Knowledge Management of Sor (Lanna folk song)

Sutthinan Chuenchom

Department of Information Sciecne, Faculty of Humanities and Social Sciences
Chiang Mai Rajabhat University, Thailand
E-mail:sutthinan@cmru.ac.th

Abstract

"Sor" (a folk song of Lanna people) has a long history, unique, and invaluable since it is a foundation of an inherited society. Indeed, it is Lanna wisdom, considered as tacit knowledge that should be transferred into explicit knowledge. This research investigated Lanna Sor wisdom transferring process and developed a model of Lanna Sor wisdom management using information technology. Research findings are: Lanna Sor masters (Kru Sor) have learned Lanna Sor through several processes: learning from masters or local wisdom, learning from seniors and friends who are Lanna Sor artists, self-learning from various media. Moreover, Lanna Sor masters have transferred knowledge by storytelling, explaining, answering questions, demonstrating, practicing, opening a school or Lanna Sor learning center, and teaching Lanna Sor in organizations and schools. A model of Lanna Sor wisdom management using information technology consists of 4 steps: 1) identification, creation, and acquiring for Lanna Sor wisdom, 2) systematic Lanna Sor wisdom management by codification and refinement by creating a database, 3) sharing Lanna Sor wisdom via various types of electronic and online channels, and 4) learning and practicing Sor to increase awareness and experience. This Lanna Sor wisdom management model encourages sharing and exchanging new skills. Additionally, learn from one another as well as create new Lanna Sor knowledge.Replace the content of this template with your accepted abstract.

Keywords: Lanna, Lanna Folk song, Lanna wisdom, Knowledge management, Knowledge transfer, Sor

1. Introduction

Lanna is the name of an ancient kingdom in the northern Thailand covering eight provinces, namely Chiang Mai, Chiang Rai, Lampang, Lamphun, Phrae, Nan, Phayao, and Mae Hong Son. The center of the kingdom is Chiang Mai, the rich cultural heritage city. Lanna people or "Knon Muang" have their unique culture and traditions, knowledge or wisdom. Lanna wisdom is the social and cultural development of adaptation, adjusting lifestyle to an environment and then create, accumulate, and inherit those experiences for a long time continuously (Ekawit Na Thalang, 2001), deserving to promote, preserve, and disseminate such knowledge. Lanna Sor wisdom is the tacit knowledge deeply embedded in a person, known as Lanna Sor master (Kru Sor called by Lanna people: Por Kru (male Sor master and Mae Kru (female Kru Sor). From the initial survey, biographies and works of Kru Sor were recorded as well as short video clips on YouTube. However, the tacit knowledge of Kru Sor has not been collected in a form of preservation and knowledge management. The researcher therefore aims to apply the knowledge management theory to Lanna Sor wisdom, focusing on a pattern and a process of transferring knowledge of Kru Sor. The tacit Lanna Sor knowledge was captures and transferred into explicit knowledge by using the SECI Model (Nonaka & Takeuchi, 2000), the conceptual framework for systematically collecting, categorizing, storing, retrieving, sharing, and transfer knowledge using information technology. Finally, scholars, teachers, students, interested people are able to learn and share, results in sustainably promote, preserve, inherit, and disseminate the country's cultural heritage.

Lanna Sor wisdom

"Sor" (verb) means singing or Lanna folk songs singing, also known as "Lanna Sor." Lanna Sor wisdom has a long history, unique and outstanding culture of Lanna people. The Lanna Sor wisdom has evolved throughout the Lanna era. Chao Dararasmee, a wife of King Rama V of Siam, was an originator of Sor in Chiang Mai. In 1965, there was a contemporary Sor; Sor melodies with western music.

The Lanna Sor wisdom uses the Kham Muang (Northern-Thai dialect) in both of Sor Pod (a solo Sor) and Sor Tong (a duo Sor: Ku Tong-Sor male artist and Sor female artist react with each other in flirtatious manner) to tell stories, narratives, and events along with Lanna folk instruments. There are 2 types of Lanna Sor (Department of Cultural Promotion, 2019), including 1) Sor Chiang Mai, also known as Sor Kao Pi, Pi (Northern-Thai flute) or bagpipes and Pi Jum band (Pi Jum 3, Pi Jum 4, Pi Jum 5) are main accompaniment. There are 7 main Sor melodies; Tang Chiang Mai, Ja Pu, La Mai, Ngue, Burma, Ue and Phra Lor or Long Nan. 2) Sor Nan is Sor with Saloh (Nan string instrument), Sung (Northern-Thai stringed instrument), and Pin (Nan Sung), also known as Sor Kao Sung (The Lanna Sor Artist Association, 2016).

Most of Sor performances are Sor Don, which Sor artists (Jang Sor) lively sing according to the prosody of each Sor melodies about occasions, events, or places they are in. Sor Don demonstrates the esprit, ability, intelligence of Jang Sor due to Sor lyrics is an immediate solving unexpected problems depending on such situations and events. Jang Sor have to quickly respond
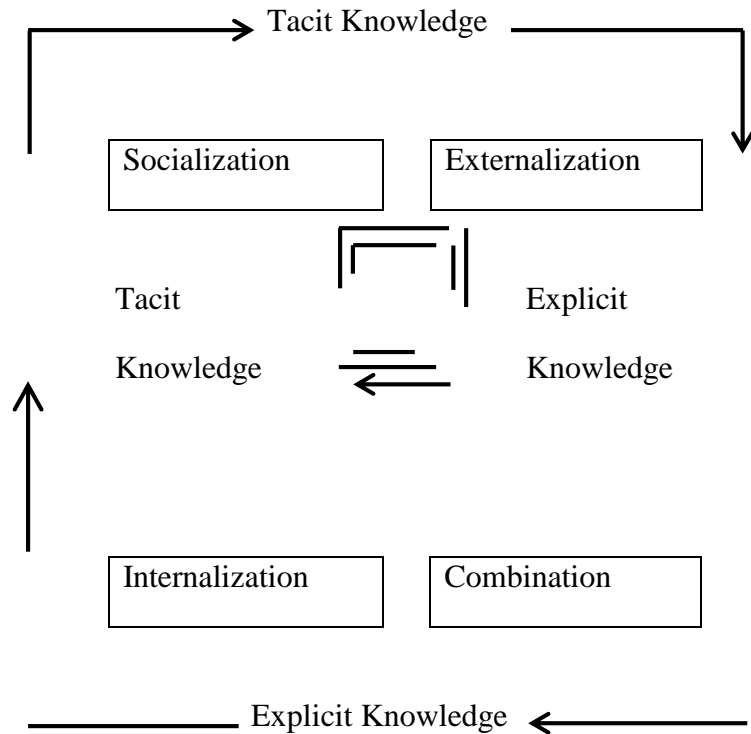
with the other, such as Sor to greet or goodbye people, Sor to invite to join meal, Sor to invite to joy an event, Sor to flirt with a girl, Sor to celebrate (Sor Poi), for example, a new house and ordination ceremony, Sor in Buddhist ceremony to make merits, Sor to describe the gratitude to parents (Department of Cultural Promotion, 2019), even Sor in funeral. Therefore, Lanna Sor wisdom conveys teachings of morals and ways of the world by reflecting relationship between humans and humans, humans and nature, human and supernatural things, as well as the Lanna way of life, such as beliefs, values, customs, traditions, religious institutions, family institutions, occupation, food and nutrition, dressing. Thus, Jang Sor require good general knowledge, good memory, pursue knowledge in order to be the Sor expert, who is able to use the surroundings to perform Sor. Also, they need to accurately memorize Sor melodies. Morever, Jang Sor might tell stories that has already been written, such as the story of Phra Lor, Sor Noy Jai Ya, Sor Kai Noy Dao Wee, or myth, such as important personal histories like the history of Kruba Srivichai. In addition, Jang Sor must exactly recognize content and well practice so that they can perform posture and make more fun. Jang Sor with high abilities and experiences is able to make beautiful and melodious Sor lyrics by their own esprit without having to compose the lyrics before, just only know related information, the Jang Sor can immediately sing Sor to the melody Sung (Northern-Thai stringed instrument) or Pi (Northern-Thai flute) players play.

The process of Sor performance begins with Wai Kru ceremony (paying respect to teachers), prelude, introduction to content, and goodbye. Examples of outstanding Jang Sor are Mae Kru Chansom Saithara (National Artist), Por Kru Khampai Nuping (National Artist), and Mae Kru Buasorn Tanomboon.

Knowledge Management

Knowledge Management is a learning process; pursue, create, organize, exchange, share knowledge with the right tools to further use for both individual and organization.

Nonaka and Takeuchi (2000) proposed a conceptual framework for knowledge management; a process of a transition between tacit knowledge and explicit knowledge. These two types of knowledge can change status at any time, depends on situations resulting in creating new knowledge in a process called the SECI Model, which is a knowledge spiral as Picture 1.

Tacit Knowledge

| Socialization | Externalization |

Tacit   Explicit

Knowledge   Knowledge

| Internalization | Combination |

Explicit Knowledge

Picture 1 Nonaka and Takeuchi's SECI Model

The picture 1 shows a spiral process of knowledge transition and creation, consisting of 4 steps as follows:

1. Socialization is creating and sharing tacit knowledge; sharing one's tacit knowledge with tacit knowledge of those who communicate with each other by exchanging direct experiences. This may be an informal conversation, meeting, discussion, observation, practice, and action.

2. Externalization is creating and sharing tacit knowledge to explicit knowledge or tangible knowledge by various formats of media, such as textbooks and manuals.

3. Combination is creating and sharing explicit knowledge (tangible knowledge) to explicit knowledge by collecting, categorizing, adding, classifying, and continuously integrating different parts of those tangible knowledge to create new types of knowledge, called Systematic knowledge.

4. Internalization is creating knowledge from the transition of explicit knowledge into tacit knowledge, often occurs after practicing tangible knowledge until becoming own expertise.

The Office of the Public Sector Development Commission (OPDC) and the Thailand Productivity Institute (2006) proposed a 7-step continuous knowledge management process as follows:

1. Knowledge identification is to identify knowledge and analyze existing knowledge formats and sources by answering questions what necessary knowledge is and whether we have such knowledge or not.

2. Knowledge creation and acquisition from various sources in order to create content to fulfill needs by answering questions where such knowledge is, what format of such knowledge is, and how such knowledge is collected.

3. Knowledge organization is to classify knowledge to easily and conveniently develop a system; search and use by answering questions how knowledge created will be collected and how to classify topics.

4. Knowledge codification and refinement is to create knowledge format and language in the same standard as well as composing and updating content to fulfill the needs by answers questions how to make it easy to understand and complete.

5. Knowledge access is an ability to access knowledge quickly, conveniently, and easily at the time needed by considering whether knowledge can be used easily or not and how to gain access to knowledge.

6. Knowledge sharing, especially tacit knowledge that must be transferred by employing various tools, such as documenting, creating a knowledge base, creating a Community of practice (CoP), mentoring system, and Job rotation.

7. Learning is applying knowledge to make decisions and learning by doing, by considering whether the necessary knowledge identified in Step 1 has been used for real work or not or how can it be improved.

Knowledge management has 3 main components (Siripen Ung-Sitthiphunporn and Kumari Laparporn, 2016; Namthip Wipawin, 2004) as follow:

1. People are the most important component since people are both a source of knowledge or source of knowledge combination and the person who benefit from knowledge. Sharing and transferring knowledge do require people.

2. Information technology is a tool to support searching, storing, exchanging, and applying knowledge more easily and quickly.

3. Knowledge management system or knowledge management process is management to bring knowledge from knowledge sources to users in order to develop and create innovations. Knowledge management process consists of 3 main steps: creating and acquiring knowledge, sharing knowledge, and using or disseminating knowledge.

Knowledge management bring about systematic knowledge and innovations. People are the crucial factor of knowledge sharing, in which people are source of knowledge and benefit from knowledge along with technology and process helping people to gain knowledge when they need. Currently, 3 types of information technology used to manage local wisdom are:

1. Technology for creating and storing knowledge systematically, employing information technology aims to preserve old knowledge and create new knowledge in order to seek the best knowledge from outside, to filter and prioritize knowledge, to organize data in a systematic way, be standardized, correct, up-to-date, and to interpret various experiences. Then store systematically by classifying knowledge, establishing a database or a knowledge base, creating a retrieval system and also creating an easy-to-use knowledge access system.

2. Technology for sharing, learning, and communicate knowledge in order to access easily and to encourage interaction in sharing and learning, such as video conference, social media (weblog, Youtube, Wikipedia, Facebook). Consequently, there are online Communities of Practice (CoPs), resulting in various forms of learning like self-learning, learn from friends, or learn from experts.

3. Technology for accessing and learning knowledge in order to support and facilitate learning and apply knowledge, for example, websites, digital media, video, e-learning systems.

Wanida Narathon (2015) further explained application of information technology in local wisdom management process as follows:

1. Creating and acquiring knowledge can employ data mining tools to create and acquire knowledge with the goal of acquiring outside knowledge, retaining old knowledge, and creating new knowledge.

2. Systematic knowledge management can employ database management system to store knowledge systematically as well as filter and prioritize information.

3. Knowledge processing and refining can employ a database or repositories, metadata, and directories to organize data in a systematic way, to be standardized, correct, up to date, and interpret knowledge and experiences to be stored in the a knowledge base.

4. Knowledge access can employ a database and search or retrieval technologies for knowledge communication, able to access knowledge easily and benefit knowledge.

5. Knowledge sharing can employ tools supporting a collaboration, such as teleconferencing, social media to connect people interested in local wisdom in different locations together in order to promote learning and interaction.

6. Learning can employ software and digital media, for example, electronic books, videos as well as e-learning systems in order to encourage and facilitate learning, benefit knowledge and create new knowledge.

Lanna Sor wisdom is the tacit knowledge and should be transferred into explicit knowledge, this research therefore investigate Lanna Sor wisdom transfer process to further develop a knowledge management model using information technology.

Objectives

1. To investigate Lanna Sor wisdom transfer process.
2. To develop the Lanna Sor wisdom management model.

2. Method

The qualitative research approach was used to collect research data. The knowledge management process was integrated in a research process as follows:

1. Acquire necessary knowledge from documents, books, journals, research, articles, primary source, printed and electronic media, websites related to Lanna Sor wisdom, knowledge management, and Lanna Sor wisdom transfer process.

2. Employ participatory processes along with recording photos and videos to create and acquire Lanna Sor wisdom, participatory methods of acquiring Lanna Sor wisdom are mixed methods to gain the most effective results, including:

2.1 Conversation; visit 12 Lanna Sor masters to make understanding, exchange, and discuss about research significances, objectives, and method.

2.2 Informal in-depth interview, and observation about history of Lanna Sor, biography of Lanna Kru Sor, Lanna Sor melodies, a process of Lanna Sor performance, and techniques for Lanna Sor.

3. Twelve Lanna Kru Sor transferred Lanna Sor by using knowledge management tools; storytelling, lecturing, demonstrating, transferring, and question and answer along with recording photos and videos.

4. Analyze content of video recording using content analysis approach, which categorize in to these topics: history of Lanna Kru Sor, history of Lanna Sor, content of Lanna Sor, Sor melodies, Lanna Sor process, techniques for Lanna Sor, knowledge transfer of Lanna Sor.

5. Define Lanna Sor wisdom management model using information technology.

This section describes the methodology of the study. It may include sub-sections such as participants, research instruments, data collection, and data analysis.

3. Results

Lanna Sor wisdom transfer process

From participatory processes, conversations, informal in-depth interviews and observation to investigate knowledge transfer process of 12 Kru Sor. They have learned Lanna Sor through several processes, which are:

1. Learning and practicing from masters or local wisdom, such as Mae Kru Chansom Saithara (National Artist), Por Kru Khampai Nuping (National Artist), and Mae Kru Busorn Tanomboon, Mae Kru Khamnoi Laomeaw, Mae Kru Khampan Ngaosai, Mae Kru Saengei Wiangpapao, Mae Kru Buapud Sudsaengta, Por Kru Kaew Talai. They requested these masters to be a learner and live with masters at home, in the same Sor band. They followed their masters to perform in various events. Thus, they accumulated experiences to be Lanna Sor artist until becoming experts in Lanna Sor.

2. Learning from seniors and friends who are Lanna Sor artists, including the establishment of the Lanna Sor Artists Association. The president of the association is Por Kru Thai Tipanet. There are 317 members from the Chiang Mai Pi Sor Legend Inheritance Association, Nan Folk Artists Association, Chiang Rai Lanna Pi Sor Association, Phayao Sor Club, Lampang Pi Club. The Lanna Sor Artists Association aims to unite all Sor and Pi artists in the northern Thailand and share the culture heritage of Lanna. Objectives of the Lanna Sor Artists Association as follows:

1) To perform community voluntary work, promote, support education, research, revive, protect, preserve, create, and sustain Lanna Sor in a changing society.

2) Cooperate with government agencies, private organizations and institutions both in Thailand and aboard in admitted role development of Lanna Sor artists.

3) Protect members' rights and privileges.

4) Be a center for sharing knowledge, providing consultation, and transferring Lanna Sor to other artists and interested people.

5) Promote marketing plan of Sor performance, leads to the added value of Sor band.

3. Self-learning from various media, including Lanna Sor video and Sor lyrics that Sor masters have recorded and created.

Lanna Kru Sor have transferred knowledge by:

1. Storytelling, explaining, answering question

2. Demonstrating

3. Practicing with media, such as recorded Pi Jum melodies

4. Opening a Sor school or Lanna Sor learning center, most of Lanna Kru Sor teach Lanna Sor at their home, such as Mae Kru Sirilak Paipun, Mae Kru Pranee, Pakpon, Por Kru Praphan Kaewkhae.

5. Teaching Lanna Sor in organizations and schools, both in Chiang Mai and nearby provinces, such as Por Kru Inta Laokham, Por Kru Winai Chaiya, Mae Kru Wanpen Manorat.

Lanna Sor wisdom management model

From the SECI Model, a Knowledge Spiral of Nonaka and Takeuchi (2000), the knowledge management process of the Office of the Public Sector Development Commission (OPDC) and the Thailand Productivity Institute (2006), a 7-step continuous knowledge management cycle, information technology in local wisdom management, and Lanna Kru Sor' knowledge transfer process. Continuous knowledge management cycle providing a process of transferring knowledge is suitable for Lanna Sor wisdom, results in creating knowledge and innovations. Indeed, information technology can be a substantial tool for searching, storing, sharing, transferring, and applying knowledge easily, conveniently, quickly with accuracy. A model of Lanna Sor wisdom management to collect and transfer Lanna Sor tacit knowledge to Lanna Sor explicit knowledge using information technology is shown in the picture 2.
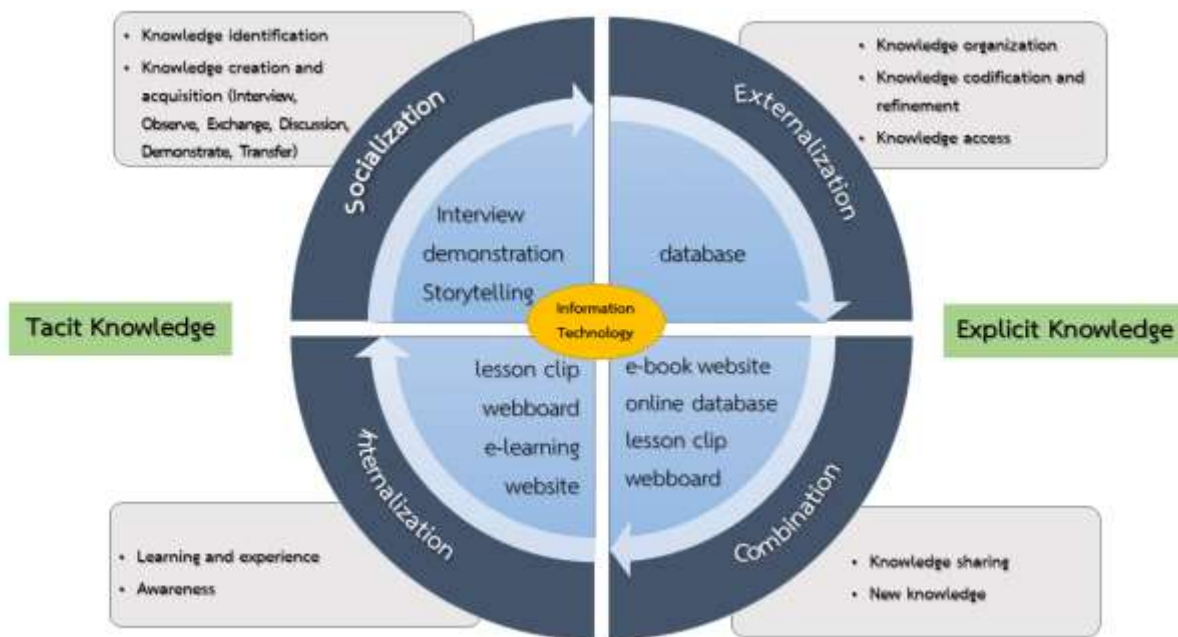
Picture 2 A model of Lanna Sor wisdom management

From picture 2, knowledge management of Lanna Sor wisdom is therefore a collection of knowledge in people or documents to be systematically developed by applying information technology. Other people can benefit knowledge by accessing knowledge and practicing. In fact, such knowledge sustains in a society. The application of information technology in Lanna Sor wisdom management process is as follows:

1. Knowledge identification is to identify, create, and acquire Lanna Sor wisdom with mixed several methods together to gain the most effective results. Lanna Kru Sor who are willing to transfer knowledge can tell story, lecture, demonstrate, and answering questions. In addition, observating, practicing, analyzing works, as well as searching for knowledge from various media related to Lanna Sor wisdom like books, journals, articles, websites, and related research (knowledge collected for dissiminate) can be a worthy method to acquire knowledge. In this step, information technology can record knowledge from storytelling, lecturing, demonstrating, and transferring knowledge, including digital motion picture recording and technology for data collection and recording, such as video camcorder, handy drives, and hard disks.

2. Systematic management by codification, refinement, and management Lanna Sor wisdom to be accessed and applied conveniently. Information technology can be used to help access Lanna Sor wisdom faster and easier by creating a database or an information repository of Lanna Sor wisdom, which can provide information in several format: Text, images, and motion picture (VDO Clip, animation).

3. Sharing, knowledge sharing between individuals through formal and informal processes, this can be one-on-one or in groups (Socialization). Information technology that can convey or transfer Lanna Sor wisdom include electronic books, digital teaching media, a website, and online database or information repository of Lanna Sor wisdom. Moreover, discussion boards (Webboard) can be used for sharing knowledge, resulting in online Community of Learning (CoP) and Mentoring System.

4. Learning is applying Lanna Sor wisdom and then gain advantages of using wisdom. Learning also increase awareness and acknowledge of Lanna Sor wisdom. Information technology used in this step is digital teaching media, self-learning system (e-learning), website, and webboard.

This cycle model of Lanna Sor wisdom management encourages share and exchange of new skills and learn from one another as well as create new Lanna Sor knowledge.

This section should be organized in order to answer each of your research questions.

4. Discussion and Conclusion

The various patterns of knowledge transfer of Kru Sor are learning from masters or local wisdom, seniors, friends, and self-learning from media and then hard practicing until becoming Sor expert or Kru Sor. Moreover, Kru Sor Lanna folk teachers have transferred knowledge by storytelling, explaining, answering questions, demonstrating, practicing, opening a school or a Sor learning center, and teaching Sor with organizations and schools. Therefore, the pattern of Sor wisdom transfer is practicing-based learning. This in line with Orapin Luepan (2001) explained that Por Kru Sor and Mar Kru Sor (who has a lot of experiences accumulated by age and time, a well-known reputation, with high ability to transfer knowledge) transferring, teaching, and learning Sor wisdom to the next generation by recruit students. In the past, those who were interested in being Sor artist may request Kru Sor to be a Sor student. This due to their poor status and needed to have a supplementary career from agriculture, get income to support themselves and their family after the end of the harvest season. If Kru Sor accepted thier requests, they will go to live with Kru Sor to learn Sor and do housework or farming as a tuition. When Kru Sor have free time, they will teach their students.

In terms of the process of Lanna Sor wisdom transfer, Kru Sor begins with teaching the learners to remember and understand Sor melodies. Since one of Kru Sor's technique used to communicate the meaning of Sor to make the audience better understand and feel related with Sor is bing able to choose Sor melody according to content. This is an accordance with Orapin Luepan (2001) and Department of Cultural Promotion (2019) described that Sor wisdom transfer requires memorizing and patience as much in order to recognize Sor lyrics and melodies. Thus, Sor learners must have a very good memory. After the learners have memorized Sor melodies and accent, Kru Sor will put the lyrics according to Sor melodies. However, with the advancement of technology and educational development helps Kru Sor teach much easier. Sor artists have more educational opportunities so most they are literate person as can be seen that most of Kru Sor have at least fundamental educated knowledge. They are able to write Sor lyrics for students to read and memorize. While the students can learn and memorize faster. In addition, there is a recording of Pi (Northern Thai flute) for learners to practice Sor with such sound. When learners can Sor according to the melodies, Kru Sor will listen students, which is a vital characteristic of Sor artist. Department of Cultural Promotion (2019) emphasized that Sor artists must hard practice by performing in various Sor events in order to reduce excitement on a stage as well as practicing resourcefulness because of because of having to interact with the other immediately. Moreover, Sor lyrics are immediate problem solving depending on situations and events in order to gain more experiences and expertise. In accordance with the technique of Kru Sor who has practiced until becoming expert. In addition, the technique of Kru Sor to create Sor more aesthetic is reading books, striving to learn a lot. Doing so helps with stylistic matters, rhyme, and words usage for communicating content to the audience.

Lanna Sor wisdom originated from an accumulation of knowledge and long experience. Lanna Kru Sor are those who have learned and gained experiences and skills through learning process, practice, and various inheritance methods to the present. Consequently, selection of knowledge transferring methods of Lanna Sor wisdom to suit objectives, target groups, and readiness of person who transfer knowledge therefore requires a mixed method to gain the most effective results, For that reason, main knowledge management tool for manage Lanna Sor wisdom is storytelling. The main goal of storytelling is to let Lanna Kru Sor tell and talk their tacit knowledge. Yet, conversation, teaching, demonstrating, and answering questions, or interviewing with Lanna Kru Sor are employed. This is in line with Dejvit Nilawan and Thipatu Kritsunthorn (2016) found that the process of transferring local wisdom should use the hybridization strategy, an integration of 3 type transfer methods and processes together, including verbal teaching, focus on practicing, and answering questions. In fact, Teerayut Seniwong Na Ayudhaya (2007) and Kanchana Kaewthep (2008) explained that masters or local wisdom have their own mechanism to continuously develop knowledge, understanding, skills, expanding learning skills, and transfer. However, these processes occur naturally and at an individual level only. Hence, tools to transferring knowledge for knowledge management process are significant. The knowledge management system of Lanna Sor wisdom that will further develop should be an integration of the old style and the new style of knowledge transfer. In which, learning from masters the most with self-learning through modern media and verbal teaching, focusing on practicing and a new teaching method for students to ask questions about things they want to know and be interested. Learner can learn from the beginning with introduction to content, transferring methods, teaching materials (providing examples and processes from demonstration of Lanna Sor), activities, motivation techniques, and an evaluation of practice-based learning. The Lanna Sor wisdom management system requires an online database, website, webboard, e-learning, and digital media (electronic books, electronic teaching materials) with multimedia information (text, image, sound, and motion picture or animation).

Conclusion

Lanna Sor masters' knowledge transferring patterns and processes are diverse. They have learned from masters, local wisdom, seniors, friends, and self-learning from media and documents as well as hard practice, practice-based learning. Lanna Sor masters have transferred knowledge by storytelling, explaining, answering questions, demonstrating, practicing, trying, and using media like recorded Pi (Northern Thai flute) sound. A model of Lanna Sor wisdom management using information technology consists of 4 steps as the following: 1) Identification, creation, and acquiring for Lanna Sor wisdom; storytelling, lecturing, demonstrating, and answering questions, observation, practicing, analyzing works, and searching for knowledge from various media, 2) systematic Lanna Sor wisdom management by codification, refinement, and management Lanna Sor wisdom to be accessed and applied conveniently by creating a database, 3) sharing Lanna Sor wisdom via electronic books, digital teaching media, a website, and online database or information repository and discussion boards (Webboard), and 4) learning and practicing Lanna Sor wisdom to

increase awareness and experience by digital teaching media, e-learning, and a webboard. These cycle model of Lanna Sor wisdom management encourages sharing and exchanging of new skills as well as learning from one another and creating new Lanna Sor knowledge.

The section should contain a summary of the study, discussions of the results, and the conclusion.

Suggestions

1. There should be a complete development of knowledge management system for all kind of Lanna wisdom

2. There should be a thorough study of the Lanna Sor wisdom in various areas, such as usage of language, rhetoric, and melodies.

5. References

Dejvit Nilawan and Thipatu Kritsunthorn. (2016). *Process and strategy of transferring local wisdom: Case study at Tambon Faham, Muang, Chiang Mai*. Chiang Mai: Research and Development Institute Chiang Mai Rajabhat University. (in Thai)

Department of Cultural Promotion. (2 0 1 9). Lanna Sor. Retrieved from http://ich.culture.go.th/index.php/ th/ich/performing - arts/236- performance/161-----m-s (in Thai)

Ekawit Na Thalang. (2001). Lanna wisdom. (2th ed.) Bangkok: Amarin. (in Thai)

Kanchana Kaewthep. (2008). Focus proactive guidelines for folk media research for community development. In Introduction to Knowledge management "Community communication." Bangkok: Pappim. (in Thai)

Lanna Sor Artist Association. (2016). History of Sor. Retrieved from http://sorlanna.com/article/history (in Thai)

Namthip Wipawin. (2004). Knoeledge management and knowledge base. Bangkok: S.R. Printing Mass Products. (in Thai)

Nonaka, I. & Takeuchi, H. (2000). *Classic work: Theory of organization knowledge creation*. New York: MIT Press.

Office of the Public Sector Development Commission (OPDC) and the Thailand Productivity Institute. (2006). Handbook of developing knowledge management plan: Project of developing government agencies to learning organization and knowledge management in government agencies. Bangkok: Office of the Public Sector Development Commission (OPDC) and the Thailand Productivity Institute. (in Thai)

Orapin Luepan. (2001). Analysis of Sor lyrics of Buasorn Muangprao. Master of Art thesis (Langauge and Lanna Literature) Chiang Mai University. (in Thai)

Siripen Ung-Sitthiphunporn and Kumari Laparporn. (2016). Knowledge management process through knowledge and local wisdom transfer of online Hagga community: Success and challenge. *Journal of Language and Culteral*, *35*, 203-225. (in Thai)

Teerayut Seniwong Na Ayudhaya. (2007). Local wisdom transfer of elderly. In Course book in Elderly Psychosocial Study. Nonthaburi: Sukhothai Thammathirat Open University. (in Thai)

Wanida Narathon. (2015). Local information management. Nakorn Ratsima: Nakorn Ratsima Rajabhat University Faculty of Humanities and Social Sciences. (in Thai)