally born, know everyone as well as working for a long time to receive trust and confident from the community. It also has support from formal community health volunteers who are villagers themselves. It makes them have inside and insight information about all community members, for example, who likes and dislike each other, who is good for certain activity or having relevant experiences. More importantly, they know who are willing to participate. In community forum individuals share their thoughts, concerns and dreams toward collaborative planning in order to have a holistic shared vision to solve their problems by their own action as well as finding sources of funding. This means knowing local community administrative system and key members of all sectors to support the activity is a basic to begin with.

Health practitioners act as facilitators, not teachers or ones who know better. Leading role belongs to individuals in the community. In the community forum, health practitioners would come up with questions that provoke their thoughts based on their unique context. These questions encourage them to think deeply together and bring about what they want to do for themselves and how to make it possible. For example: a) What are their local foods? B) What is their Local Wisdom (tacit local knowledge) in food for healthy living? C) What are the negative effects of buying food (meats and vegetables, etc.,) from outside the community? D) What are the positive effects of home cooking over cheap ready-made food?

E) If we promote eating lots of fresh vegetable, how we can get enough fresh vegetable and are confident of its safety.

From this story, for the community members to learn about healthy food is not just receiving information about what is healthy food and how they should eat, but rather a process of learning and co-creation of knowledge between them and health practitioner. Dialogue is vital to nurture two-way communication.

The literature regarding the creation of interorganizational knowledge has brought to the academic debate, specially in the past two decades, a reflection about the results of the joint action from various actors in order to archieve common goals. This way of thinking about the means to reach the intended ends was called by Dyer and Singh (1998) a "relational vision" of strategy. According to the relational vision, the collective strategy creates a inimitable source of resources through a network with valuable access to information, knowledge sharing, complementarity of resources and effective governance. The relational vision of strategy has had as an empiric concern, in the majority of its works, the quest for understanding of the relational gains noticed by the joint action. One of the most important relational gains is the creation of knowledge.

A second story shines from an ethnic root of Thai Paun villagers whose ancestors came from the city of Vientiane (Laos) to establish their settlement for over 100 years here in Thai territory at Bung Kae, Nakhon Nayok Province, in central region of Thailand. They still keep strong bond to their cultural root of Thai Puan. The economic landscapes of Thailand have been shifting so much in the past few decades. This brings a lot of lifestyle changes in people everywhere all over the country with both positive and negative impacts. Ironically, chronic diseases, such as obesity, diabetes, high-blood pressure and etc., are prevalent caused by imbalance behavioral food consumption. The negative impacts can be obviously seen in the rural communities where these diseases were just new comers, especially diabetes, high – blood pressure and obesity. Number of patients and high risks groups of these diseases are shockingly increasing.

Rungrut Taveewong, the Director of Ban Bung Kae Community Hospital is concerned about these happenings too and she wants to make a difference. She points to the high risks group of community members who would become diabetes patients if they do not take care of their health seriously. They are in their forty five years' old and above. This is the younger generation who goes into the workforce outside the village. It means they do not have time to cook their own meals. And there also are foods from outside pouring into the community. Rungrut is from a Thai Puan family. She was born and raised in the village and coming back

to work in her hometown after receiving education in the big city. That's how she can understand the world inside and outside of the village. She sees the threats of changing eating and lifestyle on their health, however it stirs her to recall the community capitals and their cultural heritage that used to keep them live a well-balanced life. It is important that she is able to grasp the value of all the community capitals that they have. "*Good things we have in our community, they are already there. We should highlight them to everybody's attention. Especially, in the issue of health, make them see the importance, value and usefulness of our local capitals that our lives grow on*".

This understanding of Rungrut, clashes with the affirmation of Nonaka, Toyama and Hirata, 2011 and Nonaka et al., 2014, that the knowledge cannot exist without the subjectivities of human life and the contexts that envolve the human race.

Rungrut emphasizes *Lum Puan* or Puan song, the cultural sacred songs and dance of Thai Puan is used as a medium to convey contemporary message. Rungrut knows that she can make villagers listen and hear the health message with enchantment she has to offer through the traditional Puan Singing and Dancing. She has to work with Paa Pongsri or auntie Pongsri who is the focal performer of *Rum Puan*. It is a full moon night of the tenth lunar month. It is *Wansad Lao* Celebration Day, a big occasion that all Thai Puan in Bung Kae Community gather at the temple to make merits for their ancestors. This religious gathering brings delight to everyone. After the religious ceremony, the fun part begins with festive food and traditional performance. They feel the caring and loving that binds them together.

The event like this is the opportunity for villagers to strongly reminisce on their heritage and be proud of their cultural root and identity. Paa Pongsri sings in Thai Puan dialect: "*Man Ta Wa Oh La Nor...Nee La Nor....*". This has been part of the Thai culture from long time ago. Our Thai Puan songs have been preserved over years. *May our Bung Kae village have only happiness. The danger and misery are kept away from us! I'd like to beg all our relatives, both younger and older to visit and keep in touch. Please come, stop by to eat and drink before you leave. Eat just enough fat. Avoid sweet, greasy and salty foods. Your food must be clean with no chemical contamination. And you must stop drinking alcoholic drinks. Our loving Village Health Volunteers have warned us. So, please keep this in mind, all the brothers and sisters."*

This expressive and informative lyric does not only reach the heart of villagers but also help them keep the time-honored tradition alive and vivid for their wellbeing. Paa Pongsri tells that "*Lum Puan Songs are our traditional custom from the old days. The words are from our elders who have experienced life before us and passed down the songs that*

express good thoughts and good deeds like this to the younger generations." Some villagers say that "*I love it. When I hear it, I often think of the time I was young when I still lived with my parents*." And "*I feel that the song is so sacred. When the song begins, my hair stands on end. I like to hear the song*." "*When I am about to eat something not so healthy I recall how the song tells us. So, I make up my mind not to go for the fattening, greasy and salty foods."*

Nonaka and Takeuchi, 1995, Nonaka, Toyama, and Hirata, 2008, Von Krogh, Nonaka and Rechsteiner, 2012, point out that in order to archieve a goal, one must create new knowledge constantly and seek practical wisdom, which seems to be exactly the purpose of this group.

Apart from this work, Rungrut believes in the traditional way of living well, and eating well. She organizes quite a number of community forums to allow tacit knowledge of local people to emerge. Knowledge acquired from the sharing of experiences is streamlined into workable operational plan. Housewives group and local food sellers are invited to participate. Then knowledge and action are carried out in effect to every household with a warm welcome. Because the villagers have evidence-based information of their health conditions of having or at risk of diabetes and high blood pressure, they know that they have to do something for change. And it is not too alien or complicated to adapt it for their own sake. This is knowledge based on self-dependent and inter-dependent. They have mutual share & learn experiences to empower their own community for sustainable development of a well-being community in all dimensions.

From an old villager they find Local tacit knowledge – time-tested knowledge in their own land based on the geography and way of living. It is a special kind of knowledge that takes everything and everyone including environment into consideration. They have discovered interesting and remarkable local health menus for all. One is 3-kind-mushrooms spicy soup. It is told by an old man who is healthy despite the fact that he is almost 90 years' old. This certain menu consists of 3 kinds of local mushroom, a wild herbal plant extracted juice called *Ya Naang* and other kitchen herbs and spices common to Thai cooking: galangal, lemon grass, onion, garlic and chilly. The ingredients are believed to have health promotion and detoxification properties. This 3-kind-mushrooms spicy soup menu enters many families in the community. It is also adopted by Paa Mer, or auntie Meur – the ready- made food seller of the community. She prepares this spicy soup for those who have no time to cook. Everybody loves this delicious and healthy spicy soup.

The traditional Thai ways of daily cooking are also revived. In the old days, Thai cooking did not use much cooking oil. They preferred boiling, and grilling to frying which is

more to Chinese way of cooking. Sharing of knowledge from older generation to younger generation has linked the two generations together. Food becomes not only palatable, healthy but also warm to the heart. An example is from Pii (elder sister) Wantee's kitchen. Pii Wantee has now changed her cooking methods from deep frying to steaming or boiling, and from fully seasoning for sweetness, greasiness and saltiness to half portion seasoning together with stopping using monosodium glutamate. Many feel that their health is better. It encourages them to be more thoughtful of what they should eat for a better health and away from getting sick. This is in accordance to the Buddhist proverb saying that "*Life without illness is so fortunate."*

Nonaka et al., (2014) explain that, while tacit and explicit knowledges contrast, they aren't simply polar opposites, but they rather meet in a continuous series and interact in a spiraled continuity. For Nonaka et. al., (2014), the phonesis is the factor that promotes this spiraled process; the sinthesis of the tacit and the explicit knowledges. These senses of value help to interpretate conecpts, to gather the essence and to create meaning through the contexts. Tacit knowledge is deeply related to oncology, explicit knowledge is related to the epistemology and phronesis can add axiology, in other words, the value that comes from the beliefs of the cultures, commitment, passion and judgements.

The last example a noteworthy one, is Pii Boonjua's story. Pii Boonjua used to sidestep from eating vegetables. But since she learns about her diabetes and high blood pressure, as well as how to take care of herself, she grows her own vegetables at home. Her meals always include vegetables. Pii Boonjua tells "*Before, I hated vegetables. When I have this illness, I eat more vegetables. I am now very happy, no health problems. At my age, 57 years old, I don't have diabetes nor high blood pressure, just knee pain. At dinner today, we have an opportunity to see fresh colorful vegetables arranged in a big plate side by side a small bowl of local dish made of fermented fish.* Mae Preung, her mother joins the dinner. She has eaten like this until she is eighty seven years now. She is an example of a strong person alive to inspire us towards the results of good eating behavior. She is in good health. She has no chronic illnesses. All teeth remain strong. All smile while eating, healthy body and healthy mind. Now, Pii Boonjua's blood sugar level reduces from 120 to 97, lifting her up from the risk group to a normal condition group.

The health status of Baan Bung Kae Community is getting better within these three years. The number of diabetes/high blood pressure patients and risk group is decreasing. Finally, the results of the screening test in the past year showed not even a single case of diabetic patients coming up. The health challenge of modern society in the local community

can be taken care of by using community's local capitals, be it knowledge of the elderly, natural resources, social ties, rituals, and traditions. This is indeed the harmonious and simple modification of Local Wisdom that has been accumulated over times to meet the challenge posed by today modern lifestyles.

Rungrat, the leader of health personnel from Ban Bung Kae Community Hospital says that, " *In fact, I am just a supporter encouraging them to be aware of their health condition and how they can take control of their lives by their own hands. Everything can be found within the community, which is more important than something brought from outside to offer to or to impose on the villagers. They can use their pool of knowledge in complement with the support from public health care staff*." They definitely can play a major role in health modification and transformation with confidence leading to a healthy community and sustainable development.

The key to tacit knowledge acquisition is experience. Thus, it's known that without any form of continuous shared experience, it is extremely hard that a person projects himself in the process of other individual's reasoning. "The sheer transfer of information, usually, has little meaning, if it's abstracted from the associated emotions and the specific contents in which the experiences are inserted" (Nonaka & Takeuchi, 2008, p. 61). Therefore, the spaces of socialization, where the members that participate on the collaborative project can share their knowledges, feelings and ideas face to face, are fundamental.

The model of knowledge creation in Diabetes Care in Thailand presents the use of a mix between explicit global scientific knowledge and the local tacit knowledge. In addition, this special way of dealing with problems related to public health is part of the knowledge search process. It ends up involving an important stakeholder group that performs a "journey" into the search for collaborative discoveries, each one of them being part of the situation. The formed network doesn't choose its partners for exploration of one or another capacity, nor it joins them by meeting in advance, but rather chooses the ones that are inserted in the place to venture together and recognize the abilities that may be useful for the project. We named this strategy as "Knowledge Expedition".

The Expedition Knowledge strategy can be understood as a strategically oriented process of identifying contextualized knowledge that can be used for a particular purpose. It involves experimentation with different practices and is presented as a journey where different local tacit knowledges are combined and experienced. The table below that shows the main conceptual elements of the Expedition Knowledge strategy was created after identifying the following characteristics.

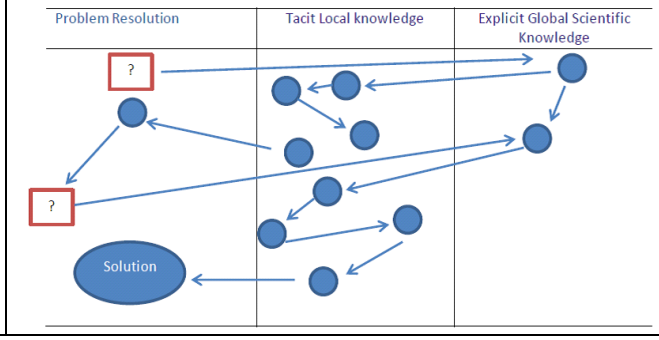
Conceptual Elements	Caracteristics	*Knowledge Expedition*
Tacit Local knowledge and Explicit Global Scientific Knowledge	Type of required knowledge	Universal, context-free and objective knowledge (explicit knowledge) Practical and context-specific technical knowhow (tacit knowledge) Experiential knowledge to make context-specific decisions based on one's own value/ethics (high quality tacit knowledge)
	Ability of the partners	Local tacit knowledge - to have experiences in the context of the created knowledge
	Turnover of partners	Any partner is welcome, because all practical/contextualized knowledge may be helpful.
	Type of alliance	Engagement is voluntary, established in the form of social networks for collaboration.
	Partners who collaborate just once versus recurrent partnerships	Based on high commitment.
Collaborative knowledge creation process		

Table 2: Conceptual elements and characteristics of Knowledge Expedition strategy
Source: Elaborated by the authors

As regard the conceptual elements related to the process of knowledge creation in the table 2, the representation of the collaborative process of knowledge creation was highlighted. This new deal matches *tacit local knowledge* and needs from patients and their relatives, and *explicit global scientific knowledge* from health and care professionals within a transforming knowledge creation process useful for all the stakeholders. We call this process of knowledge construction in a collective way of "Knowledge Expedition", because is based on a shared interest of curing and caring, professionals and patients integrate new ways to be, including empathy, open-mindedness and doubtful attitudes in order to provide best conditions for creative communication process.

FINAL REMARKS

All KM activities have resulted in an increase in the number of health care personnel who work more efficiently and happily to improve diabetic patients' self-care ability. Thus they can take better care of themselves and extend to helping other patients. This network is voluntarily created to complement the regular diabetes care and prevention activities offered by the governmental healthcare system. This network uses knowledge management tools and techniques to discover and disseminate successful practices in care for people with at risk of diabetes. Participating multidisciplinary health care teams from different organizations and in various settings were inspired and encouraged to providing a better diabetes care. Success stories about why and how things happened encompass tacit knowledge, and they reveal its dynamic potential in many ways. They show that tacit knowledge from experiences and explicit or evidence-based knowledge are complementary.

Since KM has been introduced to the Diabetes Care Network, experiences and knowledge on new ways of thinking and new approaches to improve the work have continuously accumulated among health care personnel. Diabetes Care Network sees itself as a facilitator; allow a new way of gathering towards new relationship that will encourage knowledge emergence. Its ultimate goal is to see diabetes patients and high-risk groups adapt and maintain a healthy lifestyle to their daily life in a sustainable manner.

Politically, in the Thai local context these days, each local community has a specific administrative body to manage its well-being using its own resources in complement with the central government supports – a system of decentralization for the democratic society. Strategically in order to find a way to understand better and direction of the community, in each one forum the health practitioners would be there together with other relevant local authorities. It is thought provoking to find out how some remarkable health practitioners integrate the diabetes prevention program into community agenda and receive a warm welcome as well as participation. Its success resonates to other communities to learn about it and adapt to their own contexts. Diabetes prevention goes beyond its goal and turns into aspects of networking and other activities in community empowerment.

Community meeting- public considering of issues that affect them, were not just the starting point to expand and lift knowledge spiral. It was actually a *ba* or shared space for emerging relationships of which tacit knowledge is expressed and shared, co-created and enriched. Hence, it is crucial to recognize local culture, plus current activities of other local organizations - governmental and non-governmental, to be able to assimilate the community

hospital mission into the public processes as such. It is a complex condition further than health issue. Health problems may be interrelated with local economy situation, relationship among community member, and even local political power. Health practitioners need to be sensitive to what's happening in the context and able to see the whole picture of the jigsaws in order to manage their work effectively and efficiently. Two examples will be highlighted here.

This approach developed in Thailand focused on health is worth because introduction of context, living traditions and community energy for problem solving through creative knowledge sharing. The inclusion of ancestral knowledge doesn't act as an obstacle to scientific one but as a "ground-component" that make the question alive in order to find proper ways. It is not romanticize on old time knowledge but it recognizes it as most compatible with the local community because its roots and way-to-be to strive for a well-being life for all. Though, Local Wisdom is not in written form and might look suspicious, modern scientific global knowledge can complement it with a systematic approach of S&T in validation of Local Wisdom action and outcome. Doing so, invisible scientific knowledge gain momentum acting low profile, learning to be more cautious about context rather than an outsider too mainly focused on content.

Two ways and symmetric communication is the way to mutual respect and learning in a collaborative democratic society. Doing so, everyone is engaged assuming responsible and active participation. This is a way to empower community based on their own local capitals, intellectual, natural resource, social capital and cultural roots, and to foster capacity to integrate and mix with modern knowledge, including S&T. Share and learn is best activated through asking questions relevant to communities' life and context. Being humble and open-minded about what is local and specific, learning to feel and to listen, science and technology may contribute, enrich and stimulate people on the basis of the recognition of the importance and validity of their local history and culture. Identification of what to ask previously to push contents because sounds as working as a gardener with respect and care, and not just seeking the local or traditional medium to carry S&T context-free messages because of outsider and a priori purposes. It is not about exploitation of traditions and cultures in order to find right places and opportunities to convey S&T contents, but to motivate people through for appropriate community knowledge expeditions.

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