



The Impact of Organization Development Intervention on
Awareness and Collaboration of Knowledge Sharing:
Case study of Thailand Productivity Institute

By
Varatthinee Suanbudh

A Thesis submitted in partial fulfillment of the requirements for
the degree of

Master of Management in
Organization Development & Management

Graduate School of Business
Assumption University
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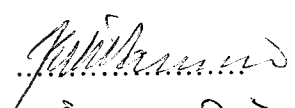
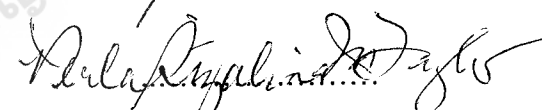

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Master of Management in Organization Development and Management

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ABSTRACT

The main objective of this thesis was to study the impact of organizational development interventions (ODI) on awareness and collaboration of knowledge sharing activities of Thailand Productivity Institute (TPI). This paper is presented following of the three stages of research's conceptual framework which are diagnosis stage or pre OD interventions, OD interventions implementing, and the last stage is analysis of the difference between pre and post OD interventions.

Due to the fact that the selected company is a knowledge-based organization or a consultancy company, most of the jobs is concerned about knowledge and information delivery. Hence, the researcher has believed that the management of knowledge directly influences performances outcome such as products quality and customer services. Therefore, any techniques or methods which sustain knowledge growth, knowledge sharing and knowledge distribution are key to the success of today's organization. That's called Knowledge Management (KM). Also, in this research study, the researcher concentrates on knowledge sharing study in order to create the awareness of knowledge sharing as well as to create the collaboration on knowledge sharing activities by using KM techniques in the selected private organization (as a case study).

The significant benefits of this study are for any person or organization as a tool as well as serves as an example for providing guideline for converting employee's knowledge such as tacit knowledge to value of organization performance. Besides, it would serves as an example of appropriate ODI that leads to higher productivity and to increase organization effectiveness.

The study was conducted by using quantitative approach based on questionnaire survey which was distributed to 40 people focused on Training and Consulting Division, as well as, qualitative approach by conducting interview session with 10 representatives, 6 of whom were consultants. To analyze the quantitative data and determine the impact of ODI on awareness and collaboration of knowledge sharing activities, the SPSS program which include mean, standard deviation and paired sample T-test was used.

The study on Pre OD interventions found that there were gaps of the awareness on knowledge management among the staff since they didn't clearly understand what knowledge management is. While, some didn't know how to share as well as didn't aware that what they know would be beneficial to others. Lack of communication channel also found because some said that they have no idea where to get the information they needed.

The OD interventions that were implemented to the study are in-house training on the related topic of knowledge management and knowledge sharing, setting up break zone, electronic public relation, community of practices or COPs activities, and after action review or AAR activities. On the other hand, there is significant difference between pre and post ODI.

In conclusion, since ODI is the continuous process which needs to practice and refresh often in order to maintain as well as to make the organization always active. So, the recommendation is that the management should try to keep some activities in focus, such as Break Zone activities, COPs activities, Electronic Public Relation and AAR activities, in order to maintain the situation of knowledge sharing.

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I also would like to thank to the management and staff of TPI which I am working for as they provided me with the great opportunity and the information that enabled this study to become a reality.

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List of Abbreviations

KM	- Knowledge Management
KS	- Knowledge Sharing
LO	- Learning Organization
MAKE	- The Most Admired Knowledge Enterprise program/award
TQA	- Thailand Quality Award
MBNQA	- Malcolm Baldrige National Quality Award
ODI	- Organization Development Intervention
COP	- Community of Practice
IT	- Information Technology
SECI	- Socialization, Externalization, combination, and internalization Model
BM	- Business Management Department
HR	- Human Resource Management Department
Product	- Production Management Department
Training	- Training and Services Department
Cus. Service	- Sales and Customer Services Department

CHAPTER ONE

INTRODUCTION

1.1. Generalities of the study

1.1.1. Background of Knowledge Management (KM)

Knowledge Management (KM) as a conscious discipline would appear to be somewhere between five and fifteen years old. It evolved from the thinking of academics and pioneers such as Peter Drucker in the 1970s, Karl-Erik Sveiby in the late 1980s, and Nonaka and Takeuchi in the 1990s. During that time, economic, social and technological changes were transforming the way that company worked. Globalization emerged and brought new opportunities and increased competition. Companies responded by downsizing, merging, acquiring, reengineering, and outsourcing. Many streamlined their workforce and boosted their productivity and their profits by using advance in computer and network technology. However, their successes in doing so came with price. Many lost company knowledge as they grew smaller. And many lost company knowledge as they grew bigger- they no longer 'knew what they knew' (Quinn, 2002).

By the early 1990's a growing body of academics and consultants were talking about KM as the new business practice, and it began to appear in more and more business journals and on conference agendas. By the mid 1990s, it became widely acknowledged that the competitive advantage of some of the world's leading companies was being carved out from those companies' knowledge assets such as competencies, customer relationships and innovations. Managing knowledge suddenly became a mainstream business objective as other companies sought to follow the market leaders (Quinn, 2002).

1.1.1.1. A Relationship of Knowledge Management and Knowledge Sharing

The key outcome of knowledge sharing is knowledge management. It include what the people share on what they know such as organization processes, products and services, customer, and competitive environment. Such knowledge may be explicit and exist in codified form such as document, manual, and databases or, it may be tacit and reside mainly in people's skill, memories, and intuitions. The critical outcome of knowledge sharing is the creation of new knowledge and innovation that will significantly improve organization performance as a whole. KM interventions have also focused heavily on codifying organization knowledge after it has been shared, how that knowledge can be readily accessed and applied to organization tasks. In addition, tacit knowledge is difficult if not impossible to codify, therefore, attention also has been directed at how such knowledge can be shared informally across people and organization units. It can imply that knowledge sharing is the critical process for knowledge management. KM might not happen if sharing of knowledge disappears.

O'Dell and Grayson (1998) believe that for knowledge sharing to work, organization must embrace the internal transfer of knowledge as a core process designed to deliver dramatic and sustainable improvement in performance.

1.1.2. Global Context

The management of knowledge became more and more competitive advantage of some of the world's leading companies.

As we enter the 21st century we are moving into a new phase of economic and social development, which can usefully be referred to as a 'knowledge economy', in which

knowledge will be a key determining factor in organizational and economic success or failure. The most effective organization in the knowledge economy will be those which recognize and best harness the crucial role that knowledge play both inside and outside their organization (NeLH Specialist, 2003).

Today's dynamic marketplace requires companies to constantly create knowledge that translates into competitive advantage and new opportunities for their businesses. Knowledge becomes the key strategy that many companies use to deal with the complex, rapidly changing of the business world as well as environments. Unfortunately, it is also very difficult to find a full description of methodology for KM implementation and also very difficult to get people to participate in the KM effort.

Moreover, as the selected company is a knowledge-based organization, a consultancy company, most of the jobs is concerned about knowledge and information delivery. The management of knowledge directly influences performances outcome such as products quality and customer services. Therefore, any techniques or methods which sustain knowledge growth, knowledge sharing and knowledge distribution are key to the success of today's organization. That's called Knowledge Management (KM).

The broader perspective of KM includes the processes of knowledge use, knowledge creation, knowledge sharing, knowledge transfer and knowledge renewal. Nevertheless, in this research study, the researcher concentrates on knowledge sharing study in order to create the awareness of knowledge sharing as well as to create the collaboration on knowledge sharing activities by using KM techniques in the selected private organization (as a case study).

However, the aim of KM is not necessary to manage all knowledge, but just manage the knowledge that is most important to the organization. It is about ensuring that employees have the knowledge they need, where they need it, when they need it. It should be the right knowledge in the right place and at the right time. And, it should be also helping employees share and put information into action in the way that strives to improve organization performance as a whole.

KM and learning organizations (LO) are two of the potentially most important notions for allowing organizations to transform themselves so that they are competitive in the new millennium (Sethi & King, 1998)

Over the past decade, the concept of KM has become an integral part of work processes in organization of all types, including business, education, healthcare, and government. Knowledge asset become the most important factor in the economy and knowledge worker also become the critical success factor in producing innovation and competitive product. There are many expertise and researchers tried to state the definition of KM as follow:

- KM is scoped out broadly as any process or practice of creating, acquiring, capturing, sharing, and using knowledge, wherever it resides, to enhance learning and performance in organization (Lefrere & Jon, 1997).
- KM is a strategy that express the overall approaches a company intend to take to align its knowledge resources and capabilities to the intellectual requirement of its strategy (Zack, 1999).

- KM is the process of identifying, growing, and effectively applying an organization's existing knowledge in order to achieve the organization's goals, while creating an organization culture that permits further knowledge creation (Takeuchi, 1998).
- KM is the insights, understandings, and practical know-how that we all possess—is the fundamental resource that allows us to function intelligently (Wiig, 1996).
- KM is really about recognizing that regardless of what business you are in, you are competing based on the knowledge of your employees (Johnson, 2002).
- “An investment in knowledge always pays the best interest” (Benjamin Franklin).
- “The basic economic resource is no longer capital, nor natural resources, nor labor. It is and will be knowledge” (Peter Drucker).
- “In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge” (Ikujiro Nonaka).

About MAKE Research Program and MAKE Award

Teleos, a leading independent KM research company, administers the Most Admired Knowledge Enterprises-MAKE-program. MAKE is the international benchmark for best practice knowledge-based organization. MAKE studies are also conducted to identify leading knowledge-driven organization at the regional/national level, such as in Asia, Europe, India, Indonesia, Japan, and North America.

In addition, Teleos also manages The KNOW network, a new web-based group of leading knowledge-based organizations which are dedicated to the identification and exchange of knowledge best practices such as networking, benchmarking, and sharing best knowledge practices leading to superior business performance. There are many companies

that has been recognized for MAKE winners such as Nokia, Siemens, BP Amoco, General Electric, Accenture, Microsoft, Price Waterhouse Coopers, Infosys Technologies, Xerox, World Bank, IBM, and etc. (www.knowledgebusiness.com).

1.1.3. Asian Context

KM also making waves throughout Asia in which it has so far had the biggest impact especially in Japan, Hong Kong, India, South Korea, Taiwan, Singapore, and Malaysia.

In Japan, the world's second largest economy, has long been at the most important position of the KM movement, even in a global context. As Hideo Yamazaki, senior researcher for Tokyo-based Nomura Research suggests, Nonaka and Takeuchi's groundbreaking book *The Knowledge Creating Company* triggered a knowledge-management boom in both the US and Europe soon after it was published in 1995. In fact, Yamazaki maintains that executives in these parts of the world responded to the ideas contained in the book even before their Japanese peer did. He cites 1998 as the year KM really began to make an impact in Japan, the same time that the KM Society of Japan was found. Asahi Breweries, IBM Japan and pharmaceutical firm Ezai were among the earliest adopter, says Yamazaki. While more recently Toyota, Sony, and Honda have established a position at the forefront of KM development and implementation. And an increasing number of firms from various economic sectors are turning to KM in recognition that the talent and innovative capabilities of their employees will be crucial resources in the struggle of high competitiveness (www.ikmagazine.com).

In Hong Kong, the economic engine of the most populous country in the world. Waltraut Ritter, president of the Hong Kong KM Society, believes that the Asian economic

crisis of 1997 forced firms across the region to review their organizational and business strategies. “After 1997, many companies had to change their business processes, and corporate-governance practices were critically analyzed.” said Ritter. Trevor Lui, senior consultant at the Hong Kong Productivity Council agree and claim that the events of 1997 represented something of a wake-up call to Hong Kong’s economic community particular. Frankly, until that point, Hong Kong was ten years behind in the development of KM. After 1998, KM-based principles were visible at the highest level of government policy, and the KM community began to flourish as a result. In 1999, for example, Suliman Hawamdeh, now a professor of the University of Oklahoma, set up a KM interest group that would eventually grow into the Information and KM Society, an organization that now has over three-thousand members (www.ikmagazine.com).

In India, a home to a billion people and a country that is starting to realize its massive economic potential on the world stage, particularly in the field of information technology. The worldwide economic uncertainty also fostered the growth of the KM community, but here others factor played a critical role too. J.K. Suresh, a principle knowledge manager at Infosys Technologies, point out “An important factor in enabling to emergence of KM has been the gradual liberalization of the Indian economy, underway for the past thirteen years or so. In the decade before this, a regime of strict government controls, licensing, and quotas had constrained the Indian industry in its research for excellence, market share and international presence. It is the widening exposure to markets and competition worldwide and also promoted through the growing integration with the global economy that has encouraged Indian industry to focus on deriving superior operational efficiencies and encouraging organizational innovation, two important objectives that KM serves.” As this

process of liberalization gathered momentum, a number of Indian firms were well placed to take advantage of KM-based working practices. Suresh's own Infosys was certainly one of these as well as Tata steel. These two firms are perhaps the most widely recognized for their formal KM efforts, and both are previous finalists in the MAKE Asia awards (www.ikmagazine.com).

In Singapore, a nation that has set international standards in terms of government adoption of KM-based principles. According to Praba Nair, Director of NCS's Institute for Insights and Innovation in Singapore said that "The Singaporean government has been emphasizing the importance of advancing towards a knowledge economy since the mid 1990's. This has prompted certain government ministries and agencies to make KM a key agenda to pursue. Today, KM is at the core of government tasks, inseparable from strategy, planning, consultation, and implementation." Both Nair and Hawamdeh agree that public sector agencies remain well ahead of organizations in the private sector both in implementing KM and in understanding its differentiate and subtleties(www.ikmagazine.com).

1.1.4. Thailand Context

KM as a long term endeavor is well recognized in the business excellence models around the world, including the prestigious Malcolm Baldrige National Quality Award (MBNQA) and the Thailand Quality Award (TQA). The criteria of those awards are directly and indirectly include KM as a critical success factor in virtually every category and item of the model. International role model of organizational excellence must now demonstrate

superior in the application of KM in their day to day operation. Superiority in KM is no longer an option, it is now a requirement in achieving world class performance.

There are three organizations in Thailand which are participating in the KM pilot study project composed of TRUE Corporation PLC, Spansion (Thailand) Ltd., and Siriraj Hospital. They all have actively embraced knowledge management, and have begun to act as role models of the concept. In 2003, Robert J. Osterhoff, the KM expert and KM consultant from United State as a consultancy of a pilot study project, had the pleasure of introducing the theory behind KM and a practical six-step approach to implementing the concept within the respective pilot organization. This process was in part adopted from a successful KM and Quality Improvement approach utilized by Xerox Corporation, an early pioneer of KM and a two-time Baldrige Award winner.

After initial struggles, each of the pilot organizations has not only begun to comprehend knowledge management, but exceeded expectation in creating an environment that fosters an increased sharing of knowledge. Each of the pilot projects selected was most needed and relevant to the respective organization. Whether it was knowledge sharing of continuous improvement activities, the creation of a customer-oriented knowledge system or initiating communities of practice, the project have begun to demonstrate increased productivity, more knowledgeable employees and ultimately improved organization performance as results (The KM Yearbook, 2004).

About Malcolm Baldrige National Quality Award (MBNQA)

The Malcolm Baldrige National Quality Award is the premier award for business excellence and quality achievement in the United States. Thousand of companies have used

the Baldrige criteria to assess performance and measure their progress relative to a recognized compilation of best practice. The MBNQA consist of seven criteria: leadership, strategic planning, customer and market focus, measurement analysis and knowledge management, human resource focus, process management, and business result. These seven areas affect all key stakeholders, including: communities, customers, employees, shareholder, and suppliers.

Malcolm Baldrige National Quality Award (MBNQA) was established by Congress in 1987 to enhance the competitiveness of U.S. businesses. The award is named after Mr. Malcolm Baldrige, who served as Secretary of Commerce from 1981-1987, and whose managerial excellence contributed to long-term improvement in efficiency and effectiveness of government.

About Thailand Quality Award (TQA)

Thailand Quality Award (TQA), positioned to be the most prestigious quality award in Thailand, is established to promote an understanding and implementation of the requirements for performance excellence, recognize world-class quality achievement and facilitate sharing of best practices information.

The TQA criteria, adopted from Malcolm Baldrige National Quality Award (MBNQA) criteria, consists of seven categories; Leadership, Strategic Planning, Customer and Market Focus, Information and Analysis, Human Resource Focus, Process Management and Business Results.

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1.1.5. Company Background

According to the government specific direction to increase productivity of country in the world-class competition, the nation strategy has been exclusively established in order to improve industrial capabilities from the comparative advantage which typically drive overall businesses by considerably low cost of direct labors and direct materials plus the economics advantage from geographical properties to the competitive advantage initiated by the development of products' high qualities, innovation, excellent managements, up-to-date technologies, and higher knowledge of worker under the specific objective that all of which will efficiently leads to the High Performance Economy with stability and consistency.

Thailand Productivity Institute (TPI) is a consulting company in Thailand which is established on January 18, 1994 as a private organization under the Ministry of Industry, by the approval of the cabinet.

Key responsibilities are to utilize all highly valuable skilled, knowledge and experienced human assets to intensively promote the increasing productivity of various business sectors in Thailand and also inclusively leverage competitive advantages of nation in the world markets. The organization has been certified in the ISO 9001:2000 international system in order to guarantee their quality of training and consulting service.

The training and consultancy service business exclusively requires fluent knowledge and skill professionals to stay with the company as long as possible. Training service section particularly require in-depth knowledge for its excellence in their academic market while the consulting service section increasingly require practical skills and experience in niche market such as automobile, textile, food, etc.

TPI has been specified its roles and responsibilities (TPI, 2004) to

1. Effectively support macro economics perspectives and country's situation in the world market in order to increase the foreign investment competitiveness.
2. Proactively develop organizational capabilities for both of the manufacturing industries and service business sectors of the global niches.
3. Increasingly provide the strategic plan for human resource management, science and technology development, corporate governance improvement, and information management establishment.
4. Widely create the nation awareness of Competitive Advantage, Business Cluster Management and Productivity Movement.

TPI certainly has its specific responsibilities to leverage Thailand industrial capabilities means. Corporate vision has been definitely specified ***"We are Productivity Champion."*** We are somebody who defends, supports, and promotes a principle of productivity and we are somebody who exemplifies excellence or achievement by mean of productivity." (TPI, 2004).

Figure 1.1 Corporate Overview of Thailand Productivity Institute



There are three main missions which have been introduced to achieve corporate vision.

1. To provide training and consultancy services on the basis of productivity concepts and organizational improving methodologies and create productivity network.
2. To research, develop, collect and distribute all knowledge and information related to the productivity improvement for both of business and public sectors.
3. To create awareness and promote significance of the productivity with all related information in the large scale of acknowledgement.

In addition, the Quality Policy has been inclusively fulfilled to assist not only the corporate objectives but also the ISO 9001:2000 regulatory compliance. It states that “a national organization responsible for building a Thai society with ever-increasing mindset, knowledge and skills in productivity by means of consultancy, training, research and

productivity promotion, through personnel who strive inexorably for excellence” (TPI, 2004).

1.1.5.1. A Pilot Project and Observation

The researcher has conducted a pilot project of knowledge sharing by using knowledge management techniques such as community of practice (COP) in order to review its effectiveness, to see the benefits of knowledge sharing, and become convinced of its usefulness.

A pilot community of practice project is conducting twice a month for two months, normally on second and fourth Friday 3.00–4.00 p.m. A target group is focus on the staff of Consulting and Training Division on the topic of both work related and common interest. Each has been consisted of ten- twelve participants with one and a half hour of participation. Schedule is shown below in Table 1.1.

Table 1.1. A pilot community of practice project schedule

DATE	TIME	TOPIC	FACILITATOR	HISTORIAN	ROOM
Aug.11.06	14.30-16.00 p.m.	Prefered hotels.contact person and rate price	K.Dao/ K.Som	K.Mim /K.Finn	Meeting 5
Aug.25.06	14.30-16.00 p.m.	Prefered hotels.contact person and rate price (cont.)	K.Nam/ K.Lek	K.Lew/K.Peung	Meeting 5
Sept.8.06	14.30-16.00 p.m.	Cool English Institute	K.Mim/ K.Finn	K.A/ K.Toom	Meeting 5
Sept.22.06	14.30-16.00 p.m.	How to win government sector.contact person.	K.Finn/ K.Chan	K.Nam/K.Nuch	Meeting 6

Community of practice (COP) generally means a group of people who share a common interest in an area of competence and are willing to share the experience of their practice. Facilitator plays as a key man who has to facilitate all COP participants to share and to participate. Historian plays as a recorder who has to record all knowledge that happen during COP conducted, then, those knowledge will be proved and revised before stored as a knowledge inventory. However, the pilot community of practice project can be useless if the participants do not feel free to discuss and to share their ideas.

1.1.5.2. TPI Knowledge Sharing Assessment

This part is the important part to diagnosis the company, then, describe and analyze all the gathering data. The data helped the researcher in identifying the company as current situation and identify the state of problem. Moreover, the data also helped the research to develop the appropriate ODI to solve the problems. The researcher has used two main tools which are COPs and interview to address TPI's knowledge sharing current situation. The researcher has focused on Consulting and Training Division assessment.

The researcher found that some of employees had doubt about the concept of KM process on how to obtain and how to use it as well as have no ideas on its usefulness. They thought that it was meaningless to share their individual knowledge due to the difference in oneself and the different job responsibilities. Lack of motivation to share is also found and it might lead to less of collaboration, less of cooperative project as well as less of cross functional project.

Some said that they were willing to share but they didn't know how to communicate their tacit knowledge. They knew but were unable to express. Most of tacit knowledge is

subjective and difficult to transmit. Rarely encouraged distribution and sharing of knowledge amongst employees can be identified that there has no occasion to talk and to express the idea.

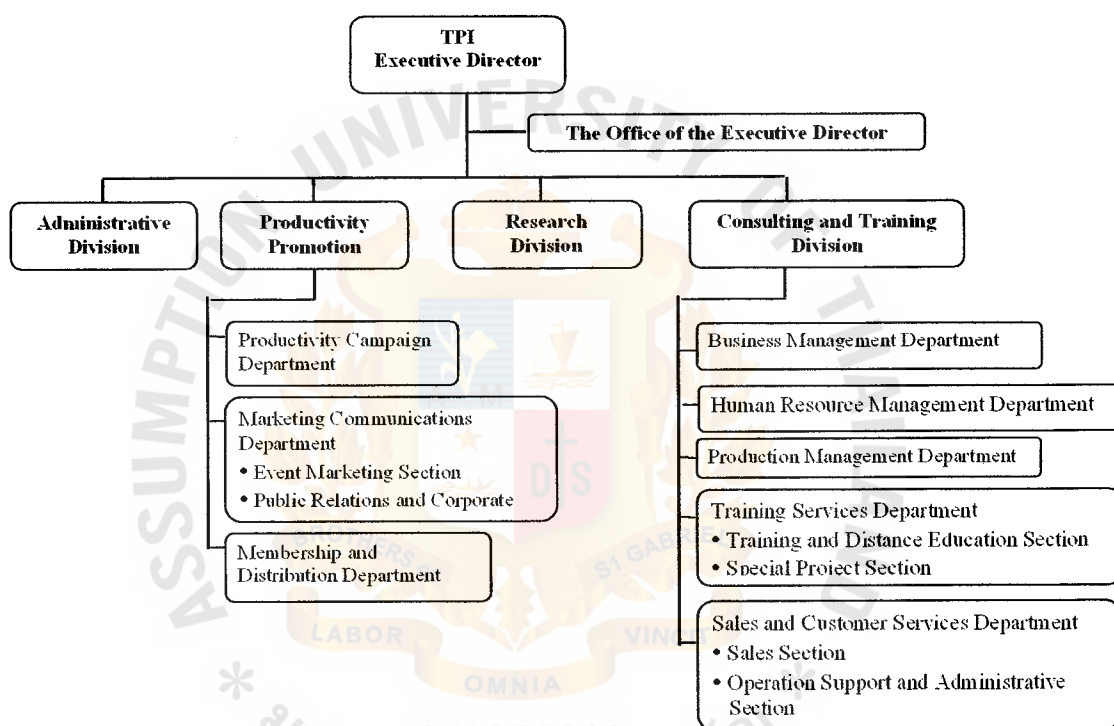
In addition, lack of communication and public relations about KM activities and knowledge sharing were also found because some said that they had no idea about where to get the information they need. Moreover, most of time they wasted for recreating the existing information. Some claimed that they didn't know how to upload their knowledge to I-Zone, and, for some they cannot find information they need on their I-Zone (Company Intranet). All these factors can lead to redundant work, low employee involvement, slow work process, employee cannot offer good and immediate solution to customers, repeated mistakes, and also lack of teamwork in Consulting and Training Division, TPI.

The concept of "knowledge is power" still takes place. So, some are unwilling to share their information and knowledge as well as their abilities and experiences. In TPI, Knowledge also lost due to the turnover of employee whenever people leave the company and take their knowledge with them.

Therefore, the collective knowledge of employees has become a critical resource to the organization that TPI need to know how to gain and manage that intellectual capital, intangible assets of employees' abilities and experiences. Managing this intangible asset involves a change in mindset, no more the culture of knowledge is power within organization and stop positioning oneself as the only person within organization able to make key decisions, since previously TPI rarely encouraged distribution and sharing of knowledge amongst employees. This management of knowledge within organization is

become more and more crucial especially in the *consulting and training division* because many activities of TPI over that division, over the world economic, and also the social life today are knowledge driven.

Figure 1.2 Chain of command of Thailand Productivity Institute



1.2. Objective of Study

The general objectives of the research were to focus on studying the impact of ODI after conducted: creating the awareness of knowledge sharing by using KM techniques in private organization and to create the collaboration on knowledge sharing activities in private organization also. This research is seeking to achieve the following:

- 1.2.1. To conduct OD diagnosis on awareness and collaboration of knowledge sharing.

1.2.2. To design and implement the appropriate ODI to improve the awareness and collaboration of knowledge sharing.

1.2.3. To determine the impact of ODI on awareness and collaboration of knowledge sharing.

1.3. Statement of the Problems

The researcher seeks answers to find out the employee who are working in Thailand Productivity Institute, Thailand about their perception which is relating to knowledge sharing implementation.

The main focus of this research study is on the impact of ODI on awareness and collaboration of knowledge sharing: A case study of Thailand Productivity Institute (TPI) which is focused on Consulting and Training Division.

1.3.1. Research Questions

This research specifically will seek to answer the following questions:

1.3.1.1. What is Thailand Productivity Institute's current situation on the awareness of Knowledge Management?

1.3.1.2. What are Thailand Productivity Institute's current situation on the awareness and the collaboration of knowledge sharing activities?

1.3.1.3. What are the appropriate ODI for Thailand Productivity Institute to improve the awareness and the collaboration of knowledge sharing?

1.3.1.4. Is there a significant difference between the pre and post ODI on the awareness and the collaboration of Knowledge Sharing?

1.4. Hypotheses

Ho: There is no significant difference between the pre and post ODI on the awareness and the collaboration of knowledge sharing.

Ha: There is a significant difference between the pre and post ODI on the awareness and the collaboration of knowledge sharing.

1.5. Scope and Delimitation of the Study

This section of the study determines the extent of coverage and the limits of the study itself. It provides the parameters of the conduct of the study.

1.5.1. Scope of the Study

The scope of this research study covers a study focusing on Consulting and Training Division which has 40 staff on the topic of knowledge sharing implementation of Thailand Productivity Institute, a consultancy firm under the Ministry of Industry.

This research study consisted of three phrases; pre ODI, ODI process, and post ODI respectively. The framework of the research model for ODI process is shown in figure 3.1., and the details of each phrase were addressed in chapter three.

1.5.2. Delimitation of the study

The researcher aimed that this research study becomes the critical step for organization improvement and development in order to be Learning Organization (LO) in the near future. It can be enhanced the organization's ability to acquire and develop new knowledge which focuses on how that knowledge can be organized and used to improve the overall organization performance. It can be a source of strategic renewal, and enable

organization to acquire and apply knowledge more quickly and effectively than competitors, therefore, establishing a sustained company competitive advantage.

Moreover, whenever knowledge is translated into new products and services, it can become a key source of wealth creation for organization (Cummings & Worley, 2005).

1.6. Significant of the study

This research study is aimed at studying on the impact of ODI and how to create the awareness of knowledge sharing and how to create the collaboration on knowledge sharing implementation by using KM techniques.

After the completion of the research study, the researcher hoped that it would accomplish the following:

1.6.1. It would serves as an example for providing guideline for any person or organization as a tool for converting employee's knowledge, tacit knowledge, to value of organization performance.

1.6.2. It would serves as a review for TPI's management and TPI's KM team on its KM implementation process.

1.6.3. It would serves as an example of appropriate ODI that leads TPI to higher productivity, higher job efficiency, and to be a learning organization following TPI's value.

1.7. Definition of term

According to the study, all of the definitions of terms below are related to knowledge management and knowledge sharing which the researcher focused on. Therefore, these definitions of terms could help the reader to thoroughly understand throughout this researcher study.

1. Awareness – It is a mindful or consciousness of happening as well as its advantages and disadvantages of knowledge management and also knowledge sharing concepts and its activities.
2. Best Practice – techniques believed to constitute a paradigm of excellence in a particular field (Todd & Thomas, 2003).
3. Collaboration – It is a human social skill that enables people to work together especially in a joint intellectual effort as team to achieve more than we could accomplish alone in term of innovation, teamwork, and learning organization. It may take place between two people, and at meeting or among people via phone, e-mail, and etc.
4. Cooperation – To operate or to work with another as a group or team in order to share knowledge and experience toward a common end.
5. COP – Community of practice is generally mean a group of people who share a common interest in an area of competence and are willing to share the experience of their practice (Cortada & Woods, 2000).
6. Data - the nature data is raw and without context. It simply exists and has no significance beyond its existence. It can exist in any form, usable or not (Todd & Thomas, 2003).
7. Explicit knowledge - refers to tacit knowledge that has been documented. It has been articulated into formal language and can be much more easily transferred among individuals (Todd & Thomas, 2003).

8. Infinite Asset – knowledge is often called the infinite asset because it is the only asset that increases when it is shared (Todd & Thomas, 2003).
9. Information - information is data that have been given meaning by way of context. A spreadsheet is often used to make information from the data stored within it. A good example would be an income statement for your business. It is still a list of dollar figures, but now it has a relevant context (Todd & Thomas, 2003).
10. Innovation – a new device, process, or idea created through study, experimentation, and insight (Todd & Thomas, 2003).
11. Intangible – assets that cannot be easily perceived by the senses.
12. Knowledge – information combined with understanding and capability, living in the mind of people (Todd & Thomas, 2003).
13. KM channel – a course or pathway through which information is transmitted and knowledge is exchanged (Todd & Thomas, 2003).
14. Knowledge Management (KM) – the tools, techniques, and strategies to retain, analyze, organize, and share business expertise (Todd & Thomas, 2003).
15. Knowledge Sharing (KS) – is refer to the communication of all types of knowledge, which include explicit knowledge and information, the know-how and know-who which are types of knowledge that can be documented and captured as information, and tacit knowledge in the form of skills and competencies (Daneshgar et al, 2005).
16. Learning Climate – It is defined as all managers' see their primary tasks as facilitating company members' experimentation and learning from experiences, through

questioning, feedback and support. The company seeks to export this learning climate to its context and business partner (Wongphaet, 1999).

17. Learning Organization – It is define as an organization that encourages development of its members’ thinking and reflection framework toward the internal learning activity that leads to utilization of its members’ knowledge (Wongphaet, 1999).
18. MAKE - The Most Admired Knowledge Enterprises program/award which is the international benchmark for best practice knowledge-based organization (www.knowledgebusiness.com) .
19. MBNQA - The Malcolm Baldrige National Quality Award which is the premier award for business excellence and quality achievement in the United States (www.nist.gov) .
20. ODI – Organization development intervention is a sequence of activities, actions, and events intended to help an organization improve its performance and effectiveness (Cumming & Worley, 2005)
21. Performance – is defined as the degree of accomplishment of the tasks that make up an individual’s job (Cortada & Woods, 2000).
22. Reflection – It is defined as the final stage of learning process, which individual is able to realize what, why, and how ones have learned and gain new or better understanding (adapted from Wongphaet, 1999).
23. Tacit knowledge - refers to personal knowledge embedded in individual experience and involving intangible factors such as personal belief, perspective, and values. Tacit knowledge can be extremely difficult to transfer (Todd & Thomas, 2003).

24. TQA - Thailand Quality Award which is positioned to be the most prestigious quality award in Thailand in business excellence management field (www.tqa.or.th)



CHAPTER TWO

REVIEW OF RELATED LITERATURE AND CONCEPTUAL FRAMEWORK

This chapter begins with the review of related studies on the area of organization as system, organization change management, organization development, organization development intervention, knowledge, knowledge management, knowledge sharing, knowledge sharing implementation techniques, and learning organization. The emphasis is on the review of related literatures that related to the main variable; knowledge sharing. In the last part, the action research framework and the conceptual framework are included.

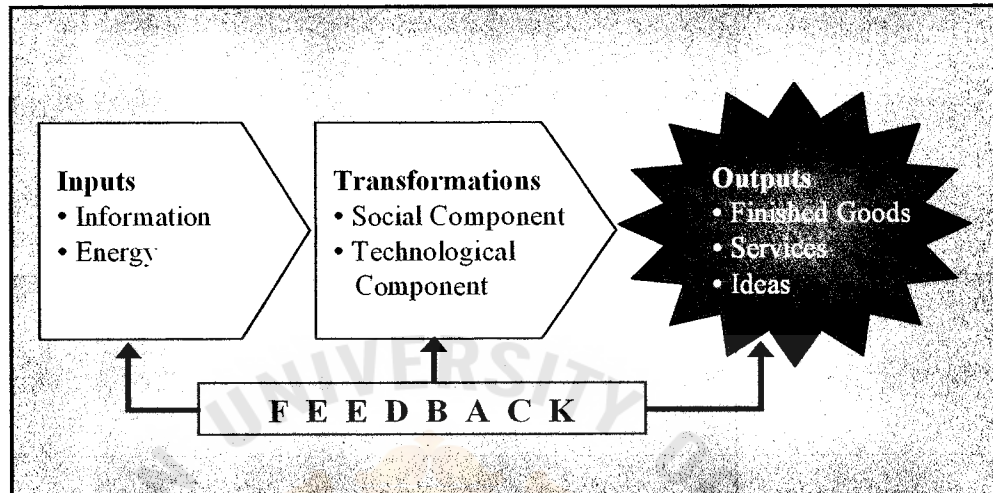
2.1. Organization as System

According to Harvey and Brown (2001) the system approach is the view that the organization is the unified system in which a system is a set of interrelated parts unified by desire to achieve goal. Organization is viewed as a system because each organization consisted of interrelated, interdependent parts, each of which contributes to total organizational functioning and to achievement of its goal.

2.1.1 Organization as Open Systems

There are two basic types of organization system which are closed and open. In this research study, the researcher focused on an organization as open system. It can vary in how open they are to their outside environment, such as, organizations and people, exchange information and resources with its environments. All these are influenced by external forces. In order to understand how the external forces, for example, raw materials, customer demands, and competition affect the organization can help explain some of its internal behaviors.

Figure 2.1 The Organization as an Open System.



Source: Thomas G. Cumming & Christopher G. Worley. Organization Development and Change, 2005, 8th edition, p.86

Organization is viewed as an open system in which the key properties of this system consisted of inputs, transformations, and output; boundaries; feedback; equifinality ; and alignment as shown in Figure 2.1 above. The organization is consisted of three related parts: inputs, transformations and outputs (Cummings & Worley, 2005).

The organization system has the circulation flow. The flow starts with the inputs which refer to human and other resources such as information, energy, and material. They are acquired from external environment of the system. The inputs then go to the transformation which is the processes of converting inputs into outputs. It consisted of social and technological components. The social component refers to human resources and their work relationships. The technological components refer to tools, techniques, and methods of production or service delivery (Cummings & Worley, 2005). The outputs came from the

transformation phase which became finished goods, services and ideas. Then the outputs will be sent back to the environment.

Boundaries help in distinguishing between systems and environments (Cummings & Worley, 2005). The definition of boundary line is somewhat arbitrary because a social system has multiples subsystems and the boundary line for one subsystem may not be the same as that for a different subsystem. As with the system itself, arbitrary boundaries may have to be assigned to any social organization, depending on the variable to be stressed. Anyway, conflict over boundaries is always a potential problem within an organization, just as it is in the world outside the organization. For the open system, it cannot measure where the boundaries should be.

Feedback means the information about the actual performance or the result of the system. It is a vital tool in maintaining the system in a steady state and helps the firm adapt to the changing situations.

Equifinality supported the idea that there is no best way to design an organization. Therefore, the function of management is not to seek a single rigid solution but rather to develop a variety of satisfactory options. It stated that the similar results might be achieved with different initial conditions and in many different ways (Cummings & Worley, 2005).

Alignment means a characteristic of the relationship between two or more parts. It represents extend to which the features, operations, and characteristics of one system support the effectiveness of another system (Cummings & Worley, 2005).

2.2. Organization Change Management

It is very important for every organization to keep changing with the new environment in order to remain in the good position in the market. Change should be innovative and help the organization to improve. Therefore, the organization should aware of change and how to manage with that change effectively.

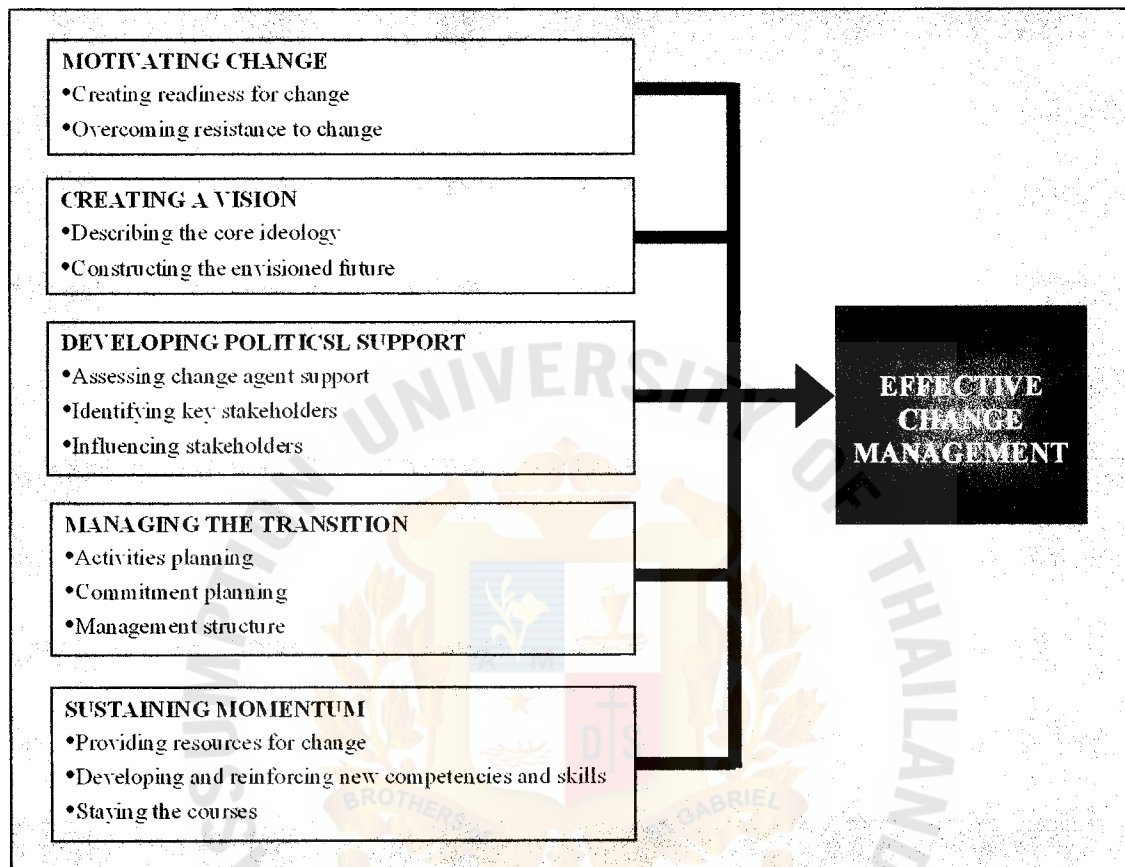
According to the diversity of practical advice for managing change can be organized into five activities as shown in Figure 2.2. below. The activities are contributed to effective change management and are listed roughly in the order in which they typically are performed (Cummings & Worley, 2005).

2.2.1 Motivating Change

The first activity includes creating a readiness for change among organization members and helping them to address resistance to change (Cummings & Worley, 2005). Motivation is a critical issue for starting change, and, commit physical and psychological energy indicates that people and organization seek to and willing to change. Leader, moreover, must create an environment in which people accept the need for change.

In addition, it helps the researcher clearly understand on how to effective managing change in organization step by step. According to this researcher study, it is one of Motivating change activities in creating the awareness as well as creating the collaboration of knowledge sharing climate in Training and Consulting Division, TPI. It involves in making TPI's people feel a need of change by educating them the benefits of sharing their knowledge , motivating them, and also help them to overcome the resistance to that change such as the believe of knowledge is a power.

Figure 2.2 Activities Contributing to Effective Change Management



Source: Thomas G. Cumming & Christopher G. Worley. Organization Development and Change, 2005, 8th edition, p.156

2.2.2 Creating a Vision

The second activity is concerning with creating a vision and is closely aligned with leadership activities. Vision provides a purpose and reason for change and also describes the desired future state. Together, they provide the “why” and “what” of planned change (Cummings & Worley, 2005).

2.2.3 Developing Political Support

The third activity involves developing political support for change (Cummings & Worley, 2005). Organizations are composed of powerful individuals and groups that can block or promote change, so that, leaders and change agents need to gain their support in order to implement changes.

2.2.4 Managing the transition

The fourth activity concerns managing the transition from the current to the desired future states. It involves creating a plan for managing the change activities as well as planning special management structures for operating the organization during the transition (Cummings & Worley, 2005).

2.2.5 Sustaining Momentum

The last activity involves sustaining momentum for change so that it will be carried out to completion. This includes providing resources for implementing the changes, building a support system for change agents, developing new competencies and skills, and reinforcing the new behavior needed to implement the changes (Cummings & Worley, 2005).

2.3. Organization Development (OD)

Many researchers have given the definition of organization developments. Cummings & Worley (2005) stated that OD is a system wide application of behavioral science knowledge to the planned development, improvement, and reinforcement of the strategies, structure, and processes that lead to organization effectiveness.

According to Harvey and Brown (2001), OD is an attempt to achieve corporate excellence by integrating the desires of individuals for growth and development with organization goals.

Lindsay and Petrick (1997) defined OD as planned, organization-wide management from the top, designed to increase organization effectiveness and health, and carried out through planned interventions in the organization's processes behavioral science knowledge.

In more general term, OD is a discipline aimed at improving the effectiveness of the organization and its members by means of a systematic change program. Change is a way of life in today's organization, and also, organizations are faced with maintaining a stable identity and operation in order to accomplish its goals. Therefore, it must be adapted to changes and OD today became a common term for learning organization because the world is changing. There is fierce competition in every industry. The organizations, that adapt themselves with the change, surely can survive in the business cycle.

From Table 2.1 below, it help the researcher to understand more about the major characteristics of the OD. Everyone in the organization must commit to change and work as a team. The OD programs must be designed to bring out the potential in people and enable them to perform better.

Table 2.1 Major characteristics of the field of OD (Harvey & Brown, 2001)

CHARACTERISTICS	FOCAL AREAS
1. Leading Change	Change is planned by managers to achieve goals.
2. Collaborative Approach	Involve collaborative approach and involvement.
3. Performance Orientation	Emphasis on ways to improve and enhance performance.
4. Humanistic Orientation	Emphasis upon increased opportunity and use of human potential.
5. System Approach	Relationship among elements and excellence.
6. Scientific Method	Scientific approaches supplement practical experience.

Source: Don Harvey & Donald R. Brown. An Experiential Approach to Organization Development, 2001, 6th edition, p.5

2.4. Organization Development Intervention (ODI)

ODI is a sequence of activities, actions, and events intended to help an organization improve its performance and effectiveness. Effective interventions based on valid information about the organization's functioning; they provide organizations members with opportunities to make free and informed choices; and they gain members' internal commitment to those actions (Cummings & Worley, 2005).

It is also the process of diagnosis and feedback brings about the specific activities for organization development which are called "interventions". It is the procedure that the OD consultants use to address an organizational problem. It is any event which is directed toward improving organizational effectiveness, which disrupts an organization's normal way of operating (Houston & McIntire, 1996).

2.4.1 Types of ODI

Cummings and Worley (2001) identified four types of ODI. They are Human Process Intervention, Technostructural Intervention, Human Resource Management Intervention, and Strategic Intervention.

Firstly, the human process interventions aim at people in the organization and the process they use to accomplish the organizational goals. They also aim at improving the functioning of people and organizational process. This intervention derive from the disciplines of psychology and social psychology and the applied fields of group dynamics and human relations which included the process consultation, team building, conflict resolution interventions, and large group interventions.

The second type of ODI is technostructural interventions which focused on an organization's technology and structure. They covered structural design, downsizing and reengineering (Cummings & Worley, 2005).

Thirdly, human resources management interventions are the planned activities that integrate people into organizations which is covered performance management, career planning and development, and managing workforce diversity (Cummings & Worley, 2005).

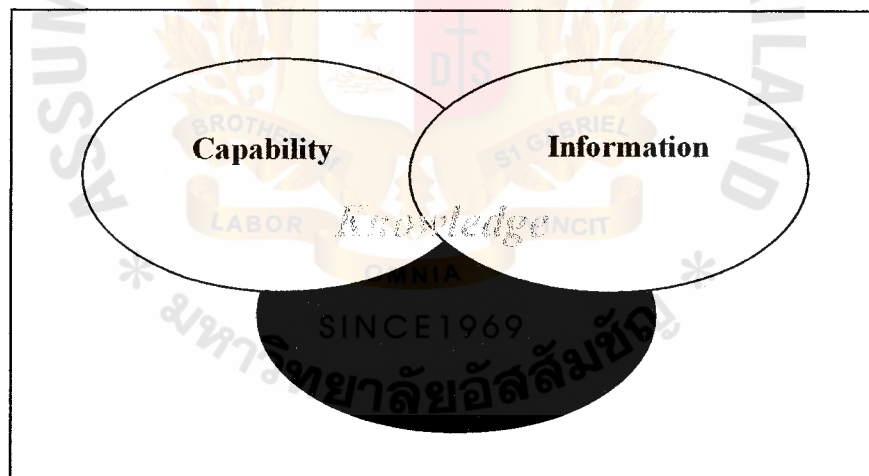
The last intervention is strategic interventions which bring about a fit between business strategy, structure, culture, and the larger environment. They covered integrated strategic change, transorganizational development, and merger and acquisition integration (Cummings & Worley, 2005).

2.5. Knowledge

Knowledge is the fact or condition of knowing something with familiarity gained through experience and association (the Merriam Webster Dictionary, 2006).

According to Todd and Thomas (2003), knowledge is information combined with understanding and capability as shown in Figure 2.3 below. It lives in the mind of people. Typically, knowledge provides a level of predictability that usually stems from the recognition of patterns. For example, the astute executive knows the significance of the dollar figures on her company's income statement, and this makes her capable of taking positive action.

Figure 2.3 Venn diagram shows the relationship between information and knowledge



Source: Todd R. Groff & Thomas P. Jones. Introduction to Knowledge Management, 2003, p.3

Davenport and Prusak (1998) attempted to define knowledge in context of experience, value, processes, practices, and norms. They stated that “Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a

framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Devenport & Prusak, 1998).

There is no consensus on the definition of knowledge and it is very difficult to try and to define something the existence of which most of the time we are not aware of. Instead, it is more practical to focus on the process that involve knowledge activities and see how these activities can be optimized.

Knowledge in the form of skills and competencies is normally acquired through training, socialization, and interaction with the environment. Knowledge embodied in documents does not necessarily translate into useful and usable knowledge unless it is read, digested, manipulated and communicated from one person to another. The process of transforming knowledge into information is called codification. But not all types of knowledge can be codified and captured.

In addition to this, Brown and Duguid (1998) also stated that knowledge is not the property of an individual but rather it held collectively by people working together. The know-how is knowledge created out of practice and collectively shared by the workgroup.

The confusion that surrounds knowledge management today can be attributed largely to the complexity of knowledge and its relationship to information and data. Figure 2.4 below shows the transition from data to information to knowledge to intelligence and finally to wisdom by Yamasaki's theory.

Figure 2.4 The knowledge transformation process (adopted from Yamasaki's theory)



Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.19

According to Polanyi and Nonaka (1995), knowledge can be generated into three main types shown in figure 2.6. The first and the most common type is called tacit knowledge, the second type is called explicit knowledge, and the third type is called implicit knowledge.

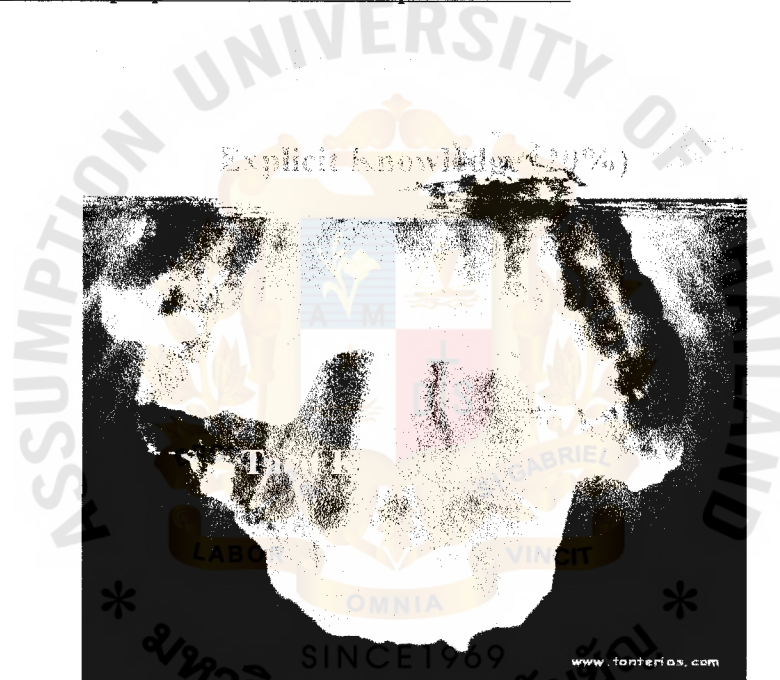
According to Nonaka and Takeuchi (1991), most of organization knowledge is tacit knowledge that can be expressed into proportion as 80:20 (Tacit: Explicit). For example an iceberg, about 20% of the total space of the whole iceberg that emerged and we can see represents explicit knowledge. And, for the rest 80% of the iceberg that we can not see represents tacit knowledge as shown in Figure 2.5.

2.5.1 Tacit Knowledge

Tacit knowledge is a type of knowledge that is personal and refer to as something that people do unconsciously and most of the time people are not aware of its existence.

It refers to personal knowledge embedded in individual experience and involving with the intangible factors such as personal belief, perspective, and values.

Figure 2.5 Show the proportion of Tacit: Explicit is 80:20



Source: www.tonterias.com

Tacit knowledge can be extremely difficult to transfer. For example, a mother tried to teach her child something as seeming simple as how to properly hold a pencil, even though how easy it is for her to do, but it also seems almost impossible for her to explain.

In this case the knowing is in doing. “It is not only difficult to articulate, but also it is something that we cannot express and we do not even know. We can know more than we can tell (Polanyi, 1995).”

2.5.2 Explicit Knowledge

Explicit knowledge is knowledge that has been articulated into formal language and can be much more easily transferred among individuals. It can be captured in the form of tables, diagrams, product specifications, and so on. It, also, can be shared and transferred through documents and e-mails.

Nonaka (1991) stated that explicit knowledge is as a formal and systematic, and offers product specifications, scientific formulas and computer programs as example. Other examples of explicit knowledge include documented best practices and the formula for finding the area of rectangle.

2.5.3 Implicit Knowledge

Implicit knowledge is knowledge that can be gained through learning and training. It is also a type of knowledge that can be self-acquired through reading and research. It can be articulated but hasn't is implicit knowledge. It means that its existence is implied by or inferred from observable behavior or performance.

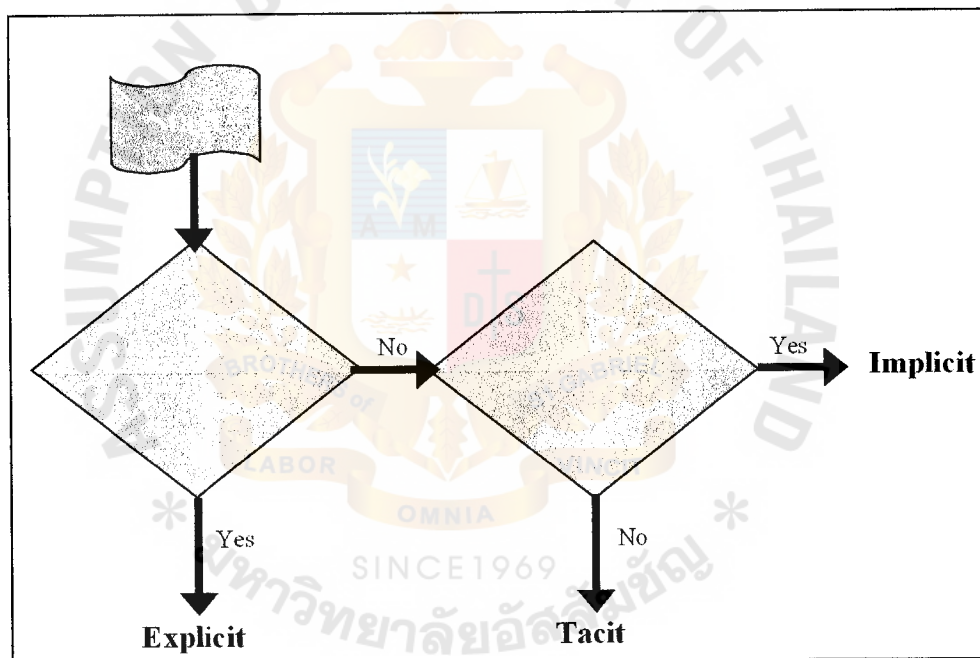
Figure 2.6. highlights the fact that not all types of knowledge can be captured and codified as information. And, a great deal of useful knowledge is normally lost when people leave an organization or feel that there is no incentive for them to share.

Therefore, it also increased pressure to the organization on how to capture those knowledge that can be generated into new ideas which can, then, be applied to develop innovation products, to improve the organization's productivity and performance as a whole.

2.5.4. Knowledge Conversion by SECI Model

According to Nonaka and Takeuchi (1995), there are four types of interaction within and beyond an organization that are based on the distinct differences between tacit and explicit knowledge. There are Socialization, Externalization, Combination, and Internalization (SECI Model). SECI model describes a dynamic process in which tacit and explicit knowledge are exchanged, transformed, and converted.

Figure 2.6 Tacit, Explicit, and Implicit knowledge



Source: James W. Cortada & John A. Woods. The Knowledge Management Yearbook, 2000-2001, p.18

- **Socialization (*from tacit to tacit*)**

It refers to the process of sharing tacit knowledge between people. This exchange of knowledge can take in one-to-one, one-to-many, or many-to-many interaction. Tacit

knowledge can be transferred from one person to another without verbal or written documentation, for example through shared experience and storytelling. Tacit knowledge can also be gained through observation, on-the-job training, and joint activities such as meeting and team or cross functional project. It deals mainly with communication and collaboration between people.

- **Externalization (*from tacit to explicit*)**

It refers to the process of articulating and codifying tacit knowledge. It is the attempt to convert the tacit knowledge into explicit knowledge through conceptualization, elicitation, and ultimately articulation, typically in with other and some proportion of a person's tacit knowledge may be captured in explicit form (Marwick, 2001). Externalization includes activities such as a discussion taking place among colleagues or team members, responding to a questions and storytelling.

- **Combination (*from explicit to explicit*)**

Combination refers to the process of converting explicit knowledge into more complex sets of explicit knowledge. After an individual has accessed and retrieved the information, a reconfiguring process is likely to take place, whereby the information is stored, understood and re-contextualized. Placing a project report in the organization's shared repository is an example of the combination process.

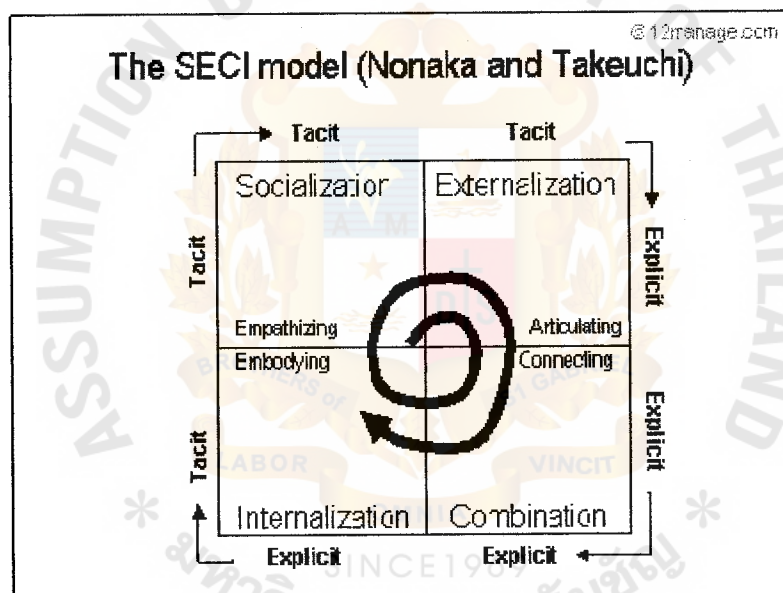
- **Internalization (*from explicit to tacit*)**

Internalization refers to the process of utilizing explicit knowledge. This requires processing external knowledge or information, understanding it, and then internalizing it. This, in turn, is supposed to create tacit knowledge for the individual. For example,

internalization take places when an individual accesses and reads a project report from the organization's shared repository, understands the report, and then contextualizes those information to suit his or her needs and matches with the situation. Internalization can take place when an individual learns or gains knowledge by doing or experiencing.

Successful internalization is a function of the sense-maker's individual attributes, including personal expertise, experiences, and mindset (Junnarkar & Brown, 1997).

Figure 2.7 SECI Model by Nonaka and Takeuchi



Source: Ramon C. Barquin. Knowledge Management and Knowledge Exploration, 2006, p.40

2.6. Knowledge Management

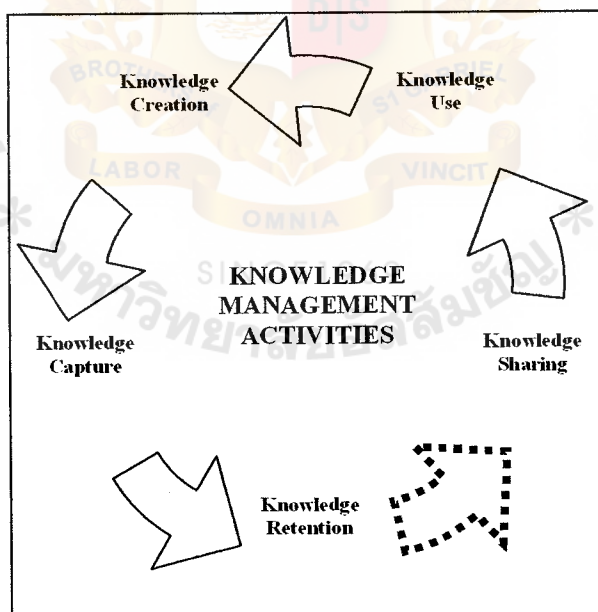
The advances in information and communication technologies, such as internet, have highlighted the importance of knowledge and the need for knowledge management.

One of the important characteristics is that the goals of knowledge management put more emphasis on the value-added for users as well as require ongoing user contribution and feedback not only simply on the delivery and accessibility of that knowledge.

Since knowledge sharing is the key process to drive knowledge management activities cycle effectively, this research study put more attention on this process which will be clarified on the need for knowledge sharing, motivation, collaboration, and communication. These points will be shown in items 2.7.

There are five dimensions of knowledge management activities as shown in Figure 2.8 below; knowledge creation, knowledge capture, knowledge sharing and transferring, knowledge retention, and knowledge utilization and use.

Figure 2.8 The five dimensions of knowledge management activities.



Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.67

2.6.1. Knowledge Sharing

Knowledge sharing is a very important activity in knowledge management. The most important aspect of knowledge sharing is the human factor. People hold the keys for any successful knowledge-sharing activity. Today, with the use of high technologies, knowledge sharing is extended beyond the organization as individual can now quickly and easily access information from where at any time such as through internet. It is also enable the sharing of ideas among the employees in the organization.

According to Lee and Hong (2002), knowledge sharing can help organizations improve learning, sharing, and cooperation among all levels of employees and even with external customers and suppliers.

2.6.2. Knowledge Use

The identification and capture of knowledge should lead to knowledge utilization and use. It does not make sense for an organization to spend money and time on knowledge capture unless this knowledge is going to be used effectively in the creation of new ideas, new products and services. Upon accessing, understanding, and conceptualizing the knowledge available via the process of knowledge sharing, new knowledge is created.

Knowledge that has been captured, stored, retrieved, and analyzed can be leveraged for strategic and tactical decision-making and problem-solving.

2.6.3. Knowledge Creation

Knowledge creation refers to the discovery and generation of new knowledge. Knowledge can be generated through various sources such as experimentation, observation, training, people interaction, interaction with the environment, research, and innovation

thinking. Some of the knowledge created is codified or documented as explicit knowledge.

While, the rest are generated resides in people's mind as tacit knowledge in the form of skills and competencies.

2.6.4. Knowledge Capture

Knowledge capture refers to the enablity of organization to identify knowledge sources and to try to capture that knowledge or assist to transferring it from one person to another. Knowledge in the form of tacit knowledge can be captured and codified, and, most organization would like to retain this knowledge. The organization knowledge resources vary from one organization to another for example competitors intelligence, customer information, internal products and services information, and so on. Knowledge capture describes the process by which the know-how and know-who can be documented and stored. Although, the capturing process is a difficult task, when executed successfully, it will ensure the retention of knowledge in the organization

2.6.5. Knowledge Retention

Most organizations realize the importance of knowledge retention, either in the form of explicit knowledge or in the form of tacit knowledge. Knowledge retention is a difficult task that requires a system and process. Technologies, today, are the keys to facilitate the storage and organization of information. There are some of the tools that can be used for knowledge retention such as database management systems, data warehousing, intranet, and etc.

2.7. Knowledge Sharing

Nowadays, large amounts of information are being shared freely over the internet and through subscription to databases and information repositories. Knowledge sharing refers to the communication of all types of knowledge, which includes explicit knowledge, the know-how and know-who which are types of knowledge that can be documented and captured as information, and tacit knowledge in the form of skills and competencies.

Effective sharing involves the action of transmission and absorption by the sender and potential receiver respectively. If knowledge is received but not absorbed, and then the knowledge transfer process is not considered complete. For knowledge transfer to take place, it has to be received, processed, and absorbed (Davenport & Prusak, 1998).

The critical outcome of knowledge sharing is the creation of new knowledge and innovation that will significantly improve organizational performance. O'Dell and Grayson (1998) believed that for knowledge sharing to work, organization must embrace the internal transfer of knowledge as a core process designed to deliver dramatic and sustainable improvement in performance.

In addition, knowledge sharing also take place outside the organization with customers, suppliers, partners, collaborators, etc. The knowledge transfer can take many forms. It can be in the form of writing book or research. Natarajan and Shekhar in 2000 stated that the irresistible urge to share knowledge propelled them to write their book. Knowledge transfer can occur while delivering a lecture or making a speech or presentation.

From the diagnosis, the researcher found that some of TPI's people are still not know on how to share their knowledge especially on their tacit knowledge, or, some do not feel

free to share their knowledge. The researcher, therefore, has strongly believed that creating the awareness of knowledge sharing as well as creating the collaboration on knowledge sharing activities will be supported to smoothly drive knowledge management activities cycle and also will be improved the overall TPI's productivity.

2.7.1. The Need for Knowledge Sharing

There are several reasons that make knowledge sharing essential. This process has led to the requirement that the knowledge that they have accumulated over the periods of time be codified in some form and passed on before they retire. Much knowledge sharing has to take place to take advantage of the knowledge that exist in organization, for example, to avoid reinventing the wheel, to reduce duplication and replication of effort, and to avoid the same errors.

Drucker (1994) proposed that applied knowledge is only effective when highly specialized. Highly specialize knowledge workers mean that teams become the work unit rather than the individual himself. They become productive only if combined together into single, unified knowledge.

Normally, the organization has a large portfolio of products and services, far too many for any one person to comprehend, but the same idea can be adapted to different processes, products, or services.

Competition is based on speed to market and shortening product life-cycles. Intel accelerated the development process for microprocessors and ensured the quick harvesting of research results by collaborating the process development and production groups to

facilitate the exchange of ideas and to enable the groups to gain an understanding of the issues they faced (Yu, 1998).

2.7.2. Motivation

In order to gain collaboration and communication through knowledge sharing activities, a system of reward, recognition, and motivation must be present in the organization. Knowledge is something valuable and people might not give it away without something in return. This is common in a business climate where competition between employees is very stiff, and the monopolizing of knowledge by individuals may give them an edge over their peers. An obvious solution to this problem is to align the reward and recognition system with employees who support and adhere to the sharing of knowledge.

According to Smith and McKeen (2001), rewards and recognition relate positively to group cohesiveness, teamwork, performance, problem-solving, and problem-prevention. There are many forms of rewards including with money, recognition, time off, empowerment, work select, advancement, and development. Rewards should be early and often then they should promote desired behaviors such as collaboration, experimentation, risk-taking, and learning.

Dermott and O'Dell (2001) stated that reward and recognition is a way to make the importance of sharing knowledge visible. Management, in addition, should evaluate performance based on sharing rather than rewarding only the knowledge owner. A knowledge-oriented reward system would then encourage people to share and collaborate in their daily course of work.

2.7.3. Collaboration

Without friendship and the openness and trust that go with it, skills are barren and knowledge may become an unguided missile (Frank, 1983).

Collaboration is about dialogue. It is provided a platform for people to engage in discussion and exchange information as well as to expand of people current thinking. The paradox of collaboration is that through the process of interacting with other, individuals discover more of themselves. It is also aided by business process automation capabilities such as routing and workflow. The objective of collaboration is to achieve business goals and improve organizational learning and innovation. It is believed that collaboration assists in the process of capturing of tacit knowledge, although problems still exist in translating the tacit knowledge captured into explicit knowledge. There are five requirements for successful collaboration as follow:

- **Dialogue**

Collaboration can only exist in the presence of dialogue. If people try to build relationships without having an understanding of the partners potential and their unique perspectives, it will probably succeed in building a negative relationship. Dialogue typically strengthens personal relationships and solves problems. The key difference between dialogue and empty discussion is valuing the points of view of others. A good understanding should lead to an attitude that respects, values, and demands a diversity of viewpoint. In diversity, there is strength, adaptability, and insight.

- **Trust**

Dialogue requires a certain degree of mutual trust. Collaboration among people of unequal status and authority can make dialogue more difficult to achieve. Avoid displaying coercive, authoritarian attitudes and flatten the political hierarchy to help build that trust. Todd and Thomas (2003) stated that no project can be complete failure for you if you can use trust as an opportunity to improve your relationship with your co-workers, and, no project can be a complete success if the price of success is bad relationships with your co-workers.

- **Common goal**

Members of a collaboration team come to the table with their own agendas, fears, assumption, and requirements. Expecting them to ignore these issues is both naïve and dangerous. Once an atmosphere of trust and two-way dialogue have been achieved, work toward making everyone's position clear and explicit. Too often collaboration means being dropped into a group of people you don't know to write a document in which you have no interest or belief. It should be win-win for all members, therefore, this collaboration benefit no one.

- **Empathy**

Discussion is more common than dialogue because people find it easy to express their opinion and exchange ideas with others, but they usually do not respond positively to opinion with which they disagree. Although it is easier to spend time congratulating people who agree with you, however, effective collaboration calls for finding common ground

within the ideas of those with whom you disagree. Be ready to truly listen to others and to look for win-win solution whenever possible.

- **Openness**

Collaboration requires that participants be uninhibited in bringing their assumptions into the open, where others can respond to them. Unexamined assumptions typically result in misunderstandings and errors, so, it is better to get the bad ideas on the table than to squash them. Openness ensure that the collaboration strategy does not rely on false assumption of shared goals and diverging abstractions among participants. Also, today's bad idea can often become tomorrow's innovative solution (Todd&Thomas, 2003).

2.7.4. Communication

In all change situations good communication can help to reduce resistance by ensuring that the reasons for change are clear and the degree of urgency is understood and that all those concerned know what the change mean. Resistance maybe lower in a crisis situation if people know there is a crisis (Hussey, 1995). Communication, however, also need to be encouraged directly through interventions that will ensure people are continuously talking about issues of concern to the organization as well as sharing their knowledge.

Organization communication is the transfer of information and knowledge among organization members in order to achieve organization efficiency and effectiveness. Communication plays an important role in ensuring the success of any change in the organization culture. And communication strategies, it can also help to reduce the negativity

expressed toward change and the implementation of knowledge management within the organization.

Communicating the right message to the right people at the right time through the right channels within the organization is crucial to the success of any cultural change (Hawamdeh, 2002).

2.8. Process Awareness in Divergence-supportive Knowledge Communities

DIVERgence Awareness (DIVA) is a technological framework for management of divergence occurrence in knowledge communities, which is a precursor to the creation of new knowledge in these communities (Daneshgar et al, 2005).

The web-based knowledge communities are special kind of discussion forum that are considered as today's main method for knowledge sharing in virtual communities. It is also designed to facilitate communication between remote participants at same and different times whenever they wish or are able to do so.

According to the article, authors have adopted the Nonaka's knowledge creation spiral process in order to take into account knowledge codification as a method for developing knowledge repositories. The spiral process consists of four steps which are as follow:

Extetalization means to make explicit some knowledge that is at the individual knowledge context, normally, by some form of formalism. It is carried out in isolation from other collaborating actors (Daneshgar et al, 2005).

Submission / Publication is the act of making public a new knowledge (Daneshgar et al, 2005).

Internalization is an individual process when someone realizes and appreciates the subject of a new contribution. The new knowledge will then become part of the individual knowledge context. Internalization can be detected by monitoring a person's reaction to a contribution (Daneshgar et al, 2005).

Reaction is the act of giving some kind of response to a contribution (Daneshgar et al, 2005).

The natural consequence of the act of sharing knowledge in virtual knowledge communities is divergence occurrences. Divergences occur until such time when the community reaches a unique perspective. It's also defined as generation of alternatives, arguments and different point of views about a topic of interest. It demonstrates that as the degree of people's involvement in various communication acts increases, it will be the opportunities for divergence. The knowledge management community tends to live peacefully with such convergences and sees them as the opportunities for interaction and, therefore, for sources of new knowledge.

The general opinion is that conflicts must be treated as a natural part of the knowledge sharing process which promotes emergence of new knowledge. As a result, any technological approach that supports knowledge sharing activities must pay attention to divergence as well as conflicts and how to manage them (Daneshgar et al, 2005). The DIVA technological approach also allows communities to coexist with conflicts and letting agreed knowledge to emerge naturally through acts of knowledge sharing. Moreover, the authors' proposition is an extension to the existing knowledge sharing process used in DIVA in order to enhance knowledge sharing capabilities of the actors.

According to this extended formalism, the DIVA process will be a collaborative process where various actors perform certain roles, and each role performs one or more tasks using various artifacts. Such added formalism will then enable identification of the process awareness requirements of the actors in term of collaborative semantic concepts such as other roles within process, their tasks, and the artifacts that they use for executing those tasks. This in turn will provide a mean by which actors' process awareness requirement can be defined as a precursor for enhancing collaboration and knowledge sharing within the DIVA process (Daneshgar et al, 2005).

2.8.1. Supporting Knowledge Sharing With Divergence

Diaz & Canals (2004) introduced a technological approach for supporting and management of divergence awareness in knowledge communities that for simplicity called DIVA.

DIVA is a technological model of a collaborative workspace that manages community forums while allowing divergence to coexist within the community as a source of creating new knowledge within the community. DIVA also provides a conceptual framework for creating new knowledge through management of divergence occurrences, enabling community members to contribute while moving between private and public knowledge spaces, and managing contribution threads seamlessly. The DIVA workspace system is aware of its members' profiles such as skill, interests, as well as their evolution. And, as a result it can deliver custom-made contribution to the members (Daneshgar et al, 2005).

The DIVA workspace consists of a private knowledge workspace (PKW) and a shared knowledge workspace (SKW). The PKW is a non-public space that can be accessed by its owner only. It represents the private knowledge context and allows users to externalize any knowledge privately. More specifically, PKW contains personal knowledge, point of view, and alternatives. The SKW on the other hand, is a public space that can be accessed by any community members, and represents shared knowledge context.

The objective of a process awareness framework is that to explicate the private and public contexts for the actors through measurement of their process awareness within the DIVA knowledge sharing process. Through this extended formalism all actors collaborate and interact with one another by assuming one or more roles within the collaborative process that knowledge sharing takes place. By extending the scope of the knowledge sharing process from being a set of pair wise intellectual activities into a larger collaborative process where people perform various tasks and use various artifacts, then, the notion of the process awareness will become a major issue (Daneshgar et al, 2005).

2.8.2. Introducing Extended Formalism : The Aware Net

The awareness net used in this paper is a major component of a conceptual framework called Process Awareness Framework or PAF (Daneshgar et al, 2005).

The PAF was initially created for identification of process awareness requirements of the actors in collaborative business processes in terms of roles, tasks, and artifacts that exist within the collaborative processes. It was also intended to provide a measure for such awareness (Daneshgar et al, 2005). Subsequent studies, however, revealed its additional capabilities including identification of the storage requirements of the knowledge-base

systems for maintaining actors' process awareness as well as identification of the user-interface design requirements for systems that provide support for knowledge sharing processes (Daneshgar et al, 2005).

2.9. Knowledge Sharing Implementation Tools

There are various tools for sharing knowledge such as After action review, Knowledge center, Knowledge inventory, Social network analysis, Communities of practice, Exit interview, Knowledge audit, Storytelling, and etc. This research study will be focused on Communities of practice (COP) tool which is the most common tool used in knowledge management program and other tools will be present as an overview as follow:

2.9.1. Knowledge Center

A knowledge center typically provides a focus for collecting, organizing, and disseminating both knowledge and information. It doesn't mean that the knowledge center will actually perform all of these activities itself. Rather, it will create a framework and provide leadership, co-ordination, guidance and expertise. Good knowledge centers will put as much emphasis on connecting people with people to know-who as well as they do on connecting people with information and document collections.

2.9.2. Knowledge Inventory

Knowledge inventory is an approach that allows the tacit knowledge or know-how of experts and top performers in an organization to be captured and documented. This know-how can then be made available to others in various ways such as through training program, manuals, best practices, and knowledge management database. Its aim is to help

organizations make better and wider use of their existing knowledge by extracting it from the heads of a few key people and making it available to a much wider range of people.

2.9.3. Social Network Analysis (SNA)

SNA is the mapping and measuring of relationships and flows between people, group, organizations, computers or other information and knowledge processing entities (Krebs, 2002).

In the context of KM, SNA enables relationship between people to be mapped in order to identify knowledge flows such as Whom do people seek information and knowledge from? Who do they share their information and knowledge with? In contrast to an organization chart which shows formal relationships, for example, who works where and who report to whom, a social network analysis chart shows informal relationship such as who knows who and who share information and knowledge with who. It, therefore, allows managers to visualize and understand the many relationships that can either facilitate or impede knowledge creation and sharing. Because these relationship are normally invisible. SNA is sometimes referred to as an organization x-ray, showing the real networks that operate underneath the surface organization structure.

2.9.4. Exit Interview

Exit interviews are conducted with employees leaving an organization. The purpose of the interview is to provide feedback on why employees are leaving, what they liked or didn't liked about their employment and what areas of the organization they feel need improvement.

More recently, the concept of exit interview has been revisited and expanded as a KM tool, as a way of capturing knowledge from leavers rather than simply capturing human resource information, the interview also aims to capture knowledge about what it takes to do the job.

2.9.5. After Action Review (AAR)

AAR is a discussion of a project or an activity that enables the individuals involved learn for themselves what happened, why it happened, what went well, what needs improvement, and what lessons can be learned from the experience. The spirit of an AAR is one of openness and learning. It is not about problem fixing or allocating blame. Lesson learned are not only tacitly shared on the spot by the individuals involved, but can be explicitly documented and shared with a wider audience.

2.9.6. Communities of Practice (COP)

COP is a network of people who share a common interest in a specific area of knowledge or competence and are willing to work and learn together over a period of time to develop and share that knowledge.

According to Wenger (2002), it is pointed that COP is a groups of people who share a concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise by interacting on an ongoing basis. He also believed that learning is a social activity and that people learn best in groups.

Through interactions via storytelling, mentoring, and discussions, communities of practice allow the better transfer of tacit knowledge. Many of the skills and competencies acquired in the job environment are through observation and training. Within COP, people

share common values, observe and interact with each other, exchange views and ideas and contribute to the knowledge creation process. Knowledge creation and transfer are integral parts of COP activities and interaction. Ward in 2000 said that he believes that COP have the potential to enhance the organization's ability to learn and grow and in return form the organization's most versatile and dynamic knowledge resource.

- **Characteristics of COP**

The characteristic of COP vary from one organization to another. It varies in the form of it can take as well as in the manner of practice. COP starts over the common interest, certain problems that concern a group of people, or as a result of sharing certain values and beliefs. The people who belong to these communities might not be working together everyday, but, they meet in either a physical or virtual space because they find value in their interaction. Through discussion, interaction, and participation, they share information, insight, and advice, and help each other in solving common problems. People working in organizations often develop such informal network of relationships that indirectly promote knowledge sharing. Informal networks of relationships often enable the organization to accomplish tasks faster and better (Hawamdeh, 2003).

Most COPs emerge spontaneously, without any effort on the part of management. The members get together voluntarily for common purpose where they can learn from each other. The informal nature of many COPs creates a more conducive environment for knowledge sharing. The members in these communities share equal amounts of passion and commitment to the issues being raised and discussed.

COP is about knowledge sharing. The best way to share knowledge is through social interaction and informal learning processes such as storytelling, conversation, coaching, and apprenticeship. All these processes can be found in COP. However, in a COP, the members participate voluntarily and assume roles to support one another. The roles may be formal or informal.

Figure 2.9 Characteristic of Communities of Practice



Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.123

Wenger (2002) identified some roles namely the community coordinators, experts and facilitators, pioneers and historians. The community leader and facilitator are the member who helps the community focus on its domain, maintain interrelationships, develops its practice and even creates a bridge between the community and the formal organization.

Other members also play their roles by identifying issues or problems that crop up in the course of their work for discussion and sourcing for relevant information.

Table 2.2 Communities of Practice in relation to Team and Work group

Aspect	COP	Team or Work group
Communication	Face to Face	Face to Face
Goals	Knowledge sharing, learning, Knowledge creation	Task, Project oriented
Culture	Culture of learning	Culture of action
Emergence	Spontaneous	Intentional
Membership	Voluntary	Formal, Assigned by management
Knowledge need	Community	Project requirement
Knowledge use	Individual, Group, Organization	Individual, Group
Duration/Lifespan	Unlimited	Limited
Structure	Homogeneous	Heterogeneous
Focus	Same topic, Same problems, Same interest	Deliverables

Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.127

- **COP differ from Team or Work group**

It is also important to differentiate between COP and team or work group. Table 2.2 shown the difference between the two different categories. Team or work group members are tend to be assigned by management and share with the task oriented. The group is heterogeneous and the focus is more on deliverables rather than knowledge creation. While, COP are people who share a common interest and develop chemistry and lasting friendship.

- **The Value of COP**

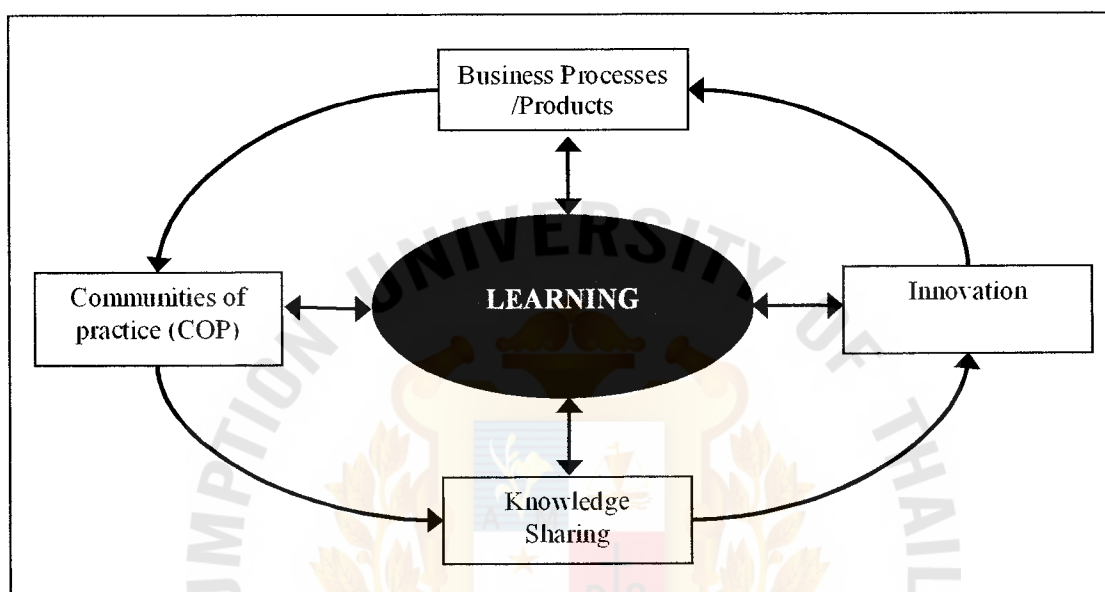
The value of COP is measured by its contribution to the knowledge creation process. It's valuable to promote knowledge sharing through socialization. COP creates value for their members and their organization and in return they contribute to success in the knowledge economy. Figure 2.10 below shows the importance of COP in innovation and business processes. Also, knowledge sharing that takes place within the community results in innovation and product development. All these activities normally happen in a continuous learning environment.

- **Value to the individual**

COP creates value for its individual members in many ways. In the short term, when members encounter problem in their works, they are able to get immediate help from other community members. Hence there is easy access to the relevant expertise and less time is required to hunt for information or solutions. With constant interactions in the community and exposure to the different perspectives of their peers, the members are able to devise better solutions and make better decisions. The knowledge they acquire through participation in the community will enhance their skill and competencies resulting in a better

performance. Members also tend to become more confident in their approach to problem-solving. All these advantages lead and result in higher job efficiencies of each member.

Figure 2.10 The value of Communities of practice



Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.127

- **Value to the organization**

The value created and the knowledge gained by individual members can now be seen as relevant and beneficial to the whole organization. COP can be an integral part of the organization and it plays an important role in research and development activities. The community can be viewed as an arena where the member are able to find answers for specific problems, raise questions and get answers in quicker and efficient way. With multiple perspectives and collective knowledge, a complex problem can be simplified and overcome. With COP the organization is able to come up with the best solution in a shorter

time and at lower cost. In addition, the organization is also able to respond more rapidly to customer needs and inquiries with improved quality (Storck & Hill, 2000)

It is also important for the new employees to get acquainted with the procedures, methodology, tools and activities involved in the new position. An effective form of learning normally happens on the job and through interaction with fellow workers. Moreover, the communities preserve the tacit aspects of knowledge that formal systems cannot capture. Therefore, new employees are able to learn better and faster from the experiences of their seniors.

Stimulating and encouraging innovation is one of the main advantages of COP. It also provides the platform needed for exchange of ideas and discussions about similar problems and likely solutions. Communities are able to create the cultural environment ideal for innovation by stimulating interactions and connecting members with overlapping skills and disciplines (Brailsford, 2001). With such rich discussions of the different perspectives and experiences, the likelihood of innovation ideas emerging increases, spawning new products and services.

Moreover, COP also provides a sense of identity to their members in the member's workplace, no matter to which team they belong, it will resulting in the form of highly and strongly teamwork. People in the organization are normally formed into small informal networking groups which are very similar to COP. Their loyalty to a smaller group tends to be stronger than to the organization as a whole.

In addition, it will also attract good and more capable people who feel that their presence is welcomed and their contributions are highly appreciated in the community. In

the event of loss of personnel from the organization, the loss of knowledge or brain drain which most of knowledge-based organization confront is greatly minimized as this knowledge is living within the community.

2.10. Learning Organization

It is difficult to distinguish between the learning organization and organizational learning. Some other researchers compared organizational learning and the learning organization in terms of process versus structure. By the way, in this research study, the researcher didn't distinguish between organizational learning and the learning organization, and remaining used learning organization as a main issue.

Learning organization is the ability of an organization to gain insight and understanding from experience through experimentation, observation, and analysis, and through a willingness to examine both successes and failures. It can be viewed as the process of gaining knowledge and developing skills and competencies which enable the organization to compete more effectively. Learning can take place individually, collectively as a team, or as an organization. Learning from past experiences, processes, and practices leads to the creation of knowledge and the generation of new ideas and new concepts which can then be applied to improve the organization's productivity and performance and to develop innovative products. The new knowledge created can be used as an input for future learning.

According to Senge (1990), it is defined that learning organization as an organization where people continually expand their capacities to create the results they truly desire, where new expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.

Successful organizations are committed to learning as a way to ensure knowledge transfer in the form of skills and competencies. Knowledge transfer can be carried out through sharing, collaboration, and teamwork, and through the development of the ability to exploit and learn from what they know. Forming teams that allow debate, challenges, and creative tension to occur is one way to encourage learning and the generation of new knowledge. Team members will be exposed to different perspectives, learn from other members and interpret and use shared knowledge appropriately.

According to Bessant and Pavitt (1997), internal structures and processes must continuously balance two conflicting requirements. The first is to be able to identify and develop specialized knowledge within the technological fields, business functions, and product divisions. The second requirement is to be able to exploit this knowledge through integration across technological fields, business functions, and product divisions. Due to this conflict, it is necessary to strategically manage knowledge and to look for integration across the organization. Internal integration relates to the linking of specialized skills, knowledge bases, and technological and managerial system. While, external integration relates to the generation of options using external source of information and to the ability to evaluate those options according to the existing knowledge base.

2.10.1. Two Sides of the Same Coin

KM practices are key enablers and essential tools for a learning organization. It provided the needed infrastructure in the form of information, systems and processes that facilitate the management of knowledge and flow of information within the organization. The concept learning organization and knowledge management can be considered as two

sides of the same coin. The key focus is to improve organization skills at all levels in the organization through better handling of the knowledge resources.

Many other researcher and practitioners view learning as a social activity and people learn best when they can interact with other people as full members in communities of shared interest (Rosenberg, 2001). In this respect organizations need to provide a cooperative and collaborative environment in which employees learn from each other as well as from both mistakes and successes, then new ideas emerge as a result of the increased interaction. Access to the right information at the right time, a sense of belonging and trust in the knowledge community are necessary for learning to take place.

Evolving the KM strategy from the concept of learning organization, therefore, leads to more innovation and higher efficiency, and also helps the organization to transform itself into a high performance learning organization.

2.10.2 The Characteristics of Learning Organization

Learning in organization means the continuous testing of experience and the transformation of that experience into knowledge—accessible to the whole organization, and relevant to its core purpose as shown in Table 2.3 (Harvey & Brown, 2001).

A learning organization may be defined as an organization that has developed a continuing capacity to adapt and change. In its essence, every organization is a product of how its members think and interact, changing the way they interact (Harvey & Brown, 2001)

2.10.3. The Importance of Learning

Learning is a basic process by which static information is transformed into dynamic or active information. It is a skill that people possess intrinsically and continue to use throughout their lives, whether in the workplace and elsewhere. Liebowitz (1998) defined learning as the acquisition and application of new knowledge, skills, and experiences that change behavior, thought, and beliefs to improve performance or to better adapt to or to take advantage of the environment.

Table 2.3 Characteristics of Learning Organization (Harvey & Brown, 2001)

Characteristics of a Learning Organization

- People feel they're doing something that matters-to them personally and to the larger world.
- Every individual in the organization is somehow stretching, growing, or enhancing his or her capacity to create .
- People are more intelligent together than they apart. If you want something really creative done, you ask a team to do it.
- The organization continually becomes more aware of its underlying knowledge base- particularly the store of tacit, unarticulated knowledge in the hearts and minds of employees.
- Visions of the direction of the enterprise emerge from all levels. The responsibility of top management is to manage the process whereby new emerging visions become shared visions.
- Employees are invited to learn what is going on at every level of the organization, so they can understand how their actions influence others.
- People feel free to inquire about each other's (and their own) assumptions and biases. There are few (if any) sacred undiscussable subjects.
- People treat each other as colleagues. There's mutual respect and trust in the way talk to each other and work together, no matter what their position may be.
- People feel free to try experiments, take risk, and openly assess the results. No one is killed for making a mistake.

Source: Don Harvey and Donald R. Brown. An Experiential Approach to Organization Development, 2001, 6th edition, p.396

Many researchers and practitioners argue that organization should continue to invest in learning to ensure the transfer of knowledge that will help in sustaining the business. The flow of information and know-how within the organization facilitates knowledge creation and knowledge sharing which in return improves productivity and enhances organizational competitive advantage. Learning activities in the organization may take place in a planned or unplanned manner by individuals or groups within the organization.

According to Garvin (2000), learning process have to be analyzed to foster better learning and they have to be managed so that more effective learning occurs by design rather than by chance.

The learning style is a characteristic that an organization exhibits in addressing its improvement. Three different styles of learning are discussed which are Single-Loop, Double-Loop, and Deutero learning.

- **Single-Loop**

Single-loop learning refers to the detection and correction of errors (Argyris&Schon, 1996). This is the basic level of organizational learning where the effectiveness of the rules and policies is questioned. However, single-loop learning can be detrimental to the learning organization as it can create a competency trap because organizations become less likely to seek alternatives (Levitt & March, 1988).

- **Double-Loop**

This type of learning is more in-depth and occurs when the organization is willing to look at deeper organizational norms and structures, to raise questions about their validity, and to look at why the errors and successes occurred in the first place (Marquardt, 1996).

This results in fundamental changes that might impact values, strategies and beliefs.

Therefore, double-loop learning can be seen as trying to solve the root cause of the problem and not the symptoms.

Single-loop learning is important for solving immediate problems and getting the “everyday job done” whereas double-loop learning is necessary for the organization to have “another day” (Argyris&Schon, 1996).

- **Deutero Learning**

According to Argyris and Schon (1996), this “learning about learning”. Enterprises that nurture the deuteron learning style enquires not only into the root causes and outcomes of their practices which double-loop actions attempt to uncover, but, also explore the relevant of their whole learning process. Members discover what they did that eased or inhibited learning. They invent new strategies for learning in order to generate or innovate the learning process. The results are encoded and reflected in organizational learning practice.

The successful organization is multi-layered and moves through the three successive styles progressively. However, the effectiveness of the organization as a learning organization lies not so much in progressive through the stages, but, it is more about the speed at which it reaches a higher stage (Lassey, 1998).

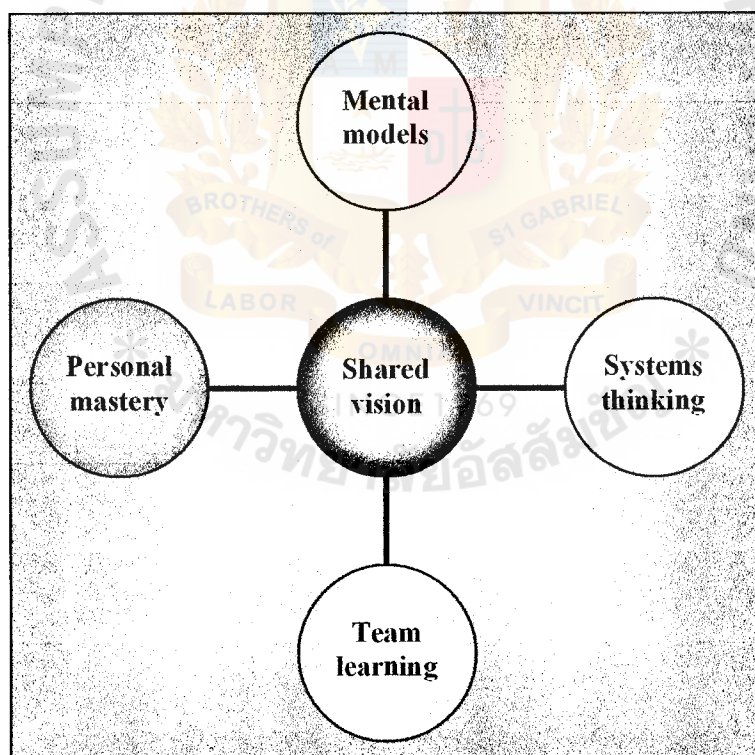
2.10.4. The Fundamental of a Learning Organization

Learning organization are based on several ideas and principles that determine how individuals within the organization interact and inter-organizational practices are carried out. Senge (1990) visualizes the learning organization as continually expanding its capacity to

create its future. For such an organization, it is not enough merely to survive. Survival learning or adaptive learning is necessary, but for a learning organization, the adaptive learning has to be joined by generative learning or double-loop learning that enhances the capacity to create.

According to Senge (2003), what fundamentally distinguishes learning organizations from traditional bureaucratic organizations will be mastery of five basic disciplines. There are personal mastery, mental models, shared vision, team learning, and systems thinking as shown in Figure 2.11.

Figure 2.11 Senge's Five Components of a Learning Organization



Source: Suliman Al-Hawamdeh. Knowledge Management-Cultivating knowledge professionals, 2003, p.147

- **Mental Models**

Mental models to a large extent determine our perception of the world around us. People form them to help them to see the world in a simplified manner. It allows individuals within the organization to think about and reflect upon the structure and direction of the organization. It can also be viewed as filters and simplified mechanisms to deal with complex problems. Often, new ideas and insights conflict with deeply held beliefs making it difficult for these ideas to get into practice. These predefined beliefs and perceptions of the world can often limit individuals to familiar ways of thinking and acting. According to Senge (2003), the problems with an existing mental model is not whether it is right or wrong but that it lies beneath one's consciousness and, therefore, is extremely difficult to identify and in turn examine.

A learning organization needs to be aware of the existence of mental models and be willing to examine and challenge them.

- **Shared Vision**

Shared vision enables people within organization to look at the world through the same magnifying glass. It implies a sense of group commitment to a set of goals and objectives. It is the ability to create a sense of belonging and the ability to bind people together around a common identity and sense of destiny. Shared vision is important to the organization as it provides a focus and creates a reference point to which people in the organization can refer when measuring their contribution. It is important in a learning organization that people within the organization have a collective understanding and vision of what the principles, goals and purposes of the organization are.

This type of institutional structure can be made part of the boarder organization by emphasizing with a great degree of openness and clarity exactly what the vision of the organization is. To build a shared vision, it should start to review from oneself which mean that individuals must be also encouraged to hold and express their personal vision.

- **Team Learning**

According to Garvin (1993), not all learning comes from reflection and self-analysis. Indeed, some of the most powerful insights come from looking outside one's environment to gain new perspective and ideas. Team learning involves knowledge sharing and the utilization of knowledge in a collective thinking environment.

Senge (1990) believes that teams, rather than individuals, are the basic learning units in modern organizations. The emphasis of team learning is on dialogue, which facilitates the examination of current assumptions that may inhibit learning.

- **Personal Mastery**

Personal mastery is about the commitment individuals make with regard to their self-improvement. It encompasses continuous improvement in learning skills and competencies and engaging in continuous personal and professional development. A learning organization needs to support the development and application of this discipline among organization members. Personal mastery is an institutional and cultural ideal that must occur within the organization at the individual level (from vice presidents down to workers) in the construction of the learning organization (Guthrie, 1996).

Personal mastery is about gaining personal power and exercising control. According to Epictetus "No man is free who is not a master of himself."

- **Systems Thinking**

System thinking represents the cornerstone of a learning organization. Senge (1990) believed that individuals in a firm need to understand that business is a system and learn to look at its interrelated whole instead of focusing on snapshots. To develop systems thinking, individuals can take part in activities going on in different parts of the same organization. System thinking provides us with the ability to see the bigger picture by looking at the interrelationships of a system as opposed to simple cause-effect chains, allowing continuous processes to be studied rather than single pictures.

Senge (1990) sees systems thinking at the heart of his learning organization model, where all organization members develop an understanding of the whole rather than just fractional parts of the organization in terms of structure, processes, thinking, and behavior. Without a systematic orientation, there is no motivation to look at how the disciplines interrelate. By enhancing each of the other disciplines, it continually reminds that the whole can exceed the sum of its parts.

2.11. Action Research Framework

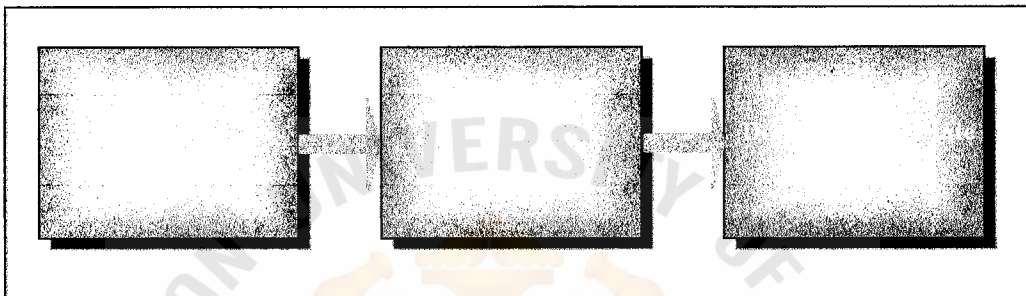
This action research framework is introduced in order to see the overview of the flow of this research study. It consists of three phases which are Pre ODI, ODI Process, and Post ODI. It is shown in Figure 2.12.

Phase I : Pre ODI state which includes the following:

- The researcher got the approval from the company to conduct the research study on their current situation.
- The researcher conducted company diagnosis and data gathering.

- The researcher described and analyzed, after that, the research identified the company current situation and identifies the problems.

Figure 2.12 Adapt from Organization change as a transition state (Cummings & Worley, 2005)



- The researcher feedback to TPI's KM TEAM and Sub KM Team of Consulting and Training Division.

Phase II : ODI Implementation state which includes the following:

- The researcher studied and developed for the appropriate techniques to solve the problem.
- The researcher gave feedback to TPI's KM TEAM and Sub KM Team of Consulting and Training Division again in order to get the approval and agreement together.
- The researcher discussed and works on data by facilitating Sub KM Team of Consulting and Training Division.
- Action planning
 - Set up objective and desired state
 - Forming task teams

- Identify time frame by using Gantt chart
- Budgeting
- Action and monitoring

Phase III : Post ODI state which includes the following:

- The researcher conducted data gathering again and evaluate whether the problems have been solved, better, or still remain the same.
- The researcher discussed and works on feedback.
- The researcher presented feedback to TPI's KM TEAM and Sub KM Team of Consulting and Training Division.
- If there is a gap between the actual situation and the desired situation, the researcher have to revise by re-diagnosising the problem and re-identifying problem statement.
- Action planning
- Action and monitoring

2.12. Conceptual Framework

The diagram below in Figure 2.13 represents the conceptual framework of this research study. The variable namely knowledge sharing is the important factor that will lead to the impact of ODI in TPI.

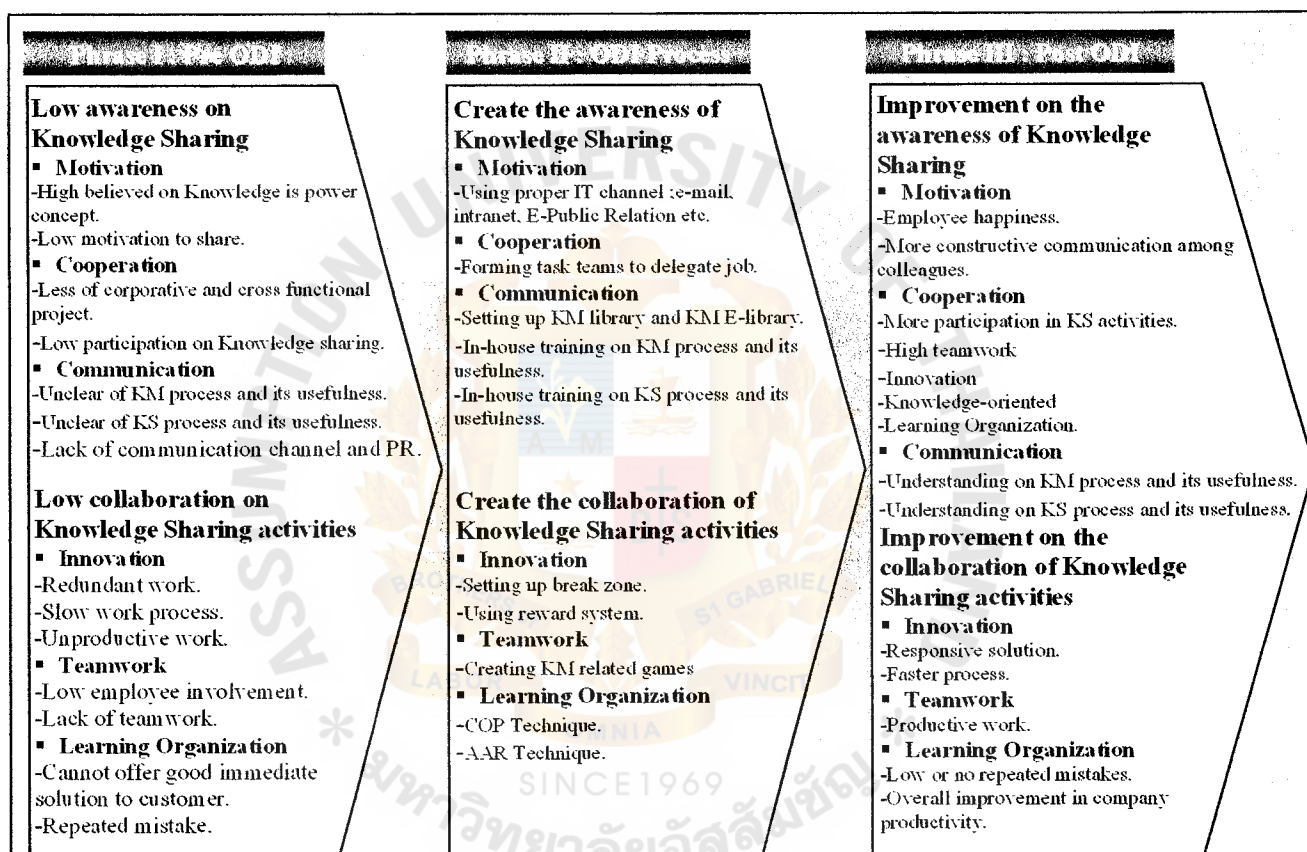
In order to gain the collaboration and gain attention on knowledge sharing from people, TPI requires to use the appropriate rewarding system to motivate them to share on what they knew. Communication is also the critical process on how to create the awareness of KM activities and KS activities throughout the organization, and if the desired state

comes true, innovation, learning organization and teamwork will be emerged in TPI as a result.

- **Knowledge Sharing** refers to the communication of all types of knowledge, which include explicit knowledge and information, and know-how which are types of knowledge that can be documented and captured as information, and tacit knowledge in the form of individual's skills and competencies.
- **Motivation** is a powerful incentive for improving employee and work group performance. It also can produce high levels of employee satisfaction. Many motivation features are contributed to both employee fulfillment and organizational effectiveness (Cumming & Worley, 2005).
- **Communication** is mean to the process of sending and receiving symbol with message attached to people. The effective communication is an important part and has direct effect on the company's performance and success. (Schermerhorn, 1996)
- **Innovation** is a more specialized kind of change. Applying new idea to initiating or improving a product, process, and services. Knowledge belongs to the individual, and building on it depends on other forms of knowledge, including information. Thus, rather like a set of building blocks, knowledge creation is a gradual process of adding value to previous knowledge through innovation (Hawamdeh, 2003).
- **Learning Organization** is committed to the development of the full range of human potential in an environment that invites participation and enjoyment. Work is exciting and challenging because one's mental as well as physical talents are being tapped. The social and physical surroundings encourage a respect for the total person (Marquardt, 1996).

- **Teamwork** is considered as the way to improve quality, productivity, and profitability to the organization. Teamwork is most likely to succeed when employee attitude and abilities are compatible with the team structure and work process (Busba, 2005).

Figure 2.13 Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes the research design and methodologies of the research study. The action research is explained by using three stages of ODI classified into Pre ODI, ODI Process, and Post ODI. It covers the target respondents, the research instruments, the data collection procedures and techniques, and data analysis procedure.

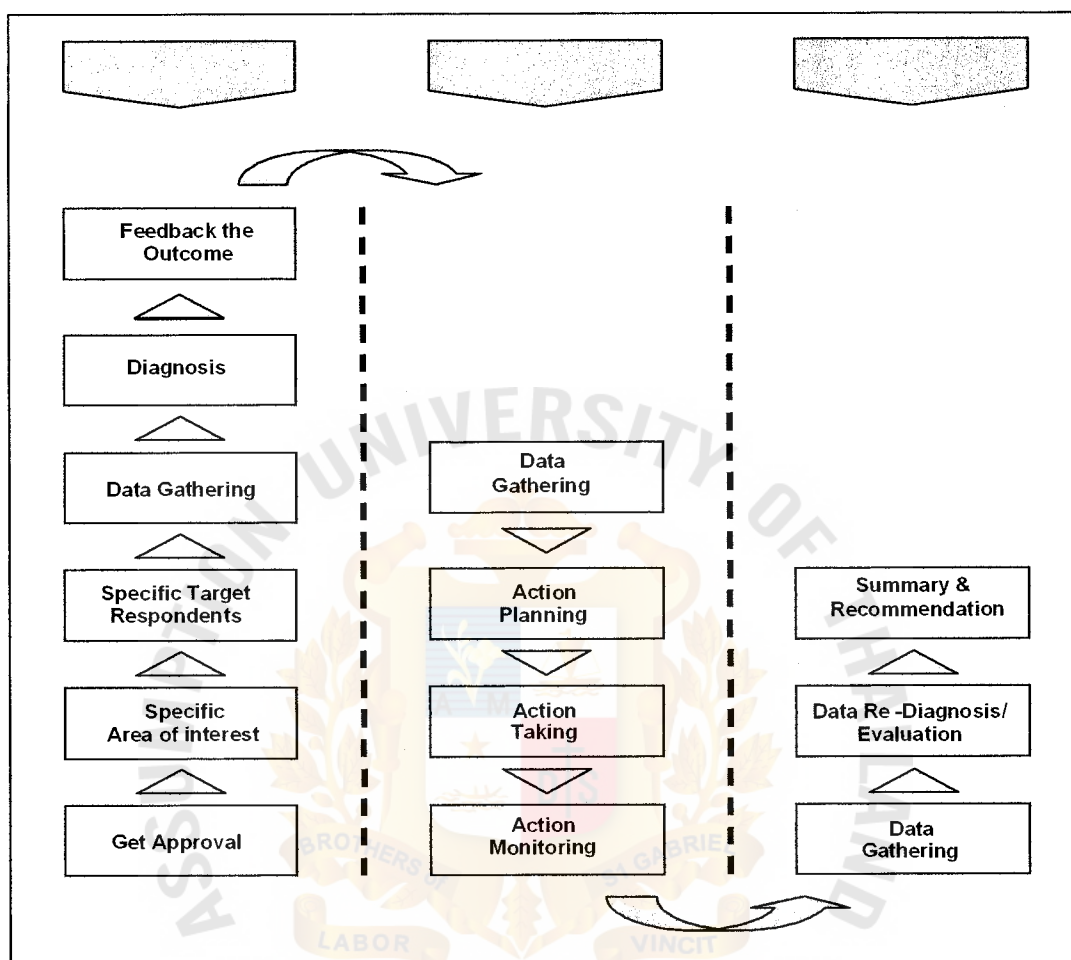
3.1. Research Design

This research is aimed at studying on the impact of ODI on knowledge sharing in Consulting and Training Division, TPI. The research design is the beginning of this study. It is a master plan that specifies the methods and procedures for collecting and analyzing the needed information; it is framework for the research plan of action (Zikmund, 2000).

The diagnosis is a systematic approach to create understanding and describe the current stage of the organization. It is a cyclical process which involves data gathering, data interpretation and identification of problem areas and possible action programs. (Brown & Harvey, 2006)

This research study consisted of three phrases; pre ODI, ODI process, and post ODI respectively. The framework of the research model for ODI process is shown in Figure 3.1.

Figure 3.1 ODI Model



3.1.1. Phase I : Pre ODI

The first stage is the diagnosis of the company in order to conduct the appropriate ODI. First of all, the researcher has gotten the approval from the company to conduct the research study on their current situation as well as has suggested the way to develop the organization. Fortunately, the researcher is working as a Special Project Coordinator, Consulting and Training Division of the company. The researcher, in addition, has personally interested in knowledge management and knowledge sharing and also recognized that TPI, the knowledge-based organization, need to conduct knowledge management by

starting with sharing of individual knowledge. The researcher is a TPI's KM Team member who was assigned to be one of facilitator teams responsible for facilitate sub-KM Team of Consulting and Training Division. Therefore, this is a good chance for conducting the research in a genuine situation.

The information was gathered by various methods such as employee questionnaire survey, and interview. The data helped diagnosis the company's current situation and identify the problem.

3.1.1.1. Pre ODI Objectives

- To conduct diagnosis of the company on knowledge sharing.
- To describe and analyze the current situation on knowledge sharing.
- To determine the current situation of knowledge sharing.
- To study of the appropriate techniques of knowledge sharing.

3.1.2. Phase II : ODI Process

For this phase, the ODI starts to implement. The appropriate ODI have been developed for the company problems.

3.1.2.1 ODI Objectives

- To introduce the appropriate ODI for improving knowledge sharing situation.
- To implement the appropriate ODI in order to improve on knowledge sharing situation.
- To determine the impact of ODI on knowledge sharing.

3.1.2.2. The ODI action plan and implementation at Consulting and Training Division, TPI are below:

- To create the awareness of knowledge sharing by more communicating and using IT as a channel for example e-mail, intranet, and interesting web links.
- To form of the task team such as KM communication team to make sure the communication flow in every location and everyone.
- To set up Break Zone in everyday 3.00-3.30 pm. as well as to provide snacks and coffee with the relaxing climate and to allow employee to share.
- To use the effective reward system along with the related games to motivate the employees to pay more on their collaboration such as KM vocabulary cross word games, knowledge hide and seek.
- To use Community of Practice technique (COP) for both of job related and personal interested topics.
- To use After Action Review Technique (AAR).
- To conduct In-house training on Knowledge management process and its usefulness.
- To conduct In-house training on Knowledge sharing process and its usefulness.

During the ODI implementation, there was close monitoring of the result such as After Action Review (AAR) method in order to make sure that ODI have been implemented on the right way as well as to ensure the improvement and change.

3.1.3. Phase III : Post ODI

For the last phase, the post ODI was the evaluation stage. After implementing the appropriate ODI for a period of time (about four months for this case), the researcher have evaluated and gave feedback to the TPI's KM Team. Again, gathering data and evaluate whether the problems have been solved, better, or still remain the same. If there is a gap between the actual situation and the desired situation, the OD practitioners have to revise the ODI plan for the better one.

3.1.3.1 Post ODI Objectives

- To evaluate the pre and post ODI based on the improvement of knowledge sharing.
- To measure the gap between the actual situation and the expected situation.
- In case of there is a gap, the ODI have to redone by re-diagnosis the problem and re-identify problem statement.

3.2. Subjects

Due to the time bound of this research study which is covers a study of Thailand Productivity Institute, a consultancy company, focusing on Consulting and Training Division on the topic of knowledge sharing implementation, therefore, the whole populations cannot be tested.

The total population of this research study is covering all staff of the division, totally 40 staff from five departments focuses on Consulting and Training Division, which are including with Business Management Department staff, Human Resource Management Department staff, Production Management Department staff, Training and Services

Department staff, and Sales and Customer Services Department staff. And, all these 40 population have been involved as target respondents for a questionnaire survey method.

3.3. The Research Instruments

This action research has been conducted by two main tools which are questionnaire survey and interview. Questionnaire survey have been conducted to all staff of Training and Consulting division 40 populations as target respondents, and, interview have been conducted with ten representatives that can be classified into two representatives from Business Management Department staff, two representatives from Human Resource Management Department staff, two representatives from Production Management Department staff, two representatives from Training and Services Department staff, and two representatives from Sales and Customer Services Department staff. The two representatives from each department have been selected by three criteria which are length of service in TPI (more than two years), not home-based workers, and are TPI's KM sub-team members. Table 3.1. has shown about the research instruments and the target respondents for data gathering.

3.4. Data Collection Techniques and Procedures

3.4.1. Data Collection Techniques

Data have been collected from primary source such as interview session with the representative of each departments and questionnaire distributed to all staff of Training and Consulting Division.

Table 3.1. Target respondents and Research instruments

Department	Target Respondents	Instruments	
	(Staff)	Questionnaire	Interview
Business Management	8	8	2
Human Resource Management	4	4	2
Production Management	10	10	2
Training and Services	11	11	2
Sales and Customer Services	7	7	2
<u>TOTAL</u>	<u>40</u>	<u>40</u>	<u>10</u>

The interview session have been conducted with ten representatives and have been divided into five groups. The interview questions have been constructed and revised by the expert. The questions will consist of four open-ended questions.

The two following techniques of data collection have been used by the researcher:

- The questionnaire survey
- The interview session

3.4.1.1. Questionnaire

The questionnaire has been designed by reviewing various sources such as internet website, and textbook together with the researcher's knowledge. The questionnaire was reviewed by an expert and translated into Thai version by an expert who is good at both Thai and English. The questionnaire was reviewed and pre-tested for reliability purposes.

A paragraph of introduction explaining the general purpose of the study and assuring confidentiality was included in the questionnaire. Part I was the demographic profile of respondents, which consists of four questions. This part provided a multiple-choice format of personal profile. Part II was about the perception of the awareness on knowledge sharing (See Appendix A). There are sixteen questions, which used four point scale, descriptive rating and arbitrary level method. Part III was about the perception of the collaboration on knowledge sharing. There are twelve questions, which used four point scale, descriptive rating and arbitrary level method. There are 5 variables to measure the respondents' opinion. These 5 variables are the series of statement that are don't know (0), strongly disagree (1), disagree (2), agree (3), and strongly agree (4) respectively. The questionnaire consisted of three parts as below.

The researcher has distributed the same set of questionnaire again after conducting ODI in order to measure the result of ODI that whether they have changed or not. The result have been analyzed and shown in chapter four. If the gap still takes place or nothing have changed, the ODI have to be redone by re-diagnosing the problem and re-identifying problem statement.

3.4.1.2. Interview

For more information collection and analysis, the interview sessions have been conducted with ten representative from each department that can be classified into two representatives from Business Management Department staff, two representatives from Human Resource Management Department staff, two representatives from Production Management Department staff, two representatives from Training and Services Department

staff, and two representatives from Sales and Customer Services Department staff. The researcher has an intention on selecting the representatives who are KM expertise or KM team member in order to collect the insider information. There are two sessions for the interviews, the first interview has been conducted during the pre ODI in order to diagnosis the problems and come up with the appropriate ODI. And, the second interview has been conducted during post ODI in order to measure and monitor the improvement and the changes.

Table 3.2. The questionnaire's parts and contents

Parts	Contents and Number of Questions
Part 1	Demographic profile and other information of respondents (4 questions)
Part 2	The respondents' perception of the awareness on knowledge sharing <ul style="list-style-type: none"> - Motivation (6 questions) - Collaboration (4 questions) - Communication (7 questions)
Part 3	The respondents' perception of the collaboration on knowledge sharing. <ul style="list-style-type: none"> - Innovation (3 questions) - Learning Organization (3 questions) - Teamwork (5 questions)

Five interviews have been conducted and each interview consisted of two staff from the different departments. All the interviews have been conducted by face-to-face method and an audio tape also have been made. The researcher has the opportunity to ask the

respondents' opinion, exchange of ideas, and probes for further understanding. Table 3.3. and Table 3.4. are the schedules for both first and second interviews.

Table 3.3. Schedule for 1st Interview

REPRESENTATIVE	DEPARTMENT	DATE	TIME	PLACE
K.Dao	HR.	Jan 8.07	17.00 – 17.30	Meeting 6
K.Lek	BM.			
K.Kea	HR.	Jan 9.07	17.00 – 17.30	Meeting 6
K.Vogue	Product.			
K.Dao(2)	Training	Jan 10.07	17.00 – 17.30	Meeting 6
K.Tooh	Product.			
K.Por	BM.	Jan 11.07	17.00 – 17.30	Meeting 6
K.Jeab	Cus. Service			
K.Finn	Training	Jan 12.07	17.00 – 17.30	Meeting 6
K.Lew	Cus. Service			

3.4.1.3 Reliability Analysis

The researcher used Alpha Coefficient Scale for testing the reliability of the questionnaire. The result of the reliability test showed that the alpha coefficient scale was at .8065 in which near 1.00. This indicated that the questionnaire was sufficiently reliable (See Appendix B).

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients 37 items

Alpha = .8065 Standardized item alpha = .8481

Table 3.4. Schedule for 2nd Interview

REPRESENTATIVE	DEPARTMENT	DATE	TIME	PLACE
K.Dao	HR.	Feb. 26.07	17.00 – 17.30	Meeting 6
K.Lek	BM.			
K.Kea	HR.	Feb. 27.07	17.00 – 17.30	Meeting 6
K.Vogue	Product.			
K.Dao(2)	Training	Feb. 28.07	17.00 – 17.30	Meeting 6
K.Tooh	Product.			
K.Por	BM.	March 1.07	17.00 – 17.30	Meeting 6
K.Jeab	Cus. Service			
K.Finn	Training	March 2.07	17.00 – 17.30	Meeting 6
K.Lew	Cus. Service			

3.4.2 Data Collection Procedure

The researcher conducted two times in collecting the information. The first collection has been done during December 6, 2006 to January 12, 2007. The second collection has been done during February 15, 2007 to March 2, 2007.

The respondents were asked to return the questionnaire to the researcher within two weeks. The interview was conducted with the representative after the working hours for 20-30 minutes; face to face method, the interview guide and an audio tape were used.

The following table was the plan for data collection procedures:

Table 3.5. Planning for data collection

Phrase 1 Questionnaire	
Step 1	Prepared the questionnaire containing three parts which are demographic profile and other information of respondents, measurement of the respondents' perception of the awareness on knowledge sharing, and measurement of the respondents' perception of the collaboration on knowledge sharing.
Step 2	Questionnaire was reviewed by the expert.
Step 3	Pretest with 10 non respondents to find the error and evaluate their understandings.
Step 4	Distributed questionnaire to the respondents by hand
Step 5	Collected the questionnaire after two week of distribution
Phrase 2 Interview	
Step 1	Prepared the questions as a guideline for interview.
Step 2	The questions were reviewed by the expert.
Step 3	Interview the respondents in pair by following the appointment schedule
Step 4	Summarize the findings from the interviews
Phrase 3 Information Conclusion	
Step 1	Conclude all information obtained from every source.

3.5. Data Analysis

The researcher did both the qualitative and quantitative approaches for conducting data analysis. The researcher used the statistical package software (SPSS) for questionnaire

statistical analysis as well as used the qualitative approach by using content analysis as a tool for interview analysis.

For quantitative approach, the Frequencies and Percentage were used to determine respondents' demographic profile. The Descriptive Statistic was used to clarify the respondents' perception on each factor. And the four-point-scale was used for rating the respondents' perception levels based on the descriptive rating and arbitrary level which was shown in Table 3.6.

Table 3.6. The descriptive rating and arbitrary level

Arbitrary Level	Descriptive Rating
3.26 – 4.00	Strongly Agree / Very High
2.51 – 3.25	Agree / High
1.76 – 2.50	Disagree / Low
1.00 – 1.75	Strongly Disagree / Very Low
0	Don't know

For qualitative approach, the information gathered from the interview was used as a supportive document for the purpose of supporting and clarifying the result from the questionnaire.

In addition, Paired Sample *t*-test was used to analyze the differences between pre-ODI and post-ODI.

CHAPTER FOUR

RESEARCH FINDING AND DATA ANALYSIS

This chapter presented the research findings and analysis of the study in order to answer the research questions and research hypotheses that are mentioned in Chapter 1. The data presentation begins with the description of respondents' demographic profiles. The following is to analyze the impact of Organizational Development Intervention (ODI) on the three operating systems through the OD activities that are designed to suit the need of the organization at present.

4.1 The Demographic Profiles of Respondents

The demographic profiles of the respondents in this research study were job function, gender, age, and job tenure of the respondents. In this part, the frequencies and percentage are used to determine the respondents' demographic profile.

Research Question 1 : What are the demographic profiles of the respondents in term of job function, gender, age, and job tenure of respondents?

4.1.1. Job Function of Respondents

Table 4.1. Job Function of Respondents

Function	Frequency	Percent
Consultant	13	32.5
Training Services Staff	12	30.0
Customer Services / Support Staff	11	27.5
Others	4	10.0
Total	40	100.0

According to Table 4.1, there were 13 respondents or 32.5% who worked as Consultant which was the largest group of the sample, followed by 12 respondents or 30% who worked in the Training Service Staff and 11 respondents or 27.5% who worked in the Customer Services / Support Staff. The remaining group of respondents with 4 respondents worked in other function was equal at 10%.

4.1.2. Gender

Table 4.2. Gender of Respondents

Gender	Frequency	Percent
Male	11	27.5
Female	29	72.5
Total	40	100.0

As shown in Table 4.2., the second demographic variable in this research study was gender. The majority of respondents were female. There were 29 respondents or 72.5% who were female, whereas, there were 11 respondents or 27.5% of the total respondents were male.

4.1.3. Age

Table 4.3. The Age of Respondents

Age	Frequency	Percent
20-30	16	40.0
31-40	24	60.0
41-50	0	0
51 years and above	0	0
Total	40	100.0

Age of the respondents in this research study was grouped into four categories. But there were only two categories shown in the Table 4.3. Age group between 31-40 years represented the largest group of 60% or 24 of the total respondents of 40. The remaining 16 respondents or 40% of the total respondents whose age was in the range of 20-30 years (See Table 4.3).

4.1.4. Job Tenure

Table 4.4. Job Tenure of Respondents

Job Tenure	Frequency	Percent
1- Below 3 year	22	55.0
3- Below 5 year	3	7.5
5- Below 7 year	10	25.0
7 years and above	5	12.5
Total	40	100.0

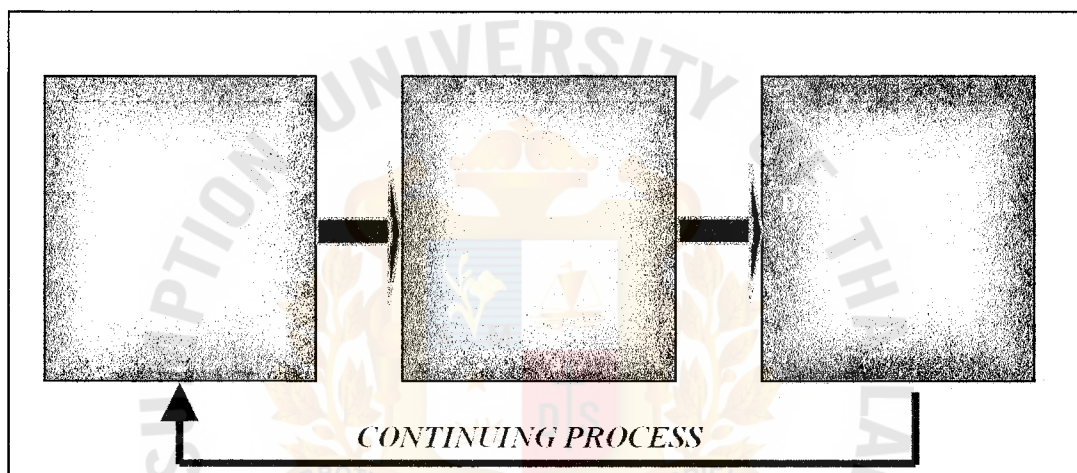
According to the Table 4.4., it has shown that the respondents whose service tenures were between 1 to less than 3 years was the largest with 22 respondents equal to 55% of the total respondents. The second largest group was those who have been working for the organization between 5 to 7 years, 10 respondents or the percentage was equal to 25%. A total of 5 respondents or 12.5% represented for those whose job tenures are more than 7 years. And, the remaining of the respondents with 3 or 7.5% was the smallest group of respondents who have been working in the organization for 3 years but less than 5 years.

4.2 Organizational Development Intervention Process

According to the Figure 4.1.below, it represents the flow and the linkage of OD process which was divided into three stages in order to see the overview of the flow of this

study. The first stage is called Current State or Diagnosis Stage which shows the current situation of the organization focusing on the awareness and the collaboration of knowledge sharing situation. The Organizational Development Intervention (ODI) was designed and developed for the appropriate techniques to solve the problem as well as to improve the current situation.

Figure 4.1. Organizational Development Intervention Process



The second stage is called Transition State or ODI process stage. This stage shows the designed ODI activities that were put into action in order to solve as well as to improve the awareness and the collaboration of knowledge sharing situation in Training and Consulting Division, TPI.

The third stage is called the Desired Future State or the evaluation stage which represents the desired situation after the appropriate ODI have been implemented. It is the evaluation between the actual situation and the desired situation whether the problems have been solved, become better, or still remain the same.

4.2.1. Stage I : Diagnosis Stage (Pre ODI Process)

The first stage is the diagnosis of the organization in order to conduct the appropriate ODI. This stage focused on the current situation of the organization which were the perception of the awareness as well as the perception of the collaboration on knowledge sharing activities based on Training and Consulting Division, TPI. The information was also described and analyzes, after that, identify current situation and also identify the problems.

The information was gathered by various methods such as questionnaire survey, and interview. For the interview session, the researcher has an intention on selecting the representatives who are KM expertise or KM team member in order to collect the insider information. They have already known the process of knowledge management that could be beneficial to the researcher in term of in-depth information as well as project consultant. Table 4.5. shows the schedule of the first interview. The data helped diagnose the organization's current situation and identify the problem.

Research Question 2 : What is Thailand Productivity Institute's current situation on the awareness of Knowledge Management?

Based on the interview session, the researcher had asked the representatives who are the staff of Training and Consulting Division in TPI that "Can you tell me what you think that should be the purpose of knowledge management?"

The researcher found that there were a gap of the awareness on knowledge management among the staff, some clearly replied but some could not. Most of them answered in the same direction that knowledge management was the tool to create value as well as to create new innovation which was integrated from the daily operation of

employees. Knowledge management started with the improvement of the collaboration method such as COPs activities and ended with the management such a multi-dimension of the additional knowledge components for achieving innovations in terms of new products and services, new processes, new method, productive work as well as bringing the highest value to customers and the organization. Some said that knowledge management is the way to be learning organization which supported TPI's vision.

On the other hand, some cannot answer since they didn't clearly understand what knowledge management is. Some said that it seems more subjective. Some didn't know how to share as well as didn't aware that what they know would be beneficial to others. Lack of communication channel also found because some said that they have no idea where to get the information they needed. Anyway, all of them aware that TPI nowadays is trying to practice on KM processes.

Perception of Respondents

The descriptive statistics were used to clarify the respondents' perception on each factor. The four-point-scale was used for rating the respondents' perceptions levels based on the descriptive rating and arbitrary levels shown in Table 4.6.

Table 4.5. The schedule of the 1st interview

REPRESENTATIVE	DEPARTMENT	DATE	TIME	PLACE
K.Dao	HR.	Jan 8,07	17.00 – 17.30	Meeting 6
K.Lek	BM.			
K.Kea	HR.	Jan 9,07	17.00 – 17.30	Meeting 6
K.Vogue	Product.			
K.Dao(2)	Training	Jan 10,07	17.00 – 17.30	Meeting 6
K.Tooh	Product.			
K.Por	BM.	Jan 11,07	17.00 – 17.30	Meeting 6
K.Jeab	Cus. Service			
K.Finn	Training	Jan 12,07	17.00 – 17.30	Meeting 6
K.Pom	Cus. Service			

Table 4.6. The descriptive rating and arbitrary level

Arbitrary Level	Descriptive Rating
3.26 – 4.00	Strongly Agree / Very High (SA)
2.51 – 3.25	Agree (A)
1.76 – 2.50	Disagree (D)
1.00 – 1.75	Strongly Disagree / Very Low (SD)
0	Don't know

Research Question 3 : What are Thailand Productivity Institute’s current situation on the awareness and the collaboration of knowledge sharing activities?

4.2.1.1.Perception of the Awareness on Knowledge Sharing Activities Before ODI

Table 4.7. The respondents’ perception of the awareness on Knowledge Sharing Activities

(See Appendix C).

Item	Mean	SD	Rating
Motivation	2.8750	.48001	Agree
Cooperation	2.4167	.59317	Disagree
Communication	2.5964	.46644	Agree
The Awareness of Knowledge Sharing	2.6294	.44475	Agree

Based on the diagnosis from questionnaire survey which shown in Table 4.7.,the overall perception of respondents on the awareness of knowledge sharing activities was rated at “Agree” with the average mean of 2.6294 and standard deviation of 0.44475. This implied that the respondents aware on the knowledge sharing activities that TPI KM team or Sub KM team have set up, but, they disagree that the awareness on the knowledge sharing activities could affect the collaboration since it was rated at “Disagree” with the average mean of 2.4167 and standard deviation of 0.59317.

From the interview with the representative, the researcher found that everyone also aware that TPI nowadays is trying to practice on KM processes. They also believed that many of the knowledge management elements have become integrated elements of daily operations. And, the success of KM is also driven by use of IT tools such as Knowledge Portals, Data Warehouse, etc.

4.2.1.2. Perception of the Collaboration on Knowledge Sharing Activities Before ODI

Table 4.8. The respondents' perception of the collaboration on Knowledge Sharing Activities (See Appendix C).

Item	Mean	SD	Rating
Innovation	2.5458	.49208	Agree
Teamwork	2.7200	.40459	Agree
Learning Organization	2.8294	.51901	Agree
The collaboration on Knowledge Sharing	2.6984	.39250	Agree

According to the Table 4.8., it revealed that the perception of respondents on the collaboration of knowledge sharing activities was rated at “Agree” with the mean of 2.6984 and standard deviation of 0.39250. It implied that the respondents agree to take part in the knowledge sharing activities since they also agree on all the related areas of collaboration which were innovation, learning organization, and teamwork.

From the interview session, the researcher found that some were willing to share, and, some of them were the member of Sub-KM team of Training and Consulting Division. The researcher had asked them more about why they became Sub-KM team member, whether they were forced or willing to. Most of them answer in the same direction that they were willing to join to KM activities because they realized that KM is an efficient tool of creating an intellectual capital by transforming new as well as existing enterprise knowledge into superior solutions. Anyway, most of them accepted that the believe of knowledge is power still takes place.

After gathering information through all techniques that the researcher has mentioned, the research could come up with a summary as below.

Summary Assessment: (Questionnaire and Interview)

The current situation of organization could be indicated as follows:-

- Some of employees doubted about the concept of knowledge management process.
- Some have no ideas on how to share and how it will be beneficial to others.
- It seems meaningless to share their knowledge due to the differential of oneself, also, the differential of job responsibilities
- The believe of knowledge is power still takes place.
- Knowledge Management seems to be more subjective.
- Some are willing to share but they didn't know how to share it especially their tacit knowledge.
- Lack of communication and public relation about KM activities and knowledge sharing are also found because some said that they have no idea about where to get the information they needed.

4.2.2. Stage II : Organizational Development Intervention (ODI Process)

The second stage is ODI process. The researcher applied OD interventions based on the results of the diagnosis stage. There were several activities that the researcher had put into action in order to create the awareness as well as to create the collaboration of knowledge sharing activities in the organization. But some of these activities were arranged as simple as possible in order to make all participants felt relax and enjoy with the activities.

Research Question 3 : What are the appropriate ODI for Thailand Productivity

Institute to improve the awareness and the collaboration of knowledge sharing?

The researcher designed the ODI activities which included In-House Training on Knowledge Management (KM) process and its usefulness, In-House Training on Knowledge Sharing (KS) process and its usefulness, setting up Break Zone, Electronic Mail to promote KM and KS activities, using Community of Practices (COPs) techniques and After Action Review (AAR) techniques.

4.2.2.1. In-House Training on Knowledge Management process and its usefulness

The training was arranged by the researcher and Human Resource Department of the organization.

Actually the researcher planned to arrange two sections of training, during the fourth week of January and the second week of February, in order to serve the convenience of those target participants. Unfortunately, since the limitation of time constrain and the majorities were booked for the first section, the researcher decided to arrange just one section from 9.00 to 15.00 pm. on January 27th, 2007 at the meeting room 2, on the 12th Floor, TPI. The training schedule is shown as Table 4.9.

The main objective of this training is to make sure that every employees have clearly understood the process of knowledge management and its usefulness that would be benefit and help improve the awareness of knowledge management. The another aim of this training is also to encourage people to be more aware of its importance of sharing knowledge and readiness to share.

Table 4.9. The topics of Knowledge Management Training.

TOPICS OF KNOWLEDGE MANAGEMENT TRAINING
<ul style="list-style-type: none"> • Theory of Knowledge Management <ul style="list-style-type: none"> - What is Knowledge Management? - What's the difference of data, information, and knowledge? - How to manage the knowledge? • Knowledge Management Process <ul style="list-style-type: none"> - The 7 processes of knowledge management; create, identify, collect, adapt, organize, apply, and share - The characteristics of those 7 processes. • Tools for finding knowledge <ul style="list-style-type: none"> - What is the knowledge; tacit, explicit, and implicit? - What are the corporate knowledge? - Knowledge building activities; Problem-Solving, and, Implementing and Integrating. • Wrap up the approaches for KM implementing and maintaining.

4.2.2.2. In-House Training on Knowledge Sharing process and its usefulness

The training was also arranged by the researcher and Human Resource Department of the organization.

Because of time constraint, the researcher had arranged just one section of knowledge sharing training from 9.00 to 15.00 pm. on February 9th, 2007 at the meeting room 2, of 12th Floor of TPI. The training schedule is shown as Table 4.10.

The main objective of this training aimed that every employees have believed on the importance of knowledge sharing and its usefulness. Everyone have clearly understood about knowledge sharing process. The researcher expected that it would be enable to share and to take advantages of their tacit and explicit knowledge, then, becomes the knowledge-oriented community. In addition, the researcher aimed to decrease the believe of knowledge

is power, which is the main obstacle to open oneself to share. Contributing that sharing on what they know is not difficult and lack of time is not the obstacle anymore.

Table 4.10. The topics of Knowledge Sharing Training

TOPICS OF KNOWLEDGE SHARING TRAINING
<ul style="list-style-type: none"> • Theory of Knowledge Sharing <ul style="list-style-type: none"> - What is Knowledge Sharing? - Why do the organization need employees to share their knowledges? - How to create Learning Center or Knowledge Networking? - Why do technologies can encourage sharing? - How to create the environment that encourages people to share what they know? • Knowledge Sharing Process <ul style="list-style-type: none"> - Repeated the 7 processes of KM (<i>In Details</i>) - How to open oneself to share. - How to motivate people to share. • Tools for Contributing Knowledge Sharing <ul style="list-style-type: none"> - COPs - AAR • Workshop : COPs and AAR Techniques

4.2.2.3. Using Electronic Public Relation

From the interview the researcher found that, the communication channel was not so good. It did not go through everyone in everywhere, and, some said that they didn't know what's going on about the knowledge sharing activities. Therefore, the researcher has to use group mail to inform and to update news both general news and KM/KS news ,as well as, an interesting articles.

According to both of KM and KS in-house training, the researcher had set up group mail of those who had registered, and, used the automatic alarm clock to remind them about the training agenda, time, and place.

The main objective is to gain more attention and to call for their collaboration on related KM/KS activities. The researcher also expected the more participation as well.

4.2.2.4. Setting up Break Zone

Based on the interview, it revealed that some wanted to share their ideas but they didn't know how to share and where to share it. Some said that the relaxing atmosphere might contribute employees to share or even to talk to. Moreover, since most of the job's characteristic is work outside or some might not have time to stop by at the office for a week. As a result, they might not be able to share because they have no exact time to share and they didn't know each others as well.

OD intervention was used in terms of setting up break zone as well as setting up the convenience time together. Break zone was arranged everyday at 3.30 pm., the researcher and Sub-KM team member have provided soft drinks and snacks with the small round table and the relaxing environment.

At the first time, the researcher has to walk around and announce that "Hello!! Time for break", and, invite them to join at break zone. After two week passed by, most of them came to take a break together at the same time without announcement, some brought their snacks and fruits to join.

The main objective of Break Zone setting up is that the researcher aims to create the place and the environment that can be encouraged employees to share or to exchange any kinds of information apart from work. Allowing everyone to communicate freely and this can imply to the beginning of the collaboration of knowledge sharing activities.

4.2.2.5. Community of Practices (COPs) Techniques

Community of Practices or COPs technique is one of many popular tools encouraging people to share what they know. COPs is defined as the collections of individuals bound by informal relationships that share similar work roles and a common context. The general concept of COPs is a group of people who share a common interest in an area of competence and are willing to share the experience of their practices. It is also refers to the dynamic process through which individuals learn how to do their jobs by actually performing tasks and interacting with other similar performing tasks.

According to TPI, its website is going to be refresh and IT department also asked each division to survey whether the information on our website is enough or not. Therefore, the researcher and Sub-KM team member had created the related interesting topic for conducting COPs as shown in Table 4.11.below. There were two facilitators whose duty is to facilitate as well as to encourage people to share their ideas. Also, there were two historians whose duty is to record all the knowledge that have been shared, then, those knowledge will be proved and revised before storing it as a knowledge inventory on TPI intranet.

Table 4.11. The schedule of COPs activity

DATE	TIME	TOPIC	FARCILITATOR	HISTORIAN	ROOM
Feb. 9,07	14.30-16.00 pm.	What do we need to refresh or to adjust the information on our TPI website?	K.Dao/ K.Finn	K.A /K.Nuch	Meeting 1

The main objective is that to create the situation of knowledge sharing, and , to contribute the constructive communication among colleagues. The researcher also expected the more collaboration of employees in order to compare the result between a pitot of COPs

that the researcher had conducted in the diagnosis stage and COPs after they had trained in term of number of participants and sharing atmosphere.

4.2.2.6. After Action Review (AAR) Techniques

After Action Review or AAR technique is a monitoring tool that the researcher had used to monitor the overview of the activities as well as to allow participants to feedback about their expectation, and, what they want the ODI practitioner to improve for next time.

Table 4.12. Five questions of AAR activity

FIVE QUESTIONS OF AAR TECHNIQUE
<ul style="list-style-type: none"> • What is your expectation of this meeting? • Did your expectation achievable? How? • Why did your expectation unachievable? • If you can make differences next time, what will you do? • How do you manage the knowledge that you have got to your work?

Table 4.12. is the five questions guideline that the researcher had asked all the participants after the ODI activities such as COPs and knowledge sharing training.

The main objective of AAR technique is that to reflect the opinion of the participants' activities in order to be learn lesson for the next time. The researcher also aimed to monitor the overview of ODI activities by encouraging everyone to share and to feedback what they think as well as feedback their feelings.

4.2.3. Stage III : Evaluation Stage (Post ODI Process)

According to the third stage, the researcher had conducted interview again with the same group of the first time that have been conducted in the diagnosis stage in the same areas of interested. Table 4.13. shown the schedule of the second interview. In addition, the researcher also had distributed the same set of questionnaire to the same group of

respondents in order to see the differences after conducting ODI activities. The post ODI process consisted of the quantitative data and analysis which compared the differences among pre ODI process and post ODI process. The researcher also gathered information from the interview which was used as a supportive document for the purpose of supporting and clarifying the result from the quantitative data of questionnaire survey.

Table 4.13. The schedule of 2nd interview.

REPRESENTATIVE	DEPARTMENT	DATE	TIME	PLACE
K.Dao	HR.	Feb. 26,07	17.00 – 17.30	Meeting 6
K.Lek	BM.			
K.Kea	HR.	Feb. 27,07	17.00 – 17.30	Meeting 6
K.Vogue	Product.			
K.Dao(2)	Training	Feb. 28,07	17.00 – 17.30	Meeting 6
K.Tooh	Product.			
K.Por	BM.	March 1,07	17.00 – 17.30	Meeting 6
K.Jeab	Cus. Service			
K.Finn	Training	March 2,07	17.00 – 17.30	Meeting 6
K.Pom	Cus. Service			

4.2.3.1. Perception of the Awareness on Knowledge Sharing Activities After ODI

Table 4.14. The respondents' perception of the awareness on Knowledge Sharing Activities

(See Appendix D)

Item	Mean	SD	Rating
Motivation	3.2667	.44626	Strongly Agree
Cooperation	2.9833	.45885	Agree
Communication	3.0071	.43276	Agree
The Awareness of Knowledge Sharing	3.0857	.37194	Agree

As shown in Table 4.14. , the researcher found that the respondents' perception on the awareness of knowledge sharing activities after the researcher had conducted ODI activities was rated "Agree" with the average mean of 3.0857 and standard deviation of 0.37194. For the item of collaboration, which was rated "Disagree" on the pre ODI stage, had changed as "Agree" with the average mean of 2.9833 and standard deviation of 0.45885. This implied that after the researcher conducted ODI activities, it has been affected on the awareness of knowledge sharing in term of more collaboration.

From the interview, the researcher found that electronic public relation method that was used could be improved the numbers of respondents' collaboration. During the training, the trainer conducted KM related games with the winning prize, the researcher found that the participants had put more effort on it. Break zone activities was a good start to let the employees felt relax and familiar to each other which could contributed them to share as well as to exchange what they know.

4.2.3.2. Perception of the Collaboration on Knowledge Sharing Activities After ODI

Table 4.15. The respondents' perception of the collaboration on Knowledge Sharing Activities (See Appendix D)

Item	Mean	SD	Rating
Innovation	2.9521	.55370	Agree
Teamwork	3.1850	.40608	Agree
Learning Organization	3.3429	.42530	Strongly Agree
The Collaboration on Knowledge Sharing	3.1600	.39232	Agree

According to Table 4.15., the researcher found that the respondents' perception of the collaboration on knowledge sharing activities after conducting ODI activities was rated "Agree" with the average mean of 3.1600 and standard deviation of 0.39232.

From the interview, some said that to create value, it must possess the ability to determine and undertake the best action in a specific situation to serve the common goal. So that, the more sharing and the more integration across knowledge leads to the more innovation with higher value to customers and the organization as well.

Summary Evaluation: (Questionnaire and Interview)

The results after ODI activities had conducted could be indicated as follows:-

- More awareness leads to the higher of collaboration on knowledge sharing activities.
- KM related games with the winning prize could call for more collaboration.
- The employees have clearly understood about knowledge management and knowledge sharing.

- From the interview, most of the representatives felt that electronic public relation was a good communication channel that could encourage the collaboration.

4.3. Discussion and Analysis

From all those ODI activities above, the researcher has strongly believed that it would help to improve on the awareness and the collaboration of knowledge sharing activities in Training and Consulting Division, TPI.

The presentation and discussion in this section are based on the test of hypotheses. The paired sample t-test would be used in proving whether there was a significant difference between pre and post ODI implemented.

Research Question 4 : Is there a significant difference between the pre and post ODI on the awareness and the collaboration of Knowledge Sharing?

4.3.1. Hypotheses Testing

- Ho: There is no significant difference between the pre and post ODI on the awareness and the collaboration of knowledge sharing.
- Ha: There is a significant difference between the pre and post ODI on the awareness and the collaboration of knowledge sharing.

The findings in the below table showed that there was a significant difference on the awareness of knowledge sharing activities between pre and post ODI. Since, the significant value equal to 0.000 which was less than 0.05, this meant that the null hypothesis was rejected. Therefore, it was concluded that there was a significant difference on the awareness of knowledge sharing activities between pre and post ODI ($p < 0.000$, $t = -12.234$).

Table 4.16. The paired sample statistic of the awareness and the collaboration on knowledge sharing activities between Pre and Post ODI (See Appendix E)

Variable	Questionnaire					Result	
	Pre		Post		<i>t</i>		Sig. (2-tailed)
	\bar{X}	SD	\bar{X}	SD			
The Awareness on Knowledge Sharing	2.6294	.44475	3.0857	.37194	-12.234	.000	Reject Ho
The Collaboration on Knowledge Sharing	2.6984	.39250	3.1600	.39232	-10.620	.000	Reject Ho

In addition, Table 4.16. also showed that there was a significant difference on the collaboration of knowledge sharing activities between pre and post ODI. Since, the significant value equal to 0.000 which was less than 0.05, this meant that the null hypothesis was rejected. Therefore, it was concluded that there was a significant difference on the collaboration of knowledge sharing activities between pre and post ODI ($p < 0.000$, $t = -10.620$).

From the interview, the researcher found that there were improvement both of the awareness and the collaboration of knowledge sharing activities. After the researcher had conducted in-house training both of knowledge management process and knowledge sharing, it helped the participants clarify what is knowledge management and more clearly understood on the processes of knowledge management especially of knowledge sharing. Most of them said that they were satisfied with the training approaches that the trainers had

used. Not just the purely theory but learning by doing such as COPs workshop. Break Zone was also a good start that could call employees for take a break together, most of them felt free to talk in any kinds of information apart from work.

From the researcher's observation, most of them take more participation on the presentation during the training, and, willing to join the workshop. Most of them came to register on time since the researcher had used the automatic alarm clock to remind them through Outlook program's option. Since it was training inside the organization, some of them often walked in and out that could interrupt others and some disappeared after break time. AAR technique was also a good monitor tool that could contribute everyone to share the five questions as well as helped the researcher to see the overview of ODI activities; what should be improved for the next time and how to maintain it as well. Most of them were willing to join break zone together, since, they had bring some snacks and fruits to join. Summary of these finding are shown in Table 4.17.

Table 4.17. Summary of finding

Title	Pre ODI	Post ODI
Awareness	Some were doubt about KM/KS concept	More awareness on KM and KS
-Motivation	No idea on how to share	Most of staff felt free to join and to talk during break zone
-Cooperation	Less of corporative and cross functional project	Higher amount of participants on COPs activities
-Communication	Lack of communication channel and public relation	More understanding on KM/KS process and its usefulness
Collaboration	Low participation on KS activities	More improvement on the collaboration on KS activities
-Innovation	Unproductive work.	Faster process
-Teamwork	Low employee involvement.	AAR technique encourage everyone to express ideas
-Learning Organization	Cannot offer good/immediate solution to customer	Responsive solution

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

A summary of the major findings of this research study is presented as three stages of research's conceptual framework which are pre ODI, ODI implementing, and post ODI respectively. As mentioned in the introduction, there are three objectives for conducting this research study. First, to conduct OD diagnosis on awareness and collaboration of knowledge sharing. Second, to design and implement the appropriate OD Interventions to improve the awareness and collaboration of knowledge sharing. Lastly, to study the impact of ODI on awareness and collaboration of knowledge sharing. All those objectives are focused to study on the employee who have been working in Training and Consulting Division, TPI. Moreover, the limitations of doing this research study also presented and ended with the recommendations which were classified into three dimensions; the recommendations for the organization, the recommendations for future study and the recommendations for OD discipline respectively.

5.1.1. Pre ODI

The researcher had used various methods such as employee questionnaire survey, and interview session to create understanding and describing the current situations of the organization in order to conduct the appropriate ODI. After gathering information through all techniques that the researcher has been mentioned, the research could come up with a summary as below.

Summary Assessment: (Questionnaire and Interview)

The current situation of organization could be summarized as follows:-

From the assessment, the researcher found that some of TPI's employees doubted about the concept of knowledge management process. Since the concept of knowledge management seems to be more subjective, some said that they have no ideas on how to share and how it will be beneficial to others. It seems meaningless to share their knowledge due to the differential of oneself, also, the differential of job responsibilities. The researcher, moreover, found that the belief of knowledge is power still takes place.

Lack of communication and public relation about KM activities and knowledge sharing are also found because some said that they have no idea about where to get the information they needed.

However, some are willing to share but they didn't know how to share it especially their tacit knowledge.

5.1.1.1. Designed and Developed ODI

According to the current situation that have been found, the researcher had designed and developed the various activities for OD interventions in order to improve the awareness and the collaboration of knowledge sharing activities.

The researcher came up with the in-house training and COPs workshop aimed to increase the awareness and to have more clear understanding of knowledge management, as well as, knowledge sharing concept. Moreover, to contribute on collaboration of knowledge sharing situation, the researcher also came up with break zone activities, COPs and ended with AAR technique.

The researcher also came up with electronic public relation and automatic alarm clock that was used to remind them about the ODI activities. The researcher aimed to increase the communication channel in order to gain more attention on knowledge sharing in term of news and activities in the organization. Moreover, the researcher also aimed to gain more participation on knowledge sharing activities as well.

Therefore, in order to maintain and improve the ODI activities, the researcher came up with the AAR technique at the end of all ODI activities which was used to allow the participants feedback about their expectation, what they got from the activities and what they want the practitioners to improve for next time.

5.1.2. ODI Implementation

The researcher applied OD interventions based on the results of the diagnosis stage. There were several activities shown in Table 5.1. below that the researcher had designed and developed in order to clarify knowledge management and knowledge sharing concept, to improve the awareness as well as to encourage the collaboration of knowledge sharing activities.

5.1.3. Post ODI

After the ODI activities have been implemented, the researcher had conducted interview again with the same group of the first time that have been conducted in the diagnosis stage in the same areas of interest was used as a supportive document for the purpose of supporting and clarifying the result from the quantitative data of questionnaire survey.

Table 5.1. The Organizational Development Intervention Activities

ODI ACTIVITIES	OBJECTIVES	RESULTS
INH-KM Process	<ul style="list-style-type: none"> - To know what is Knowledge Management. - To understand the process of Knowledge Management. - To learn what are the benefits of Knowledge Management. 	<ul style="list-style-type: none"> - All employees clearly understand the process of Knowledge Management. - All employees know the usefulness as well as the importance of Knowledge Management.
INH-KS Process	<ul style="list-style-type: none"> - To know what is Knowledge Sharing. - To understand the process of Knowledge Sharing and its importance. - To know what are the tools of Knowledge sharing especially COPS and AAR. - To learn what are the benefits of Knowledge Sharing. - To understand how to share their knowledges. 	<ul style="list-style-type: none"> - All employees understand the process of Knowledge Sharing. - All employees know the usefulness of Knowledge Sharing. - Everyone know how to share and willing to share their knowledges both of their tacit and explicit knowledge. - All employees can take advantages on those knowledges that others had shared. - Everyone know COPS and how to play it. - Decrease or no more believe on Knowledge is power.
E-Public Relation	<ul style="list-style-type: none"> - To updated news of Knowledge Management and Knowledge Sharing activities throughout the organization. - To gain more attention on Knowledge Sharing in term of news and activities. - To inform and call for their collaborations. - To create a new communication channel. 	<ul style="list-style-type: none"> - More participation in Knowledge sharing activities. - More collaboration in Knowledge sharing activities.
Setting up Break Zone	<ul style="list-style-type: none"> - To allow everyone to share and to talk freely to each others. - To create relax atmosphere and let them to get to know more each other. - To create the center of informal knowledge sharing. - To exchange all kinds of information apart from work. 	<ul style="list-style-type: none"> - Everyone take a break together at Break Zone. - Everyone can freely communicate. - More constructive communication among colleagues. - Employee happiness. - More collaboration in Knowledge sharing activities.
COPs Techniques	<ul style="list-style-type: none"> - To be more understand about what is COPs techniques by real situation. - To contribute everyone to share and to join COPs activities. - To create the situation of knowledge sharing especially tacit knowledge. 	<ul style="list-style-type: none"> - More constructive communication among colleagues. - Knowledge-oriented. - More collaboration in Knowledge sharing activities. - More productive works.
AAR Techniques	<ul style="list-style-type: none"> - To allow the participants feedback about their expectation, what they got from the activities, what they want the practitioners to improve. - To monitor the overview of conducted. 	<ul style="list-style-type: none"> - Learning from doing. - Lesson learned for next time or next activities.

Also, the researcher had distributed the same set of questionnaire to the same group of respondents in order to see the differences after conducting ODI activities. The post ODI process consisted of the quantitative data and analysis which compared the differences between pre ODI process and post ODI process. After gathering information through all these techniques, the research could come up with a summary as below.

Summary Evaluation: (Questionnaire and Interview)

The results after ODI activities had conducted could be summarized as follows:-

According to Table 5.2., after all the ODI activities had conducted, the researcher found that the employees have clearly understood about knowledge management and knowledge sharing concept. More awareness leads to the higher collaboration on knowledge sharing activities. In addition, KM related games with the winning prize which the trainer was conducted during the training could call for more participation.

Break Zone was also a good start that could call employees for take a break together, most of them felt free to talk in any kinds of information apart from work and willing to join break zone, since, they had brought some snacks or fruits to join.

From the interview, most of the representatives felt that electronic public relation was a good communication channel that could encourage on the collaboration. AAR technique was also a good monitor tool that could contribute everyone to share following the five questions as well as helped the researcher to see the overview of those ODI activities.

Table 5.2. Summary of Evaluation after ODI

Title	Questionnaire Survey		Interview Session
		Rating	
Awareness on KS	3.086	Agree	More awareness on KM and KS
-Motivation	3.267	Strongly Agree	Most of staff willing to join and felt free to talk during Break zone
-Cooperation	2.983	Agree	Higher amount of participants on COPs activities and Break zone
-Communication	3.008	Agree	More understanding on KM/KS process and its usefulness
Collaboration on KS	3.161	Agree	More improvement on the collaboration on KS activities
-Innovation	2.952	Agree	Faster process
-Teamwork	3.185	Agree	AAR technique encourage everyone to express ideas
-Learning Organization	3.343	Strongly Agree	Responsive solution

5.1.4. Limitations

The limitations of this research study were divided into two main categories as below:

5.1.4.1 The Limitations of Data Gathering process

As the topic of this research is new in Thailand, some of respondents did not understand the objective of this research. Some of the respondents were not be honest in filling questionnaire which caused some errors occurred from unrealistic answer.

Some of the respondents are the consultants who normally have no time to stop by the office and some are home-based workers. Therefore, it was quite difficult for gathering data within the time frame of this research study.

5.1.4.2. The Limitations of OD Interventions

There were some problems in knowledge sharing implementation due to the belief that knowledge is a power. In addition, there were also some problems in sharing tacit knowledge during Community of Practices (CoPs) activity.

Sometime the researcher could not reach all the respondents since some of the respondents' mailboxes were full. During the training and COPs activities, there were someone interruption such as walking in and out of the room as well as absence of some trainees after break time.

5.2. Conclusions

In conclusion, the researcher had conducted diagnosis on awareness and collaboration of knowledge sharing, then, had designed as well as implemented the appropriate OD activities. After all OD activities had conducted, the researcher found that there was an impact of organization development intervention on the awareness and the collaboration of knowledge sharing in Training and Consulting Division, TPI.

Moreover, the researcher also found that most of employees have clearly understood about knowledge management and knowledge sharing concept, however, the better of awareness leads to the higher of collaboration on knowledge sharing activities.

Therefore, the study rejects the null hypothesis: There is no significant difference between the pre and post ODI on the awareness and the collaboration of knowledge sharing. Because the average score of post ODI from the questionnaire were higher.

5.3. Recommendations

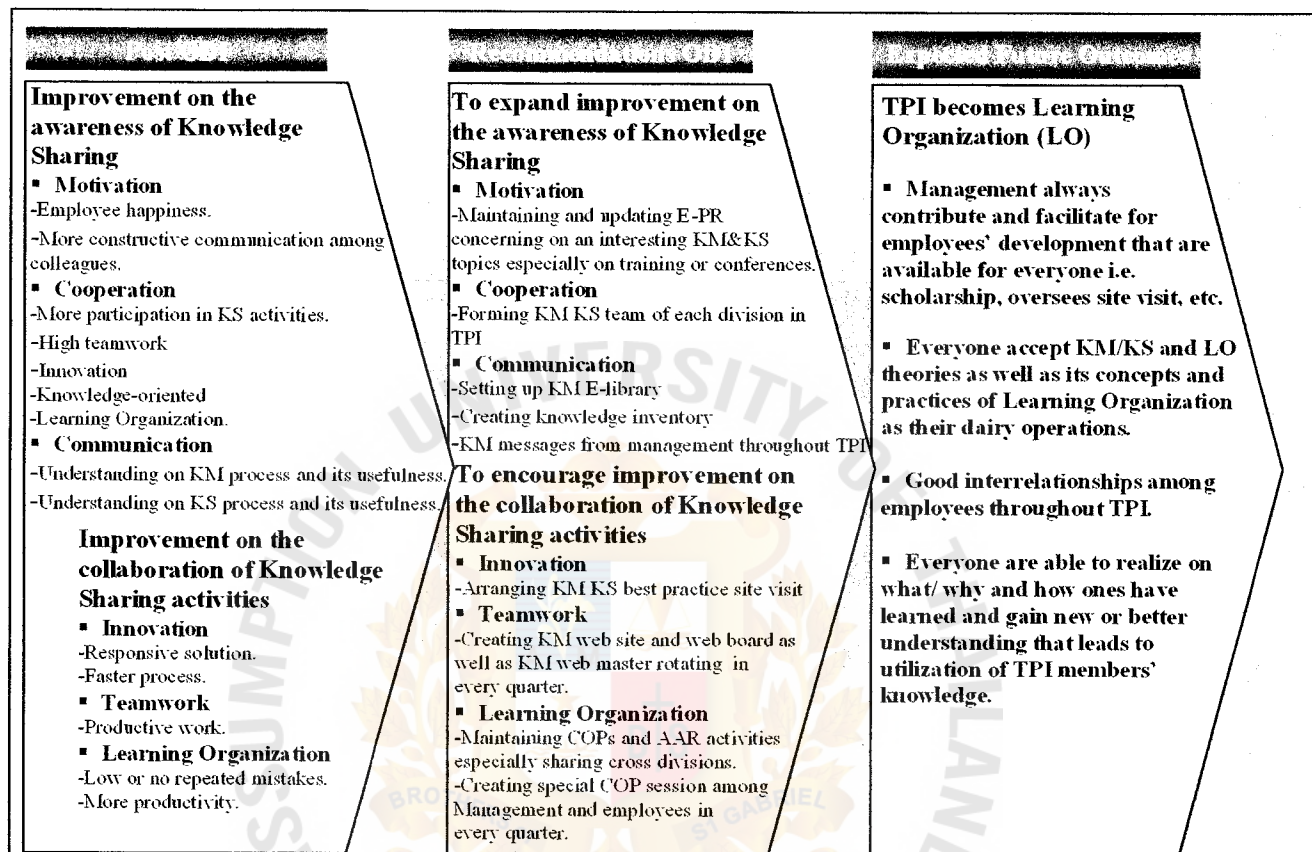
The recommendations were classified into three dimensions as follow:

5.3.1. Recommendations for the Organization

From the researcher's point of view, the result of the ODI activities, which were implemented to improve the awareness and to encourage the collaboration of knowledge sharing activities, were good. Based on the paired sample *t*-test technique, there were significant differences on the awareness as well as on the collaboration of knowledge sharing activities between pre and post ODI.

Therefore, some of these ODI activities are a continuous process that the organization needs to keep in focus, such as Break Zone activities, COPs activities, Electronic Public Relation and AAR activities, in order to maintain the situation of knowledge sharing. It would serve as an example of appropriate ODI. The knowledge gained from sharing will help the organization in term of more innovation, productive work, being learning organization and so on which will create higher value to customer as well as to organization and Table 5.3 has shown the recommended future ODI.

Table 5.3. Recommended Future ODI



5.3.2. Recommendations for Future Study

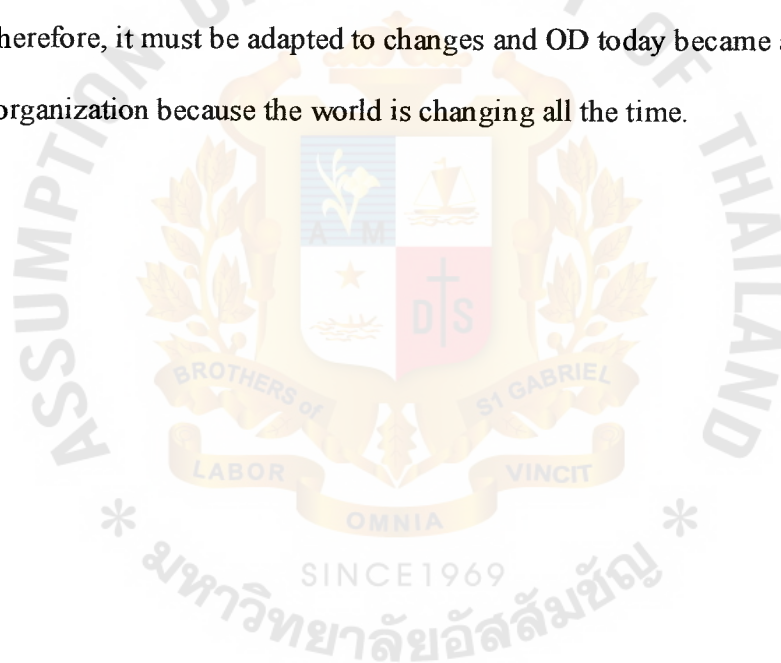
After ODI implemented, the researcher accept that the believe of knowledge is power still takes place. Since, it's concern on the attitude of oneself which might need more time or other techniques to deal with. These concept concerned to those who are unwilling to share their knowledge as well as their experiences. The researcher might have to study further in depth about the attitude, culture, motivation and compensation, communication techniques and career path in order to more understand on how to encourage them to share.

In addition, after the knowledge have been shared and captured, then, the knowledge inventory also has been created in order to store those knowledge. It's time for another

process, knowledge use, that had to concern to. The knowledge that have been shared should be managed and used as an input, however, to create more value added for the user and the overall organization as a result.

5.3.3. Recommendations for OD Discipline

From the researcher's point of view, OD discipline encourages the researcher to be more aware on an attempt to improve the effectiveness of the organization and its members by means of a systematic change management program. Change is the ways of life that are around us. Therefore, it must be adapted to changes and OD today became a common term for learning organization because the world is changing all the time.



Epilogue: Personal Reflection

This research study aimed at studying on the impact of ODI and how to create the awareness of knowledge sharing and how to create the collaboration on knowledge sharing implementation by using KM techniques.

After completing of this research study, the researcher hoped that it would serves as an example for providing guideline for any person or organization as a tool for converting employee's knowledge such as tacit knowledge to value of organization performance. Besides, it would serves as an example of appropriate ODI that leads to higher productivity and to increase organization effectiveness.

As a Master of Management in Organizational Development and Management or MM (OD&M) student and OD practitioner, both OD and change management address the effective implementation of planned change which the researcher also applied as an approach through this study. They are both concerned with the sequence of diagnosis stage, design and implementing ODI stage, and evaluation stage.

The researcher has learnt that OD is a continuing process to improve organizational performance as well as its efficiency and effectiveness. To be successful, it requires everyone in the organization especially the management to dedicate as an OD practitioner, to encourage and support for change.

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Appendices



Appendix 1

Questionnaire in English version



QUESTIONNAIRE

This survey is designed to study the target respondents on their perception of the awareness and the collaboration of knowledge sharing situation within TPI as well as the related area of motivation, innovation, communication, collaboration, learning organization, and teamwork upon the situation.

The researcher is now conducting a research on knowledge sharing. The researcher appreciates your time for considering these questions. The survey is divided into three parts:

Part I: Questions about demographic profile.

Part II: Question about the awareness on knowledge sharing.

Part III: Question about the collaboration on knowledge sharing.

Instruction: For each of the questions listed below, please check the most appropriate answer or mark on the scale that best describes how much you agree or disagree with the statement. As you consider each statement, please think about how it relates to your personally and to your thoughts and beliefs about your company. If you are not in a position to a given statement, please select "Don't know". There are four scales:

0 = Do not know (*Don't know*)

1 = Strongly Disagree / Very Low (*SD*)

2 = Disagree (*D*)

3 = Agree (*A*)

4 = Strongly Agree / Very High (*SA*)

Please be honest in your response. Confidentiality is guaranteed, and all analysis will be grouped to ensure individual results are not revealed.

PART I: Demographic profile and other information.

1. Which function do you have in the company?

- ☐ Consultant
 ☐ Training Services Staff
☐ Customer Services / Support Staff
 ☐ Others

2. Gender

- ☐ Male
☐ Female

3. Age category

- ☐ 20-30 yrs.
 ☐ 41-50 yrs.
☐ 31-40 yrs.
 ☐ 51 yrs. or more

4. Length of service in the present company

- ☐ 1-less than 3 yrs.
 ☐ 5-10 yrs.
☐ 3-less than 5 yrs.
 ☐ More than 10 yrs.

PART II: The Awareness on Knowledge Sharing.

<u>Motivation</u>	SA	A	D	SD	Don't know
5 In general, knowledge sharing and learning are valued in my company culture.	4	3	2	1	0
6 I am satisfied that the present knowledge sharing helps to improve my job efficiency.	4	3	2	1	0
7 I am satisfied that the present knowledge sharing helps to provide customer services.	4	3	2	1	0
8 I am satisfied that the present knowledge sharing helps to decline my job's mistakes.	4	3	2	1	0
9 I am satisfied that the present knowledge sharing helps to understand strategy/ mission of company.	4	3	2	1	0
10 The knowledge sharing practices are aligned with overall objectives of the company.	4	3	2	1	0

<u>Cooperation</u>	SA	A	D	SD	Don't know
11 I am believed that knowledge is the power of oneself.	4	3	2	1	0
12 I am generally allowed time to reflect on completed tasks and projects, and to share experience with team members and colleagues.	4	3	2	1	0
13 I always attend KM activities or other opportunities for sharing my relevant knowledge and experience.	4	3	2	1	0
14 I am satisfied with knowledge from group discussion.					
<u>Communication</u>	SA	A	D	SD	Don't know
15 Knowledge sources within the company are easily regular accessed.	4	3	2	1	0
16 I can generally access the information that I need without having to refer to the person who created it.	4	3	2	1	0
17 Information about failures, errors, and mistake is shared and addressed constructively.	4	3	2	1	0
18 In my company, there are many occasions do exist for an exchange of knowledge.	4	3	2	1	0
19 I am satisfied with the available knowledge from face to face informal meeting.	4	3	2	1	0
20 I am satisfied with knowledge exchange of other employees from other department.	4	3	2	1	0
21 I am satisfied with knowledge exchange among my colleagues within my department.	4	3	2	1	0

PART III: The Collaboration on Knowledge Sharing.

<u>Innovation</u>	SA	A	D	SD	Don't know
22 I know what knowledge I missed to deploy my activities, and, I will do best next time.	4	3	2	1	0
23 My pressure of workload is too high to spent time on learning new thing.	4	3	2	1	0

24	The product/service that I provide always involve bringing together expert with relevant knowledge and experience.	4	3	2	1	0
<u>Teamwork</u>		SA	A	D	SD	Don't know
25	I am satisfied with knowledge available from team and group task/project.	4	3	2	1	0
26	I am satisfied with transfer of knowledge through cooperative project.	4	3	2	1	0
27	I am satisfied with transfer of knowledge through cross functional project.	4	3	2	1	0
28	There is cooperation among team member.	4	3	2	1	0
29	Our department staff meetings are filled with open and honest participation.	4	3	2	1	0
<u>Learning Organization</u>		SA	A	D	SD	Don't know
30	My knowledge continues to stay sufficiently up-to-date to deploy my activities.	4	3	2	1	0
31	In this company the intention is that time is also spent on gathering new knowledge.	4	3	2	1	0
32	Rate the importance of the following knowledge domains that you need to share as follow:					
32.1	- Marketing / Sales	4	3	2	1	0
32.2	- Customer Service	4	3	2	1	0
32.3	- Competition	4	3	2	1	0
32.4	- Internal processes of Company Operations	4	3	2	1	0
32.5	- Suppliers	4	3	2	1	0
32.6	- Other (Specify)	4	3	2	1	0

Questionnaire in Thai version



แบบสอบถามความคิดเห็นเกี่ยวกับการรับทราบและการมีส่วนร่วมในกิจกรรมการแลกเปลี่ยนความรู้

ข้าพเจ้า น.ส.วรวิณี สอนพุ่ม ได้จัดทำแบบสอบถามนี้ขึ้นเพื่อทำการวิจัย เรื่อง “การรับทราบและการมีส่วนร่วมในกิจกรรมการแลกเปลี่ยนความรู้ ของสถาบันเพิ่มผลผลิตแห่งชาติ” ซึ่งเป็นส่วนหนึ่งของการทำรายงานการวิจัยระดับการจัดการมหาบัณฑิต สาขาการจัดการและการพัฒนางานองค์กร มหาวิทยาลัยอัสสัมชัญ ปีการศึกษา 2548 ข้อมูลที่ได้จากแบบสอบถามนี้ จะเป็นความลับและถูกนำไปใช้เพื่อการทำวิจัยเท่านั้น จึงใคร่ขอความกรุณาในการตอบแบบสอบถามนี้ตามความคิดเห็นของท่าน

ส่วนที่ 1 ข้อมูลทั่วไป

1. ท่านดำรงตำแหน่งอะไรในสถาบัน

- ☐ วิทยากรที่ปรึกษา
 ☐ เจ้าหน้าที่บริการฝึกอบรม
☐ เจ้าหน้าที่บริการธุรกิจ
 ☐ อื่นๆ

2. เพศ

- ☐ ชาย
☐ หญิง

3. อายุ

☐ 20-30 ปี☐ 41-50 ปี☐ 31-40 ปี☐ 51 ปี หรือมากกว่า

4. อายุงาน

☐ 1 - น้อยกว่า 3 ปี☐ 5 – น้อยกว่า 7 ปี☐ 3 – น้อยกว่า 5 ปี☐ มากกว่า 7 ปี

ส่วนที่ 2 โปรดกรอก X ลงบนตัวเลือกที่คุณคิดว่าเหมาะสมมากที่สุด (เลือกตอบเพียงข้อเดียว)

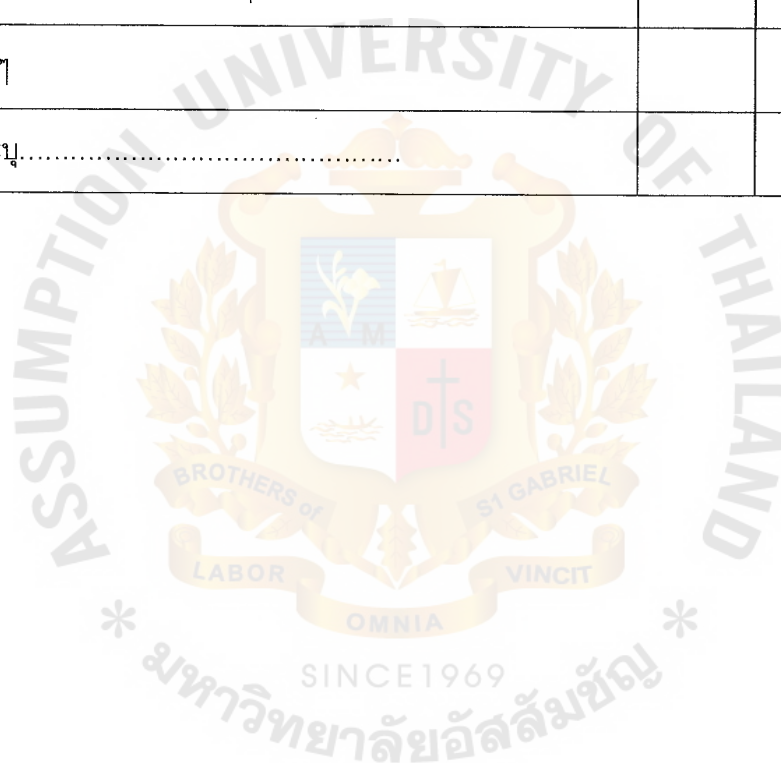
ความคิดเห็นของเจ้าหน้าที่เกี่ยวกับการรับรู้ในเรื่องการแลกเปลี่ยนความรู้		เห็น ด้วย มาก ที่สุด	เห็น ด้วย	ไม่ เห็น ด้วย	ไม่เห็น ด้วย มาก ที่สุด	ไม่ ทราบ
5	วัฒนธรรมองค์กรของข้าพเจ้าให้ความสำคัญกับการเรียนรู้และการแลกเปลี่ยน ความรู้					
6	ข้าพเจ้ามีความยินดีที่การแลกเปลี่ยนความรู้สามารถช่วยพัฒนาประสิทธิภาพ การทำงานของข้าพเจ้า					
7	ข้าพเจ้ามีความยินดีที่การแลกเปลี่ยนความรู้ระหว่างเจ้าหน้าที่สามารถช่วย ตอบสนองความต้องการของลูกค้าได้ดีขึ้น					
8	ข้าพเจ้ามีความยินดีที่การแลกเปลี่ยนความรู้สามารถช่วยลดข้อผิดพลาดใน การทำงานได้					
9	ข้าพเจ้ามีความยินดีที่การแลกเปลี่ยนความรู้ช่วยให้ข้าพเจ้าเข้าใจในพันธกิจ รวมถึงกลยุทธ์ขององค์กรมากขึ้น					

10	การแลกเปลี่ยนความรู้ในองค์กรสอดคล้องกับวัตถุประสงค์ต่างๆของการทำงาน					
11	ข้าพเจ้าเชื่อว่าความรู้คืออำนาจ					
12	โดยปกติข้าพเจ้าจะติดตามประเมินผลงานของข้าพเจ้าหลังจากงานนั้นๆ เสร็จสิ้น เพื่อจะแลกเปลี่ยนความรู้กันในทีมและเพื่อนร่วมงาน					
13	ข้าพเจ้ามักจะหาโอกาสเข้าร่วมในกิจกรรมการจัดการความรู้ (KM) ต่างๆ เพื่อแลกเปลี่ยนประสบการณ์ดีๆ กับเพื่อนร่วมสถาบัน					
14	ข้าพเจ้าชอบการอภิปรายกลุ่ม (Group Discussion) เพราะข้าพเจ้ามักจะได้รับความรู้ใหม่ๆ เสมอ					
15	ข้าพเจ้าสามารถเข้าถึงแหล่งความรู้ในองค์กรได้อย่างง่ายดาย					
16	ข้าพเจ้าสามารถเข้าถึงเกร็ดความรู้ต่างๆ ในแหล่งความรู้โดยไม่ต้องขออนุญาตเจ้าของเกร็ดความรู้นั้นๆ ก่อน					
17	ข้าพเจ้าแลกเปลี่ยนข้อมูลต่างๆ ในการทำงานกับเพื่อนร่วมงานรวมถึงข้อผิดพลาดต่างๆ เพื่อให้เกิดแนวทางการแก้ไขปัญหาาร่วมกัน					
18	มีกิจกรรมหลายอย่างในองค์กรของข้าพเจ้าที่สนับสนุนการแลกเปลี่ยนความรู้ระหว่างเจ้าหน้าที่					
19	ข้าพเจ้าชอบที่จะแลกเปลี่ยนความรู้กับเพื่อนร่วมงานจากการสนทนาหรือการบอกเล่าเรื่องแบบ face to face					
20	ข้าพเจ้ายินดีแลกเปลี่ยนความรู้กับเพื่อนร่วมงานระหว่างฝ่าย					
21	ข้าพเจ้ายินดีแลกเปลี่ยนความรู้กับเพื่อนร่วมงานในแผนกเดียวกับข้าพเจ้ามากกว่า					

ส่วนที่ 3 โปรดกรอก X ลงบนตัวเลือกที่คุณคิดว่าเหมาะสมมากที่สุด (เลือกตอบเพียงข้อเดียว)

ความคิดเห็นของเจ้าหน้าที่เกี่ยวกับการเข้าร่วมในกิจกรรม การแลกเปลี่ยนความรู้		เห็น ด้วย มาก ที่สุด	เห็น ด้วย	ไม่ เห็น ด้วย	ไม่ เห็น ด้วย มาก ที่สุด	ไม่ ทราบ
22	ข้าพเจ้ารู้ถึงสาเหตุของข้อผิดพลาดในการทำงานของข้าพเจ้า และข้าพเจ้าจะพยายามทำให้ดีขึ้นในครั้งหน้า					
23	งานของข้าพเจ้าเยอะมากจนไม่มีเวลาสำหรับการเรียนรู้สิ่งใหม่ๆ					
24	ข้าพเจ้ามักจะนำเกร็ดความรู้หรือประสบการณ์มาปรับใช้กับการทำงานในปัจจุบันอยู่เสมอๆ เพื่อให้เกิดประสิทธิภาพมากขึ้น					
25	ข้าพเจ้าชอบที่เรียนรู้และสรรหาความรู้ใหม่ๆ เพื่อมาปรับใช้กับการทำงานของข้าพเจ้าเสมอๆ					
26	ข้าพเจ้าชอบทำงานเป็นทีมและเรียนรู้จากเพื่อนร่วมงานในทีม ข้าพเจ้ารู้สึกที่ข้าพเจ้าได้เรียนรู้สิ่งใหม่ๆ อยู่อย่างสม่ำเสมอ					
27	ข้าพเจ้ายินดีที่จะทำงานแบบข้ามสายงาน (Cross Functional) กับแผนก/ฝ่ายอื่นเสมอๆ					
28	ข้าพเจ้ายินดีที่จะทำงานแบบโครงการร่วม (Cooperative Project) กับแผนก/ฝ่ายอื่นเสมอๆ					
29	ในองค์กรของข้าพเจ้ามักมีการทำงานและประสานงานแบบข้ามสายงาน (Cross Functional) เสมอๆ					
30	การประชุมต่างๆ ขององค์กรเปิดโอกาสให้เจ้าหน้าที่ได้แสดงความคิดเห็นอย่างเต็มที่					
31	องค์กรของข้าพเจ้าสนับสนุนการเรียนรู้ของพนักงานอย่างสม่ำเสมอ					
32	กฎระเบียบความสำคัญของเรื่องต่อไปนี้ที่ท่านอยากให้มีการแลกเปลี่ยนความรู้					

ซึ่งกันและกันในสถาบัน					
32.1 ด้านการขาย / ด้านการตลาด					
32.2 ด้านการให้บริการลูกค้า					
32.3 ข้อมูลด้านคู่แข่ง					
32.4 ด้านกระบวนการทำงาน ขั้นตอนต่างๆ เอกสาร ISO					
32.5 ด้านลูกค้าต่างๆ					
32.6 อื่นๆ โปรดระบุ.....					





QUESTIONS FOR INTERVIEW METHOD

This interview is designed to study the target respondents on their perception on knowledge sharing within their company as well as the related area of motivation, collaboration, and communication upon the situation.

Instruction: Your participation in this study is voluntary and you may withdraw at any time. An audio tape will be made of this interview. The tape will be kept confidential and will be destroyed at the conclusion of this study. This interview consists with five questions as below:

Question I : Knowledge Management

- Can you tell me what do you think that should be the purpose of Knowledge Management?

Question II : Knowledge Sharing

- Please tell me how Knowledge sharing help to improve your productivity?

Question III : Awareness

- Please identify what is the knowledge or information that you have been shared and also beneficial to others?

Question IV : Collaboration

- Can you tell me about the KM activities that you have experienced or other opportunities you have shared your knowledge, information, or ideas?

Prompts:

Can you tell me more?

What do you mean?

Is there anything else that might help me?

Appendix 13

RELIABILITY ANALYSIS - SCALE (ALPHA)

Item-total Statistics

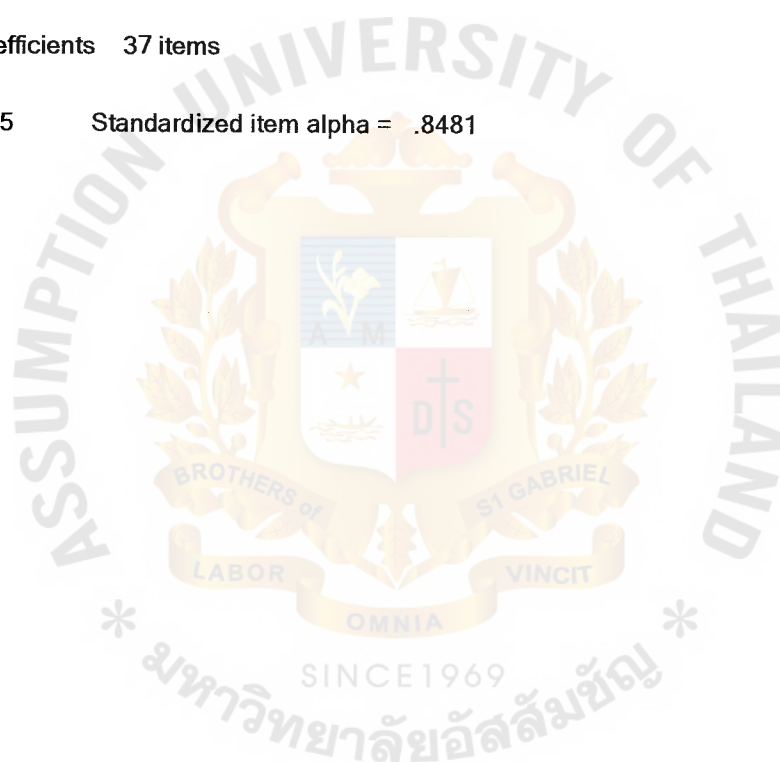
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
I_WORK	140.3846	80.9271	.1591	.8125
SEX	141.0769	85.8623	-.0134	.8093
AGE	140.6154	94.0324	-.4692	.8370
A_WORK	140.8205	85.5722	-.0447	.8222
KNO_KM1	138.7692	81.3401	.4465	.7982
KNO_KM2	138.4615	81.7287	.4632	.7985
KNO_KM3	138.3846	80.5061	.5818	.7953
KNO_KM4	138.3077	81.6397	.4438	.7986
KNO_KM5	138.7436	82.5115	.1955	.8057
KNO_KM6	138.7436	82.0378	.2165	.8050
KNO_KM7	138.4359	76.3576	.6619	.7874
KNO_KM8	139.6667	83.8596	.1387	.8068
KNO_KM9	138.5385	82.5709	.3465	.8011
KNO_KM10	139.0256	79.3414	.5190	.7944
KNO_KM11	139.5641	81.1997	.2541	.8037
KNO_KM12	138.6410	80.6046	.5220	.7961
KNO_KM13	138.8462	77.8704	.5606	.7917
KNO_KM14	138.5385	81.0445	.4669	.7975
KNO_KM15	138.6410	81.8677	.4353	.7990
KNO_KM16	138.7949	84.3779	.0394	.8138
SHA_KM17	138.9487	78.6289	.3626	.7992
SHA_KM18	139.0256	82.9204	.1720	.8064
SHA_KM19	138.8718	78.6937	.5788	.7924
SHA_KM20	138.8462	80.6599	.3462	.7999
SHA_KM21	138.5128	79.7301	.5918	.7938
SHA_KM22	138.6154	73.7692	.6539	.7843
SHA_KM.1	138.5641	82.4629	.3703	.8006
SHA_KM.2	138.2308	82.4453	.3573	.8008
SHA_KM.3	138.4872	82.8354	.1705	.8067
SHA_KM.4	138.5641	84.6734	.0879	.8079

SHA_KM.5	138.7949	83.7989	.1462	.8065
SHA_KM.6	138.8205	85.5722	.0592	.8070
SHA_KM23	138.3590	82.7099	.3277	.8015
SHA_KM24	138.6667	80.9649	.5023	.7969
SHA_KM25	138.6410	83.7625	.3080	.8029
SHA_KM26	138.7692	77.8138	.6997	.7891
SHA_KM27	138.8974	80.3050	.4566	.7967

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients 37 items

Alpha = .8065 Standardized item alpha = .8481



The Awareness on Knowledge Sharing (Pre ODI)

Item	Mean	SD	Rating
<u>Motivation</u>			
In general, knowledge sharing and learning are valued in my company culture.	2.9250	.65584	Agree
I am satisfied that the present knowledge sharing helps to improve my job efficiency.	3.0750	.76418	Agree
I am satisfied that the present knowledge sharing helps to provide customer services.	2.8750	.82236	Agree
I am satisfied that the present knowledge sharing helps to decline my job's mistakes.	3.0000	.81650	Agree
I am satisfied that the present knowledge sharing helps to understand strategy/ mission of company.	2.7250	.93336	Agree
The knowledge sharing practices are aligned with overall objectives of the company.	2.6500	.92126	Agree
<u>Total</u>	2.8750	.48001	Agree
<u>Cooperation</u>			
I am believed that knowledge is the power of oneself.	2.5500	.98580	Agree
I am generally allowed time to reflect on completed tasks and projects, and to share experience with team members and colleagues.	2.0000	.64051	Disagree
I always attend KM activities or other opportunities for sharing my relevant knowledge and experience.	2.7000	.91147	Agree
I am satisfied with knowledge from group discussion.	2.3750	.77418	Disagree
<u>Total</u>	2.4167	.59317	Disagree
<u>Communication</u>			
Knowledge sources within the company are easily regular accessed.	2.5500	.87560	Agree
I can generally access the information that I need without having to refer to the person who created it.	2.0250	.89120	Disagree
Information about failures, errors, and mistake is shared and addressed constructively.	2.9250	.79703	Agree

In my company, there are many occasions do exist for an exchange of knowledge.	2.4500	.87560	Disagree
I am satisfied with the available knowledge from face to face informal meeting.	2.7500	.89872	Agree
I am satisfied with knowledge exchange of other employees from other department.	2.7750	.80024	Agree
I am satisfied with knowledge exchange among my colleagues within my department.	2.7000	1.01779	Agree
<u>Total</u>	2.5964	.46644	Agree

The Collaboration on Knowledge Sharing. (Pre ODI)

Item	Mean	SD	Rating
<u>Innovation</u>			
I know what knowledge I missed to deploy my activities, and, I will do best next time.	2.5897	1.04423	Agree
My pressure of workload is too high to spent time on learning new thing.	2.5250	.90547	Agree
The product/service that I provide always involve bringing together expert with relevant knowledge and experience.	2.7000	.75786	Agree
<u>Total</u>	2.5458	.49208	Agree
<u>Teamwork</u>			
I am satisfied with knowledge available from team and group task/project.	2.9250	.85896	Agree
I am satisfied with transfer of knowledge through cooperative project.	2.8000	.85335	Agree
I am satisfied with transfer of knowledge through cross functional project.	2.9000	.63246	Agree
There is cooperation among team member.	2.6000	.74421	Agree
Our department staff meetings are filled with open and honest participation.	2.3750	.62788	Disagree
<u>Total</u>	2.7200	.40459	Agree

<u>Learning Organization</u>			
My knowledge continues to stay sufficiently up-to-date to deploy my activities.	2.7000	.88289	Agree
In this company the intention is that time is also spent on gathering new knowledge.	2.7750	1.04973	Agree
Rate the importance of the following knowledge domains that you need to share as follow:			
- Marketing / Sales	2.9730	.79884	Agree
- Customer Service	3.2051	.80064	Agree
- Competition	2.8649	.85512	Agree
- Internal processes of Company Operations	2.7368	.92076	Agree
- Suppliers	2.8000	.86772	Agree
- Other (Specify)	2.6250	1.18773	Agree
<u>Total</u>	2.8294	.51901	Agree

Appendix 1

The Awareness on Knowledge Sharing (Post ODI)

Item	Mean	SD	Rating
<u>Motivation</u>			
In general, knowledge sharing and learning are valued in my company culture.	3.08	.616	Agree
I am satisfied that the present knowledge sharing helps to improve my job efficiency.	3.40	.496	Strongly Agree
I am satisfied that the present knowledge sharing helps to provide customer services.	3.45	.504	Strongly Agree
I am satisfied that the present knowledge sharing helps to decline my job's mistakes.	3.50	.506	Strongly Agree
I am satisfied that the present knowledge sharing helps to understand strategy/ mission of company.	3.10	.810	Agree
The knowledge sharing practices are aligned with overall objectives of the company.	3.08	.829	Agree
<u>Total</u>	3.2667	.44626	Strongly Agree
<u>Cooperation</u>			
I am believed that knowledge is the power of oneself.	3.40	.778	Strongly Agree
I am generally allowed time to reflect on completed tasks and projects, and to share experience with team members and colleagues.	2.23	.660	Disagree
I always attend KM activities or other opportunities for sharing my relevant knowledge and experience.	3.33	.526	Strongly Agree
I am satisfied with knowledge from group discussion.	3.03	.768	Agree
<u>Total</u>	2.9833	.45885	Agree
<u>Communication</u>			
Knowledge sources within the company are easily regular accessed.	2.90	.709	Agree
I can generally access the information that I need without having to refer to the person who created it.	2.30	.883	Disagree
Information about failures, errors, and mistake is shared and addressed constructively.	3.22	.577	Agree

In my company, there are many occasions do exist for an exchange of knowledge.	3.03	.733	Agree
I am satisfied with the available knowledge from face to face informal meeting.	3.33	.572	Strongly Agree
I am satisfied with knowledge exchange of other employees from other department.	3.20	.516	Agree
I am satisfied with knowledge exchange among my colleagues within my department.	3.08	.971	Agree
Total	3.0071	.43276	Agree

The Collaboration on Knowledge Sharing. (Post ODI)

Item	Mean	SD	Rating
<u>Innovation</u>			
I know what knowledge I missed to deploy my activities, and, I will do best next time.	2.92	1.010	Agree
My pressure of workload is too high to spent time on learning new thing.	2.85	.834	Agree
The product/service that I provide always involve bringing together expert with relevant knowledge and experience.	3.00	.679	Agree
Total	2.9521	.55370	Agree
<u>Teamwork</u>			
I am satisfied with knowledge available from team and group task/project.	3.45	.504	Strongly Agree
I am satisfied with transfer of knowledge through cooperative project.	3.20	.516	Agree
I am satisfied with transfer of knowledge through cross functional project.	3.22	.423	Agree
There is cooperation among team member.	3.10	.672	Agree
Our department staff meetings are filled with open and honest participation.	2.95	.639	Agree
Total	3.1850	.40608	Agree

<u>Learning Organization</u>			
My knowledge continues to stay sufficiently up-to-date to deploy my activities.	3.35	.580	Strongly Agree
In this company the intention is that time is also spent on gathering new knowledge.	3.20	.939	Agree
Rate the importance of the following knowledge domains that you need to share as follow:			
- Marketing / Sales	3.33	.535	Strongly Agree
- Customer Service	3.59	.498	Strongly Agree
- Competition	3.41	.798	Strongly Agree
- Internal processes of Company Operations	3.33	.586	Strongly Agree
- Suppliers	3.09	.742	Agree
- Other (Specify)	3.67	.516	Strongly Agree
<u>Total</u>	3.3429	.42530	Strongly Agree

Appendix E

Paired Sample T-Test : The Awareness on Knowledge Sharing.

Variable	Questionnaire						Result
	Pre		Post		<i>t</i>	Sig. (2-tailed)	
	\bar{X}	SD	\bar{X}	SD			
<u>Motivation</u>	2.8750	.48001	3.2667	.44626	-7.759	.000	Reject Ho
In general, knowledge sharing and learning are valued in my company culture.	2.9250	.65584	3.08	.616	2.623	.012	Reject Ho
I am satisfied that the present knowledge sharing helps to improve my job efficiency.	3.0750	.76418	3.40	.496	4.333	.000	Reject Ho
I am satisfied that the present knowledge sharing helps to provide customer services.	2.8750	.82236	3.45	.504	4.658	.000	Reject Ho
I am satisfied that the present knowledge sharing helps to decline my job’s mistakes.	3.0000	.81650	3.50	.506	4.655	.000	Reject Ho
I am satisfied that the present knowledge sharing helps to understand strategy/ mission of company.	2.7250	.93336	3.10	.810	4.050	.000	Reject Ho
The knowledge sharing practices are aligned with overall objectives of the company.	2.6500	.92126	3.08	.829	3.597	.001	Reject Ho
<u>Cooperation</u>	2.5458	.49208	2.9521	.55370	-8.954	.000	Reject Ho
I am believed that knowledge is the power of oneself.	2.5897	1.04423	2.92	1.010	3.929	.000	Reject Ho

I am generally allowed time to reflect on completed tasks and projects, and to share experience with team members and colleagues.	2.5250	.90547	2.85	.834	3.911	.000	Reject Ho
I always attend KM activities or other opportunities for sharing my relevant knowledge and experience.	2.7000	.75786	3.00	.679	3.674	.001	Reject Ho
I am satisfied with knowledge from group discussion.	2.3750	.77418	3.03	.768	5.342	.000	Reject Ho
<u>Communication</u>	2.5964	.46644	3.0071	.43276	-12.827	.000	Reject Ho
Knowledge sources within the company are easily regular accessed.	2.5500	.87560	2.90	.709	4.149	.000	Reject Ho
I can generally access the information that I need without having to refer to the person who created it.	2.0250	.89120	2.30	.883	3.439	.001	Reject Ho
Information about failures, errors, and mistake is shared and addressed constructively.	2.9250	.79703	3.22	.577	3.674	.001	Reject Ho
In my company, there are many occasions do exist for an exchange of knowledge.	2.4500	.87560	3.03	.733	4.867	.000	Reject Ho
I am satisfied with the available knowledge from face to face informal meeting.	2.7500	.89872	3.33	.572	5.387	.000	Reject Ho
I am satisfied with knowledge exchange of other employees from other department.	2.7750	.80024	3.20	.516	3.775	.001	Reject Ho
I am satisfied with knowledge exchange among my colleagues within my department.	2.7000	1.01779	3.08	.971	3.777	.001	Reject Ho

Paired Sample T-Test : The Collaboration on Knowledge Sharing.

Variable	Questionnaire						Result
	Pre		Post		T	Sig. (2-tailed)	
	\bar{X}	SD	\bar{X}	SD			
<u>Innovation</u>	2.4167	.59317	2.9833	.45885	-8.941	.000	Reject Ho
I know what knowledge I missed to deploy my activities, and, I will do best next time.	2.5500	.98580	3.40	.778	5.835	.000	Reject Ho
My pressure of workload is too high to spent time on learning new thing.	2.0000	.64051	2.23	.660	2.467	.018	Reject Ho
The product/service that I provide always involve bringing together expert with relevant knowledge and experience.	2.7000	.91147	3.33	.526	4.407	.000	Reject Ho
<u>Teamwork</u>	2.7200	.40459	3.1850	.40608	-11.410	.000	Reject Ho
I am satisfied with knowledge available from team and group task/project.	2.9250	.85896	3.45	.504	4.891	.000	Reject Ho
I am satisfied with transfer of knowledge through cooperative project.	2.8000	.85335	3.20	.516	3.399	.002	Reject Ho
I am satisfied with transfer of knowledge through cross functional project.	2.9000	.63246	3.22	.423	3.340	.002	Reject Ho
There is cooperation among team member.	2.6000	.74421	3.10	.672	5.278	.000	Reject Ho

Our department staff meetings are filled with open and honest participation.	2.3750	.62788	2.95	.639	4.867	.000	Reject Ho
<u>Learning Organization</u>	2.8294	.51901	3.3429	.42530	-6.536	.000	Reject Ho
My knowledge continues to stay sufficiently up-to-date to deploy my activities.	2.7000	.88289	3.35	.580	4.604	.000	Reject Ho
In this company the intention is that time is also spent on gathering new knowledge.	2.7750	1.04973	3.20	.939	3.981	.000	Reject Ho
Rate the importance of the following knowledge domains that you need to share as follow:							
- Marketing / Sales	2.9730	.79884	3.33	.535	3.179	.003	Reject Ho
- Customer Service	3.2051	.80064	3.59	.498	3.376	.002	Reject Ho
- Competition	2.8649	.85512	3.41	.798	4.286	.000	Reject Ho
- Internal processes of Company Operations	2.7368	.92076	3.33	.586	3.416	.002	Reject Ho
- Suppliers	2.8000	.86772	3.09	.742	3.260	.003	Reject Ho
- Other (Specify)	2.6250	1.18773	3.67	.516	1.348	.235	Accept H0