

KNOWLEDGE MAPPING IN THAI WEAVING INDUSTRY

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Abstract:

Knowledge is a valuable asset to any organisation especially, the organisation which depend heavily on the utilization of the professional knowledge (tacit and explicit) of its employees. Capturing and representing knowledge are one of the most important task to collect and organise knowledge in order to gain the sustainable competitive advantage. Therefore, this paper aims to capture and represent knowledge in Thai weaving industry. The methodology uses a knowledge map as a tool to capture and represent knowledge. A case study of weaving manufacturing in the social enterprise in Thailand is provided. The results from this research are especially important for the weaving industry in Thailand since weaving is one of the oldest traditions in Thailand and has been an important part of Thai culture. Knowledge mapping is as a starting point to help the weaving industry keep a valuable knowledge and plan for transferring knowledge from older generation to others.

Keywords: knowledge mapping, knowledge capture, weaving industry, social enterprise

1. INTRODUCTION

Textile is Thai handicraft that has the major role in the history of Thai society. All along, Thai textile industry has been continuously and actively developed. As such, nowadays the textile products made in the country is very well known for its high and truly neat quality (Thailand Textile Institute, 2012). According to the information from Thailand Textile Institute (2012), Thai textile industry and clothing is considered very important for the overall economy of Thailand. As can be seen from GDP, Thai textile is ranked the fourth preceded by food and beverage, operational machines, and automobile, respectively. This proportion is as 245 thousand million Baht or as 2.2% of GDP. Currently, there are approximately 163,827 textile and clothing business owners around the country. Of the entire number, 163,500 (99.8%) can be considered at the level of SME. With such industry size, it leads to the employment rate of 666,092 employees (66.6%) in the country. However, this high employability rate could raise only 31.2 added value to the country (The Thailand Research Fund, 2011).

As can be noticed, the important action for this situation is to strengthen the potential of SME business to be able to create more added value, more effective work, and more innovative products in order to maintain their sustainable competitive advantage (Little et al., 1987). It is suggested that the next step for the development of Thai textile industry is to develop local textile for more innovative. This should be started from the level of natural fabric material such as silk and cotton (Thailand Textile Institute, 2012). In addition, the unique way of local weaving should also continuously been improved so that it can be stable and response to the need of the customers. Nevertheless, the information regarding the export level of the country in the past two years indicates that the exporting rate of Thai textile has reduced for more than three hundred thousand million Baht (Thailand Textile Institute, 2012). This implies that Thailand's textile industry is now losing its competitive capability which can be caused by several factors; for example, the lower cost of the competitive countries such as the wage in China, or the production factors such as the quality and ability in producing textile of Thailand itself. In any cases, these are the risky factors threatening the growth of textile industry of the country.

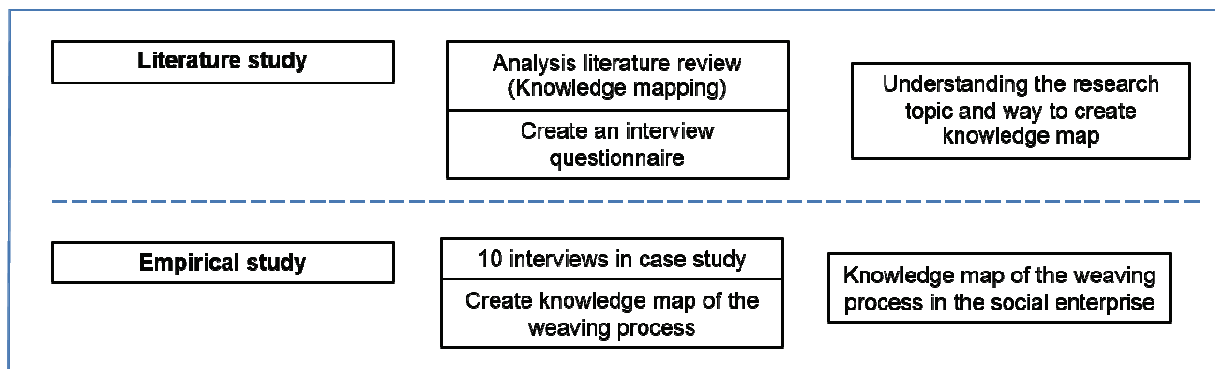
Therefore, in order to build up and maintain the competitive advantage in long term period, it is needed for textile industry to focus on the product design and production as accurate to the demand of the market at best (The Department of International Trade Promotion, 2014). However, to achieve such goals, the main difficulty that textile business cannot avoid is to seek for and maintain the knowledgeable workers as essential. This problem is even more obvious in the textile business at the level as SME and SE (Social Enterprise) because of the high turnover rate shown. In other words, when the labors have more advance technical skills, they tend to move to work in the other companies that offer them the higher wage. What is followed is the lost of that advance technical skills and all knowledge from the origin company. As can be seen, the most crucial solution is to create the effective knowledge management in the company so that all skills and knowledge born in the company can be kept and ready for the competition afterwards (Blemenburg et al, 2009).

As results, the knowledge capture of local Thai weaving is needed since Thai weaving comes from indigenous knowledge that has been collected and transferred from generation to generation. However, at the present, specialists in Thai weaving who possess knowledge, skill and experience for weaving are the older generation and local Thai weaving is slowly disappearing in the modern world. Therefore, this research is aimed to capture knowledge related to local Thai weaving process by using knowledge mapping as a tool in order to easily keep and transfer these value weaving knowledge from older generation to younger generation as well as to keep the sustainable competitive advantage of Thai weaving industry.

2. RESEARCH METHODOLOGY

The research was conducted as a case study: knowledge mapping of Thai weaving process in a social enterprise. The main data collection method is interviews. More detailed research process is presented in Figure 1.

Figure 1: Research process



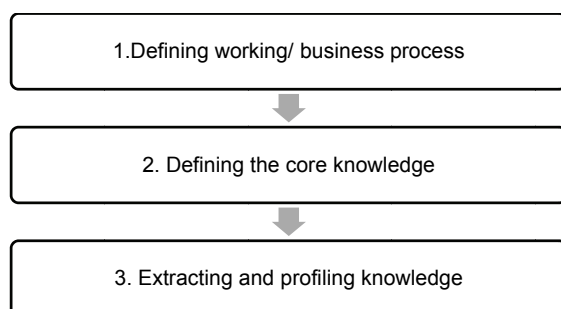
3. KNOWLEDGE MAPPING

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 (Chan & Liebowitz, 2006; Suyeon et al., 2003)
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Numerous theoretical and conceptual frameworks have been proposed on knowledge mapping process. Ebener et al., (2006) state that knowledge mapping includes the following process: 1) knowledge gathering (i.e. survey) 2) knowledge management (started by knowledge producing), 3) knowledge storage (in form of database for knowledge mapping) 4) information process (knowledge assembly analysis) and 5) knowledge visualizing (knowledge map production). Suyeon et al., (2003) present the six steps of knowledge mapping: 1) defining organization knowledge, 2) process map analysis, 3) knowledge extraction, 4) knowledge profile, 5) knowledge linking and 6) knowledge map validation.

In this research, the knowledge mapping can be classified into four phases: 1) defining working/ business process, 2) defining the core knowledge and 3) extracting and profiling knowledge (Figure 2).

Figure 2: Knowledge mapping process



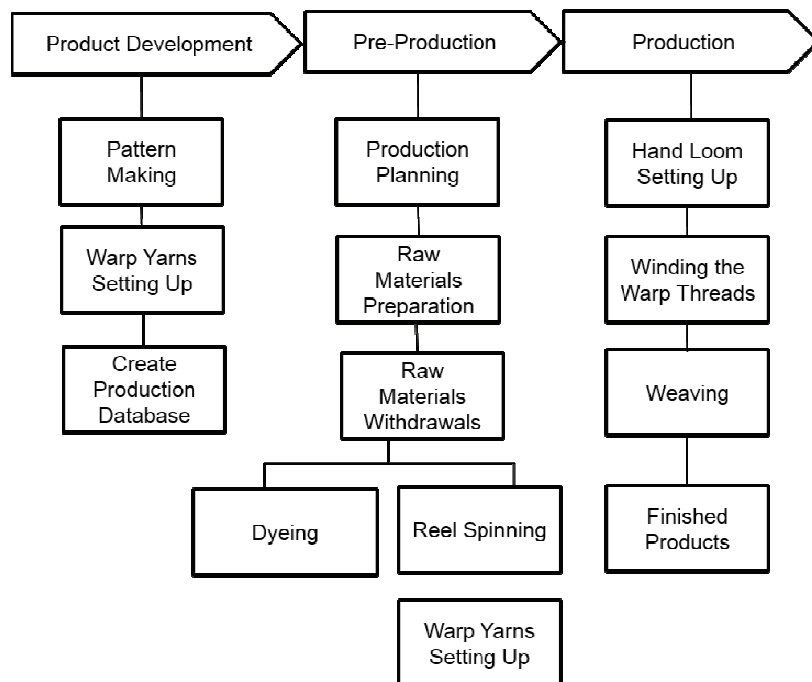
4. RESULTS AND DISCUSSION

weaving factory
 weaving factory
 naging and transferring order to enhance job performance and maintain the sustainable competitive advantage.

Defining business process

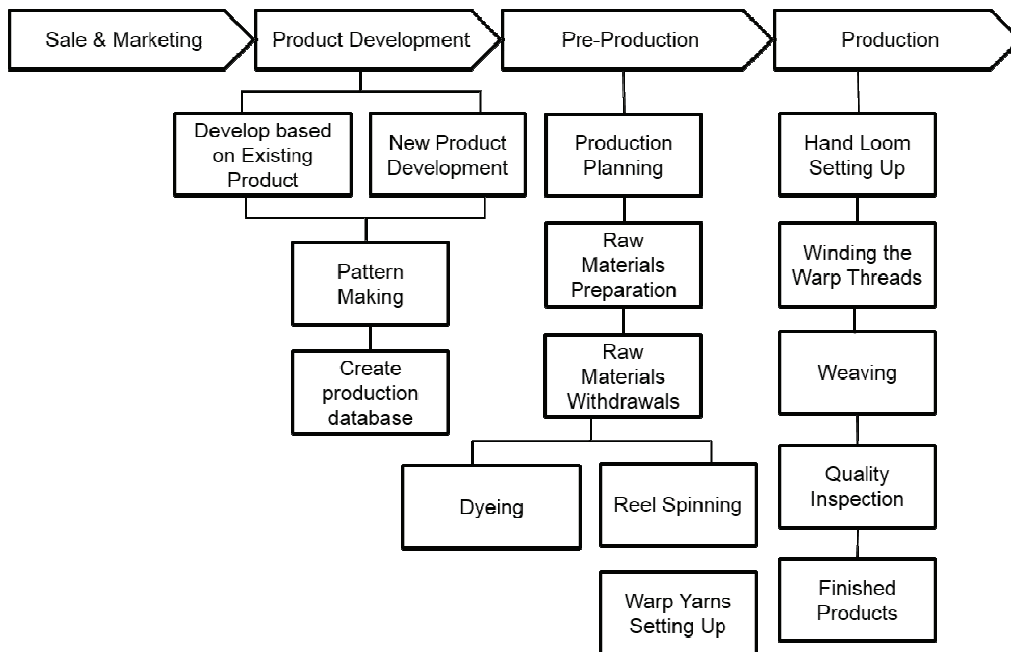
The findings from reviewing the work instruction a found that the weaving process can be grouped into three phases: 1) product development phase, 2) pre-production phase and 3) production phase (Figure 3).

Figure 3: The weaving process from documentation



While, the results from observation and conducting the in-depth interviews s and staff found that the weaving process consists of four stages: 1) sale and marketing phase, 2) product development phase, 3) pre-production phase and 4) production phase (Figure 4).

Figure 4: The weaving process from observation and interviews



In this paper, the weaving process from observation and interviews is selected to study.

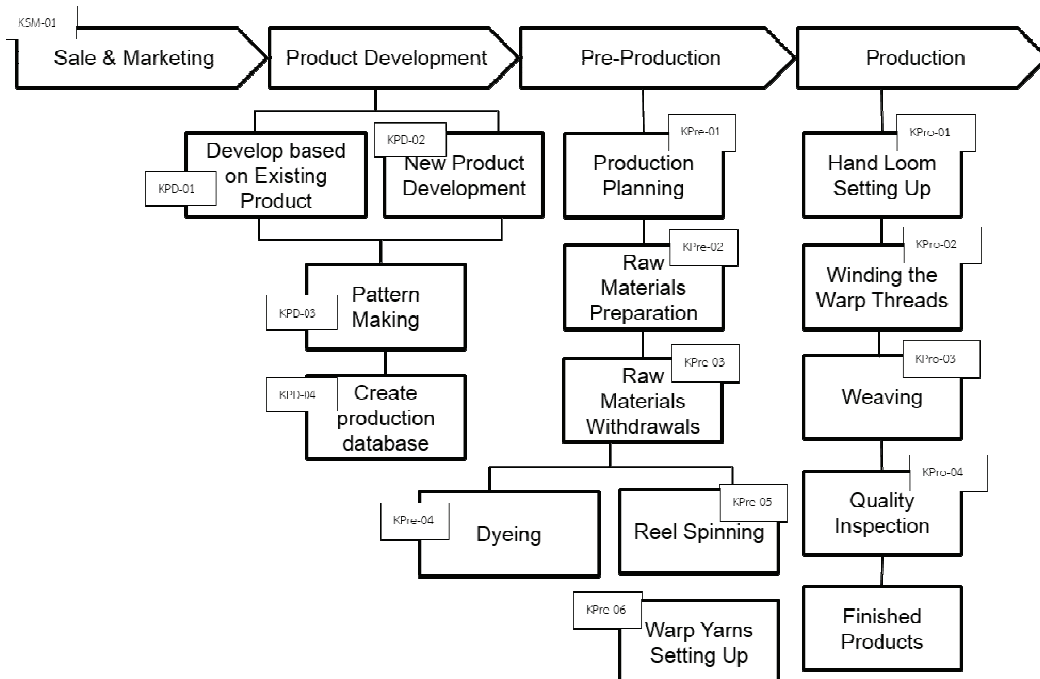
Defining the core knowledge

5) four the weaving process (Figure 5)

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Figure 5: Core knowledge identification of the weaving process



Extracting and profiling knowledge

After the core knowledge of the weaving process can be identified, the knowledge profile is created. In this research, the knowledge profile can be grouped into five categories: 1) knowledge ID, 2) owner of the knowledge (department), 3) type of knowledge, 4) title of the core knowledge and 5) brief description. The company can see the whole picture of knowledge from knowledge map and transferring knowledge between individual staff can be done systematically and effectively. The samples of knowledge profile of the weaving process are as follow (Figure 6 and 7):

Figure 6: Knowledge profile of sale and marketing stage

Knowledge ID	KSM-01
Owner (Department)	Sale and Marketing
Type of knowledge	Tacit
Title of core knowledge	Sale planning
Brief description	Developing a simple sale plan by identifying what, when, where and how to sell.

Figure 7: Knowledge profile of pre-production stage

Knowledge ID	KPre-03
Owner (Department)	Pre-Production
Type of knowledge	Explicit
Title of core knowledge	Raw Materials Withdrawal
Brief description	Fill the information in the Raw Materials Withdrawal form and send it to the head of pre-production phase to check.

5. CONCLUSION

The purpose of this research aimed to capture and represent the core knowledge of the weaving process in the social enterprise in Thailand by using knowledge mapping as a tool. According to the findings, knowledge mapping in the context of the weaving process consists of three stages: 1) defining business process, 2) defining the core process, and 3) extracting and profiling knowledge.

The results from this research are especially important for the weaving industry in Thailand since weaving is one of the oldest traditions in Thailand and has been an important part of Thai culture. However, in the present, the weaving industry face with the labor shortage problem and the risk of losing valuable knowledge. There are older people than 60 who have knowledge and skills of weaving but there are hardly any people younger than 50 who have mastered it. Knowledge mapping is as a starting point to help the weaving industry keep a valuable knowledge and plan for transferring knowledge from older generation to others.

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