



The Work Process, Teamwork, Communication and Proposed Organization
Intervention of Install District Metering and Remote Terminal Unit:
A Case of Technology Service and Consulting 1656 Company Limited.

By

Nat Bawonpreechawanich

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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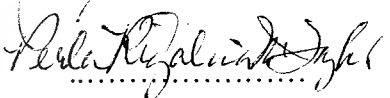

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Master of Management in Organization Development and Management

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ABSTRACT

The main objective of this research is to study the work process, teamwork, and organization communication at TSC 1656 Company Limited (TSC Company). The significant benefit of this study is for the management team to recognize the situation and also look for the way to develop the work process, teamwork and communication inside organization.

The research design of this study is based diagnosis stage of Organization Development (OD). The 158 respondents were chosen by simple random sampling from a population 222 people who relate with job no.5 which is install “District Meter”(DM) and “Remote Terminal Unit” (RTU) that TSC Company work for Metropolitan Water Authority of Thailand (MWA). The researcher used both quantitative and qualitative approaches. Quantitative analysis was done on the data gathered from the survey questionnaire while qualitative analysis was done by interview. There are two set of questionnaire. 1) attitude of workers in term of teamwork and communication of TSC Company 2) work process of each department.

The researcher found that the workers accept concept about teamwork and they felt they work as a team from questionnaire. From interview, task manger told they do not work as a team or there was not much support from other workers both inside and outside department. The workers also did not communicate to each others sometimes even it was important. Work process of install DM and RTU was changed but there was not communicate well and it was cause of time late, ineffective work, even conflict among workers. So the researcher is going to propose Organization Development Intervention (ODI) to the project director in order to solve the problem as well as improve company performance. Activities which can tighten and build

strong relationship among workers make teamwork happen. Some policies will be set to solve problem about communication. And work process management will be used to increase effective level of work process in installing DM and RTU.



ACKNOWLEDGEMENT

I have spent about half a year to study and conduct the research for TSC Company. Although from time to time, I found lots of difficulties as I am no longer working with them, together with the limitation of time, and cooperation among workers, I could finally summarize the outcome in this thesis. The most important thing is to thank all professors who started to explore my mindset since the beginning of year one till this final stage of the Master Degree of MM Batch 9. I would like to thank all my classmates also, without everyone's help I could not have completed my degree for sure. So, thank you very much.

The course has totally helped develop my process of thinking; from people as a critical element, till a macro organizational structure. All those related courses helped me to be able to combine every skill in this thesis. I would like to give special thanks to Dr. Luis Danai Kristhanin who is my advisor and he gave me no boundaries of thinking while helping to complete my ideas from time to time. In addition, special thanks to all the committee members Dr. Perla Rizalina M. Tayko and Dr. Salvacion E. Villavincencio who also suggested lots of ideas during my presentation.

Last but not least special thanks to all the staff of TSC Company who helped by participating in both questionnaire fulfillment and interview. I would like to give many special thanks to my brother who helped me to approach a lot of important information. He also encouraged me during my thesis.

Finally, if the reader found any disagreements and mistakes in my study, I would hereby say sorry and hope every reader would get some idea and knowledge from this thesis.

Nat B.

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CHAPTER ONE

Introduction

1.1 Generalities of the Study

1.1.1 Background of The Study

The essential for learning of every organization has become important nowadays. The organization which survives has good flexibility with changing external environment because no one can predict the change 100%. So the companies have to learn or develop to survive. (Cinite, 2006)

The view point that organizations are open systems which cannot ignore to face with different situational variables; so they should manage their structure and managerial competency to the contingencies they have to face. It has no “one best way” management principles of planning, organizing and controlling anymore because it’s useful only within stable environment. The primary source of competitive advantage in the future isn’t the resources which the companies have (capital, land, money), but it’s an innovation to create a new knowledge. The development and commitment of the employees become important because it’s lead to successfulness of the company. The companies try to fit between traditional training interventions and the established structural and cultural constraints by sharing beliefs and corporate cultures. (Cinite, 2006)

The learning process from experience is very important for both individual and organizational effectiveness. It will happen when personal values and organizational norms support action based on valid information, free and informed choice and internal commitment. It seems to be a process by reflecting individual experiences more than outcomes or results. There is no organizational learning without individual

learning, but that individual learning is important but inadequate condition for organizational learning. Developing a learning organization requires deep realignment of remaining structure, socio-structure and culture also.

(Cinite, 2006)

Every organization has to reach their maximization in the productivity. It's mean that every process of production should be effectively. That's why work process management, teamwork, and communication acted as the important roles in many firms. Work process management is very helpful to define specific task of every employees to let them perform in specific task and process. It will get rid of doing the same task by 2-3 persons which is spend more time. The effective work process (or workflow) will automate the company's process for the creation, updating, review and approval of documents and digital content. (Ude, 2006)

As well-functioning workflow identifies tasks to be performed, the workflow engine automatically shows users assigned to a task a screen that is specific to the task type. The best of these engines enable users to easily create and modify workflows according to their business needs and processes. Anyway, financial institute and government that must deal with the transportation and presentment of e-forms, supplier payment and business intelligence, powerful workflow engines are a critical part of the data and document management system.

(Ude, 2006)

1.1.2 Global Context

Recently, change management is in track of the world's management. Organizations often need to modify their business processes to cope with changes in the external environment in order to survive. Many firms invest their budget in

researching on process analysis and design, how to systematically extract workflow models from business policies has not been studied, resulting in a missing link between the specification of business policies and the modeling of business processes (Wang, 2006).

Given that process changes are often determined by executives and managers at the policy level, the aforementioned missing link often leads to inefficient and inaccurate implementation of process changes by business analysts and process designers. It's the policy mismatch problem in business process management. The problem will be very difficult and a challenge to solve for organizations with large-scale business processes and a large number of business policies. That's why organizations pay more attention to the work process (Wang, 2006).

For Heidelberg Druckmaschinen AG(Heidelberg) which is the world's leading solution provider for commercial and industrial customers in the print media industry, the company increases the competitiveness by using the workflow management. Because of a large-scale business processes so it's very difficult to conduct workflow. The management team recognize for the benefit so they conducted Job Definition Format (JDF) workflow that cover all production and business processes which are key to maximize productivity and profitability. (www.ipec.org)

1.1.3 Regional Context

In Asia, work process is also very important to implement. There is some waste resource and time without good work process management. In 2004, A Fortune 200 company in China which is doing business in the industrial gases and specialty

chemical industry, the company want to improve their productivity. Standard work process had to be conducted in order to get rid of unnecessary paper work and handling, search for information, delays in getting responses to questions. The company was dealing with nine different freight-forwarding companies to ship their products within Asia as each of its plants operated independently. As a consequence, the company had nine variations in how freight forwarding was handled. These variations required logistics personnel (about 50 in the region) to manually fill out forms, fax forms, place telephone calls in attempts to get information, fend off phone calls from concerned (and sometimes angry or desperate) customers. Also, since each of their plants was a small customer to its freight forwarder, no plant was getting good pricing and service. When customers called requesting delivery information, the personnel had to go through great pains to get any information on the status of the freight. Most of the time they were not able to provide a timely answer for the customers. Employees were frustrated, and their customers were frequently not satisfied with the responses they were getting to their information requests. The project team had met several times during the year, but it was not able to produce any improvements. (www.vitalentusa.com)

At that time, there was no standard work process in use. So it needed to develop one standard work process stripped of the waste the company could detect in the existing variations. The company could then give all the business to one freight forwarder with an alternative in case there were problems with the primary forwarder's performance. The company use about 2 weeks to collect work process information by survey from each participant who is from eight countries: China, Indonesia, Japan, Korea, Malaysia, Singapore, Taiwan and Thailand. The company

also mapped the backbone work process and noted its variations during the meeting.
(www.vitalentusa.com)

1.1.4 Thailand

In Thailand, many companies think about handling the business with good work process. In the past, Thai culture caused Thai people to work in an easy-going way. It is one real point about Thai people from the phrase “There are fish in the river, there is rice in the field”. They are not working hard enough as they want to earn from their effort. That’s why many Thai people always hope in luck when they are gambling. When they go to work for the company, they are not systematic in work process, communication. They just do their task and it is over. The Thai company is not strong because of these reasons. Recently, every company has learnt to improve themselves or to survive in the intensive competition situation. Thai companies have to improve their capability and competency. So clearly work process should be conducted. Fujitsu Thailand knew this advantage so the company invested in MyOffice which is the workflow based personnel and general affairs solution. MyOffice can allow users to change the workflow of the business from the traditional style, which results in many difficulties, to the new easier-to-handle workflow.
(www.fujitsu.com)

The traditional workflow management where a large amount of papers are being used and many procedures are being involved. This can cost business insufficient workflow such as heavy paper work, paper lost, lacking of knowledge of request status, difficulty in searching for historical data, difficulty in reusing information, time consuming in processing request, and time consuming for issuing of

summary report. But with the program the business will be better and very sufficient workflow: reducing paper work, email notification for approving request, ability to inquire requisition status anytime online, ability to issue summary report immediately, ability to inspect historical data anytime online, reusing data and controlling information, security controlling by authentication. (www.fujitsu.com)

In case of warning system in Thailand, the reconstruction process in tsunami-hit provinces in the South was starting. Japan and Germany also helped Thailand to build the early warning system which is helpful to prevent the disaster. Before tsunami occurred, Thailand did not have this system and it spent a lot of money. After the tsunami came this system was changed even though it caused a large budget. The system leads Thai people to learn about it to be useful when the disaster came which is unpredictable. Work process was informed to Thai people through many communication channels such as radio, TV, newspaper, internet, etc. (www.thailand.prd.go.th)

1.1.5 Company Background

Technology Service and Consulting 1656 Company Limited (TSC Company) is a leading ICT corporation with extensive experiences in providing complete and high-quality ICT solutions that exceed client's expectations. It was founded in 2004 by Dr. Thatchai Chuenchom. The number 1656 is a belief of founder that it will bring a good luck to the company all the time. Clients gain competitive advantages through a range of services encompassing the full spectrum of solution delivery life cycle management, from concept development, system design and architecture, system installation and implementation, quality assurance and control. The fields of

technology incorporate instrumentation and control system, communication and network, supervisory control and data acquisition (SCADA), IT hardware and software, enterprise application development, information system and business intelligence, to be offered as a totally integrated system or a part seamlessly integrated into existing systems and solutions. The office is at 8th Floor, 1010 Shinawatra Tower III, Vibhavadi-Rangsit Road, Ladyao, Chatuchak, Bangkok 10900, Thailand. Recently, most employees in the company are in charge of project of Thai government.

Project Water leakage management for metropolitan water authority of Thailand (MWA) is responded by the company. In the past, Bangkok Water Works a government enterprise in Ministry of the Interior worked for people who live in Bangkok and neighbouring areas in terms of providing, producing, and distributing depend on an act in 1967. There are many problems about water losing in production process. Metropolitan Water Authority of Thailand (MWA) tried to decrease the level of losing water in production process all the time by launched Improvement Hydrant Project (1978-82) by eliminating hydrants which were used more than 25 year and used block system in order to manage the level of losing water. It seemed to work at first because the level of losing water decreased to 30% in 1991. After that, the level of losing water increased to 42% in 1997 even though there are many proactive activities to solve this problem. So that this is not the most effective way to solve the problem because there is limitation and cannot continuously control the level of losing water. In budget year 2002-05, Metropolitan Water Authority of Thailand (MWA) organized Water-Supply System Improvement Project by using new technology in controlling water distribution and losing water. The goal of Metropolitan Water

Authority of Thailand (MWA) is to decrease the level of losing water to 30% within the year 2006 and control over this constant rate until 2017. Thai Government tries to solve the problem and find effective solution by using the water leakage management for metropolitan program. The TSC Company is implementing this project which has budgeting around 3,000 million baht with totally 300-350 workers.

There are totally 12 jobs which are performed by the company for Thai government:

1. Develop and Install Software for Water Leakage Management Application (WLMA)

The company gathered user requirement (URD). After that, develop program using URD acquired from Metropolitan Water Authority of Thailand (MWA). Then make management presentation to explain the executive of MWA. MWA team set up training to train MWA users about function and operation of WLMA. Finally, WLMA team prepared for user acceptance test (UAT) by Isonet and MWA staff.

2. Improve placement and control center system

Improve the control center which was set around Bangkok to control the working process of each area.

3. System Integration

Same process as WLMA. But focusing on the interface manager.

4. Computer network improvement

Install the new network's infrastructure for MWA. There is head quarters to control the network and one regional office in each region and 3

branch offices in each region to support regional office. Each office should be linked to others.

5. Install District Meter(DM) and Remote Terminal Unit (RTU)

Install DM and RTU on distribution pipe.

6. Support Field Engineer

Support the work of workers who work as engineer in the field in every area.

7. Install DM on Trunk Main

Same as install DM (job no.5). The different is installing DM on trunk main while job no.5 installing DM on distribution pipe.

8. Training, Seminar, and On the job training

Plan and organize training for MWA and project staff.

9. Improving communication network in work field

Each DM area (DMA) always links to other areas. This job is to improve communication network between DMA to make sure effectiveness of sharing information.

10. Maintenance computer based communication for management

Same as job no.9. Additionally, feedback to management team to let them know the working process in each DMA.

11. Update information which is significance for the project

Every worker in this project has to update their work progress and new plan everyday via internet. There are about 30 persons who are in charge of gathering the data and make it usable.

12. Design and Plan District Metering Area (DMA)

Design DM and where DM should be installed. Plan each DMA to have required water inlets and outlets.

Now, the company faced a project pitfall which is a problem that was ignored since the project started on 24 November 2005. At that time, there was not much system or process in solving problems. So the company let problems continue by hoping that they will not impact the process of the project. Many little problems were beginning to affect the project until it was in the stage of “the project pitfall”. The founders tried to solve these problems by hiring Project Performance Improvement Team (Internal OD Officer). They are in charge of finding and solving problems as soon as possible.

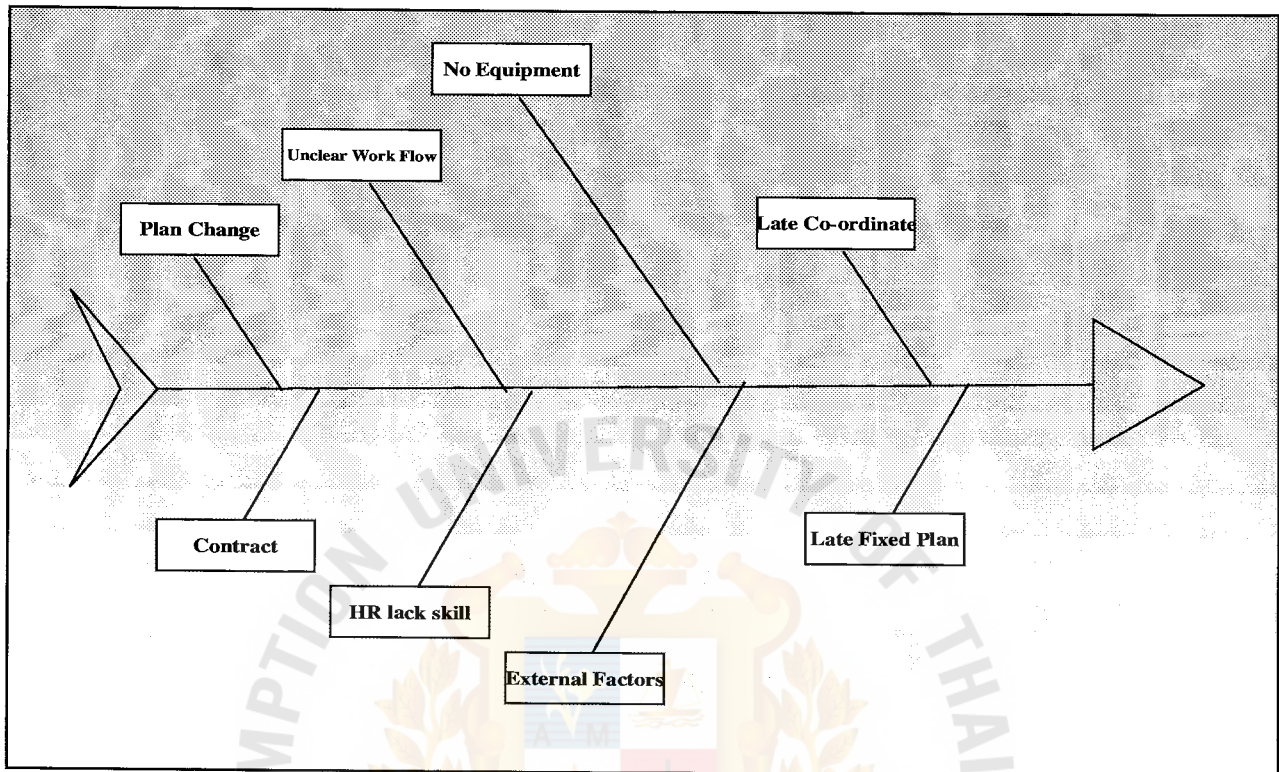
The Internal OD Office use “focus group” as a tool to identify problems. They developed project work flow contain processes and internal customers by using the following steps:

Step 1: 360 degree interview (Most of the people in every department).

Step2: Develop Roughs Work Flow as a general guideline of Step 3.

Step 3: Focus Group (Management sat with officers to try to identify problem and develop cause and affect diagram. They call this diagram “Fish Bone Diagram”).

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Figure 1.1 Causes and Effect (Fish Bone) Diagram

There are many causes which lead to these 8 effects was shown in the table below:

Table 1.1 Causes and Effect of the project

Causes	Effects
1. No plan change from branches, equipment change	1. Delay in operation
2. Unstable organization chart, lack of knowledge, Unclear workflow, no specific responsible	2. Unclear Workflow
3. Lack of inventory plan, no stock update, late purchasing, Lack of contingency plan	3. No enough equipment
4. Late report, incomplete information, wrong information, wrong person in charge	4. Late co-ordinate
5. Law conditions	5. Contract
6. New job, new employees, no training, low enthusiasm	6. HR lack skill
7. TRUE, electricity, policeman, season change, flood, etc.	7. External factors
8. Unclear blueprint	8. Late fixed-plan

However the company also faced the problem from some workers who resigned because of their own reasons. The project is running with the time that

generates more pressure for some workers. They cannot endure this kind of work pressure leading them to resign. It affected the motivation and commitment of the remaining workers.

The company still faced challenge to put value into the heart of employees. Some employees don't pay enough attention to their work even they are in high position. They made some mistakes in communication because of matrix organization which is coming from the project. As the project was rushed, the company would like to minimize the errors as much as possible. Especially, errors coming from ignorance should not occur.

Some jobs were done by more than one worker, while there was no one doing another job because of unclear responsibilities. Work flow of the company changed many times because of ineffectiveness. Firstly, the company had to invent effective work flow and acknowledge related workers to make them understand the same.

Teamwork and co-ordination between departments isn't on time in some situations. Field Engineering (FE) is late in reporting the results to the manager. Information support is not accurate, incomplete and sent to wrong persons. These can make chaos in working time.

The research study is based on company's job number five which will be done for the Project Water Leakage Management for Metropolitan Water Authority of Thailand (MWA) from totally 12 jobs. It's installing District Meter (DM) and Remote Terminal Unit (RTU). This job related with 10 departments from 24 departments of the company: Program Office, Contract Management Team (CMT), Project Management and Implementation Team (PMI), District Metering Installation Team

(DMI), Remote Terminal Unit Team (RTU), AutoCAD and PR Team, Isonet, DMA Acceptance Team, System Support, Store Team.

The work process of job install DM and RTU insists of four processes which are planning, organizing, installing, and accepting. The processes flow as follow;

Planning

1. TSC Company discussed with MWA about the project in detail for each job.
2. Project Director collected data which is useful for doing the project.
3. CMT prepared and signed contract for implementing this project.
4. DMA provided data for PMI.
5. PMI gathered environmental data, planning, and plot milestone.
6. Project Director approved the project.
7. DMA opened site and gathering data.

*Process 3-5 were done at the same period of time.

Organizing

1. DMA designed single line.
2. RTU planned for installing.
3. AutoCAD and PR Team planned for PR, attached and took a photo 15 days before the installation date.
4. CMT and PMI collected and send DMA files to Isonet.
5. Isonet used DMA files in making decision to approve field work.

Installing

1. MWA, PMI and Project Director observed every department's work.
2. CMT collected DMA data.
3. DMA Team and Store Team installed DMA as build drawing and resurface.

4. RTU Team and Store Team installed RTU and set online to every RTU.

Accepting

1. TSC Company made appointment with MWA after completion of the job.
2. The company presented the detail of project and passed all data, information and work to MWA.

*Every meeting was in charge by Acceptance Team and System Support. These departments had to manage schedule, confirmed every committees about time and place and how to go, confirmed Isonet, reserved van, lunch or dinner for every committees.

1.2 Objectives of the study

The general objective of the research was to focus on studying the work process for job install DM and RTU of TSC Company. This research is seeking to achieve the following:

- 1.2.1 To conduct diagnosis for job install DM and RTU of TSC Company in term of work process, teamwork, and communication.
- 1.2.2 To recommend ODI on work process, teamwork, and communication.

1.3 Statement of the Problem

The main purpose of the research is to study terms of work process, teamwork, and communication of job install DM and RTU in TSC Company.

1.3.1 Research questions

- 1.3.1.1 What are the elements and sequence of the work process of job install District Metering (DM) and Remote Terminal Unit (RTU)?
- 1.3.1.2 What is the attitude towards teamwork among workers in job installed District Metering (DM) and Remote Terminal Unit (RTU)?

1.3.1.3 What is the attitude towards communication among workers in job installed

District Metering (DM) and Remote Terminal Unit (RTU)?

1.3.1.4 What are the appropriate ODI in terms of work process, teamwork, and

communication for job installed District Metering (DM) and Remote Terminal Unit (RTU)?

1.4 Significance of the study

Now, change management is becoming an important topic in the recent years because speed of change in every part of the world is higher than the past. Changing means improving or developing for organization. So, each organization pays more attention to develop themselves to be a learning organization.

Work process management is helpful for organizations which invest on it because it creates a clear picture for everyone in that organization what to do. After that, there will be no problems of unclear tasks, unclear responsibility, and unclear process. The organization which the workers work as a team has more chance to become successful than the organization which the workers work individually. So, teamwork should be performed in every organization. Communication is also a factor which affects work process in an organization. They will lead to organizational effectiveness and productivity at last.

The expected benefits of this research may make the project manager easy to identify what their employees have to do because work process will acknowledge everyone related with it. Not only work process which benefits the company, effective communication and teamwork will improve quality of work.

The expected benefits of this research would provide employees an opportunity to upgrade performance after conduct work process of each department.

In term of customers, this research would also reflect the need of new strategy in working, development program such as training or job knowledge improvement. The positive impact will come to customers in term of more effectively.

Of course, this research also benefits the researcher. The researcher can use the way in doing this action research in real life to improve quality of life. The researcher has a different point of view and knowledge after conducting this research study. Additionally, the researcher can use this new knowledge to improve own organization (Church).

1.5 Scope and Delimitation of the Study

The scope of the study covers a study of Technology Service and Consulting1656 (TSC) in central Bangkok in diagnosing the work process of TSC company in job no. 5 which the company does for the Thai government.

The total population of the study includes 222 staff in 10 departments: Program Office, Contract Management Team, Project Management and Implementation Team, District Metering Installation Team, Remote Terminal Unit Team, AutoCAD and PR Team, Isonet, DMA Acceptance Team, System Support, Store Team.

The limitation of the study is that the company is in project pitfall, everyone work hard to solve the problem so it's hard to appoint workers to focus group or even collect questionnaire survey. There is no exact organization chart. It always adapts to the situation by the project director. He is only one person who knows to update organization chart. Anyway, the good point of the study is that Dr. Chatchai who is project director allows the researcher to approach information of the company because he is master degree instructor in ABAC.

Another point of limitation is the time line of the project which has not enough time to implement the organization development intervention. The researcher plans to diagnose the work process in January-March'07. But the project will be finished on April'07. So, there is not enough time to implement and collect the benefit from ODI. The researcher tried the best to develop attitude survey questionnaire by reviewing literature as he can. Even the Cronbach's Alpha is 0.554 but the researcher thinks it is reliable enough to study the result from this survey questionnaire. Because it has enough question to collect attitude from workers in TSC Company. It is also a big important project of Thai government which is not easy to intervene. So the researcher will do the best to diagnose the situation and identify appropriate ODI to solve the problem to improve the organization.

1.6 Definition of Terms

360 degree feedback is defined as the feedback from every parties which are involved in the related task (French, Bell & Zawacki, 2000)

Attitude is defined as evaluative statements either favorable or unfavorable concerning objects, people, or even (Robbins, 2001).

Cause and Effect (Fish Bone) Diagram is defined as the diagram which shown all possible causes of a result, the management can define the most likely cause of a result from this diagram (Scholtes, 1995)

Communication is defined as the process of exchanging information by the use of words, letters, symbols, or nonverbal behavior. (Gibson & Hodgetts, 1991)

Employee Job Performance is defined as a result from the interrelationship between employee's effort, abilities and his or her task completion (Cascio, 1995).

Job Knowledge is defined as an individual's understanding of job procedures, policies and responsibilities (Robbins, 2001).

Job Satisfaction is defined as an individual's general attitude toward his or her job (Robbins, 2001).

Organizational Commitment is defined as the extent to which people identify and bind themselves with their organizations (Robbins, 2001).

Organization Chart is defined as the formal pattern of how people and jobs are grouped in an organization (Gibson, Ivancevich, Donnelly & Konopaske, 2003).

Interface Manager is defined as software which use as a medium in receives and transfers data for every program within the project.

Participation is defined as how much management allows people to be involved during a time of change (Cascio, 1995).

Performance is defined as the degree of accomplishment of the tasks that make up an individual's job (Cascio, 1995).

PERT (The Program Evaluation and Review Technique) is defined as a network model that allows for randomness in activity completion times. (www.netmba.com)

Readiness for Change is defined as the state of being ready to accept the need for change, to learn new things and be flexible and adapt to the situation (Leekhaphan, 1999).

Responsibility is defined as employees' feeling of being their own boss and not having to double-check decisions with others (Stringer, 2002)

Structure is defined as an employee's sense of being well organized and of having a clear definition of their roles and responsibilities (Stringer, 2002)

Teamwork is defined as a situation characterized by understanding and commitment to group goals on the part of all team members. (Dubrin, 2006)

Work Attitude is defined as the positive or negative evaluations that employees hold about aspects of their work environment (Robbins, 2001)

Work Process is defined as the flow of the process which related to others process in order to complete a specific task.



CHAPTER TWO

Review of Related Literature and Conceptual Framework

This chapter presents the review of related studies on the area of Organization as a system, Organization Change Management, Organization Development and Intervention, work process, organization communication, and teamwork.

2.1 Organization as System

System Theory

The real system are open to, and interact with, their environments, and that they can acquire qualitatively new properties through emergence, resulting in continual evolution. Compared with the human body, system theory focuses on the arrangement of and relations between the parts which connect them into a whole (cf. holism). An organization is a system which has many subsystems that concern with and mutually depend on one another. Each subsystem survives by helping other subsystems, it involves the people who perform the tasks and their characteristics in terms of knowledge, skills, attitudes, values, expectations and perceptions. The subsystem will be developed when the time pass by people interacting, learning, and working together. When they learn to live and help each other to develop themselves. (Bowditch & Buono, 2001)

From the perspective of managing change a system may be defined as being an organized assembly of components, which are related in such a way that the behavior of any individual component will influence the overall status of the system. It is no way to think of any physical mechanism or process that cannot be portrayed in system terms. Likely, most managerial processes and functions may also be portrayed in a systematic manner. (Paton & McCalman, 2001)

Table 2.1: Interrelated systems dependencies

Systems level	Status	Objective
The car	System	To transport occupants and associated artifacts.
The driver	Subsystem	To manage and direct the system.
The engine	Subsystem	To provide the car's driving force.
The gearbox	Subsystem	To engage and influence the driving force.
The fuel pump	Component	To provide petrol to the combustion chamber.
The gearshift	Element	To facilitate driver/gearbox interaction.

Source: Paton, Robert A. & McCalman, James (2001). *Change Management: A guide to effective implementation*. London: Sage Publications.

Individual effectiveness

Organization effectiveness can be increased by creating a culture that achieves organizational goals and at the same time satisfies members' need. Empowering the Individual employee by letting them make decisions can often improve quality, productivity, and employee commitment. (Harvey & Brown, 2001)

Team effectiveness

More effective teams will lead to improved organizations and may increase work motivation, improve performance, and decrease turnover and absenteeism. (Harvey & Brown, 2001)

Organization effectiveness

In an OD program, a set of goals or purposes is identified, and a course of action is undertaken involving the commitment of organization members towards organization improvement. (Harvey & Brown, 2001)

Bureaucracy as a form of Organization

The definition of bureaucracy is a rational, systematic, and precise form of organization in which rules, regulations and techniques of control are specifically defined. It does not depend on size of organization when stating about bureaucracy.

Even many big organizations are bureaucratic, small one can also organize bureaucratic as own model. (Hales, 2001)

There are 6 major characteristics and principles of bureaucracy as follow:

1. Hierarchy of authority. Each lower organizational unit in bureaucratic organization will be controlled and monitored by the higher one. Most Of the formal authority focuses at the top level and decreases with each lower level.
2. Unity of command. A classic management principle states that each subordinate receives assigned duties from only one supervisor and is accountable to that supervisor. Anyway, employees also work on their projects and teams in addition which are very hard to keep the unity of command in the modern organization.
3. Task specialization. As division of labor is based on task specialization. Workers assigned to these organizational units employ specialized knowledge and skills that contribute to the overall effectiveness of the firm.
4. Responsibilities and job description. In a highly bureaucratic organization, each employee follows a precise job description, and adheres to current policies and procedures in accessible manuals.
5. Definition of managerial responsibility. This kind of organization can minimize overlapping of authority and responsibility because it is defined clearly in writing already.
6. Line and staff functions. A bureaucracy identifies the various organizational units as being line or staff. Line functions involve the

primary purpose of an organization or its primary output. Staff functions assist the line function. Although staff functions do not deal with the primary purposes of the firm, they play an essential role in achieving the organization's mission. (Hales, 2001)

Table 2.2: Managing Through Bureaucratic Organization

Management Process	Management functions separate from work process and dispersed.
Area of Application	Managerial, Administrative and some operational work.
Planning/Decision Making -Degree of centralization -Information/ Communication flows	Centralized, but pyramidal: rule/policy decisions made centrally constrain lower –level operating decisions. Predominantly vertical and formal.
Allocation of Work -Form of specialization -Level of specialization -Degree of job specialization	By function. Departments and work roles. High: job based on prescribed roles.
Motivation -Rewards -Rules -Rationale	Deferred, extrinsic rewards for conformity and loyalty. Administrative procedures. Administrative efficiency, conformity.
Co-ordination -Locus of responsibility -Method -Degree of formality	Line managers; Procedures. Direction Formal
Control -Focus -Locus of responsibility -Degree of responsibility -Degree of formality	Processes. External. Highly impersonal. Highly formalized.

Source: Hales, Colin (2001). Managing Through Organization: The management process, forms of organization and the work of managers. Business press Thomson

Learning

Organizational Structure

An organizational structure defines how job tasks are formally divided, grouped, and coordinated. There are six key elements. (Gordon, 2002)

1. Work specialization: the degree to which activities in the organization are subdivided into separate jobs.
2. Departmentalization: the basis by which jobs are grouped together.
3. Chain of command: the unbroken line of authority that extends from the top of the organization to the lowest echelon and clarifies who reports to whom.
4. Span of control: the number of subordinates a manager can efficiently and effectively direct.
5. Centralization and Decentralization: the degree to which decision making is concentrated at a single point in the organization.
6. Formalization: the degree to which jobs within the organization are standardized.

A review of the evidence linking organization structures to employee performance and satisfaction leads to a pretty clear conclusion. To maximize employee performance and satisfaction, individual differences should be taken into account. The cultural differences along with individual differences should be considered when making predictions on how structure will affect employee performance and satisfaction. (Gordon, 2002)

2.2 Organization Change Management

Forces for change

Organizations today face a dynamic and changing environment. This is requiring these organizations to adapt. There are six specific forces that are acting as stimulants for change. (Robbin, 2005)

Nature of the workplace : Almost every organization is having to adjust to a multicultural environment and to upgrade reading, math, computer,

and other skills of employees.

Technology : computers are now commonplace in almost every organization. Cell phones and handheld PDAs are increasingly being perceived as necessities by a large segment of the population.

Economic shocks : Beginning in the early 1970s, with the overnight quadrupling of world oil prices, economic shocks have continued to impose changes in organizations.

Competition : Successful organizations will be the ones that can change in response to the competition. They'll be flexible.

Social trends : In contrast to just 15 years ago, people are meeting and sharing information in Internet chat rooms ; Baby Boomers have begun to retire; and consumers are increasingly doing their shopping at discount warehouses.

World politics : the subsequent war on terrorism has led to changes in business practices related to the creation of backup systems, employee security, employee stereotyping and profiling, and post-terrorist-attack anxiety.

Table 2.3: Forces for Change

Force	Examples
Nature of the workforce	More cultural diversity Aging population Many new entrants with inadequate skills
Technology	Faster, cheaper, and more mobile computers Online music sharing Deciphering of the human genetic code
Economic shocks	Rise and fall of dot-com stocks 2000-02 stock market collapse Record low interest rates
Competition	Global competitors Mergers and consolidations Growth of e-commerce
Social trends	Internet chat rooms Retirement of Baby Boomers

	Rise in discount and “big box” retailers
World politics	Iraq-U.S. war Opening of markets in China War on terrorism following 9/11/01

Source: Robbins, Stephen P. (2005). Organizational behavior. (11th edition) New Jersey: Pearson Education, Inc.

Approaches to managing organizational change

1. Lewin’s Three-step Model: successful change in organizations should follow three steps, unfreezing the status quo, movement to the new state and refreezing the new change to make it permanent.

Figure 2.1: Lewin’s three-step Change Model



Source: Robbins, Stephen P. (2005). Organizational behavior. (11th edition) New Jersey: Pearson Education, Inc.

2. Kotter’s Eight-step plan for implementing change

- 2.1 Establish a sense of urgency by creating a compelling reason for why change is needed.

- 2.2 Form a coalition with enough power to lead the change

- 2.3 Create a new vision to direct the change and strategies for achieving the vision.

- 2.4 Communicate the vision throughout the organization.

- 2.5 Empower others to act on the vision by removing barriers to change and encouraging risk taking and creative problem solving.

- 2.6 Plan for, create, and reward short-term “wins” that move the organization toward the new vision.

2.7 Consolidate improvements, reassess changes, and make necessary adjustments in the new programs.

2.8 Reinforce the changes by demonstrating the relationship between new behaviors and organizational success.

3. Action research: a change process based on systematic collection of data and then selection of a change of action based on what the analyzed data indicate. It consists of five steps: diagnosis, analysis, feedback, action, and evaluation. (Robbin, 2005)

4. Organizational development: a collection of planned-change interventions, built on humanistic-democratic values, that seeks to improve organizational effectiveness and employee well-being. The briefly identifies the underlying values in most OD efforts are respect for people, trust and support, power equalization, confrontation, and participation. There are six OD techniques that change agents might consider using. First is sensitivity training, training groups that seek to change behavior through unstructured group interaction. Second is survey feedback, the use of questionnaires to identify discrepancies among member perceptions; discussion follows and remedies are suggested. Third is process consultation, a consultant assists a client to understand process events with which he or she must deal and identify processes that need improvement. Fourth is team building, high interaction among team members to increase trust and openness. Fifth is intergroup development, OD efforts to change the attitudes, stereotypes, and perceptions that groups have of each other. And sixth is appreciative inquiry, seeks to identify the unique qualities and special strengths of an organization, which can then be built on to improve performance. (Robbin, 2005)

The life cycle of resistance to change

The response to change itself tends to move through a life cycle. (Harvey & Brown, 2001)

Phase 1: In the first phase, there are only a few people who see the need for change and take reform seriously.

Phase 2: As the movement for change begins to grow, the forces for and against the change become identifiable.

Phase 3: In this phase there is a direct conflict and a showdown between the forces for and against the change.

Phase 4: Wisdom is necessary in dealing with the overt opposition and with that element which, although not openly opposed, is not yet thoroughly convinced about the benefit of the change.

Phase 5: The last phase may not be solidified and the change process will move again into the first phase. (Harvey & Brown, 2001)

A change model

Two major considerations in making changes in an organization are the degree of change and the impact on the culture. The relative resistance encountered to four possible change situations. (Carnall, 2003)

1. Minor change, minor impact on culture. In this situation, there will predictably occur the lowest level of resistance and the highest probability of successful change.
2. Minor change, major impact on culture. Some resistance can be expected, depending on the size of the threat and the speed of the change.
3. Major change, minor impact on culture. While some resistance is likely, good management can probably overcome resistance.

4. Major change, major impact on culture. The greatest resistance can be predicted. In this situation, the probability of success is low.

A good management can manage change by breaking it into smaller components that will be introduced over a longer time. Each component will face lower resistance by presenting a small degree of change and a small impact on the culture. On the other hand, there is the higher degree of success. (Harvey & Brown, 2001)

2.3 Organization Development

What is Organization Development?

OD is long-range effort and programs aimed at improving an organization's ability to survive by changing its problem-solving and renewal process. The purpose of OD efforts is to increase the effectiveness of the system and to develop the potential of all individual members. (Harvey & Brown, 2001)

The Characteristics of Organization Development (Harvey & Brown, 2001)

- **Leading Change.** OD is a planned strategy to bring about organizational change. The change effort aims at specific objectives and is based on a diagnosis of problem areas.
- **Collaborative.** OD typically involves a collaborative approach to change that includes the involvement and participation of those organization members most affected by the changes.
- **Performance.** OD programs include an emphasis on ways to improve and enhance performance and quality.

- Humanistic. OD relies on asset of humanistic values about people and organizations that aims at gaining more effective organizations by opening up new opportunities for increased use of human potential.
- Systems. OD represents a systems approach concerned with the interrelationship of various divisions, departments, groups, and individuals as interdependent subsystems of the total organization.
- Scientific. OD is based upon scientific approaches to increase organization effectiveness.

2.4 Organization Development Intervention

A model for organizational change

There are 6 stages in organization development; anticipating a need for change; developing the consultant-client relationship; the diagnostic phase; action plans, strategies, and techniques; self-renewal, monitoring, and stabilizing; continuous improvement process. In an OD program, the emphasis is placed on a combination of individual, group, and organization relationships. (Carnall, 2003)

Selecting an OD intervention

An OD intervention refers to the range of actions designed to improve the health or functioning of the client system. The interventions are the specific means, activities, and programs by which change can be determined. Three broad aspects are of concern to the OD consultant in selecting the appropriate intervention:

The potential results of the technique

- Will it solve the basic problems?
- Does it have any additional positive outcomes?

The potential implementation of the technique

- Can the proposed technique actually work in a practical application?
- What are the actual dollar and human costs of this technique and the impact of costs upon the client system?
- How do the estimated costs of the technique compare with the expected results (costs versus benefit)?

The potential acceptance of the technique

- Is the technique acceptable to the client system?
- Is the technique adequately developed and tested?

Has the technique been adequately explained and communicated to members of the client system? (Carnall, 2003)

2.5 Work Process (or workflow)

What is workflow?

It is the process through which documents, information or tasks are passed between participants according to a defined set of rules or goals to achieve, or contribute to, an overall business objective. More specifically, workflow is the operational aspect of a work procedure: how tasks are structured, who performs them, what their relative order is, how they are synchronized, how information flows to support the tasks and how tasks are being tracked. While the concept of workflow is not specific to information technology, support for workflow is an integral part of document management and imaging software. (Lawrence, 1997)

Distinction can be made between "scientific" and "business" workflow paradigms. While the former is mostly concerned with throughput of data through various algorithms, applications and services, the latter concentrates on scheduling

task executions, including dependencies which are not necessarily data-driven and may include human agents. (Lawrence, 1997)

Vendors who have developed pure workflow offerings have invented terms and interfaces, while vendors who have evolved products from other technologies have often adapted terminology and interfaces. Each approach offers a variety of strengths from which a user can choose. Adding a standards based approach allows a user to combine these strengths in one infrastructure. (Lawrence, 1997)

Workflow components

Single steps or components of a workflow can basically be defined by three parameters which are input description, transformation rules, and output description.

Components can only be plugged together if the output of one previous (set of) component(s) is equal to the mandatory input requirements of the following component. Thus, the essential description of a component actually comprises only in- and output that are described fully in terms of data types and their meaning (semantics). The algorithms' or rules' description need only be included when there are several alternative ways to transform one type of input into one type of output - possibly with different accuracy, speed, etc. (Lawrence, 1997)

Workflow systems

Workflow diagram systems are defined as "systems that help organizations to specify, execute, monitor, and coordinate the flow of work cases within a distributed office environment". (Lawrence, 1997)

The system contains two basic components:

1. the *workflow modeling component* (sometimes called *specification module*, *design environment* or *build time system*) which enables administrators and

analysts to define process and activities, analyze and simulate them, and assign them to people.

2. the *workflow execution component*, sometimes called the run-time system which most often consists of an execution interface seen by end-users and a workflow engine. The workflow engine is an execution environment which assists or performs the coordination of processes and activities.

Workflow application

A Workflow Application is where various applications, components and people must be involved in the processing of data to complete an instance of a process. For example, consider a purchase order that moves through various departments for authorization and eventual purchase. The orders may be treated as messages, which are put into various queues for processing. A workflow process involves constant change and update. No one can introduce new components into the operation without changing any code. (Kouloupoulos, 1995)

The Key Benefits of Workflow

Improved efficiency - automation of many business processes results in the elimination of many unnecessary steps.

Better process control - improved management of business processes achieved through standardizing working methods and the availability of audit trails.

Improved customer service – consistency in the processes leads to greater predictability in levels of response to customers.

Flexibility – software control over processes enables their re-design in line with changing business needs.

Business process improvement - focus on business processes leads to their streamlining and simplification. (Koulopoulos, 1995)

PERT/CPM

For project which is complex or many tasks related. Some tasks need to be completed before another start, or some tasks can perform at the same time. The collection of series of task performed may be link as network. In 1957 the Critical Path Method (CPM) was developed as a network model for project management. It is easy to understand and use, it does not consider the time variations that can have a great impact on the completion time of a complex project. After that, The Program Evaluation and Review Technique (PERT) was developed in the late 1950's for the U.S. Navy's Polaris project having thousands of contractors. It has the potential to reduce both the time and cost required to complete a project. So PERT is a network model that allows for randomness in activity completion times.

An activity is a task that must be performed in the project and an event is a milestone marking the completion of one or more activities. All of the predecessors activities must be completed before an activity begin. So there are steps in using PERT in the project which are identify the specific activities and milestones, determine the proper sequence of the activities, construct a network diagram, estimate the time required for each activity, determine the critical path, and update the PERT chart as the project progresses:

1. Identify the specific activities and milestones

The activities are the tasks required to complete the project. The milestones are the events marking the beginning and end of one or more activities.

2. Determine the proper sequence of the activities

This step may be combined with the activity identification step since the activity sequence is evident for some tasks. Other tasks may require more analysis to determine the exact order in which they must be performed.

3. Construct a network diagram

Using the activity sequence information, a network diagram can be drawn showing the sequence of the serial and parallel activities. For the original activity-on-arc model, the activities are depicted by arrowed lines and milestones are depicted by circles or "bubbles".

4. Estimate the time required for each activities

Weeks are a commonly used unit of time for activity completion, but any consistent unit of time can be used. A distinguishing feature of PERT is its ability to deal with uncertainty in activity completion times. For each activity, the model usually includes three time estimates which are optimistic time, most likely time, and pessimistic time.

5. Determine the critical path

The critical path is determined by adding the time for the activities in each sequence and determining the longest path in the project. The critical path determines the total calendar time required for the project.

6. Update the PERT chart as the project progresses

Make adjustments in the PERT chart as the project progresses. As the project unfolds, the estimated time can be replaced with actual times. In cases where there are delays, additional resources may be needed to stay on schedule and the PERT chart may be modified to reflect the new situation.

([http:// www.netmba.com/operations/project/pert/](http://www.netmba.com/operations/project/pert/))

Limitations of PERT

The activity time estimates are somewhat subjective and depend on judgement. In cases where there is little experience in performing an activity, the numbers may be only a guess. In other cases, if the person or group performing the activity estimates the time there may be bias in the estimate.

Even if the activity times are well-estimated, PERT assumes a beta distribution for these time estimates, but the actual distribution may be different.

([http:// www.netmba.com/operations/project/pert/](http://www.netmba.com/operations/project/pert/))

2.6 Communication

Organizational Communication

Organizational communication is the transfer of information and knowledge among organizational members for the purpose of achieving organizational efficiency and effectiveness. (Gibson & Hodgetts, 1991) Communication also helps create shared meanings because it provides social context clues (Huff, Sproull & Kiesler, 1989), which leads to the perception of social presence (Fulk & Boyd, 1991), and creates a shared interpretive context among organization members (Zack, 1993)

Communication is critical for organizational effectiveness. Good communication is a key attribute of successful companies. Communication is even more critical in the total quality management organization. In a traditional organization, the focus of communication has been internal and hierarchical; employees communicate with their immediate supervisors and subordinates – chain of command communication. In a total quality management organization, on the other hand, the emphasis is on setting up methods for complete and honest communication among everyone involved in processes. There is less concern for the formalities of

hierarchical relationships, which seldom do much to contribute to productivity and quality. Communicating clearly and completely is a learned skill that allows employees to enhance their contributions to the organization. (Bounds, Dobbins & Fowler, 1995)

Organizational communication refers to the messages sent and received within the organization's formal and informal groups. The formal communications are those that are sanctioned by the organization itself and are organizationally oriented. They deal with the workings of the organization, with productivity, and with the various jobs done throughout the organization. Such communications are made through memos, policy statements, press releases, and employee newsletter. The informal communications are socially sanctioned. They are oriented not to the organization itself, but to the individual members and might include birthday celebrations and discussion of family problems as well as feelings about the organization and the job and plans for the future. (Wehrich & Knootz, 1993)

1. Communication Channel

As business communicators, organizational members can choose how to deliver a message. Deciding which communication channel to use isn't a trivial matter. Sometimes a written message succeeds where an oral one fails; at other times talking it out with the recipient will produce results that the printed word can't match. An understanding of these two channels will help the company make the best choice about how to deliver your important messages.

Face-to-Face Communication

Face-to-face communication comes in many forms. Some are one-to-one meetings, either scheduled or in the spur of a moment. Others involve small groups of

people, gathering spontaneously or in formal meetings. Still other face-to-face communication occurs in large groups, where one or more speakers make presentations to an audience. (Adler & Elmhost, 2002) Hamilton & Parker (1998) stated that in a business meeting where participants use the face-to-face communication channel, all three codes-nonverbal, language and para-language-carry message. Some theories have suggested that effective managers will work or match the communication channel to task at hand (Trevino, Leengel & Draft, 1987)

Teleconferencing. Face-to-face meetings may be desirable, but distance often make them impractical. Teleconferencing allows participants in two or more locations to see and speak with each other. (Adler & Elmhost, 2002)

Telephone and Voice Mail. The telephone lets a communicator contact a receiver who would be impossible to reach in person. A communicator may touch base with halfway around the world in less time. The telephone can even help communicators get through to busy people who are nearby. A telephone conversation does lack the visual feedback that often reveals how the message is getting across, although vocal cues-tone of voices, pauses, interruptions, pitch, and rate-can give you a good idea of other person's reaction to the message. (Adler & Elmhost, 2002)

Real-time communication isn't the only type of telephone communication. Voice mail is a high-tech version of the answering machine. Even at the best voice mail messages might seem inferior to speaking in person to the other party. Sometimes, though, a voice mail message can be even better than a personal contact. Leaving a recorded message can save communicator from wasting time swapping formulaistic pleasantries with people they'd rather not talk to. Also, delivering message

electronically can keep the other person from responding in ways they don't want to hear. (Adler & Elmhost, 2002)

Despite its advantages, oral communication isn't a perfect medium. Possibly the greatest disadvantage of speech is its transience. All communication is fragile, but the spoken word is especially prone to being forgotten or misunderstood. Listeners quickly forget much of what they hear. Even if they can remember an oral message, listeners are likely to distort it. Some details drop out with each telling a story. Facts and figures change. Receivers may even invent variations of the truth, just to make the story more interesting or to make it fit their own idea of what ought to have happened. The farther the message travels in space and time from its original sender, the greater the chance of distortion.

Written Communication

Written communication comes in a variety of forms. Letters, memos, bulletins, and reports are familiar fixtures in almost everybody's career. Written messages have a different set of advantages and drawbacks than their spoken counterparts. Unlike speech, written communication is permanent. Once words are down on paper, they are saved for future reference. Along with its permanence, written communication can be easier to understand than speech. Readers can study complex passages, as many times as necessary, a luxury they do not have when the same message is delivered orally. Perhaps the greatest advantage of written communication is that the communicator can compose it in advance. Communicators can take as much time as necessary to shape a message, pondering every word if necessary. Finally, written messages are less prone to errors. (Adler & Elmhost, 2002)

Electronic Mail (or email) allows communicators to send and respond to one another's written messages via computers. Along with being a tool for external communication, email is used as an alternative to telephones and personal contacts within an office, where it is often labeled as part of an intranet – an infrastructure that allows people within an organization to exchange information in digital form. The speed and easy to use nature of e-mail also make it a tool for improving personal relationships on the job. Speeding up routine communication leaves more time for personal contacts, which the medium also make more possible. (Adler & Elmhost, 2002)

Computer Conferencing allows individuals and groups to work on documents that are shared via computers. Document conferences can take place in real time, with participants, interacting via their computers at the same moment, or over different periods of time, with participant working independently but picking up on the comments and input of others in their group. (Adler & Elmhost, 2002)

Instant Messaging (IM) is a tool that lets people exchange messages in real time via computer by creating a list of people with whom users wants to communicate, and whenever a user is online, a window on a screen pops up showing the people on a contact list who are available. Whenever the user wants, the user can send a message to one or more of the people on the list. There are many advantages to instant messaging along with being quick and easy to use; the technology is free, which help by reducing the number of expensive long distance or international telephone calls. Instant messaging also allows users to send urgent information and queries to other currently logged on to the network or online. Along with its advantages, instant messaging does have drawbacks. Typing is certainly more

cumbersome than talking on the phone, and text only messages lack the richness of spoken conversations. Also, instant messages that pop up on screen demand your attention and can be a distraction from other tasks. Finally, your failure to respond quickly to other messages can be perceived by senders as lack of interest. Like other technologies, instant messaging has its advantages, but it isn't the perfect medium for all occasions. (Adler & Elmhost, 2002)

New technologies have given businesspeople a wider range of choices for communication than ever before, and each channel has its use. The question then is not which communication channel to use, but when to use each one most effectively. Each communication channel has both advantages and drawbacks. In general, oral communication is best for messages that require a personal dimension. Oral channels are also best for ideas that have a strong need for visual support – demonstration, photos or slides, and so on. Spoken communication is also especially useful when there is a need for immediate feedback, such as question-and-answer sessions or a quick reply to your ideas. Written communication (with exception of e-mail) works best when you want to create a relatively formal tone. Writing is almost always the best medium when you must choose your words carefully. Writing is also better than speaking when you want to convey complicated ideas that are likely to require much study and thought by the receiver. It is also smart to put message in writing when communicator wants it to be the final word, with no feedback or discussion. Finally, writing is best for any message if the communicator wants a record to exist.

2. Communication Flow

Upward Communication is important because it is a major means of getting information to higher organizational levels where important decisions are made.

Essentially, upward communication means following the chain of command. There is downward communication that the purpose of formal downward communications is to inform and direct the behavior of the organization.

(Lahiff & Penrose, 1997)

Lateral Communication Four major purposes for using lateral communication have been identified: 1) task coordination, (2) problem solving, (3) sharing information, and (4) conflict resolution. Because lateral communication occurs among employees of about the same level in the hierarchy, it has a different tone from communication between superiors and subordinates. The tone is likely to be consultative, persuasive, or suggestive rather than directive. (Lahiff & Penrose, 1997)

Grapevine The grapevine is an informal pattern of communication that moves in any direction. Rather, they seem to have a life of heir own and are concerned primarily with personal and social matters rather than with the organization itself. Grapevine communication, however, can be and often is used to enhance a feeling of stability and to establish the credibility of the organization. (Devito, 1997)

The ways for making communication more effective

1. Guidelines for Upward Communication

Some non-threatening system, which is to seek out and reward workers' comments to show that they are received and are considered, should be established. Management must listen; management must receive, understand, remember, evaluate, and respond to the worker's messages. Convenient channels must be established for workers to communicate to the management. It is especially important to design these channels with the cultural attitudes and beliefs of the members of the organization clearly in mind. (Devito, 1997)

2. Guidelines for Downward Communication

Management needs to use a vocabulary known to the workers. Technical jargon, for example, must be kept to a minimum. Provide workers with sufficient information for them to function effectively. At the same time, avoid contributing to information overloading. (Devito, 1997)

3. Guidelines for Lateral Communication

Recognize that your own specialty has a technical jargon that others outside your specialty might not know. Clarify when and as needed. When you communicate, see the entire organizational picture and recognize the importance of all areas. Seeing one's own area as important and all others as important and all others as unimportant does little to foster meaningful communication. (Devito, 1997)

4. Guidelines for Grapevine Communication

Understand the role of grapevine in the organization. Its speed and general accuracy make it an ideal medium to carry a great deal of the social communications that so effectively bind workers together in an organization. Although grapevine information is generally accurate, it is usually incomplete and may contain crucial distortions. Therefore, treat grapevine information as tentative-as possibly true, not necessary true.

Training: Importance of Principle of Unity of Command.

The more complete an individual's reporting relationships to a single superior, the smaller the problem of conflicting instructions and the greater the feeling of personal responsibility for results. (Wehrich & Koontz, 1993)

Generally speaking, individuals should be accountable only to one boss for the results they achieve, to avoid confusion on operational matters. But in a project-based

or matrix organization individuals might be responsible to their discipline for the continuing requirements of their role and for achieving agreed standards of overall performance. (Armstrong, 1999)

As a result:

Proper Communication Channel

Effective communicators are also flexible and alter their communications based on the needs of the receivers. Individuals differ in terms of educations, skills, experiences, and cultural values. (Bounds, Dobbins & Fowler, 1995)

Oral communication has an advantage of immediacy. Information is provided quickly and in a direct, face-to-face manner. Listeners often feel that if management is taking the time to say this personally, it must be correct. Written methods have more formalities and permanence, and, quite often, that is what formal communication is about. (Gibson & Hodgetts, 1991)

Improved Communication Flow

Internal communication refers to the exchange of information and ideas within an organization. Communication among the members of an organization is essential for effective functioning. Communicating freely helps employees develop a clear sense of organization's mission and helps managers identify and react quickly to potential problems. To maintain a healthy flow of information within the organization, effective communicators use both formal and informal channels. (Thrill & Bovee, 2002)

2.7 Teamwork

Responsibility and Accountability

Each activity in a group requires individual members to take responsibility for assigned tasks. One member may be in charge of contacting group members, another with providing information, and yet another for finding and organizing the materials to be used in the planning activity. The leader is specifically responsible for delegating these tasks, foreseeing problems and needs with respect to the overall activity situation, and breaking the logjams that may occur. Activities such as these, both spontaneous and planned, pervade the work setting and provide frequent opportunities for members to practice responsibility – taking behaviors. (Kuczmariski, 1995)

According to the organization with a formal structure where they require the hierarchy, accountability shows the answerability in an employee to his or her boss in the first order. It is worth to know that the authority and accountability flow in different directions where authority flows downward from the president to the workers, but the accountability flows upward as shown in figure 2-5

For a work unit to get desired results, it is imperative that the leader attempts to create an environment in which employees have a sense of ownership in the activity and output of the group. At the same time, there must be accountability for the achievement of desired levels of performance. Even though, motivation is an inner drive in people since they are willing to expend efforts when it satisfies some need that is important to them. But motivation is not simply a way to get people to pursue organizational goals, but it means to get people to buy in and take ownership of the organization's needs as well as their own. These practices fall into two categories; practices to increase ownership of performance and practices to create accountability for results.

Practices to Increase Ownership of Performance

Managers should develop a personal connection with each employee so that the manager knows and understands employees' strengths and weaknesses. Managers can encourage ownership by developing trust and maintaining a positive attitude with their employees. Managers must clarify each employee's responsibility through effective delegation so that they all know what challenges they may encounter and what work they must take ownership of. Managers must be ensured that people are properly trained and equipped to perform their work so that they will feel prepared to succeed. Managers should practice "open-book management" with employees in terms of sharing organizational and work-unit goals, plans, and performance feedback. (Longnecker and Simonetti, 2001)

Practice to Create Accountability for Results

When responsibilities and goals are being clarified, always establish standards of performance that should be challenging yet realistic enough to encourage people to hit the mark. Provide balanced, ongoing performance feedback for your people so that they know and have no doubt about how well they are performing. Use formal appraisal process as a part of strategic planning activity to review performance, identify ways to improve, and recognize and reinforce desired levels of performance. (Longnecker and Simonetti, 2001)

Delegation

The primary reason for delegation is to enable the manager to get more work done. Subordinates help ease the manager's burden by doing major portions of the organization's work. Delegation also helps develop subordinates. By participating in decision-making and problem solving, subordinates learn about overall operations and improve their managerial skills. (Griffin, 1996)

Delegation is difficult. It is perhaps the hardest task that managers have to do. The problem is achieving the right balance between delegating too much or too little or between over-or under-supervision. When you give people a job to do, you have to make sure that it is done. And you have to do that without breathing down their neck, wasting your time and theirs, and getting away. There has to be trust as well as guidance and supervision. (Armstrong, 1999)

The advantages of delegation are:

1. It relieves the manager of routine and less critical tasks.
2. It frees the manager for more important work – planning, organizing, motivating, and controlling.
3. It extends the manager's capacity to manage.
4. It reduces delay in decision-making – as long as authority is delegated close to the point of action.
5. It allows decision to be taken at the level where the details are known.
6. It develops the capacity of staff to make decisions, achieve objectives and take responsibility. (Armstrong, 1999)

When a manager delegates, the manager should ensure that the subordinates understand. Managers can make a distinction between hard and soft delegation. Hard delegation takes place when a manager tells someone exactly what to do, how to do it, and when manager wants the result, and then, follows up regularly. Soft delegation takes place when managers agree with what generally has to be achieved and leaves subordinates to get on with it. Manager should always be expected to be delegated by he expected results. Even if the manager doesn't specify exactly how the results should be achieved, it is a good idea when delegating a problem to ask subordinates how they

propose to solve it. Managers then have the opportunity to provide guidance at the outset; guidance at a later stage may have been seen as interference. (Armstrong, 1999)

Importance of Training Course

1. Seven Habits of Highly Effective People. (Covey, 1989)

Habit 1: Be Proactive – focus their thoughts and actions on the things they can do something.

Habit 2: Begin with the end in mind – define their mission and goal in life.

Habit 3 Put first things first – do what is important before what is urgent.

Figure 2.2 Time Management Matrix

	Urgent	Not urgent
Important	<ul style="list-style-type: none"> • Crises • Pressing problems • Deadline-driven projects 	<ul style="list-style-type: none"> • Prevent of problems • Relationship building • Recognizing opportunities • Planning, recreating
Not important	<ul style="list-style-type: none"> • Interruption, some calls, mail, reports, and meetings • Near-term, pressing matters • Popular activities 	<ul style="list-style-type: none"> • Busy work • Some mail • Some phone calls • Time wasters • Pleasant activities

The prioritization of work involves deciding on the relative importance of a range of the demands or tasks so that the order in which they are undertaken can be determined. Prioritization can be carried out in the following stages:

- 1) List all the things you have to do
- 2) Classify each item on the list according to: a) the significance of the task to be done in terms of its impact on work (and reputation) and on the results achieved by the organization, team or anyone else involved; (b) The importance of the person requesting the work or

expect to deliver something; (c) The urgency of the tasks – deadlines.

- 3) Assess the possibilities of fitting this prioritized schedule of work into the time available.
- 4) Finalize the list of priorities and schedule the work.

(Armstrong 1999)

Habit 4: Think Win-Win – picture a specific interpersonal conflict situation. Try to work out an agreement.

Habit 5: Seek first to understand, to be understood – listen with care and understanding (with the ears, eyes, and heart) for feeling as well as content.

Habit 6: Synergize – this is the sum of habit 1 to 5. Step out of the comfort zone and become a pathfinder. Work together to achieve more.

Habit 7: Sharpen the saw – renewing all four aspects of human natures – physical, mental, emotional, and spiritual.

Commitment

The basic forms of organizational commitment in which either one, all, or none of the commitment components are:

- 1) Non-Commitment (low on all commitment components). This is where none of the commitment components registers very high marks, typical of casual and/or temporary relationships.
- 2) Consummate Commitment (high on all commitment components). This is complete commitment as portrayed by uniformly deep connections on all of the commitment components.

- 3) **Affiliative Commitment** (high fit and belonging). The social and affiliative aspects of the workplace are dominant. Through mutual convictions, common purposes, and/or happenstance, people who enjoy one another's company have come together.
- 4) **Associative Commitment** (high status and identity). The institutional connection is paramount, providing a derivative source of esteem to the organization's members.
- 5) **Moral Commitment** (high trust and reciprocity). The relationship is held together by moral imperatives. Employees think they should stay in the relationship because the company has always been good to them and has treated them well.
- 6) **Affective Commitment** (high emotional reward). The relationship exists because it is pleasurable.
- 7) **Structural Commitment** (high economic interdependence). The relationship endures because there are external factors holding it together. There are pressures that maintain the relationship, either by imposing costs on its dissolution or by creating incentives for its continuance. (Malley, 2000)

The organizational commitment also was distinguished into three levels as effective commitment, continuous commitment, and normative commitment (Allen & Mayer, 1990).

While effective commitment essentially concerns the person's emotional attachment to his or her organization, continuous commitment occurred when a person's perception of the cost and risks associated with leaving his or her current organization. There was considerable evidence that

there are two aspects of continuous commitment. They are the personal sacrifice that leaving would involve, and a lack of alternatives available to the person. The last is normative commitment which is a moral dimension, based on a person's felt obligation and responsibility to his or her employing organization (Allen & Mayer, 1990)

Ordinary people feel multiple commitments at work-not only to their organization, but also perhaps to their location, department, work group or even trade union (Reicher, 1985; Barling, Wade & Fullagar, 1990). Complexities like parent companies and franchises can make it difficult to identify exactly to which organization one belongs to. But more than that, some psychologists (Coopey and Hartley, 1991) are critical of the whole notion of organizational commitment because it implies that the organization is unitarist-that is, it is one single entity with a united goal. A moment's thought reveals that most organizations consist of various factions with somewhat different and possibly even contradictory goals. Faced with these ambiguities, it seems that most people think of the term organization as meaning top management. This is clearly different from commitment to one's supervisor or work group, which employees may also feel (Becker and Billings, 1993)

The steps you can take to enhance commitment include the following.

- 1) Get people involved in discussing the purpose and values of the organization, listen to their constructive contributions and pass them on to the higher management for incorporation in the organization's statement of purpose and values.

- 2) Talk to team members informally as well as formally about what is going on in the department and plans for the future that will affect them.
- 3) Involve team members in defining mutual expectations so that they 'own' and are committed to their objectives. (Armstrong, 1999)

It is naturally advantageous to have greater, rather than fewer, interrelation connections in an organization. Stronger forms of commitment are more likely to yield positive organizational results and will be more resistant to events that can potentially disrupt the employer-employee bond. (Gilley, Quatro, Hoeksta, Whittle & Maycunich, 2001)

Team Management

In everyday life, accountability means responsibility, it means being answerable to someone else for one's actions. We cannot, however, use the term without specifying accountability to whom and for what. (www.gse.harvard.edu.htm)

The key process of team management means that team leaders have to clarify the team's purpose and goals, ensure that its members work well together, build commitment and self-confidence, strengthen and team's collective skills, and approach, remove externally imposed obstacles, and create opportunities for team members to develop their skills and competences.

Team Effectiveness

An effective team is likely to be one in which the structure, leadership and methods of operation are relevant to the requirement of the task. There will be commitment to the whole group's task and people will be grouped together in a way that ensures that they are related to each other by way of the requirement of task performance and task interdependence. (Armstrong, 1999)

Use teambuilding and interactive skills training to supplement the other approaches. But do not rely upon them to have any effect unless the messages they convey are in line with the organization's culture and values.

Team Building

Team building is an effort in which a team studies its own process of working together and acts to create a climate that encourages and values the contributions of team members. Their energies are directed towards problem solving, task effectiveness, and maximizing the use of all members' resources to achieve the team's purpose. Sound team building recognizes that it is not possible to fully separate one's performance from those of others.

Characteristics of Good Team Building are: (1) high level of interdependence among team members; (2) team leader has good people skills and is committed to team approach, (3) each team member is willing to contribute; (4) team develops a relaxed climate for communication; (5) team members develop mutual trust; (6) team and individuals are prepared to take risks; (7) team is clear about goals and establishes targets; (8) team member roles are defined; (9) team members know how to examine the team and individual errors without personal attacks; (10) team has capacity to create new ideas; (11) each team member knows he can influence the team agenda.

Team building will occur more easily when all team members work jointly on a task of mutual importance. This allows each member to provide their technical knowledge and skills in helping to solve the problem, complete projects, and develop new programs. During this process, team building can facilitate as member evaluate their working relationship as at team and then develop and articulate guidelines that will lead to increased productivity and team member cooperation.

As part of this process, team members need to learn how to be willing to manage conflict, evaluate performances of the group, and provide feedback and support that will encourage each member to meet their commitment to the team and the organization.

Team performance can best be evaluated if the team develops a model of excellence against which it could measure its performance.

(www.ianr.unl.edu/ubs/misc/cc352.html)

Team Development

A very broad objective of team development is integrating the goals of the group with the goals of the organization. To do this, work teams need to spend some time on the process of their team interaction, that is, how they work together and what they accomplish.

Each team has its own structure, norms, and values, and members of the team tend to do things in certain ways. Often, the loyalty of members is greater to the fellow team members than to the organization. Because of these characteristics, team development techniques are used to clarify goals and priorities, to examine how decisions and communications are functioning, and to recognize how the relationships among team members influence outputs. The goals of team development include: (1) to identify objectives and set priorities; (2) to examine the content or task performance of the team; (3) to analyze how the group is functioning; (4) to improve communications and relationships among group members; (5) to improve the ability of the team in solving problem; (6) to decrease unhealthy competition and increase cooperation among the team members; (7) to work more effectively with other teams

in the organization; (8) to increase the team member's respect for each other's individual differences.

It should not be inferred that conflict within a team leads to organization ineffectiveness and, therefore, should be avoided. Conflict in some situations may be healthy and may improve the performance of teamwork.

Conflict is part of natural social interaction and managers should be able to recognize the types of conflict and channel it in appropriate directions. Conflict can be healthy when it is issue-oriented rather than personality-oriented, when it sharpens people's thought processes, when it is germane to the goals of the team, and when it does not produce winners and losers with the accompanying social stigma. (Harvey & Brown, 1996)

As a Result:

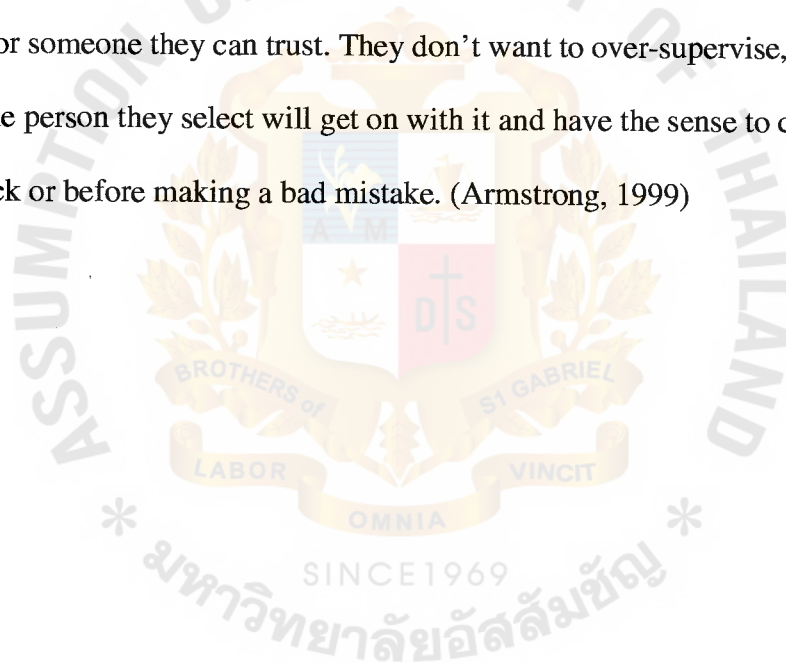
High responsibility and accountability

Every employee can be trusted to perform to the best of his or her skills and abilities. They have the right to be informed about organization's decisions, mission, and strategy. Further, they prefer to be involved contributors rather than passive observers. They enjoy teamwork and group harmony, want to grow and develop, and prefer to feel important, needed, useful, successful, proud, and respected. They want to develop a positive relationship with leaders, managers, and coworkers. Further, they prefer meaningful work, desire appreciation and reorganization for their accomplishments, and prefer responsibility to decency and passivity. Finally, they want the organization to meet its strategic business goals and objectives and thus be successful. (Gilley, Quatro, Hoekstra, Whittle & Maycunich, 2001)

Appropriate Delegation

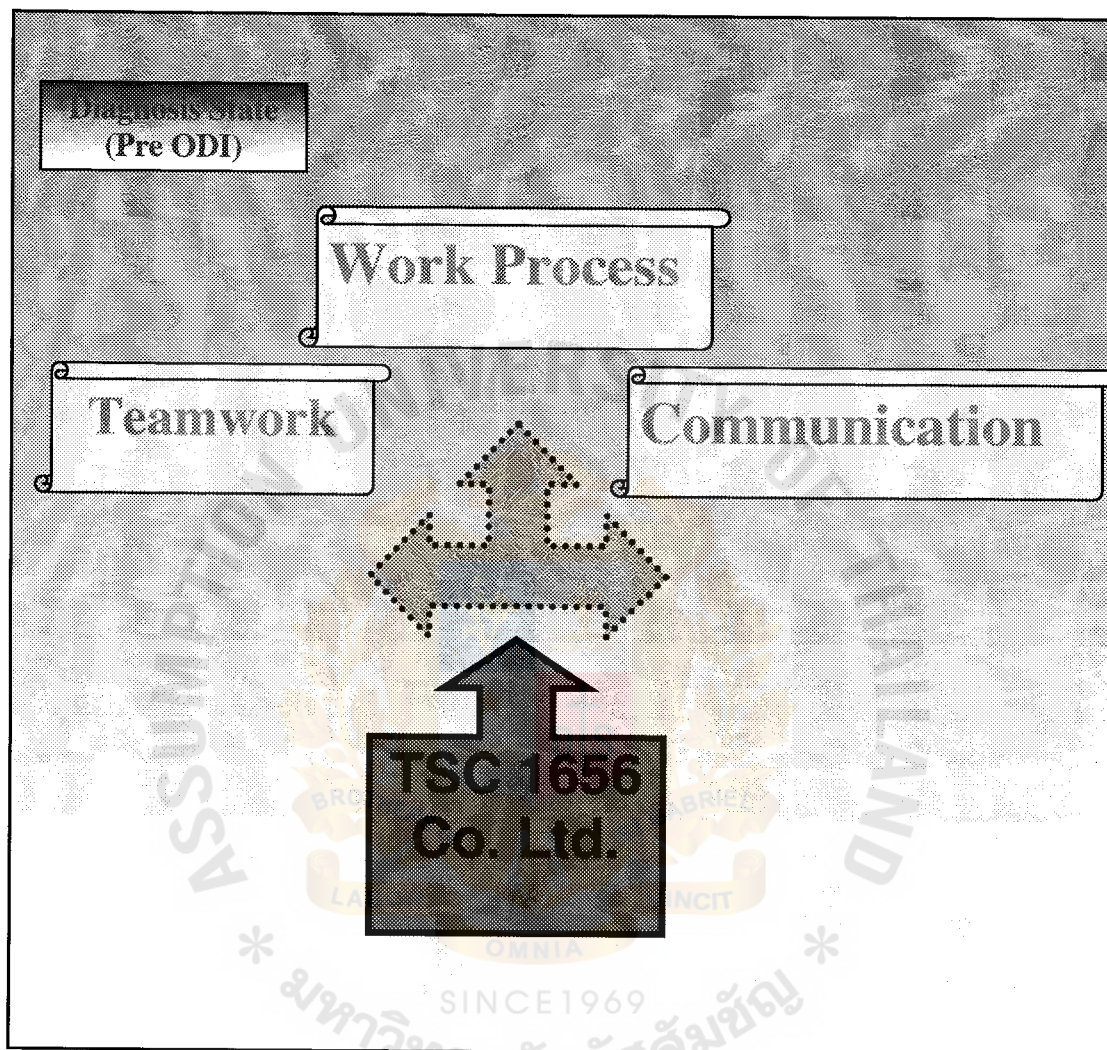
Ideally, the person who chooses to do the work should have the knowledge, skills, motivation and the time needed to get it done for complete satisfaction.

Frequently, however, managers will have to use someone who has less or than ideal experience, knowledge or skills. In these cases they should try to select an individual who has intelligence, natural aptitude, and above all, willingness to learn how to do the job with help and guidance. This is how people develop, and the development of their staff should be their conscious aim whenever they delegate. Managers are looking for someone they can trust. They don't want to over-supervise, so they have to believe the person they select will get on with it and have the sense to come to them when stuck or before making a bad mistake. (Armstrong, 1999)



2.8 Conceptual Framework

Figure 2.3 Conceptual Framework

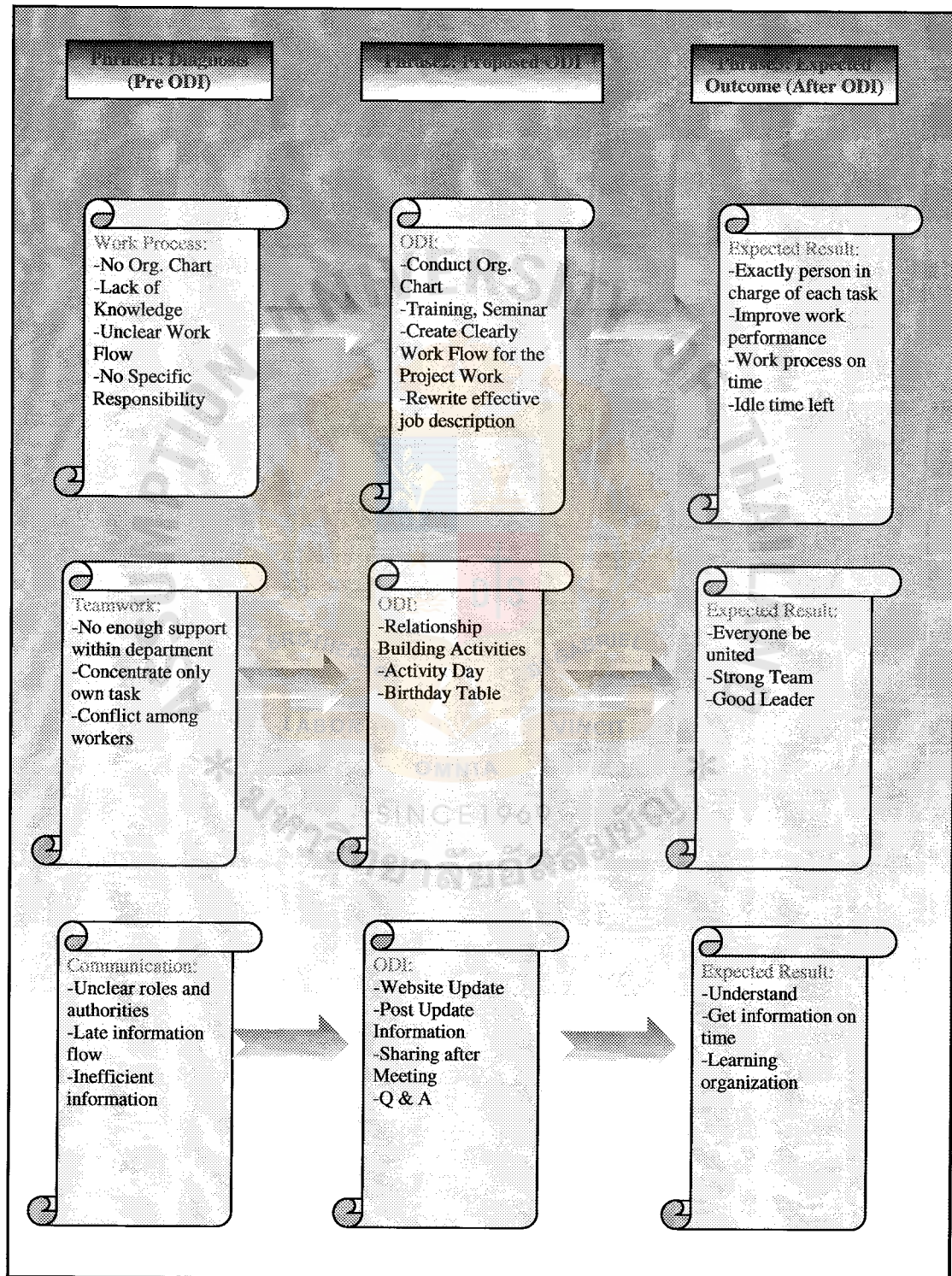


This conceptual framework is introduced in order to see the overview of the flow of this research study. There is one stage which is diagnosis state (Pre ODI).

Pre ODI is the stage that is to diagnose the current situation happened in TSC Company. There are three variables are concerned in the research which are workflow, teamwork, and organization communication. All of them are shown on figure 2.3.

2.9 Research Framework

Figure 2.4 Research Framework



The research framework show all three stage of organization development intervention which are diagnosis stage, proposed ODI, and expected resulted after ODI were performed. The researcher generated ODI in order to propose after conduct diagnosis of the job no.5 already. After that, the work process, teamwork, and communication of job no.5 were improved by ODI.



CHAPTER THREE

Research Methodology

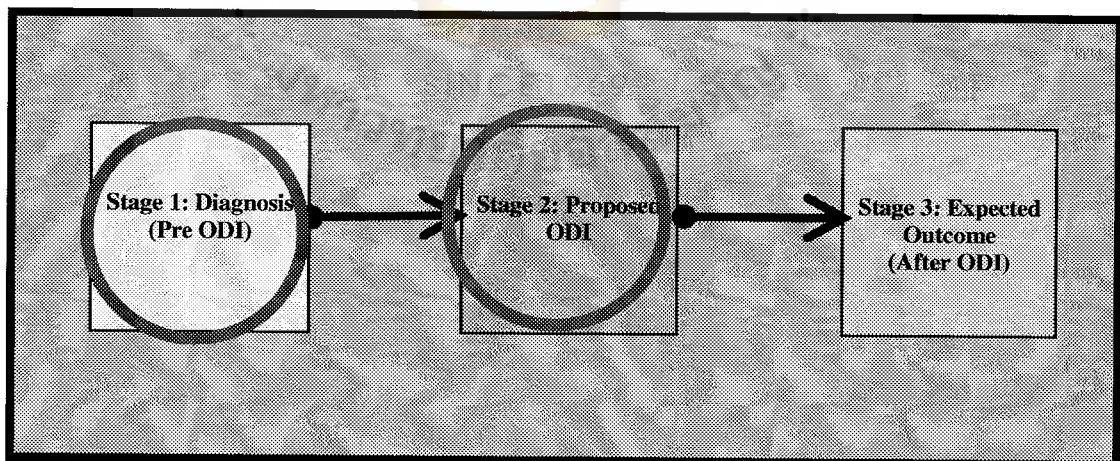
This chapter presents the research methods and procedures use in the present study: research design, respondents, the data collection procedures, research instruments, and data analysis procedure. The research is explained by using ODI diagnosis stage.

3.1 Research Design

This research is focused on studying on diagnosing and proposing ODI in terms of work process (or workflow), teamwork, and communication for the TSC Company. The research design is the starting point of the 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, 2003).

This research design was the diagnosis and proposed ODI stage.

Figure 3.1 ODI Framework



Phrase 1: Diagnosis (Pre ODI)

The first stage is diagnosis stage for the company in order to conduct ODI which can be done and improved by the company. Firstly, the research has to get

approval from the TSC company to get the current situation and some information from the company. The researcher also suggests the company to develop the organization. The project manager offers a chance to the research for working in the company in the Project Water Leakage Management for Metropolitan Water Authority of Thailand (MWA). Work process management, teamwork, and communication are important topics which should be done to gain organization effectiveness and increase productivity. Additionally, the researcher is personally thinks that these are good topics to study. The researcher can use it at the work place (Church) right now also.

The diagnosis is based on the company's job number five which will be done for the Project Water Leakage Management for Metropolitan Water Authority of Thailand (MWA) from totally 12 jobs. It's installing District Meter (DM) and Remote Terminal Unit (RTU). This job related with 10 departments from 24 departments of the company. The departments consist of Program Office, Contract Management Team, Project Management and Implementation Team, District Metering Installation Team, Remote Terminal Unit Team, AutoCAD and PR Team, Isonet, DMA Acceptance Team, System Support, and Store Team.

The data and information will be gathered by two methods which are survey questionnaire and interview in order to identify current work process, teamwork, and communication which happened in the project.

3.1.1.1 ODI Diagnosis Objective

- To conduct diagnosis of the company on work process, teamwork, and organization communication.

- To describe and analyze the current situation on work performance through work process, teamwork, and organization communication..
- To study the appropriate work process, teamwork, and organization communication for the company.

Phrase 2: Proposed ODI

The second stage is proposed ODI stage which the researcher creates in order to solve the problem and improve work process, teamwork, and communication of job install DM and RTU in TSC Company. The researcher expects that the outcome is positive.

3.1.1.2 Proposed ODI Objective

- To conduct appropriate ODI in terms of work process, teamwork, and communication of jobs installation DM and RTU in TSC Company.

3.2 The Sample size of the target respondents

Sampling is the procedure that uses a small number of items or parts of the population to make a conclusion regarding the whole population (Zikmund, 2000).

The total population of this research study is 222 workers from 10 departments which are Program Office, Contract Management Team, Project Management and Implementation Team, District Metering Installation Team, Remote Terminal Unit Team, AutoCAD and PR Team, Isonet, DMA Acceptance Team, System Support, Store Team.

The sample size of the target respondents are 158 persons for a questionnaire survey method. (Krecie & Morgan, 1970)

Table 3.1 Table for determining sample size from a given population

N (Population size)	S (Sample size)
...	...
180	123
190	127
200	132
210	136
220	140
230	144
240	148
...	...

Source: Krecie R. V. & Morgan, D. (1970). Determining sample size for research activities. Education and psychological measurement, vol. 30, 1970.

607-616

3.3 The research instruments

This research will be conducted by two main tools which are survey questionnaire and interview. The instruments for each one are questionnaire and interview guideline. All of them are on appendix part. The table below shows the research methods and the sample size of the target respondents for data gathering.

Table 3.2 Target respondents and Research instruments

Department	Population	The sample size	Instruments		
			Questionnaire1	Questionnaire2	Interview
1. Program Office	12	7	7	1	1
2. Contract Management Team	10	7	7	1	1
3. Project Management & Implementation Team	20	14	14	1	1
4. District Metering Installation Team	40	30	30	1	1
5. Remote Terminal Unit Team	20	14	14	1	1
6. AutoCAD & PR Team	30	22	22	1	1
7. Isonet	20	14	14	1	1
8. DMA Acceptance Team	20	14	14	1	1
9. System Support	20	14	14	1	1
10. Store Team	30	22	22	1	1
<u>Total</u>	<u>222</u>	<u>158</u>	<u>158</u>	<u>10</u>	<u>10</u>

3.4 Data collection techniques and procedures

3.4.1 Questionnaire

The questionnaires were divided into two sets. The questionnaire was reviewed by an expert and translated into Thai version by experts in both Thai and English. The questionnaire was reviewed and pre-tested for reliability purposes. It was distributed by using simple random sampling method. The researcher tried to give the questionnaire to each department in the same proportion compared with the number of population.

A paragraph of introduction explaining the general purpose of the study and assuring confidentiality was included in the questionnaire (See Appendix 1&2). The questionnaire 1&2 is attitude survey which consisted of 3 parts as below.

3.4.1.1. Part I: The demographic profile and other information of respondents. This part consists of four questions. This part provides multiple choice format of personal profile.

3.4.1.2. Part II: The respondents' attitude about organization communication. There are nine questions which use multiple choice format, 15 questions use four point scale, descriptive rating and arbitrary level method, and one open-ended question.

3.4.1.3. Part III: The respondents' attitude about teamwork. There is one multiple choice question, seven questions which use four point scale, descriptive rating and arbitrary level method, and two open-ended questions. For descriptive rating and arbitrary level method, there are 5 variables to measure the respondents' opinion. These 5 variables are the series of statements that are don't know (0), strongly disagree (1), disagree (2), agree (3), and strongly agree (4) respectively.

The questionnaire 3 is knowledge about work process in each department understanding (See Appendix 3). Questionnaire surveys will be distributed to the number of workers which is shown in table 3.2.

3.4.2 Interview

For more in-dept information collection and analysis, the interview sessions also was conducted for interviewing 10 task managers who were the representative from 10 departments which involve in job no.5. There was one manager from Program Office, Contract Management Team, Project Management and Implementation Team, District Metering Installation Team, Remote Terminal Unit

Team, AutoCAD and PR Team, Isonet, DMA Acceptance Team, System Support, and Store Team. Every interview was face-to-face and also recorded by tape recorder. The researcher had a good chance to ask the respondents' opinion about work process, teamwork, and organization communication.

Table 3.3 Schedule for the interview

Management	Department	Date	Time	Place
Dr. TC	Program Office	22 February'07	18:30-19:00	Central Pinklao
Mr. DN	Contract Management Team	22 February'07	19:00-19:30	Central Pinklao
Mr. LS	Project Management & Implementation Team	26 February'07	18:30-19:00	Central Pinklao
Mr. VC	District Metering Installation Team	26 February'07	19:00-19:30	Central Pinklao
Mr. WS	Remote Terminal Unit Team	28 February'07	18:30-19:00	Central Pinklao
Mr. KC	AutoCAD & PR Team	28 February'07	19:00-19:30	Central Pinklao
Mr. Visut	Isonet	1 March'07	18:30-19:00	Central Pinklao
Mr. Toi	DMA Acceptance Team	1 March'07	19:00-19:30	Central Pinklao
Mr. PK	System Support	6 March'07	18:30-19:00	Central Pinklao
Mr. Somchai	Store Team	6 March'07	19:00-19:30	Central Pinklao

3.4.3 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 .554 in which is near .600 or reliability. Anyway, the researcher was confident that this survey questionnaire was useful enough to find out the worker's attitude toward teamwork and communication. (See Appendix5).

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients 40 items

Alpha = .554 Standardized item alpha = .692

3.4.4 Data Collection Procedures

The research conducted two times in collecting the information because task managers faced a hard time in the first two month of the year 2007. So the researcher distributed survey questionnaire first and interviewed task managers after their hard period. The first collection of questionnaire had been done from December 17, 2006 to February 21, 2007. The second time, interview information has been done during February 22, 2007 to March 6, 2007.

The respondents were asked to return the questionnaire to the researcher within one and a half month. It was a little long period because the researcher would like to collect every set of questionnaire back. 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 after the researcher asked permission from the project director.

3.5 Data Analysis

The researcher did both 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 content analysis tool for questionnaire about work process and interview analysis.

For quantitative approach, the Frequencies and Percentage were used to determine respondents' demographic profile and their attitudes toward teamwork and communication. 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

Table 3.4 The descriptive rating and arbitrary level

Arbitrary Level	Descriptive Rating
3.26-4.00	SA-Strongly Agree
2.51-3.25	A-Agree
1.76-2.5	D-Disagree
1.00-1.75	SD-Strongly Disagree
0	Don't know

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



CHAPTER FOUR

Presentation and Analysis of Data

This chapter presented the major findings of the surveyed result, the analysis and interpretation of data in response to the research questionnaires for OD designed for workers in TSC Company. The study was to diagnose and propose appropriate ODI for the situation of TSC 1656 Co. Ltd (TSC) in terms of work process, teamwork, and organization communication. The researcher was going to present the data by following an organizational development process model.

4.1 The Demographic Profiles of Respondents

The demographic profiles of the respondents in this research study were department, gender, age, and length of services of the respondents. In this part, the frequencies and percentage were used to determine the respondents' demographic profile.

4.1.1 Department

Table 4.1 Department of the respondents

Department	Frequency	Percent
1. Program Office	7	4.4
2. Contract Management Team	7	4.4
3. Project Management & Implementation Team	14	8.9
4. District Metering Installation Team	30	19
5. Remote Terminal Unit Team	14	8.9
6. AutoCAD & PR Team	22	13.9
7. Isonet	14	8.9
8. DMA Acceptance Team	14	8.9
9. System Support	14	8.9
10. Store Team	22	13.9
<u>Total</u>	<u>158</u>	<u>100.0</u>

According to table 4.1, there were 30 respondents or 19% who worked in District Metering Installation Team which was the largest group of the sample, followed by 22 respondents or 13.9% who worked in AutoCAD & PR Team and Store

Team, 14 respondents or 8.9% who work in Project Management & Implementation Team, Remote Terminal Unit Team, Isonet, DMA Acceptance Team, and System Support and 7 respondents or 4.4% who worked in Program Office and Contract Management Team.

4.1.2 Gender

Table 4.2 Gender of the respondents

Gender	Frequency	Percent
Male	130	83.3
Female	28	17.7
<u>Total</u>	<u>158</u>	<u>100.0</u>

According to table 4.2, most of the respondents were male 130 persons or 83.30%. The rest were female 28 persons or 17.70%.

4.1.3 Age

Table 4.3 Age of the respondents

Age	Frequency	Percent
20-30 years	91	57.7
31-40 years	50	31.6
41-50 years	10	6.3
51 years and above	7	4.4
<u>Total</u>	<u>158</u>	<u>100.0</u>

Age of the respondents in this research study was grouped into four categories.

As shown in table 4.3, age group between 20-30 years represented the largest group of 57.7% or 91 persons out of the total respondents of 158 persons. There were 31.6% or 50 persons in age group between 31-40 years, 6.3% or 10 persons in age between 41-50 years and 4.4% or 7 persons in age 51 years and above.

4.1.4 Length of Services

Table 4.4 Length of Service of the respondents

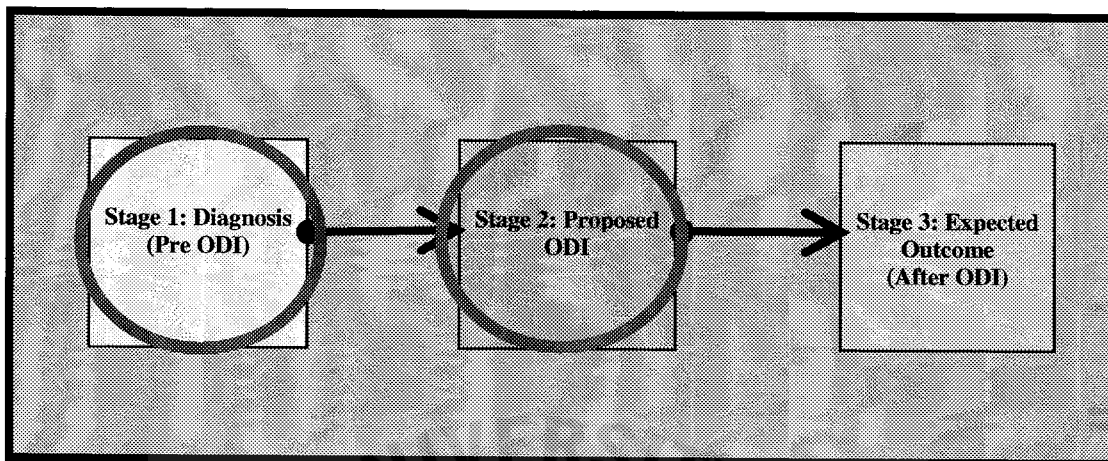
Length of Services	Frequency	Percent
Less than 1 year	34	21.5
1 year less than 2 years	40	25.3
2 years less than 3 years	36	22.8
3 years and above	48	30.4
<u>Total</u>	<u>158</u>	<u>100.0</u>

According to the table 4.4, it shows that the respondents who worked for the organization for 3 years and above was the largest group with 48 respondents or 30.4% of the total respondents. The second largest group were those who worked for 1 year to less than 2 years, there were 40 respondents or 25.3% and 36 respondents or 22.8% represented those who worked 2 years less than 3 years in the organization. The remaining respondents with 34 or 21.5% were the group of respondents who worked 3 years and above.

4.2 Organizational Development Intervention Process

According to the figure 4.1.below, it represented 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. This research focused only on the first and second stage or diagnosis state (Pre ODI) and proposed ODI state. The researcher tried to diagnose the current situation of the TSC Company concerned on work process, teamwork, and communication and generated ODI for each term after that.

Figure 4.1 Organizational Development Intervention Process



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

The first stage was to diagnose the current situation of TSC 1656 Co. Ltd. in terms of work process, teamwork, and communication in order to conduct appropriate ODI. This stage focused on the company's situation which were the perception of workers in each department of the company. The information also described and analyzed, after that, identify the current situation and also identify the problems.

The information was gathered by survey questionnaire and interview. For survey questionnaire, the researcher divided into two sets. One set was of the attitude of respondents on teamwork and communication in each department which related with job no. 5. Another set was distributed to each department (one questionnaire for one department) asking about work process. For interview, the researcher asked the management of each department about the actual situation in terms of work process, teamwork, and communication.

Research Question 1: What are the elements and sequence of the work process of job install District Metering (DM) and Remote Terminal Unit (RTU)?

Based on an open-ended questionnaire which was distributed to each department, the management drew the sequence of their process back to the researcher. It seem that every department understood clearly their tasks what they had to do, what was the process of their work was who they had to report to (See Appendix3).

During the interview, the researcher found that the management understood clearly because they always discussed to improve work process from department to department while the workers didn't understand as the management did. They told because the project was in a rush and every worker had to respond to their work. They also told that no one ask after meeting, everyone seems to understand what they had to do but their understanding as wrong sometime. The researcher found that some departments did their work but still had a little impact to the company's work. There was one department which updated information which was significant for the project. Everyone had to send their own updated work progress and short future plan to this department every day. This department collected data and transformed into useful information. Practically, this department faced with overwhelming information so they could not run the process effectively in this time.

Other problems were about organization chart. The project director was the only one person who knew the exact organization chart. Anyway, the management recognized the importance of the effective work process which could not happen if they didn't communicate to their sub-ordinates.

Perception of Respondents

The descriptive statistics were used to clarify the respondents' perception of 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 4.5 below.

Table 4.5 The descriptive rating and arbitrary level

Arbitrary Level	Descriptive Rating
3.26-4.00	SA-Strongly Agree
2.51-3.25	A-Agree
1.76-2.5	D-Disagree
1.00-1.75	SD-Strongly Disagree
0	Don't know

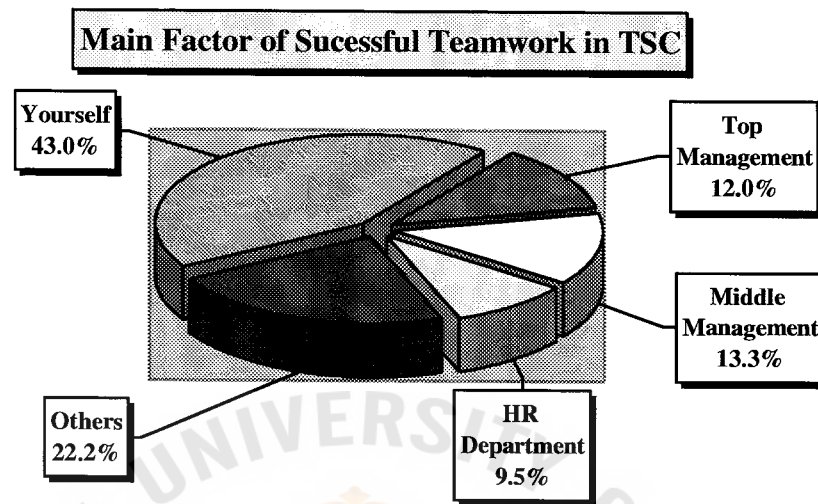
Research Question 2: What is the attitude towards teamwork among workers in job install District Metering (DM) and Remote Terminal Unit (RTU)?

4.2.1.1 Perception toward teamwork of TSC's employees

Table 4.6 Perception toward teamwork of TSC's employees

Item	Mean	SD	Rating
1.Always gain assistance from colleague inside department	3.4684	0.5719	SA
2.Always gain assistance from colleague outside department	2.7405	0.5775	A
3.Agree in concept of teamwork	3.6266	0.5470	SA
4.Clear in definition of task assigned and authority	3.0316	0.5691	A
5.Involved in planning and controlling work	2.8608	0.5807	A
6.Give good opinion in meeting	2.8734	0.6050	A
7.Always support who are in a spot during meeting	2.7658	0.6096	A
Teamwork	3.0524	0.3713	A

Figure 4.2 Main Factor of Successful Teamwork in TSC



Based on the diagnosis from survey questionnaire which is shown in Table 4.6, the overall perception of respondents on teamwork in the company was rated at “A-Agree” with the average mean of 3.0524 and standard deviation of 0.3713. This implied that the respondents felt that there already was sense of working as a team in the company. Furthermore, they “Strongly Agree” that they always gain assistance from workers within the same department with the average mean of 3.4684 and standard deviation of 0.5719. They also accepted the concept of teamwork because it was rated at “SA-Strongly Agree” with the average mean of 3.6266 and standard deviation of 0.5470. Most of the employee 43% think that they themselves were the most important factor to build teamwork in the company.

Anyway, the researcher found that there were some conflicts with the interview results. Most of the respondents told that there was not much teamwork within the company. Some situations might gain support from employees inside the department, but was not often. They felt that there was only some help from other departments. Every time they had to report to the project director before asking the other department to help them. The reason was because the project was rushed and

every department had to respond to their task first. It was because every department focused on themselves. There was a conflict among employees which came from different departments sometimes because of unclear roles and authority. The reason was the project forced subordinates to report two bosses.

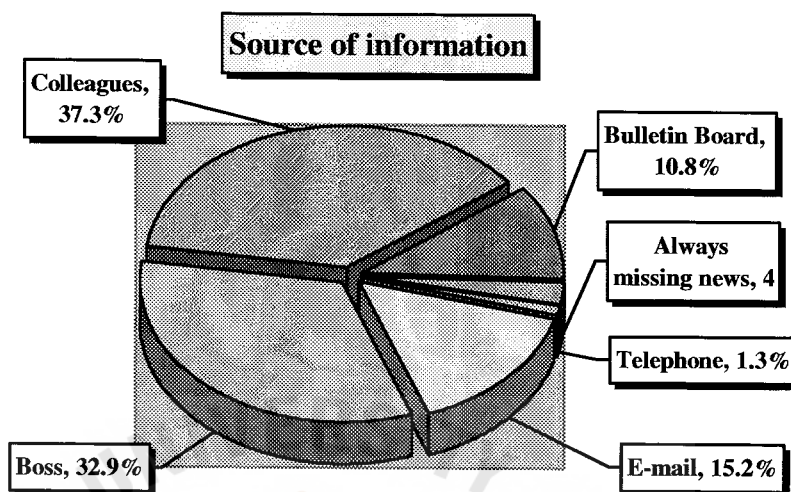
Most of the respondents were involved in planning and controlling work because the project director always asks them to go to meeting with him. They shared good opinion during meeting. The good point that the researcher found was most of the respondents agreed that teamwork was a very important factor in today.

Research Question 3: What is the attitude toward communication among workers in job install District Metering (DM) and Remote Terminal Unit (RTU)?

Table 4.7 Perception about communication within TSC Company

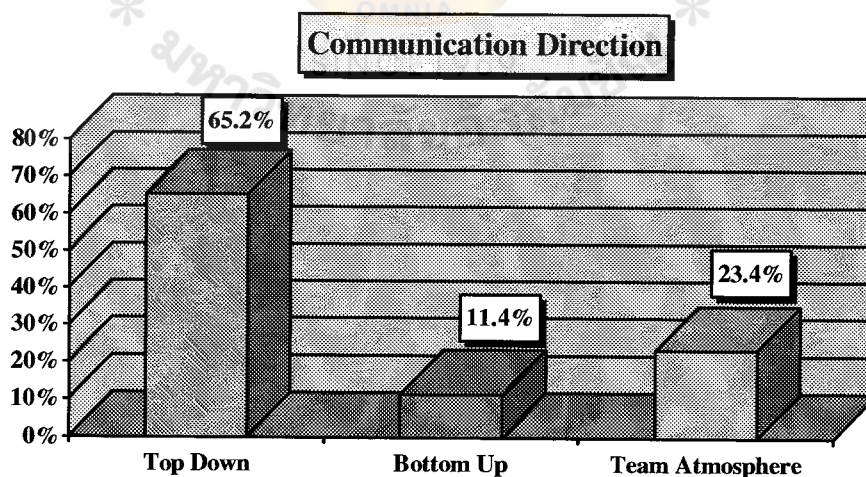
Item	Mean	SD	Rating
1.Clear in company's objective and policy	3.1519	0.6200	A
2.Clear in what my colleague say	3.1076	0.6242	A
3.Clear in boss command	3.1456	0.5646	A
4.Clear in my expectation in every word I say	3.5823	0.4948	SA
5.Clear of role and JD in organization	3.2342	0.5549	A
6.Strongly confident still flexible	3.2848	0.5875	SA
7.Don't like to listen disagree idea	1.3861	0.5498	SD
8.Uncomforted to participate when I'm not interest	2.0380	0.8208	D
9.Interest to listen other's idea which is different	3.2658	0.7522	SA
10.Rebuttal in head while other talking	1.6582	0.5730	SD
11.Listen to only main idea	2.9430	0.6888	A
12.Block out when I don't like other	1.5759	0.5563	SD
13.Restate to make sure understanding	3.0000	0.7315	A
14.Learn the mood of whom I talk to	3.1392	0.6909	A
15.Ask when don't understand	3.3671	0.6518	SA
Communication	2.7777	0.2253	A

Figure 4.3 Source of information



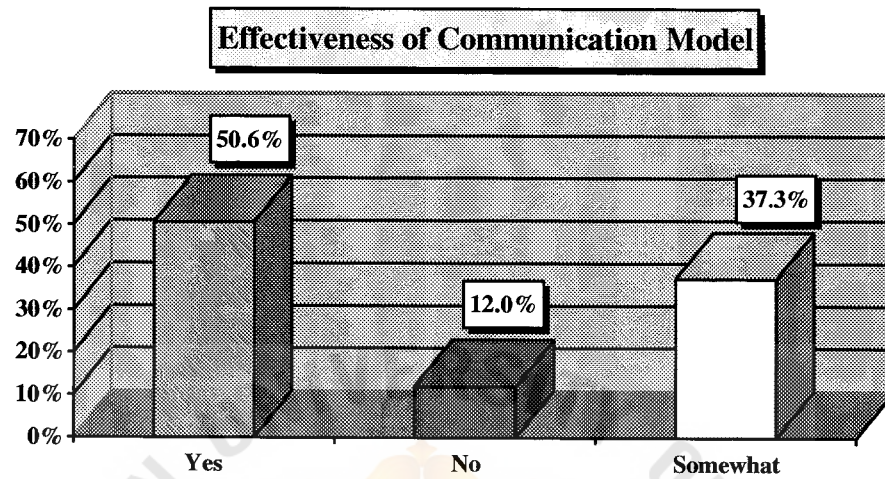
According to Figure 4.3, it shows that most of the employees get information from colleagues with 37.3%. Then, the chart shown that boss (32.9%), e-mail (15.2%), bulletin board (10.8%), and telephone (1.3%) were sources of information the employees got from the company. There were 4% of employees who always miss information.

Figure 4.4 Communication Direction



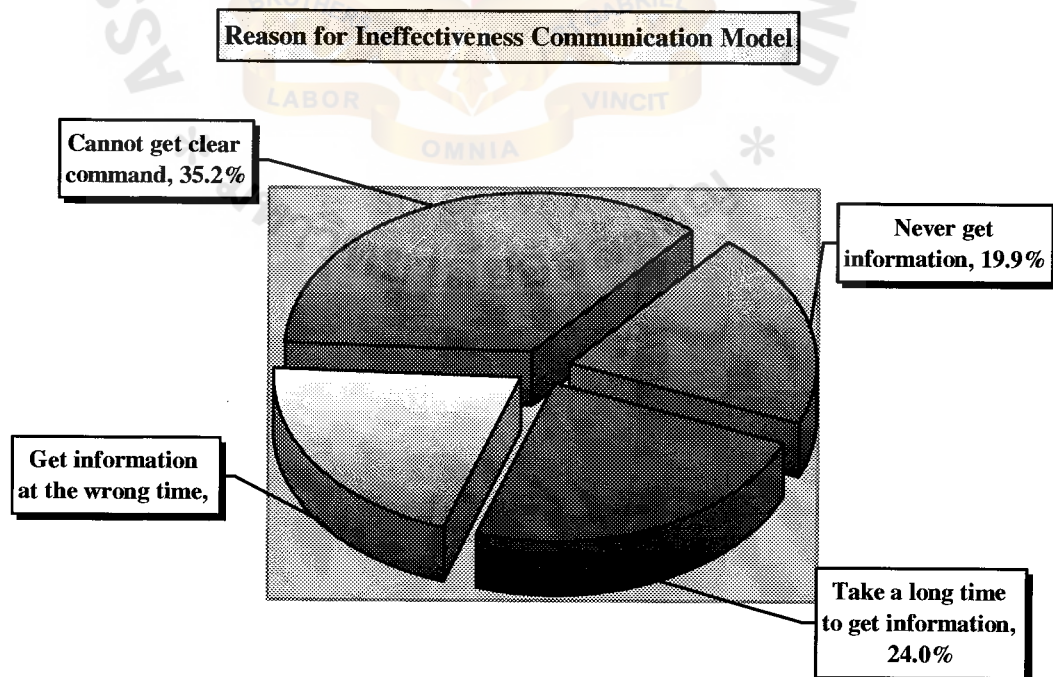
According to Figure 4.4, it shows that the employees understood that communication direction in the company was top down (65.2%), team atmosphere (23.4%), and bottom up (11.4%) respectively.

Figure 4.5 Effectiveness of Communication Model



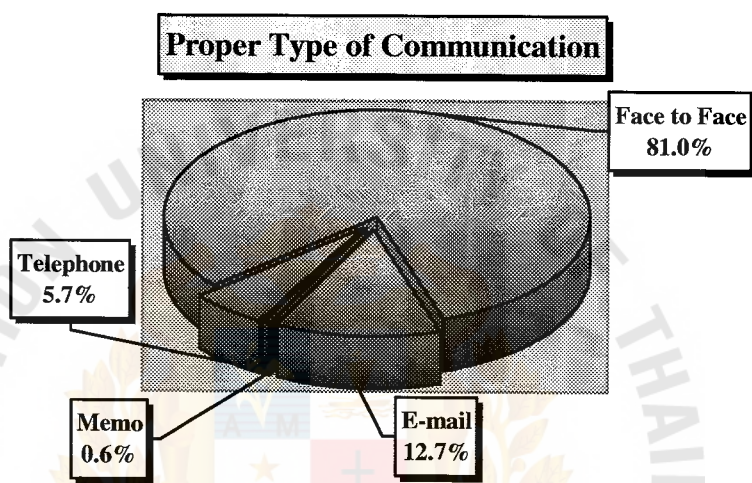
According to Figure 4.5, there were 50.6% of employees who think that communication model of the company was effective, 12% of them think it was ineffective. The other 37.3% of employees felt it was so so.

Figure 4.6 Reason for ineffectiveness Communication Model



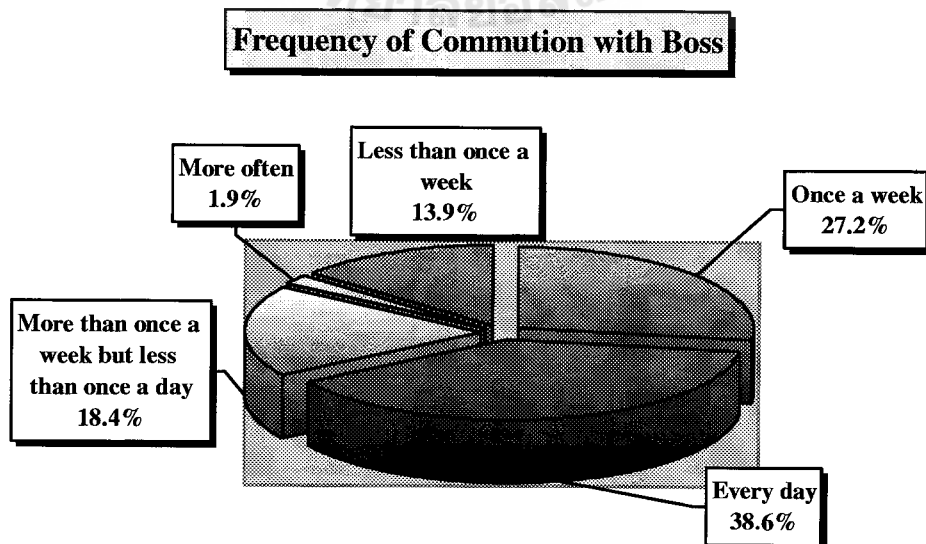
According to Figure 4.6, the employees thought that cannot get clear command (35.2%), take a long time to get information (24%), get information at the wrong time (20.9%), and never get information (19.9%) were reasons for ineffective communication model of the company respectively.

Figure 4.7 Proper Type of Communication



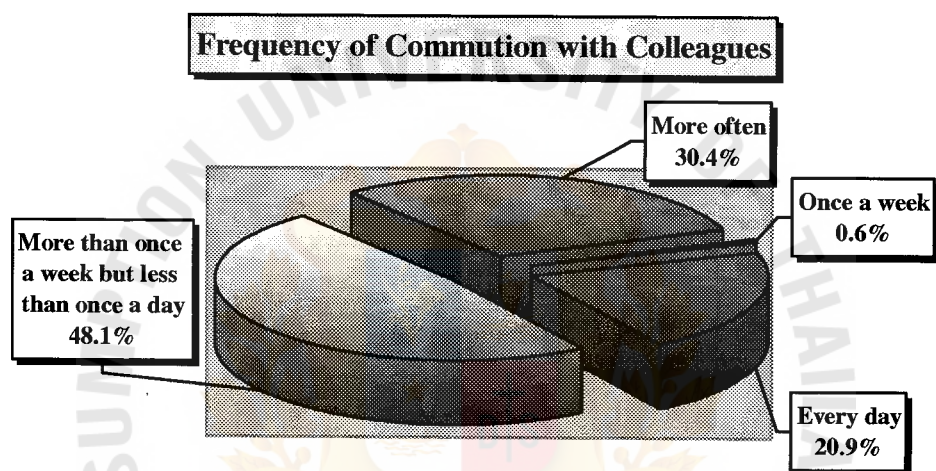
According to Figure 4.7, the most proper type of communication was face to face in employees' opinion with 81%. The rest was e-mail (12.7%), telephone (5.7%), and memo (0.6%) respectively.

Figure 4.8 Frequency of Communication with Boss



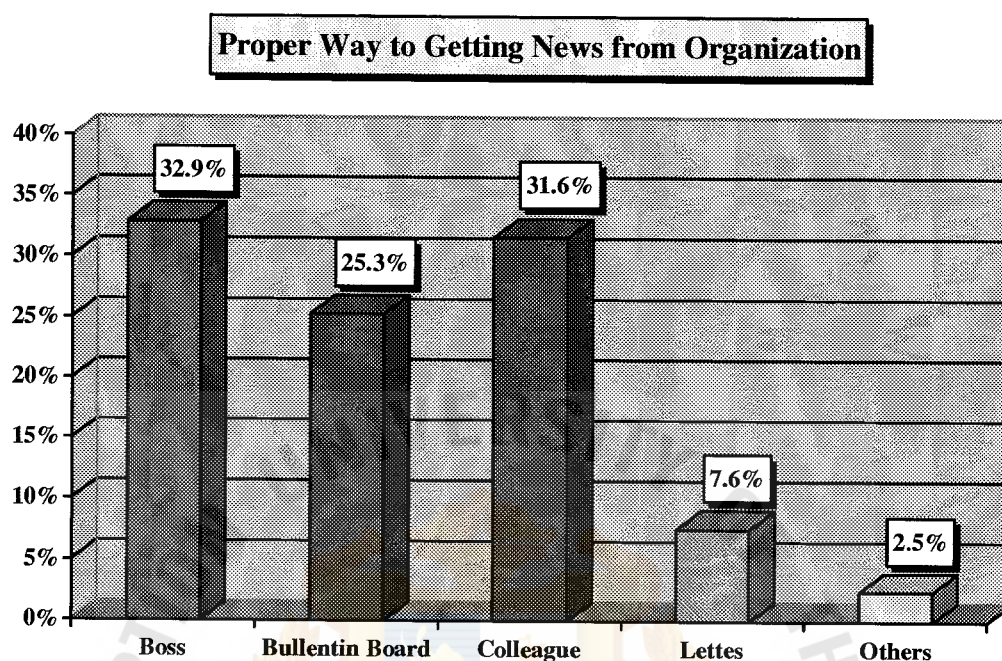
According to Figure 4.8, there was 38.6% who communicated with the boss everyday. There was 27.2% who communicated with boss once a week, 18.4% who communicated with boss more than once a week but less than once a day, 13.9% who communicated with boss less than once a week, and the rest 1.9% communicated with the boss more often.

Figure 4.9 Frequency of Communication with Colleagues



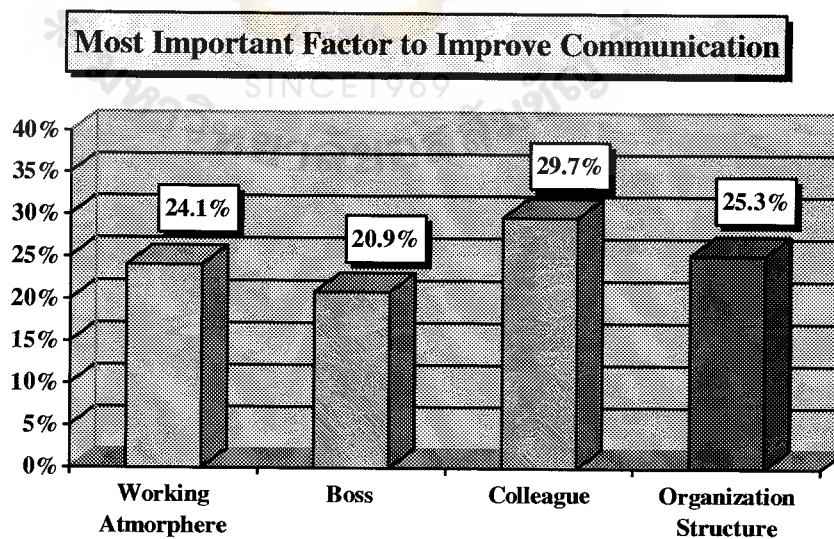
According to Figure 4.9, there was 48.1% who communicated with colleagues more than once a week but less than once a day, 30.4% who communicated with colleagues more often, 20.9% who communicated with colleagues everyday, and 0.6% who communicated with colleagues only once a week.

Figure 4.10 Proper ways to get news from organization



According to Figure 4.10, shows that boss (32.9%), colleague (31.6%), bulletin board (25.3%), letters (7.6%), and others (2.5%) were proper ways to get news from the company in employees' opinion.

Figure 4.11 Most Important Factors to Improve Communication



According to Figure 4.11, shows that colleagues (29.7%), organization

structure (25.3%), working atmosphere (24.1%), and boss (20.9%) were the most important factors to improve communication in employees' opinion.

Based on the diagnosis from survey questionnaire shown in Table 4.7, the overall perception of respondents on communication in the company was rated at "A-Agree" with the average mean of 2.777 and standard deviation of 0.2253. This implied that the respondents felt that their communication was effective. They were OK in talking with anyone who disagreed with them with the average mean of 1.3861 and standard deviation of 0.5498. They also were not rebuttal while talking with the average mean of 1.6582 and standard deviation of 0.5730. They didn't block out opinion from the one they didn't like with the average mean of 1.5759 and standard deviation of 0.5563.

From the interview, the researcher found that most of the respondents were clear in boss's command and objectives and policies of the company. They were unclear in their job description (JD), sometimes they worked what the project manager asked for. They felt confident what they thought and understood, and not flexible. Of course, the employees were not open to disagree the ideas, the people they do not like, something they did not pay interest at which were not related with the survey questionnaire result. Most of the respondents believe that the communication direction is top-down(65.2%). Most of them do not dare to say their communication model is effective although they believe so (50.6%). Most of the respondents normally get information from others worker or colleagues (37.3%) because they do not get clear enough information of command(35.2%) (See Appendix6).

They also were not interested to talk or listen to different ideas. Anyway, they did not rebut the head or block out while others were talking even the one whom they

did not like. They learned the mood of whom they talk to because they were taught from the project director to be sensitive, at least they tried to learn. As the employees felt confident they rarely restated to make sure understanding after meeting or assigned task that caused some problems. Many times what they understand was not what their bosses wanted them to do.

4.2.2. Stage I I : Proposed ODI

The researcher created specific ODI for each term of problem in order to improve work process, teamwork, and communication for job install DM and RTU.

Research Question 4: What are the appropriate ODI in terms of work process, teamwork, and communication for job install District Metering (DM) and Remote Terminal Unit (RTU)?

The researcher will propose the work process management for solving the problem occur because of ineffective work process.

Work Process Management

The problem occurred in some processes. Main problems occurred on installing process. MWA, PMI and Project Director observed every department's work at the same time. Every mistake was fixed by each advisor which was different many times. It was the cause of conflict among workers who were not sure who they should follow. Sometimes Project Director came and found out the best solution, after workers lost amount of time doing another way. Another problem was about meeting time. Normally, the meeting time was set by Project Manager, he would ask the Acceptance Team and System Support to help him arrange time and place for meeting. It was late because there were many agendas for brainstorming in each meeting. Not only meeting which late from schedule, but he also late from his

appointment with others that he planned to discuss after meeting. So the work processes were late by him.

So, the researcher collected questionnaires about work process which is distributed to each department concerned with the job. After that, the engineers who work for the company will draw them completely and post it on the bulletin board of the company to remind everyone. Not only post on the board, the researcher also distributed “The work process chart” to every department to make sure that everyone concern this job know the most effective process in working. There will be persons in charge of work process change who has to change the chart and inform every related person as fast as possible. The person in charged should come from the information department related to this work and he/she have to attend a meeting as much as possible to not only know change before informing but he/she also have to suggest ideas to develop the work process. The Project Manager also set an agenda which was suitable with the time available at each meeting. Acceptance Team and System Support would help him to confirm meeting and appointment.

The researcher will propose create strong and build relationship activities to build and maintain a sense of working as a team.

Create Strong and Build Relationship Activities

From the assessment results, the researcher found that colleagues are main factor to improve communication model, and every single worker is the main factor in successful teamwork. The researcher will propose activities to reduce gap between each worker. The researchers don't propose any activities which consume time because the project was rushed so he proposed only Activities day, Dinner, and Special events on Birthdays. The workers within the same department should arrange

their time to have a dinner together at least once a month and they should prepare some special birthday gifts for other workers who have a birthday in that month. At the end of the quarter, there are activities days in which each department groups and goes outside to the theater, karaoke, sport clubs, and ends with a buffet. For the last month, The TSC Company celebrated work performance by organizing weekend trips to other provinces to let everyone relax from working the whole year. The Company will set reasonable budget for each activity and provide to each department fairly.

Table 4.8 Yearly Schedule for Create Strong and Build Relationship Activities

Month	Activities
January	Dinner (at least 1 time within department, Special Birthday)
February	Dinner (at least 1 time within department, Special Birthday)
March	Dinner (at least 1 time within department, Special Birthday)
April	Dinner (at least 1 time within department, Special Birthday) Activities Day (Movie and Karaoke and end with Buffet)
May	Dinner (at least 1 time within department, Special Birthday)
June	Dinner (at least 1 time within department, Special Birthday)
July	Dinner (at least 1 time within department, Special Birthday)
August	Dinner (at least 1 time within department, Special Birthday) Activities Day (Sport Club and end with Buffet)
September	Dinner (at least 1 time within department, Special Birthday)
October	Dinner (at least 1 time within department, Special Birthday)
November	Dinner (at least 1 time within department, Special Birthday)
December	Dinner (at least 1 time within department, Special Birthday) Weekend Trip (Traveling to Other provinces)

The researcher will propose some new policies to improve the effective level of communication within the company.

Setting Policy

The researcher also will propose some new policies to increase the level of communication to the project director: *P30 and C247*

P30 is come from Problem in 30 Seconds. It means that every worker who is responsible to their work should try their best to complete their own tasks anyway. If they cannot, they have not to allow the time pass by or waste the time. They have to report to their supervisors who can give them advice within 30 seconds. The number 30 is not strict to be within exactly 30 seconds but it implied that every one who works for TSC Company should responded towards problems as fast as possible. If they don't report or ask for suggestions from their supervisor, it's their fault. If they report, it's the supervisor's responsibility to solve the problem. This policy will guarantee that there is conversation or consultation between the supervisor and subordinates because no one wants to fail. There is less chance that subordinates do wrong jobs.

C247 comes from Communicable 24 Hours 7 Days. Everyone who works in the project can contact each other for every situation in every single minute in order to make sure that every problem just occurred will be in charged by a suitable person. Everyone has to open their mobile phone all the time, turn on ringer tone also even in the meeting. There is no excuse in case of out of battery because they should prepare another battery with them, or keep battery charger with them every place every time. The Company will pay for these accessories. They are also responsible to check E-

mail at 9 AM everyday to update new information and work process. These policies will be informed to new employees in first orientation also.

Summary Assessment: (Questionnaire and Interview)

The current situation of organization as follows:-

Work Process:

The management knows update work process while the employees did not see the updated clear process that was changed many times when the project was run. There was no updated organization chart to let everyone in the company know the only one who knew it was the project director because he changed it. Some jobs were done by more than one person in charge because of unclear Job Descriptions (JD).

Teamwork:

The employees agreed in concept of working as a team but there was not much teamwork in practice. Everyone was concerned about their task, they were not willing to help others even in the same department. There were conflicts among workers because of unclear role and authority.

Communication:

Unclear role and authority was also the problem for communication because some employees had to report to two immediate supervisors in the project. They felt confident in their own thinking that was hard to change. The only one they accepted was the project director. Updated information was not announced up to date because of overwhelming information.

CHAPTER FIVE

Summary of Findings, Conclusions, and Recommendation

5.1 Summary

A summary of the major findings of this research study are presented following the three stages of the research's conceptual framework which are Pre ODI, Proposed ODI, and Expected Outcome respectively. The researcher mentioned already in the introduction part that there are two objectives for conducting this research study. Firstly is to conduct diagnosis for job install DM and RTU of TSC Company in terms of work process, teamwork, and communication. Secondly is to propose ODI on work process, teamwork, and communication. All those objectives are focused to study on the employees who working in job install DM and RTU of TSC Company. Furthermore, this research study also presented and ends with the recommendations

5.1.1 Pre ODI Stage

The researcher had used two methods which were survey questionnaire and interview to create understanding and describing the current situations of the organization in order to conduct the appropriate ODI. After collecting information through all techniques that the researcher had mentioned, the researcher could come up with a summary as below.

Summary Assessment: (Questionnaire and Interview)

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

Work Process:

There was no enough clear communication to sub-ordinates when work process or organization chart were changed. That is why sometimes there as more than

one worker who did the same job while there was no one in charge of some jobs. The result was delay in operation and ineffective quality of work. Sometimes it was the cause of conflict among workers.

Teamwork:

While the workers agreed in concept of teamwork, there was still not much working in team practically in TSC Company. There was not support even inside the department because everyone focused on their own tasks. It did not come from self-centeredness but because of the project's time line.

Communication:

The workers were not open for disagreement of ideas, they also did not pay attention to what they were not interested in. They did not ask to make sure what they understood because they thought that they understood. But their understanding was wrong sometimes. The researcher found the workers should communicate more even if they had to report to more than one immediate supervisor.

5.1.2 Propose ODI Stage

According to the current situation that had been discovered, the researcher had designed the several of organization development interventions (ODI) in order to improve TSC Company in terms of work process, teamwork, and communication.

The researcher will propose the work process management for solving the problems which occurred because of ineffective work process. The researcher will propose many activities to create and build strong relationship and make sense of teamwork to the workers within the same department first and the researcher will also propose some policies to improve the level of communication in the organization.

5.1.3 Expected Outcome Stage

Table 5.1 the Organization Development Intervention Activities

ODI Activities	Objectives	Expected Outcome
Work Process Management	-work process flow smoothly and on time -clear role and authority -clear job description	-work process faster -employees are clarified about their tasks
Create Strong and Build Relationship Activities	-build unity among workers inside department -reduce gap between workers inside department -let the workers relax from work	-awareness of sense of working as a team -the relationship between workers are closed -refresh and more energy
Policy	-increase level of communication -solving communication problem	-problems are solved quicker -supervisor can contact with subordinate all time -effective communication

5.2 Conclusions

The Project Water leakage management for metropolitan water authority of Thailand (MWA) is responded by TSC Company. This research studied only job install DM and RTU which the company done for MWA. The researcher could diagnose work process, teamwork, and communication, and propose ODI in installing DM and RTU in terms of work process, teamwork, and communication.

The result of this study can finally be summarized that the current situation in terms of work process, teamwork and organization communication was assessed clearly through the use of survey questionnaire and interview. The appropriate ODI which are create strong and build relationship activities, work process management, and setting some new policies will be proposed to help develop work process, teamwork, and organization communication of the company. And all research questions were answered adequately.

The researcher found that the work process in doing job install DM and RTU were not too complex to understand but there were some department and some

process which cause of ineffective work process. The researcher found that the workers who were in charge of job install DM and RTU did not work as a team. The reason was because the project was rushed and every department had to respond to their task first. It was because every department focused at themselves. There were conflicts among employees which came from different departments sometimes because of unclear roles and authority. Even there was only sometimes that workers within the same department helped each others. The researcher also found the communication in the department consists of this job were not good.

5.3 Recommendations

5.3.1 Recommendations for the Organization

From the researcher's viewpoint, the result of the ODI activities should be maintained in every project after this Project Water Leakage Management. Therefore, some of these ODI activities are a continuing process that the organization needs to keep, such as create and build strong relationship activities by having lunch or dinner together on activities day. It would serve as an example of appropriate ODI. The improvement of work process, teamwork, and communication will help the company to increase productivity and effectiveness of work.

In addition, it is recommended that a long term plan should be evolved to continually develop the company not only in terms of work process, teamwork, and communication. There should be a long term OD team in charge of developing the company performance.

5.3.2 Recommendations for future research

After diagnosing the work process, teamwork, and communication of the organization, the researcher found that these three variables related to every worker in

the company. These three variables might need more time or other techniques to deal with. The researcher might have to study further and in depth about the attitude, behavior, culture, commitment, team, workflow, and communication techniques in order to understand more of the work process, teamwork, and communication.

The ODI result should be collected in order to study whether it is suitable for the organization. The ODI should be developed in continuous process even if the project will be changed so every ODI activity and its results should be collected and kept safely to study more in the future.

5.3.3 Recommendations for OD Discipline

From the researcher's viewpoint, OD Discipline is related with change management. Change is common in daily life, everything is changed by external environment. Anyone or any living thing can deal with change can survive. An organization which is learning and deals with change can survive. The researcher encouraged to improve effectiveness of the organization and its members through a continuous development process.

Epilogue

This research study is aimed at studying the diagnosis stage in terms of work process, teamwork, and communication of install DM and RTU in TSC Company and how to improve the effectiveness by proposing ODI techniques and activities.

The researcher believed that it would serve as an example for providing guidelines for any person or organization as a tool to understand work process, teamwork, and communication more. Since the researcher is not the worker inside this company, the researcher has an outsider's point of view. The researcher has learnt that an OD practitioner is anyone who is related with the company. Each intervention needs participation from everyone also.

As a Master of Management in Organizational Development and Management or MM (OD&M) student and OD practitioner, the researcher has learnt that OD and change management are continuous processes to improve organizational performance as well as its efficiency and effectiveness. They consist of three phases which are diagnosis stage, ODI implementing stage, and ODI evaluation stage. Each stage requires everyone in the organization to attend especially the management to be OD practitioner to encourage and support for change.

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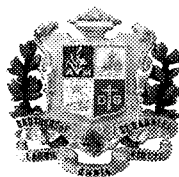
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Appendix 1: English Questionnaire Survey



QUESTIONNAIRE

This survey is designed to study the target respondents on their perceptions on TSC 1656 Co. Ltd. in terms of teamwork and organization communication.

The researcher is now conducting a research on teamwork and organization communication. The researcher appreciates your time for considering these questions. The survey is divided into three parts:

Part 1: Questions about demographic profile.

Part 2: Question about organizational communication.

Part 3: Question about teamwork.

Instruction: For each of the questions listed below, please check the most appropriate answer or fill the request information on blank area. As you consider each statement, please think about how it relates to your personally and to your thoughts and beliefs about your company.

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

PART 1: Demographic profile and other information.

1. What is your department in the project?

a) Program Office	f) AutoCAD & PR Team
b) Contract Management Team	g) Isonet
c) Project Management & Implementation Team	h) DMA Acceptance Team
d) District Metering Installation Team	i) System Support
e) Remote Terminal Unit Team	j) Store Team
2. Gender
 - a) Male
 - b) Female
3. Age category

a) 20-30 yrs.	c) 41-50 yrs.
b) 31-40 yrs.	d) more than 50 yrs.
4. Length of service in TSC Company

a) Less than 1 yr.	c) 2 years less than 3 years
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b) 1 year less than 2 years

d) 3 years and above

PART 2: Communication.

5. Which source of information do you normally get in the current working atmosphere?
 - a) Boss
 - b) Colleague
 - c) Bulletin board
 - d) Always missing news
 - e) Voice Announcement
 - f) Telephone
 - g) E-mail
 - h) Others _____
6. Which communication direction is the most common in your organization?
 - a) Top Down
 - b) Bottom Up
 - c) Horizontal
 - d) Team Atmosphere
 - e) Others, please specify _____
7. Do you currently feel that your company's current communication model is effective?
 - a) Yes
 - b) No
 - c) Somewhat
8. If you do not feel satisfied with the current communication model, what is the main reason you do not like it? (you can choose more than one)

_____ Never get information

_____ Takes a long time to get action

_____ Get information at the wrong time

_____ Cannot get clear command

_____ Others, please specify _____
9. Which type of communication do you find most effective in your own organization?
 - a) Face to face
 - b) E-mail
 - c) Bulletin board
 - d) Memo
 - e) Telephone
 - f) Others _____
10. How often do you communicate with your boss
 - a) Once a week
 - b) Everyday

- c) More than once a week but less than once a day
- d) More often
- e) Less than once a week

11. How often do you communicate with your colleague?

- a) Once a week
- b) Everyday
- c) More than once a week but less than once a day
- d) More often
- e) Less than once a week

12. If you have a free choice to choose the way of getting news from the organization, which way will you choose?

- a) Boss
- b) Bulletin board
- c) Colleague
- d) Letter
- e) Other, please specify _____

13. Which is the most important factor to improve your present communication situation?

- a) Working atmosphere
- b) Boss
- c) Colleague
- d) Organization structure
- e) Other, please specify _____

Please check in the space which most match your own attitude towards existing organizational communication

	Strongly Agree	Agree	Disagree	Strongly Disagree
14. I am very clear in my companies' objectives and policies.				
15. I am very clear in what my colleagues are trying to say.				
16. I usually get a clear command from my boss				
17. I am very clear with what I am expecting in every word I say.				
18. I get the clear picture of my role and job description in the organization				
19. Even though I strongly confident in my idea, still, I convey to others that I am flexible.				
20. I don't like to listen to other people's point of view when I feel I disagree with their ideas.				
21. I feel very uncomfortable to participate in the conversation where the topic is not interesting to me				
22. I find it interesting to listen to other's view if they are different from my own.				
23. I usually have for a rebuttal in my head while the other person is talking.				
24. I always listen to the main idea, but not all details.				
25. If I don't like the other person, I block out what is being said.				
26. I restate what I listen to make sure I understand it correctly.				
27. I try to learn the mood of the other person whom I am talking to				
28. I ask people clarify things I don't understand.				

29. Any comment regarding your organization communication system or the way people communicate with each other in the organization.

PART 3: Teamwork

	Strongly Agree	Agree	Disagree	Strongly Disagree
30. I always gain assistance from working with my colleague in my own department.				
31. I always gain assistance from working with my colleagues outside my own department.				
32. I am agreeable to the concept of working as a team				
33. My tasks are clearly defined and assigned, including accountability and authority.				
34. I am involved in planning and controlling work and responsibility				
35. Everyone in my team is giving very good opinion during every meeting.				
36. I always give support to those who are in a spot and struggling to express themselves.				

37. If you disagree or strongly disagree with the concept of working as a team, please specify your comment

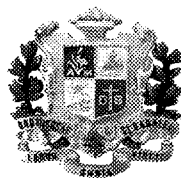
38. Who would be the main factor in deploying teamwork process in your organization?

- a) Yourself
- b) Top Management
- c) Middle Management
- d) HR Department
- e) Others, Please Specify _____

39. Any comment regarding your organization teamwork atmosphere. What do you think and feel about the atmosphere of working as teams in your organization?



Appendix 2: Thai Questionnaire Survey



QUESTIONNAIRE

แบบสำรวจนี้มีวัตถุประสงค์เพื่อสอบถามความคิดเห็นของพนักงานภายในองค์กร TSC เพื่อรับทราบข้อเท็จจริงจากสภาพแวดล้อมด้านการสื่อสารและการทำงานร่วมกัน ผู้ทำวิจัยได้แบ่งแบบสำรวจออกเป็น 3 ส่วน ดังนี้

ส่วนที่ 1 : ข้อมูลส่วนตัว

ส่วนที่ 2 : สภาพแวดล้อมด้านการสื่อสาร

ส่วนที่ 3 : การทำงานร่วมกัน

ทั้งนี้ผู้ทำวิจัยขอขอบพระคุณล่วงหน้าที่ทุกท่านได้สละเวลาเพื่อตอบแบบสอบถามนี้

ส่วนที่ 1 : ข้อมูลส่วนตัว

1. คุณอยู่ในแผนกอะไรในโครงการนี้
 - a. Program Office
 - b. Contract Management Team
 - c. Project Management & Implementation Team
 - d. District Metering Installation Team
 - e. Remote Terminal Unit Team
 - f. AutoCAD & PR Team
 - g. Isonet
 - h. DMA Acceptance Team
 - i. System Support
 - j. Store Team
2. เพศ
 - a. ชาย
 - b. หญิง
3. อายุ
 - a. 20-30 ปี
 - b. 31-40 ปี
 - c. 41-50 ปี
 - d. 50 ปีขึ้นไป
4. ระยะเวลาการทำงานในองค์กร
 - a. น้อยกว่า 1 ปี
 - b. 1 ปี-น้อยกว่า 2 ปี
 - c. 2 ปี-น้อยกว่า 3 ปี
 - d. 3 ปีขึ้นไป

ส่วนที่ 2 : สภาพแวดล้อมด้านการสื่อสาร

5. คุณมักได้รับข่าวสารในองค์กรจากแหล่งข่าวใด?
 - a. ผู้บังคับบัญชา
 - e. เสียงตามสาย

- b. เพื่อนร่วมงาน f. โทรศัพท์
c. บอร์ดประชาสัมพันธ์ g. อีเมล
d. ไม่เคยได้รับข่าวสารเลย h. อื่น ๆ
6. คุณคิดว่าระบบการสื่อสารในองค์กรคุณเป็นแบบใด?
a. จากบนลงล่าง d. ทีมเวิร์ค
b. จากล่างขึ้นบน e. อื่น ๆ
c. สื่อสารในระดับแนวเดียวกัน
7. คุณรู้สึว่าการสื่อสารในองค์กรคุณมีประสิทธิภาพหรือไม่?
a. มี b. ไม่มี c. มีบางครั้ง
8. หากคุณรู้สึว่าองค์กรคุณไม่มีประสิทธิภาพ กรุณาระบุเหตุผลที่คุณคิดเช่นนั้น (เลือกได้มากกว่า 1 ข้อ)
..... ไม่ได้รับข้อมูล ได้รับข้อมูลในเวลาที่ไม่เหมาะสม
..... ใช้ระยะเวลานาน ไม่ได้รับข้อมูลที่ชัดเจน
..... อื่น ๆ กรุณาระบุ
9. วิธีการสื่อสารใดที่คุณคิดว่ามีประสิทธิภาพมากที่สุดในองค์กรของคุณ?
a. การพบปะพูดคุย d. บันทึกหรือจดหมายเวียน
b. อีเมล e. โทรศัพท์
c. บอร์ดประชาสัมพันธ์ f. อื่น ๆ
10. คุณสื่อสารกับผู้บังคับบัญชาบ่อยแค่ไหน?
a. สัปดาห์ละครั้ง d. บ่อยกว่านั้น
b. วันละครั้ง e. น้อยกว่าสัปดาห์ละครั้ง
c. สัปดาห์ละมากกว่า 1 ครั้ง แต่น้อยกว่าวันละครั้ง
11. คุณสื่อสารกับเพื่อนร่วมงานบ่อยแค่ไหน?
a. สัปดาห์ละครั้ง d. บ่อยกว่านั้น
b. วันละครั้ง e. น้อยกว่าสัปดาห์ละครั้ง
c. สัปดาห์ละมากกว่า 1 ครั้ง แต่น้อยกว่าวันละครั้ง
12. หากคุณมีโอกาสนับวิธีการรับข่าวสารภายในองค์กร สื่อใดที่คุณคิดว่า你会เลือก?
a. เจ้านาย d. จดหมาย
b. บอร์ดประชาสัมพันธ์ e. อื่น ๆ
c. เพื่อนร่วมงาน
13. ปัจจัยสำคัญในการพัฒนาการสื่อสารในองค์กรปัจจุบันคืออะไร?
a. บรรยากาศในที่ทำงาน d. โครงสร้างองค์กร
b. ผู้บังคับบัญชา e. อื่น ๆ
c. เพื่อนร่วมงาน

กรุณาเลือกโดยทำเครื่องหมาย X ลงในช่องที่คุณคิดว่าตรงกับสภาพการสื่อสารในองค์กรคุณในปัจจุบัน

	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
14. ข้าพเจ้าเข้าใจอย่างชัดเจนถึงเป้าหมาย และนโยบายของบริษัท				
15. ข้าพเจ้าเข้าใจอย่างชัดเจนถึงสิ่งที่เพื่อน ร่วมงานของฉันพูด				

	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
16. ข้าพเจ้าเข้าใจอย่างชัดเจนถึงสิ่งที่ ผู้บังคับบัญชาของฉันพูด				
17. ข้าพเจ้าเข้าใจอย่างชัดเจนถึงสิ่งที่ ข้าพเจ้าคาดหวังจากทุกคำพูดของข้าพเจ้า				
18. ข้าพเจ้าเข้าใจอย่างชัดเจนถึงบทบาท ของข้าพเจ้ารวมถึงหน้าที่ในองค์กรของ ข้าพเจ้า				
19. แม้ข้าพเจ้าจะเชื่อมั่นในความคิดของ ตนเอง แต่ข้าพเจ้าก็มักจะแสดงออกถึง การยอมรับและการปรับตัว				
20. ข้าพเจ้าไม่ชอบฟังความคิดเห็นของ ผู้อื่นเมื่อข้าพเจ้ารู้สึกไม่เห็นด้วย				
21. ข้าพเจ้ารู้สึกอึดอัดเมื่อต้องเข้าร่วมบท สนทนาในหัวข้อที่ข้าพเจ้าไม่สนใจ				
22. ข้าพเจ้าชอบที่จะฟังความคิดเห็นผู้อื่น ที่มีความคิดต่างจากข้าพเจ้า				
23. ข้าพเจ้ามีความคิดโต้แย้งตลอดเวลา เมื่อผู้อื่นแสดงความคิดเห็น				
24. ข้าพเจ้ามักเลือกที่จะฟังเฉพาะใจความ หลักมากกว่าเนื้อหาทั้งหมด				
25. เมื่อข้าพเจ้าไม่ชอบสิ่งที่ผู้อื่นพูด ข้าพเจ้าก็มักขัดขวางทันที				

26. ข้าพเจ้ามักกล่าวถึงสิ่งที่ได้ยินเพื่อ ความแน่ใจในสิ่งที่ข้าพเจ้าเข้าใจ				
27. ข้าพเจ้ามักสังเกตอารมณ์ของผู้ร่วม สนทนาด้วยตลอดเวลา				
28. ข้าพเจ้ามักถามเมื่อไม่เข้าใจ				

29. ข้อเสนอแนะอื่น ๆ เกี่ยวกับการสื่อสารในองค์กร

.....

ส่วนที่ 3 : การทำงานร่วมกัน

	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
30. ข้าพเจ้ามักได้รับความช่วยเหลือเป็น อย่างดีจากการทำงานกับเพื่อนร่วมงานใน แผนก				
31. ข้าพเจ้ามักได้รับความช่วยเหลือเป็น อย่างดีจากการทำงานกับเพื่อนร่วมงาน นอกแผนก				
32. ข้าพเจ้าเห็นด้วยกับแนวคิดของการ ทำงานเป็นทีม				
33. หน้าที่ของข้าพเจ้าถูกระบุอย่างชัดเจน และมอบหมายอย่างเข้าใจเป็นอย่างดีทั้งใน แง่ของอำนาจและการประเมินผล				
34. ข้าพเจ้ามีส่วนร่วมในการวางแผน				
35. ทุกคนในทีมงานล้วนแสดงความ คิดเห็นที่เป็นประโยชน์ในทุกการประชุม				
36. ข้าพเจ้ามักช่วยเหลือผู้ที่ตกเป็น เป้าหมายในการโจมตีระหว่างการประชุม				

37. หากคุณไม่เห็นด้วยกับแนวคิดของการทำงานเป็นทีม กรุณาระบุเหตุผล

.....

.....

 38. ใครควรจะเป็นปัจจัยหลักในการพัฒนาการทำงานเป็นทีมในองค์กรของคุณ?

a. ตนเอง

d. แผนกบุคคล

b. ผู้บริหารระดับสูง

e. อื่น ๆ

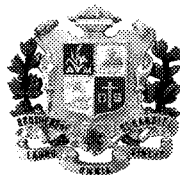
c. ผู้บริหารระดับกลาง

39. ข้อเสนอแนะอื่น ๆ เกี่ยวกับการทำงานเป็นทีม

.....



Appendix 3: Open-ended questionnaire



QUESTIONNAIRE

This survey is designed to study the target respondents on their knowledge about their own tasks and the related tasks which concern with the others worker. The tasks mentioned is about job number five: Install District Meter (DM) and Remote Terminal Unit (RTU) for Thai government.

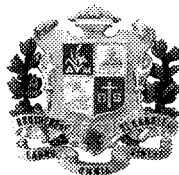
The researcher is now conducting a research on work process. The researcher appreciates your time for considering these two questions.

1. Please describe the work process of your department?

2. Please describe the work process of job no.5 (install District Metering and Remote Terminal Unit) that in charge by your company?

[illegible]

Appendix 4: Interview guideline



QUESTIONS FOR INTERVIEW METHOD

This interview is designed to study the target respondents on their perception in current situation on work process, teamwork, and communication within their company.

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 four main questions as below:

1. Can you tell me about the working process within your department and how it important to the job no.5?
2. Please give me how to develop work process in your opinion?
3. Can you tell me a sense of working as a team and commitment within your department and each department?
4. Explain about the communication channels and flows that always use in the company? How it effective?

Appendix 5 Reliability Test**RELIABILITY ANALYSIS - SCALE (ALPHA)****Item Statistics**

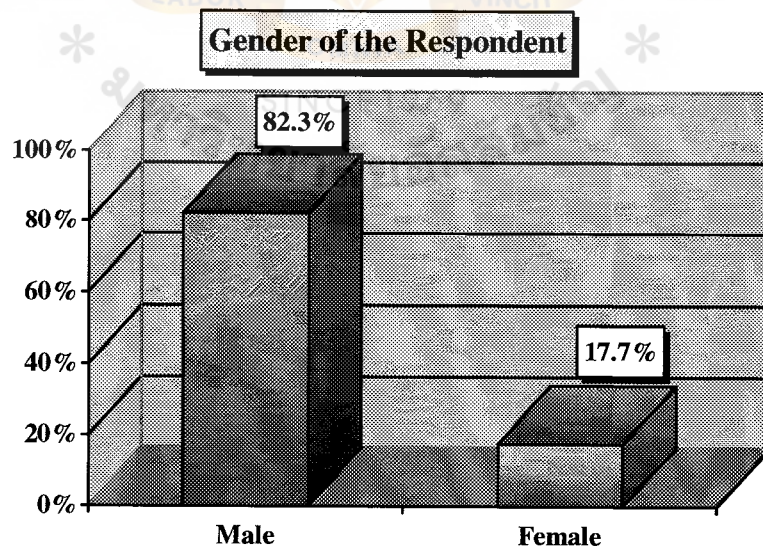
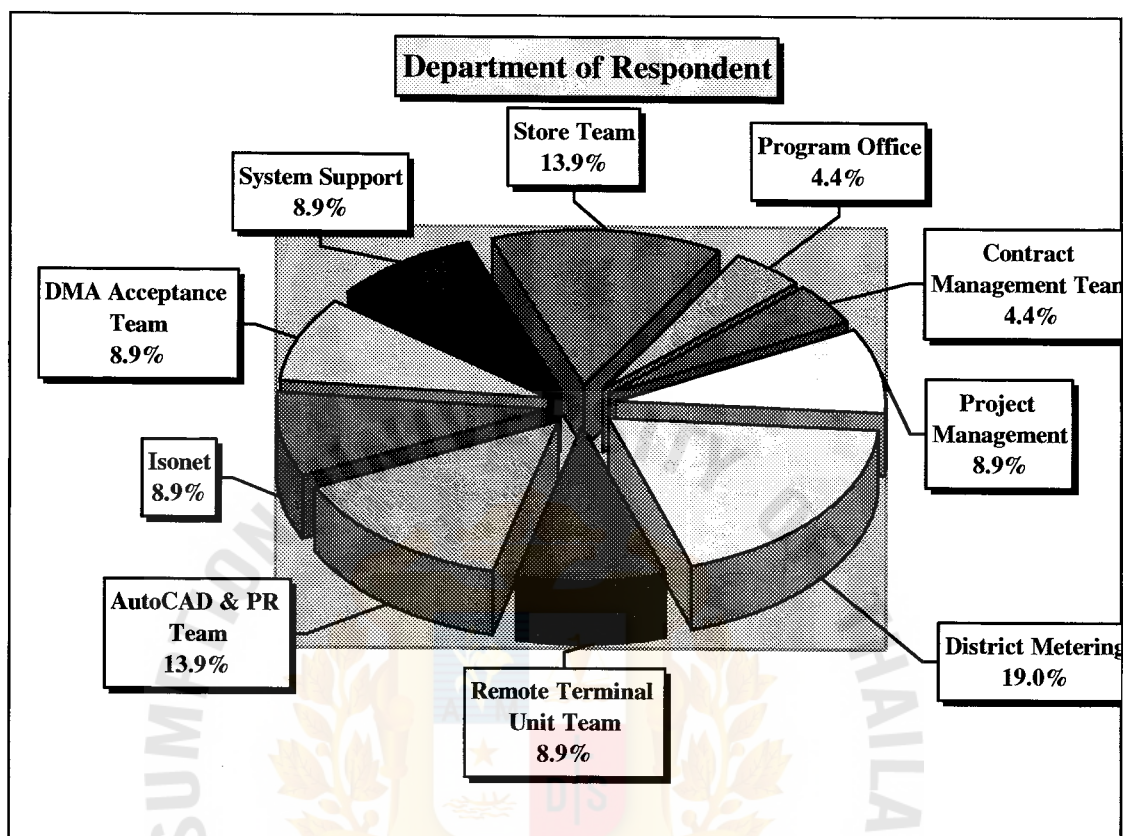
	Mean	Std. Deviation	N
Department in TSC	5.96	2.641	158
Gender of worker	1.27	.446	158
Age of worker	1.58	.800	158
Length of service in TSC	2.62	1.132	158
Source of information	2.64	2.039	158
Direction of communication model	1.93	1.307	158
Effectiveness of communication model	1.87	.931	158
Never get information	.25	.433	158
Take a long time to get action	.30	.459	158
Get information at the wrong time	.26	.440	158
Cannot get clear command	.44	.498	158
Proper type of communication	1.37	.981	158
Frequency of communicate with boss	2.37	1.289	158
Frequency of communicate with colleague	3.08	.731	158
Proper way to getting news from organization	2.22	1.067	158
Most important factor to improve communication	2.56	1.114	158
Clear in company's objective and policy	3.15	.620	158
Clear in what my colleague say	3.11	.624	158
Clear in boss's command	3.15	.585	158
Clear in my expectation in every word I say	3.58	.495	158
Clear of role and JD in organization	3.23	.555	158
Strongly confident still flexible	3.28	.587	158
Don't like to listen disagree idea	1.39	.550	158
Uncomforte to participate when I'm not interest	2.04	.821	158
Interest to listen other's idea which is different	3.27	.752	158

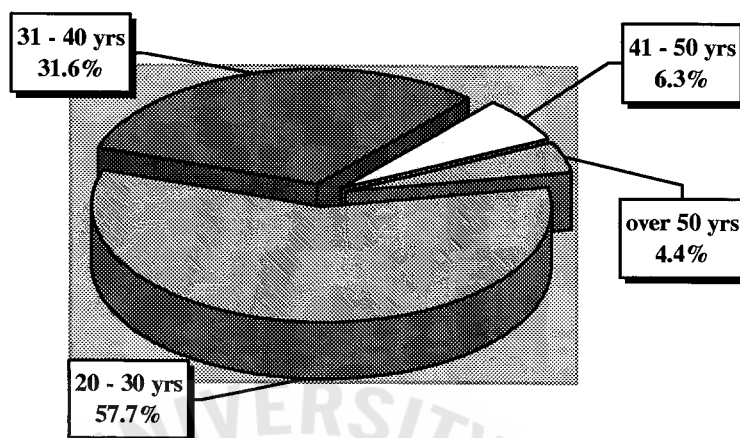
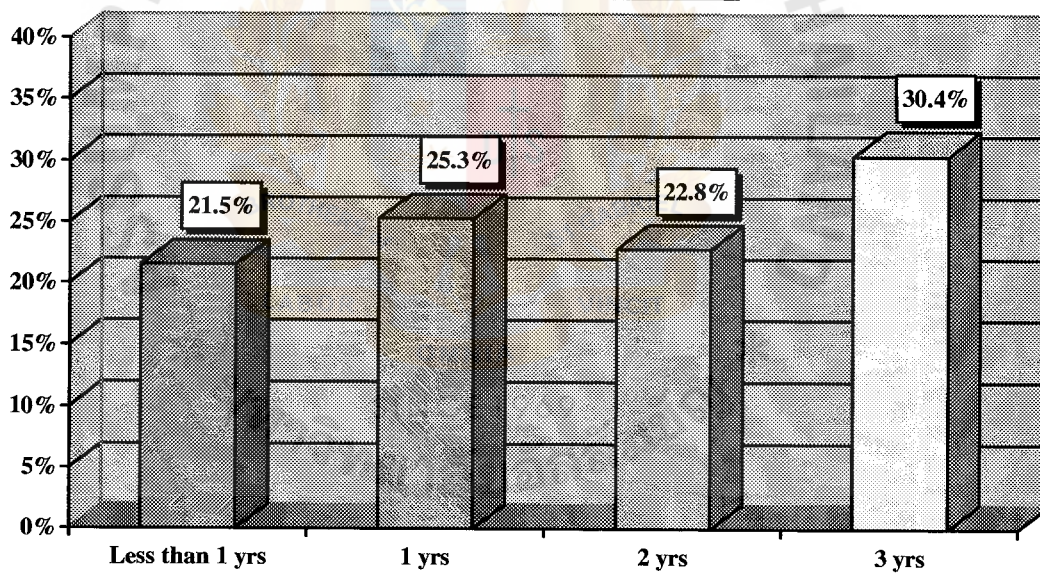
Rebuttal in head while other talking	1.66	.573	158
Listen to only main idea	2.94	.689	158
Block out when I don't like other	1.58	.556	158
Restate to make sure understanding	3.00	.731	158
Learn the mood of whom I talk to	3.14	.691	158
Ask when don't understand	3.37	.652	158
Always gain assistance from colleague inside department	3.47	.572	158
Always gain assistance from colleague outside department	2.74	.578	158
Agree in concept of teamwork	3.63	.547	158
Clear in definition of task assigned and authority	3.03	.569	158
Involved in planning and controlling work	2.86	.581	158
Give good opinion in meeting	2.87	.605	158
Always support who are in a spot during meeting	2.77	.610	158
Main factor of successful teamwork in TSC	2.56	1.626	158
Commu_in_org	2.79	.205	158

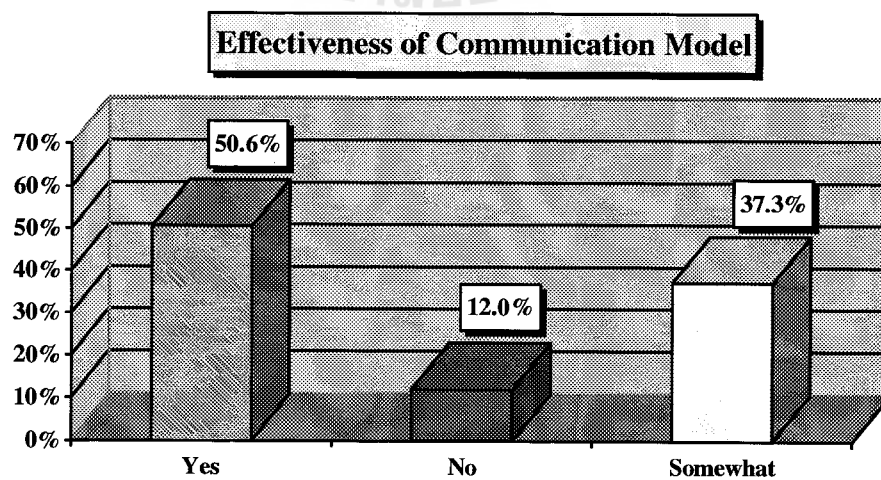
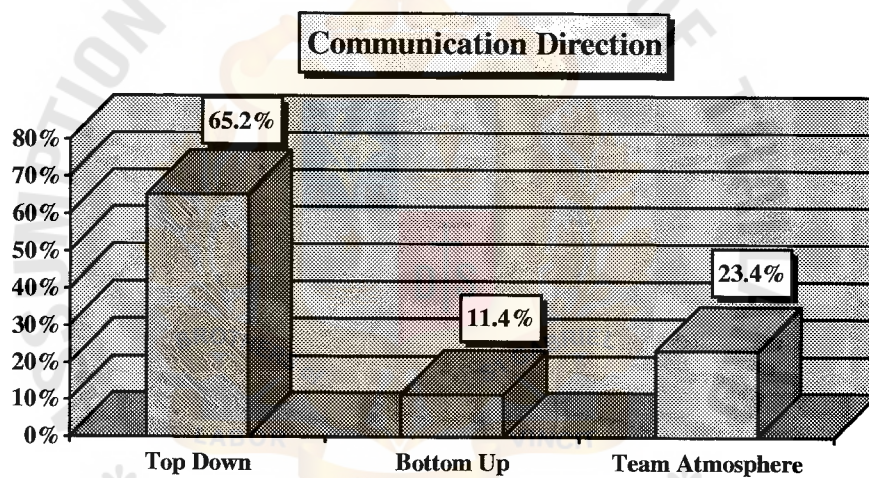
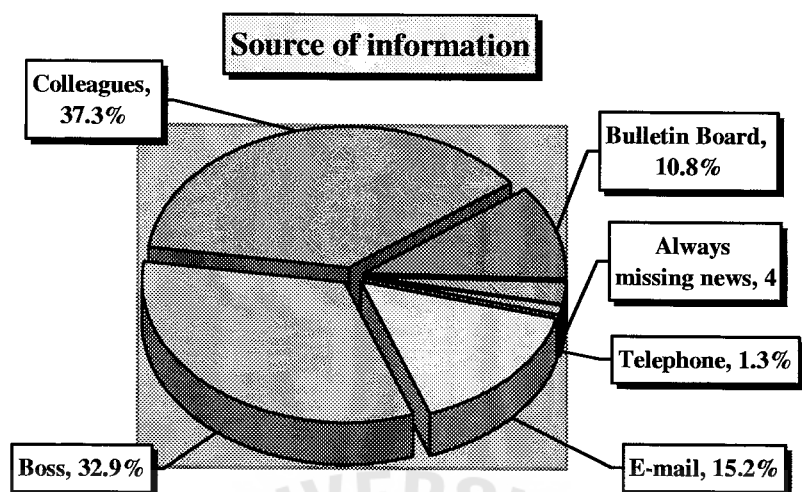
Reliability Statistics

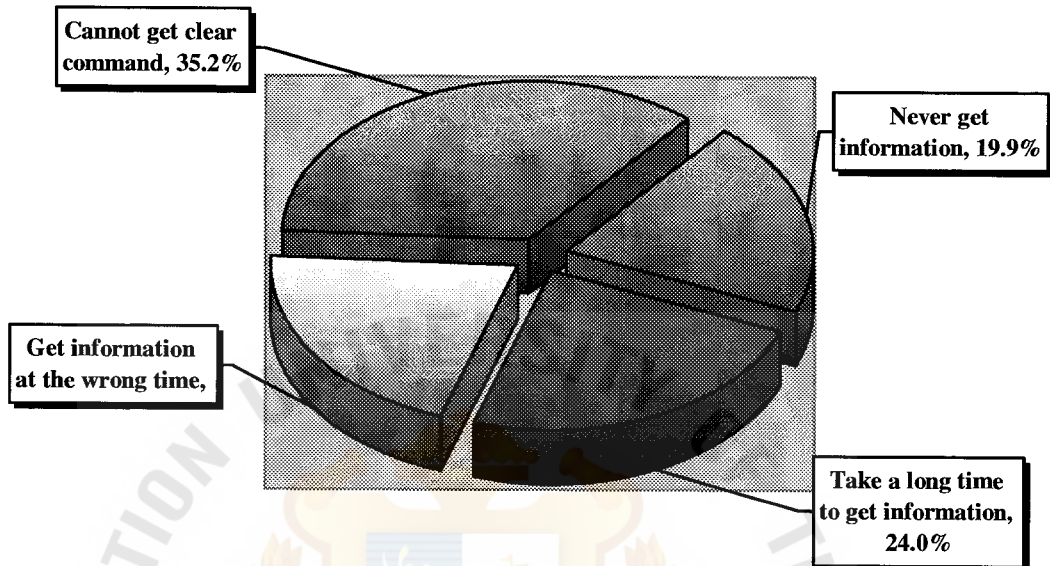
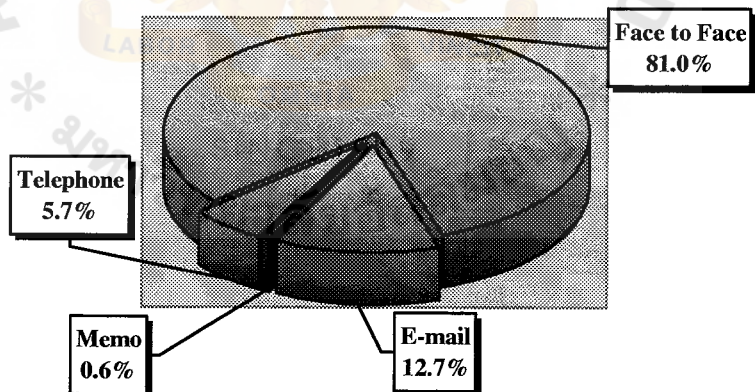
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.554	.692	40

Appendix 6 Demographic Profile and attitude toward Teamwork and Communication

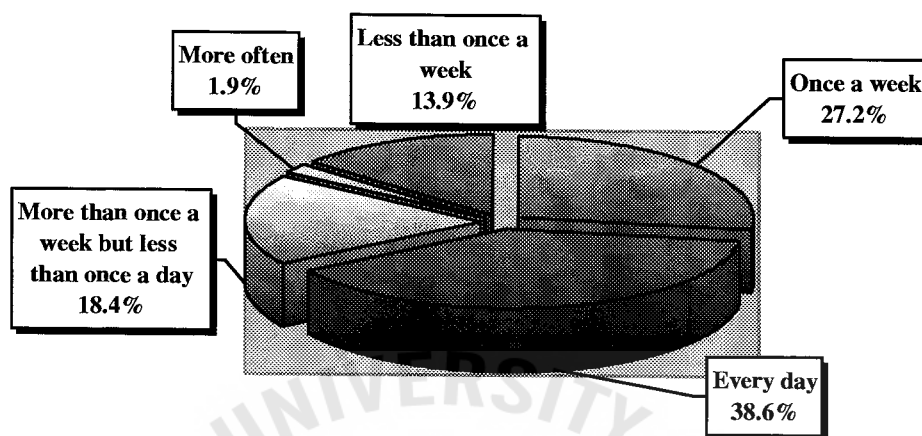


Age of Workers**Lenght of Service in TSC**

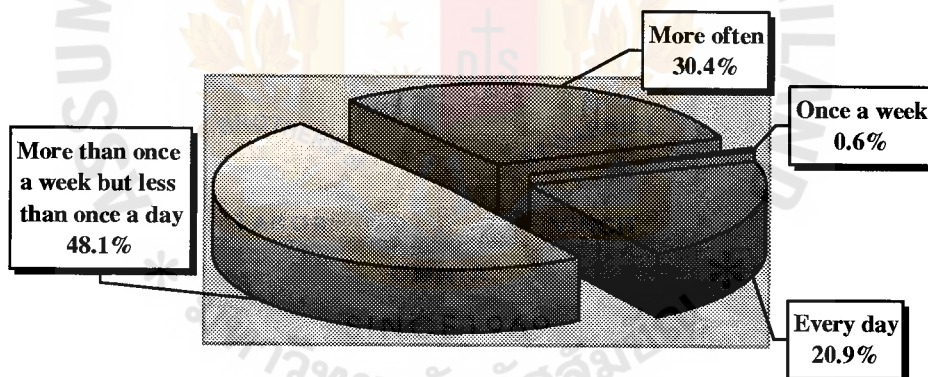


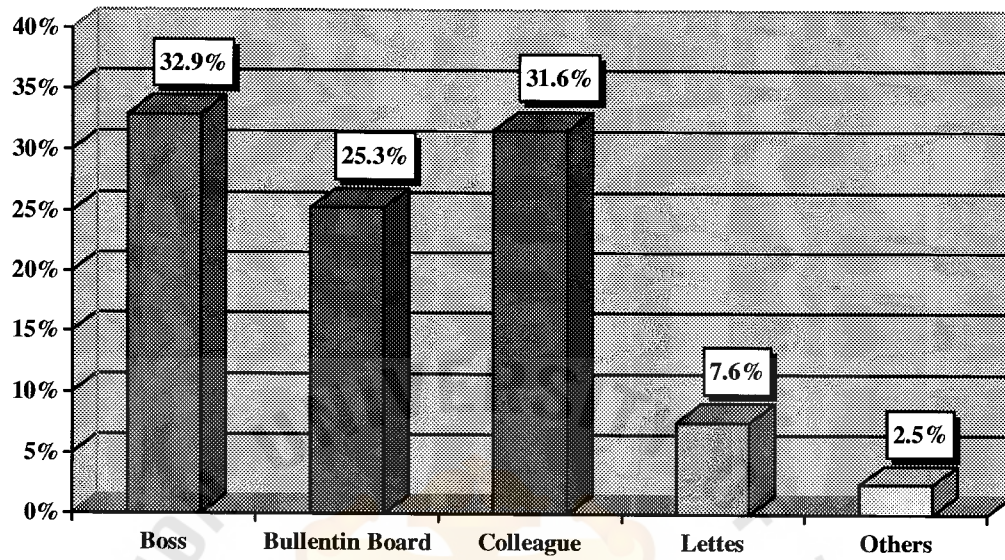
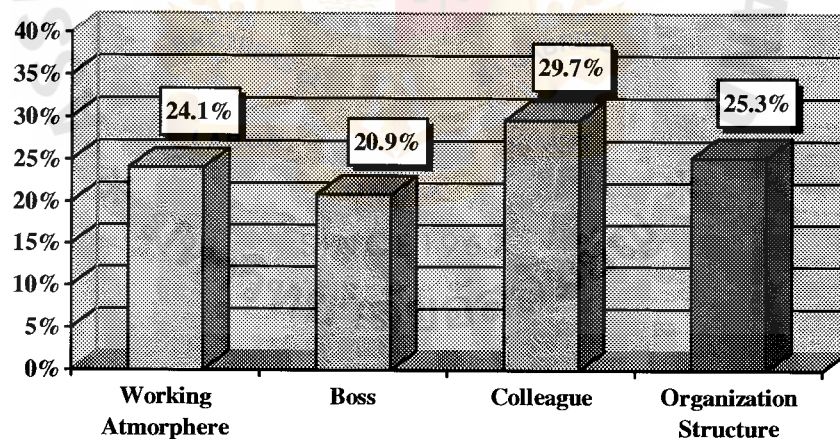
Reason for Ineffectiveness Communication Model**Proper Type of Communication**

Frequency of Communion with Boss



Frequency of Communion with Colleagues



Proper Way to Getting News from Organization**Most Important Factor to Improve Communication**

Main Factor of Successful Teamwork in TSC