KNOWLEDGE MANAGEMENT FOR SKILL IMPROVEMENT MOTIVATION

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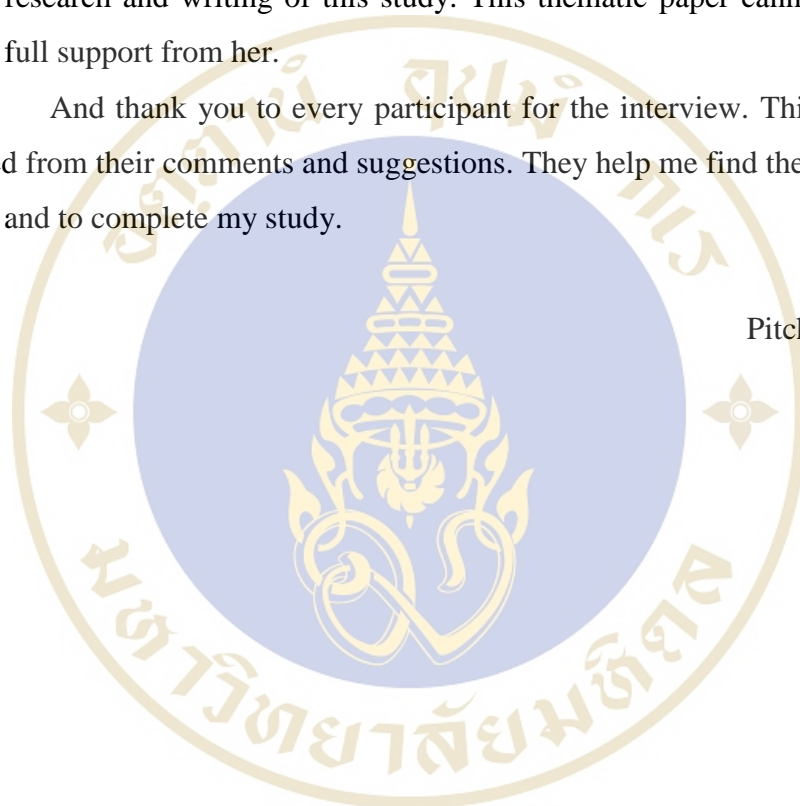COLLEGE OF MANAGEMENT
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ABSTRACT

The purpose of this study is to find out the hypothesis of what are knowledge that impact the motivation theories for people to have intention to improve skills. This study uses in-depth interviews and collect data from twenty-five people with Bachelor of Engineering degree. The study collects information from freshly graduated engineers and experienced engineers. In addition, in order to collect a more diverse information, the sample group is chosen from different occupations, positions and companies. The diversity provides an opportunity for the study to obtain information from people with similar educational background but have different perspective on self-improvement.

This study found two explicit knowledges and three tacit knowledges that the interviewees want to learn and adapt for their skills to work successfully. In addition, the knowledge that the interviewees want to improve can be classified by their jobs, positions, and responsibilities.

KEY WORDS: Explicit Knowledge/ Tacit Knowledge/ Skill/ Motivation

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CHAPTER I
INTRODUCTION

Skills is an essential part of overcoming challenges in everyday life. It is also an important gear for the growth of an organization. An organization could grow smoothly if its employees have suitable skills according to their positions and responsibilities. In addition, with consistent changes in global economic, skills need to be developed continuously and organizations need to find knowledges which motivate their employees to develop better skills.

Knowledge has become one of the critical driving forces for the success of businesses. Companies that are able to manage knowledges effectively are mostly companies that are more innovative, efficient, and effective in the marketplace. Therefore, it is crucial to improve employee's skills and knowledge, because employees are a big part of the productivity of the company. There are many ways to improve employee's skills such as training, lecture, workshop, and group activities. However, not everyone wants to improve their skills and knowledge. Hence, this study gathered the reasons why people aren't motivated to improve their skills and find out what motivates them.

Knowledge does not directly affect people's intention to improve their skill, but knowledge contributes to the motivations that influence people to improve their skill. This study used a combination of knowledge management concept and motivation theories. Motivation on skill improvement can be created extrinsically or intrinsically, and there are knowledges that can influence these motivations. This study aims to explore the knowledges people possess when they want to improve their skills.

This study concluded relevant extrinsic and intrinsic motivations from interviews and identified the knowledges that led to the motivations. In addition, it focused on the relationship between human's motivation and their knowledges to clearly describe the motivation factors that influence employees to improve their skills and help assess which employee's needs are being met, and which are not.

The study begins with the literature review and identify the definitions, descriptions and important information about two types of knowledge and motivation theories, and then create the framework to define dependent and independent variables. A research design is created to select an appropriate method for data collection and data analysis. After an appropriate method is selected, the processes of data collection, data analysis, conclusion and recommendation will be carried out respectively.

CHAPTER II
LITERATURE REVIEW

This chapter explore the theories and relevant information that are related to the study. Two main topics are looked at for the analysis of the information obtained from the interviews. The first topic is knowledge type; the study wants to collect important information for data analysis process, so it needs to clarify the meaning and the type of knowledge, i.e. explicit and tacit knowledge. The second topic is motivation theories; the study wants to understand the motivations that influence people to increase or improve their skill, so the study needs to have a clear description of motivation theories which include extrinsic and intrinsic motivations. Then the study draws a relationship between motivation and knowledge as shown in the framework.

2.1 Explicit and Tacit Knowledge

Knowledges can be categorized into explicit and tacit knowledges. They are defined by different perspective; explicit knowledge is defined as "pure knowledge" whereas tacit knowledge is defined as "skills" (Pipatanantakurn & Ractham, 2016). A skill is a type of tacit knowledge. Each person has different type of explicit and tacit knowledges; hence they have different perspective on a problem and use their own unique ways to find the solution (Smith, 2001). In every organization, both tacit and explicit knowledge are necessary to become successful.

Explicit knowledge is formal and systematic, it can be gained by reading or learning in a class or a training session. It is very easy to communicate and share in product specifications or computer program (Nonaka, 1991). Explicit knowledges are found in generalized form such as scientific method and proven knowledge, because most explicit knowledges are facts, rules, and policies (Wyatt, 2001). On the other hand, tacit knowledges are seen as an abstract and they are difficult to access, as the word of "tacit" comes from Latin "tacitum" which means secret, hidden or mysterious (Boiral, 2002). Tacit knowledge consists of mental models, beliefs, and perspectives that are

created through experiences, emotions, and values which cannot easily be analyzed (Pipatanantakurn & Ractham, 2016). In addition, a research mentioned that tacit knowledge can be classified into four groups. The first is embodied knowledge, which is a knowledge the body knows how to react naturally since they were born. The second is intuitive knowledge, which is a knowledge built from experience such as problem-solving experience gained from work. The third is affective knowledge, which is a knowledge that relate to personal feeling and emotional expression. And the fourth is spiritual knowledge, which is a knowledge that is spiritually guided in view of the big picture (Songwathana & Sanglimsuwan, 2015).

In addition, there are four modes of interaction between the two types of knowledge (Perrott, 2007). The first, from tacit knowledge to tacit knowledge, which is a process of socialization through shared experience. This knowledge occurs between individuals, for example, when a new employee learns through observation or working with a skilled worker during on-the-job training (Kelloway & Barling, 2000). The second, from explicit knowledge to explicit knowledge, which is a process of revaluating existing knowledge that can lead to a new knowledge such as teaching in class. The third, from tacit knowledge to explicit knowledge, which is a process of passing on knowledge by using metaphors and symbolic language. The fourth, from explicit knowledge to tacit knowledge, which is a process of introducing knowledges through a learning process. There is a research suggested that passing on knowledge and introducing knowledge are the most important forms of knowledge creation, because they increase the organization's knowledge pool (Kelloway & Barling, 2000).

However, the concern is "how to manage people who do not want to learn new knowledge?". Therefore, the study needs to define the influence of psychological characteristics of an individual and analyze the motivation which is a good tool for learning a part of people's psychology since motivation is a main driving force for the success of organization. The motivation also drives employees to use the knowledge they have to improve their work (Noe & Wilk, 1993). This study concentrates on only two motivations that most people know because both theories are easy to understand and well-adapted to the study.

2.2 Motivation Theories

A motivation influences an amount of effort that people perform in their activities (Weitz & Sujan, 1986). Maslow's Need Hierarchy Theory and Herzberg's Theory are two popular theories that people use for learning about human behaviors.
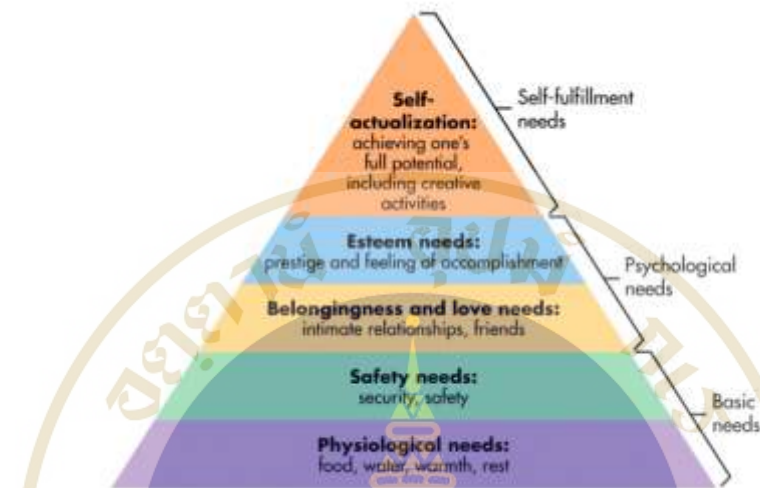
Figure 2.1 Motivation Theory. McLeod, S. A. (2018). Maslow's hierarchy of needs [Online image]. Retrieved from https://www.simplypsychology.org/maslow.html

Maslow's Need Hierarchy Theory is a motivation theory suggesting five levels of hierarchically organized needs. Referring to Maslow's Need Hierarchy in figure 2.1, starting from the bottom, physiological needs are in the first hierarchy, followed by security, belongingness, esteem, and self-actualization needs. Each level is significant to the next higher level (Mathes, 1981). From an organization point of view, the organization needs to motivate employees towards accomplishment by understanding employees' standard satisfactions (Ramlall, 2004). Some examples of organizational-related fundamental needs are physiological needs, such as vending machines or free snack bar, security needs, such as salaries, retirement benefits, medical benefits and rest periods, belongingness needs, such as outside social activities, and team spirit encouragement program, and esteem, such as providing a challenging job. Lastly, examples of the top hierarchy, or self-actualization needs, are providing trainings, providing challenges, or encouraging creativity.

Herzberg's theory of motivation is a developed theory of workplace motivation called the two-factor theory. It is based on two sets of factors, the motivators and hygiene factors, that influence workplace motivation. Herzberg concluded that factors such as company policy, supervision, interpersonal relations, working conditions, and salary are hygiene factors rather than motivators, and the lack of hygiene factors can create job dissatisfaction. In contrast, he suggested that motivators are important factors to improve productivity. Moreover, he found five strong determiners of job satisfaction, which are achievement, recognition, the work itself, responsibility, and advancement. These motivators are associated with long-term positive effects on job performance, while the hygiene factors produced only short-term changes in job attitudes and performance (Gawel, 1997).

In fact, these two motivations are not the only two theories. Many motivation theories were created and used for learning people behaviors. In addition, behavioral motivation can be classified into extrinsic and intrinsic motivations (Welschen & Todorova & Mills, 2012).

Both extrinsic and intrinsic motivations affect the satisfaction people receives from their activities. A significant difference between extrinsic and intrinsic motivation is the source of motivation. Extrinsic motivation is received from external factors such as financial reward, while intrinsic motivation is received from internal factors such as a sense of respect and accomplishment.

Extrinsic motivations are goal-driven, such as rewards or benefits earned when performing an activity (Lin, 2007). It happens when people are motivated to perform in an activity to earn a reward or avoid punishment. For example, someone performed well in activity because he/she wanted to be rewarded in return, not because he/she enjoys it or like it. In contrast, intrinsic motivations are about the pleasure and satisfaction derived from a specific activity (Lin, 2007). It relates to people's behavior because it is personally rewarding, and the activity is performed for its own sake rather than the desire for some external reward. For example, someone wanted to do a special task, because the results fulfill his desire.

A good development needs some motivations, and the study found that one of the important factors related to motivation is knowledge. Knowledge is valuable and individuals can use it to obtain status, power, and rewards (Gagne, 2009), which are, in

turn, motivations. Hence, it can be said that knowledge can create motivation and essentially contribute a skill improvement.

Knowledge sharing based on factors such as expected mutual benefits, reputation, expected relationships, trust, and generousness is another way to develop motivation (Hsu & Lin, 2008). Knowledge sharing occurs from an intentional behavior which consist of three influencing factors, including attitude, social norms and control beliefs, and these factors affect how skills are applied in a workplace (Gagne, 2009). A research stated that knowledge management is focused on extrinsic motivation. For example, organizational rewards and reputation are related to a positive attitude towards using a knowledge (Welschen & Todorova & Mills, 2012). However, another research said that knowledge is an emphasis on intrinsic motivation too. For example, the inspiration from personal knowledge (Smith, 2001) and the achievement which derives from transferring experience-based knowledge (Lin, 2007). This study found that extrinsic motivation, intrinsic motivation, and knowledge are all related the result of skill improvement motivation.

From the literature review, the study was able to define the motivations people want to have for their job. One person can have many motivations, both extrinsic and intrinsic motivations. In addition, the study learnt that people gain knowledge from two sources, which are explicit and tacit knowledges. Hence, the study can draw the relationship between knowledge and motivation that contribute to the intention to improve skills as shown in the framework. Furthermore, a research method will be selected to create the scope of the interviews and questions which are related to people's motivation, people's knowledge and the relationship between motivation and knowledge in order to find the knowledge that influence the required motivations to improve the skills.

Motivation Theories

Extrinsic motivations

- Salaries (Ramlall, 2004)
- Rewards (Lin, 2007; Gagne, 2009; Welschen & Todorova & Mills, 2012)
- Retirement benefits (Ramlall, 2004)
- Medical benefits (Ramlall, 2004)
- Rest periods (Ramlall, 2004)
- Reputation (Hsu & Lin, 2008; Welschen & Todorova & Mills, 2012)
- Power (Gagne, 2009)

Intrinsic motivations

- Achievement (Gawel, 1997; Lin, 2007)
- Recognition (Gawel, 1997)
- Responsibility (Gawel, 1997)
- Advancement (Gawel, 1997)
- Inspiration (Smith, 2001)
- Challenge (Ramlall, 2004)

Explicit Knowledge

Tacit Knowledge

Intention to improve skills

Figure 2.2 Framework

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

The study is defined from qualitative research which primarily concern about understanding humans' experiences (Jackson & Drummond & Camara, 2007), and it seeks in-depth understanding of people's attitude, ideas, and beliefs that would benefit the result. There are many useful methods of inquiry in qualitative research to analyze the qualitative information, and the study uses the interview method to learn and understand the participants, because the interview method provides an opportunity for a face to face discussion and an opportunity to observe the participant's feelings during the conversation.

The questions consist of two parts - demographic questions and interview questions. In demographic question, the questions focus on occupations, ages and education whereas the interview questions are open-end discussion to obtain ideas, feedbacks, and perspectives of the participants with their real feelings, the interview questions also provide a room for the interviewees' expressions.

3.2 Sample and Data Collection

The main objective of this interview is to learn the skills and knowledges that the interviewees learnt from their job and how they adapted their skills to work successfully. This study uses in-person interviews and collect data from twenty-five people with Bachelor of Engineering degree. The study aims to collect information from freshly graduated engineers and experienced engineers, therefore the sample group has the age of 23 to 40 years old. In addition, in order to collect a more diverse information, the sample group is chosen from different occupations, positions and companies. The diversity provides an opportunity for the study to obtain information from people with similar educational background but have different perspective on self-improvement.

3.3 Data Analysis Method

This study is carried out by in-depth interviews, so the coding process is a significant step to organize, interpret and analyze data. Coding is the method of determining repetitive words or short phrases in interviews, open-end surveys, participant observation, and categorize, translate, and summarize the data received. It is also a critical link between data collection and interviewee's explanation. There are two types of coded data; the first are repetitive words to a full paragraph, and the second are repetitive messages, longer passages of text, or analytic memos (Saldana, 2016). In this study, the four most common words that are repeatedly used refer to four most common skills that every respondent intend to improve, which are *"advance technical skill"*, *"language skill"*, *"communication skill"*, and *"people management skill"*. Interestingly, these four skills are created by a common source of knowledge, which come from only two ways of learning; the first way of learning is passive learning (books and lectures), while the second way of learning is active learning (experience and practice). Phrases such as *"I like to have a training" and "I like to have more practice"* are repeatedly mentioned and they help to classify the participants into two groups. The first group is the people who like to learn passively via books and websites and requires devices or tools to assist with their development. The second group is the people who like to learn by actively via practice and experience. The result will give a clearer understanding of the knowledges that affect people's skill improvement motivation.

CHAPTER IV
DATA ANALYSIS

This chapter will be analyzing the interview data. From demography analysis of twenty-five participants, the youngest participant is 23 years old and have one-year work experience, while the oldest participant is 40 years old and have over fifteen years of work experience. In addition, six participants are women and nineteen are men with Bachelor of engineering degree. Nineteen participants are working in the engineering career path, such as project engineer, technical support engineer, field service engineer, and foreman, but another six participants changed their career path to sale representative, insurance advisor, operation manager, customer relationship manager and entrepreneur.

Secondly, the study will be analyzing the interview questions and determine the knowledge that affect skill improvement motivation. Twenty-five participants are classified into two groups; the first group is people who prefer to learn passively and create skills from explicit knowledges, and the second group is people who prefer to learn actively by practice and create skills from tacit knowledge.

In addition, people who intend to improve their skills are mostly in between level two to four of Maslow's Need Hierarchy, which are security, belongingness, and esteem needs (Mathes, 1981). One hundred percent of participants (twenty-five people) are in the security level of Maslow's Need Hierarchy. They believe money is the fundamental aspect of their lives, therefore the most important reason to improve themselves is better salary or career promotion. If their skill is improved, they will have a better chance of achieving higher job position and earn more money. Their lives will be better, healthier, and have higher social status, including better family living as one of participant said,

"I am a father of my two little girls, so I need more money to take care of them. If my skill is improved, I will have a better chance to be promoted and earn more salary than the present."

(Participant 1, Senior Technical Support)

Out of all participants with security need, ten of them want to improve their skill because of love and belonging needs. These participants want other people to recognize and trust their decisions. For example, an electrical engineer said,

"I'm required to teach customers how to use a product after installation,
so I want them to believe I thoroughly know the product."
(Participant 15, Electrical Field Service Engineer)

An operation manager also said,

"I am a relatively young manager, I have three subordinates who are
older than me and I know they do not respect me as they should be. I want them
believe in me, especially when I make a decision."
(Participant 2, Senior Operation Manager)

Lastly, fifteen people who have safety need also have self-esteem need too. They like to be unique and they are willing to work for an achievement. One of them said,

"I want money, but it is not everything for me. I have a goal for my life. I
know why I work here, and I know what I want to do next."
(Participant 17, Automation Engineer)

This statement come from one of the fifteen interviews who have high self-esteem. It shows that some people have long-term goal they wish to accomplish. They do not reject working for money, but they also work for other accomplishment as well.

The interviews also revealed that there are two types of knowledges, explicit and tacit knowledges, that influence the participants' motivations on safety need, belonging need and esteem need.

4.1 Explicit knowledge

Explicit knowledge is a knowledge that the possessor can make explicit by means of a verbal statement (Davies, 2013). It can be expressed in formal writing and needs a certain level of education to understand. It usually is documented as words, numbers, and codes. This study found two explicit knowledges from people who want to improve their skill is knowledge of related technical theory and knowledge of company vision.

4.1.1 Knowledge of related technical theory

Most participants need related technical theory for their work such as maintenance, repair, and installation processes, especially for onsite engineers. Most engineers learnt these technical knowledges in university, but they require deeper understanding and application method when they are at work. There are some technical knowledges that participants want to increase in order to improve their technical skills, such as thermodynamic, electrical design, and power electronic.

Thermodynamic is related to the use of thermal energy or heat to produce dynamic forces or work. Heat, energy, and work are all measured in the same unit, but are not equivalent to one another (Chaplin,2010). Electrical design is the process of planning, designing, and creating electrical equipment, such as electrical components, schematics, lighting equipment, and power systems. Power electronics is a field that deals with the conversion and control of electrical power with high-efficiency switching mode electronic devices for a wide range of applications. These include DC and AC power supplies, electrochemical processes, heating and lighting control (Bose, 2014). These three technical fields are very important for engineers who want to improve their technical skill, because they are related to the maintenance, monitoring, and repair of electrical products and cooling systems. The participants said,

"When I do not know how to fix a new problem of cooling system, I go back home and read the thermodynamic book that I studied in class. Then I try to adapt a theory to my case, and I can finally solve it."

(Participant 25, Cooling Field Service Engineer)

"Electrical design and power electronic are very important for my job responsibility. They help me a lot in term of analyzing, repairing, and checking electrical system. These two theories are necessary for my technical skill improvement."

(Participant 20, Critical Operation Engineer)

From the interviews, even participants with engineering degree directly related to their job's responsibility, such as air conditioning engineering and power electrical engineering, cannot deal with every issue. Participants still want to increase their knowledge of related technical theories, because they believe they will not be able to solve new problems without those knowledges.

4.1.2 Knowledge of company vision

Companies usually share the growth and profit/loss report, as well as remind all employees about company's vision in every quarterly company meeting. Vision is important when considering the future of company in the next five to ten years, and it's always related to company's principal obligation and strategy. Some participants know their company's vision well, and they think it will be beneficial for their employment if they understand it well. It is easily to find out the company's vision from company's website, journal, and shared drive. An electrical engineer who know his company vision said,

"When I understand my company's vision clear, I will know what I should do. The knowledge of the company's vision will help me grow up in this company."

(Participant 19, Electrical Field Service Engineer)

It is a good idea to develop the skill related to the company's vision because employees who are involved in the company's most competitive product will have a better chance to grow and earn more salary than other employees. Hence, it is better to know the company's vision and try to improve the skill according to the company's most competitive product. Employees who consistently improve their skills will have

more chance than others. For example, if a company vision is "*to be the leader of digital energy management and automation,*" employees who want to be successful in this company should learn more about company's sustainability products because it relates to energy management. Moreover, if the company wants to hire a new technical product manager, any electrical engineer who only work with electrical system can apply for the position. However, if an engineer can show the expertise in electrical system and has the knowledge of energy management in consistent with the company's competitive product, the engineer will have a better chance to be hired and grow in the future.

4.2 Tacit Knowledge

Explicit knowledge is not the only influence on the people's intention to improve, but the study also found some tacit knowledges which that are understood by individual but are not easily shared. These knowledges are expertise, skill, and know-how, which are built from experiences and habits (Dampney & Busch & Richards, 2002). Some participants use tacit knowledge to motivate themselves to improve their skills; the three tacit knowledges that the study found from the interview are knowledge from problem solving experience, knowledge of English pronunciation and knowledge of employee's work behavior.

4.2.1 Knowledge from problem solving experience

People gain this knowledge from everyday work because issues can occur anywhere and anytime. The more problems they face, the more knowledge they will gain. Furthermore, problems often repeat themselves, so proficiency increases with the number of problems solved. For example, a maintenance engineer said,

"When we go to a worksite and see an alarm, we immediately know
what we should do first, second, and third because it is not the first time."

(Participant 10, Maintenance Engineer)

The maintenance engineer knows that he should push the stop button first, then shut down electrical system, and pull the control box out of the machine before

fixing it when the machine alarm goes off. He knows the procedure to fix broken parts by learning from past problems as he said, "*it is not the first time.*" A phase show that engineer learnt the solution from his experience, and every problem occur during work can be a good example case for next time it happens. Therefore, all problem-solving experiences that they faced and solved make them want to develop higher skills and competence. They will be happy if they can solve a problem by themselves and feel a stronger sense of accomplishment if the problem is more difficult and they can resolve it quicker than before.

4.2.2 Knowledge of English pronunciation

Nowadays, many companies in Thailand are international joint ventures. Employees in those companies should be able to understand, write, and speak English language. A software engineer thinks the correct English pronunciation is very important, and she really want to improve her skill in order to work more efficiently and avoid miscommunications.

"I used to experience miscommunication when I was training at Australia due to my Thai accent. I decided to learn the correct pronunciation from my Australian friends by paying more attention to their pronunciation as they speak."

(Participant 7, Software Field Service Engineer)

The study found that people who have English pronunciation knowledge want to improve their English communication skill as much as they can. They can learn it by slowly adapting to the right accent when they are among native speakers. Some of them want to have the same accent as native speaker because they work among foreigners every day. They wish to eliminate miscommunication, and they also believe good English pronunciation can minimize working time due to clearer communication.

4.2.3 Knowledge of employee's work behavior

People gain knowledges from working among other people's work behavior. Most position in a company requires employees to work with other positions.

Therefore, it is necessary to learn and understand the colleague's behavior and adapt to different type of people, as one of the project engineers said,

"I have been working in this position for three years. My position requires me to deal with customers, partners, and employees, and I learnt that each people have different work behavior. From my perspective, I can classify the people I work with into different working styles."

(Participant 6, Project Engineer)

This project engineer categorized his co-worker into two working styles; the first are people who respond quickly but carelessly, and the second are people who respond slowly but carefully. It is beneficial for him to know how each person works as he can adapt himself to fit different work behavior. For example, if he wants to hand out a task for the second group, he needs to make extra room for the due date and try not to conflict with the final task. It is also better to plan a following task that relates with the colleagues' responsibility. With good planning, he will have an efficient and punctual project. People with the knowledge of other employee's work behavior wants to improve their people management skill because they want to know how to manage and negotiate with each type of behavior in order to have a better collaboration, efficiency, and accomplishment.

As the result from this study, every participant with engineering background want to improve their skill. Interestingly, all of them have some common skills they want, including advance technical skill, language skill, communication skill, and people management skill. The study has identified five knowledge that influence people to improve their skills as shown in the Table of Interview Summary. The table summarizes the result from the interviews of twenty-five participants and divides into tacit knowledge and explicit knowledge categories. Sixteen participants want to have more knowledge of related technical theory, eight participants want to have more knowledge of their company vision, all twenty-five participants want to have more knowledge from problem solving experience, twenty participants want to have more knowledge of English pronunciation, and eleven participants want to have more knowledge of people's work behavior.

Table 4.1 The Interview Summary

No.	Occupation	Explicit knowledge		Tacit knowledge		
		Knowledge of related technical theory	Knowledge of company vision	Knowledge from problem solving experience	Knowledge of English pronunciation	Knowledge of people's work behavior
1	Senior Technical Support		✓	✓	✓	✓
2	Senior Operation Manager		✓	✓		✓
3	Project Engineer	✓		✓		✓
4	Entrepreneur			✓	✓	
5	VIP Customer Manager		✓	✓	✓	✓
6	Project Engineer	✓		✓	✓	✓
7	Software Field Service Engineer	✓		✓	✓	
8	Entrepreneur			✓	✓	
9	Solution Engineer	✓		✓	✓	
10	Maintenance Engineer	✓		✓		
11	Software Project Engineer	✓		✓		✓
12	Financial Advisor			✓	✓	
13	Service Partner Manager		✓		✓	✓
14	Sale (Engineer) Representative	✓	✓	✓	✓	✓
15	Electrical Field Service Engineer	✓	✓	✓	✓	
16	Electrical Field Service Engineer	✓		✓	✓	
17	Automation Engineer	✓		✓	✓	
18	Flow Man			✓	✓	

Table 4.1 The Interview Summary (cont.)

No.	Occupation	Explicit knowledge		Tacit knowledge		
		Knowledge of related technical theory	Knowledge of company vision	Knowledge from problem solving experience	Knowledge of English pronunciation	Knowledge of people's work behavior
19	Electrical Field Service Engineer	✓		✓	✓	
20	Critical Operation Engineer	✓	✓	✓	✓	✓
21	Product Sourcing Engineer			✓		✓
22	Cooling Field Service Engineer	✓		✓	✓	✓
23	Electrical Field Service Engineer	✓		✓	✓	
24	Electrical Field Service Engineer	✓	✓	✓	✓	
25	Cooling Field Service Engineer	✓		✓	✓	

The knowledge that the participants want to improve can be classified by their job and responsibilities. Most people who want to improve the knowledge of related technical skill are onsite engineers who directly work with products, for example machine monitoring, repairing, maintenance and installation. These people will focus on how to produce efficient work for their company. Most people who want to improve on the knowledge of the company vision are people who work as a senior or in a management position. These people do not only focus on their work efficiency, but they also focus on their advancement and achievement. People who want to improve the knowledge of people's work behavior are mostly people who have the responsibility to work with many people, such as product sourcing engineer and project engineer. The knowledge of problem-solving experience and English pronunciation are important knowledges that almost all participants want to improve, because to become a successful employee, they should always keep improving these two knowledges.

In addition, the study found the knowledge of related technical theory, knowledge from problem solving experience, and knowledge of the company vision influence the participants to improve their advance technical skill to use in their work, because they want to be the expert who can solve every technical problem and the person that the company wants to invest in. The knowledge of English pronunciation influences the participants to improve their language, because they believe correct pronunciation can help them work more efficiently with their foreign colleagues. The knowledge of people's work behavior influences the participants to improve their communication and people management skills, because good understanding and communication between colleagues can reduce miscommunication and conflicts.

CHAPTER V
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study found that every participant has their own aim and want to have self-improvement. They also have many different motivations, but explicit and tacit knowledges are the common sources of these motivations. From the interview result, explicit knowledge includes knowledges of related technical theories that can be gained from reading a book, search the internet, or taking an educational course. Another explicit knowledge is knowledge of the company vision, which can be learnt from different forms of announcement, such as company's website, company's shared drive, and company's newsletter. For tacit knowledge, three relevant knowledges were determined. The first knowledge is problem solving experience; everyone learns different ways to solve their problems by first-hand experience. As they gain the experiences, they become more competent and can spend less time solving the same problem. The second knowledge is English pronunciation which people learn by familiarizing themselves with the tone and accent when they talk with their foreign colleague. The third knowledge is people's work behavior, which people gain from observing their colleagues' behavior and evaluating the situation. All of these knowledges influence the people's intention to improve their skills.

If an employee has more skills than their responsibility required, the employee will not just work better, but it will be beneficial for the organization in term of minimizing cost and maximizing the profit as well. Employees with a more diverse and better skills will work more efficiently with less mistakes. Moreover, employees will work more happily if they do not have conflicts with their team or colleagues. These benefits will create more productivity in the organization, which contributes to the organization's profit margin.

5.2 Recommendations

The recommendation from this study is separated into theoretical implication and practical implication. For the theoretical implication, the study recommends people to find and increase their self-esteem, which is one of the intrinsic motivations (Lin, 2007) and belongs to the fourth level of Maslow's Hierarchay of need pyramid (Mathes, 1981). The study found that people who have self-esteem believes in their value. They always have a target and a strong desire to reach their goal. They are not afraid to imagine, create, and change, which are the characteristic of people who intend to improve themselves.

For practical implication, it is good for an organization to know about its employees' intention to improve their skills. It is even better for the organization to understand different perspectives about the direction the employees want to improve and focus at the appropriate development. The explicit and tacit knowledges gained also need to be appropriately adapted to the related skill improvement in order to maximize the benefit.

The first is explicit knowledge approach; companies can help their employees to obtain effective knowledges by creating knowledge assets. The study recommends companies to create a useful technical guide book for employees. From the interviews, many participants, including those in field engineer and sale position, want to improve their technical skills. This guide book will share advance technical knowledges and explain new product repair and maintenance techniques. Hence, employees can immediately consult the guide book when technical information is needed. In addition, the study recommends companies to create an employee manual which explain the company vision, mission, procedures and strategies. This manual will clarify what is expected from them and consistently revaluate themselves to the expectation.

The second is tacit knowledge approach, companies can help employees by giving them a chance to learn new skills. The study suggests companies to provide more space for employees to practice in order to increase problem solving experience. Team switching program can be implemented for employees to have an opportunity to learn new skills from new teams. For example, switch a member of a software engineer team with a member of an electrical engineer team for three months. They both will have an

opportunity to learn new skills they have not known before, and they can learn how to adapt themselves in different team and environment. This development program could help maximizing human resource management as one person can do more than one job and the program does not create any extra financial cost.

5.3 Limitation and further research

The limitation of the study is the lack of diversity. Many participants are from the same department and some have the same boss and colleagues. This factor influences the data analysis because people and environment are some of important motivations for employees. Participants with the same background are more likely to give similar answers, making it more difficult to find new idea or suggestion. Further research should expand the variety of the sample group and concentrate on how to maintain and pass on the discovered explicit and tacit knowledges. In addition, it should specify and clarify processes of knowledge sharing in steps to help companies create an effective and sustainable employee development strategies.
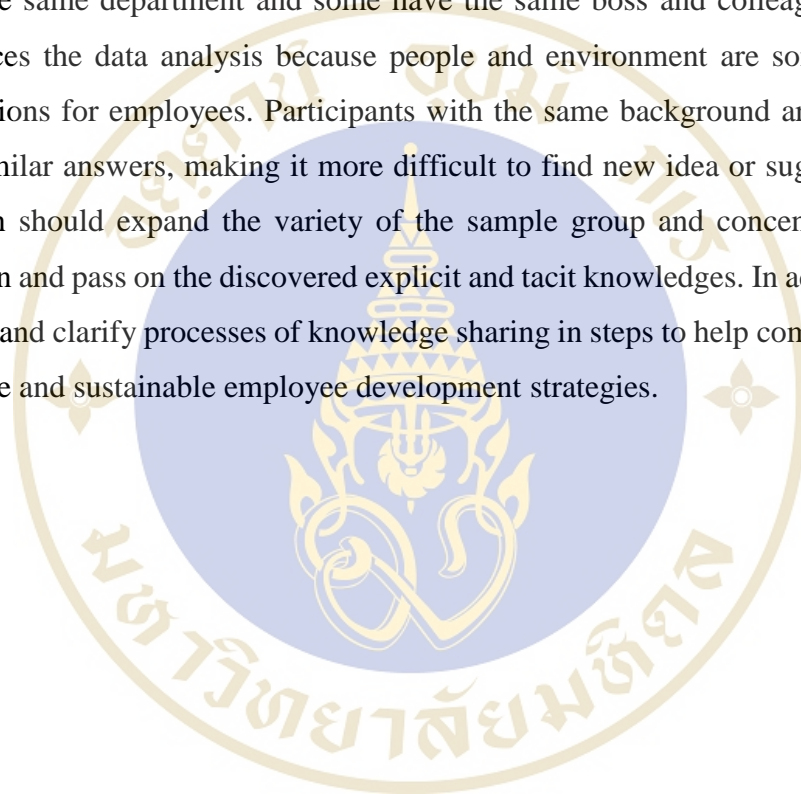
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APPENDICES
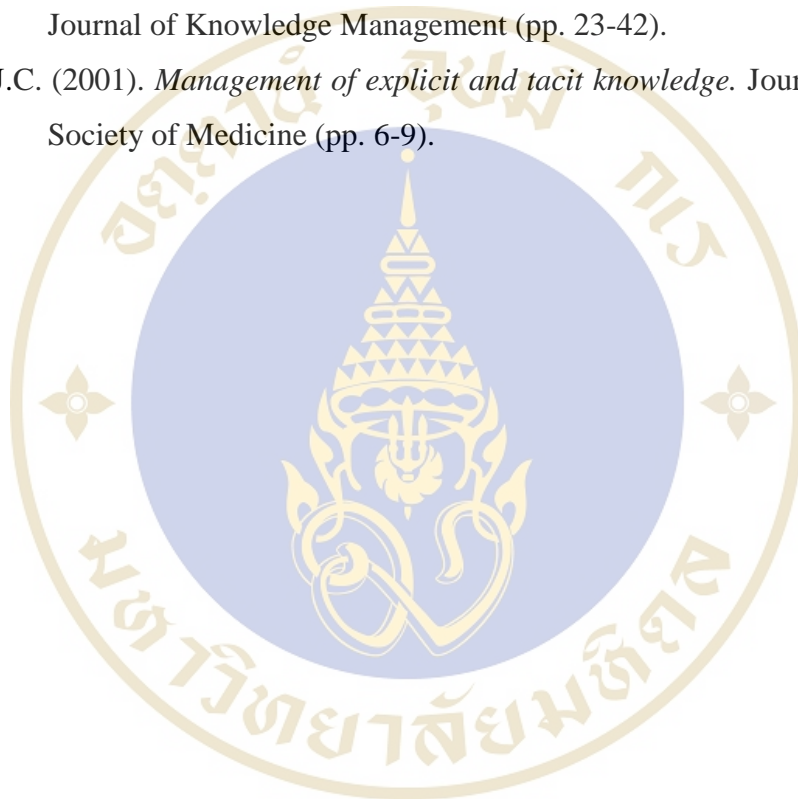
Appendix A: Interview Questions

No.	Questions
1	How old are you?
2	What is your occupation?
3	How many years have you been working in this position?
4	What is your engineering major?
5	What do you expect from your career?
6	Do you want to follow the same career path (engineering) or different career and why?
7	If you have opportunity to choose your preferred job position, what would you choose and why?
8	What did you learn from your current job?
9	From your work experience, what gave you more confidence and improve your work capability?
10	Which skill have you adapted to use with your work?
11	Are there any new skills you learnt from your work?
12	If the company requires every employee to improve their skill, what do you want to improve and why?
13	What motivates you to improve the skill in question twelve?
14	What tools or procedures do you recommend for skill improvement?
15	If the company uses the recommended tools and procedures in question fourteen, what do you expect to receive besides skill improvement?