

CHAPTER VI

CUSTOMER PERCEPTION WITH THE IMPROVED KEY AREA

6.1 General

From the objective of the research that to increase the customer satisfaction by reducing the number of customer complaint, the investigation of related concept is observed. Therefore, the implementation of this objective is separated by two major phases, which are reduction of customer complaint and develop a questionnaire for analyze level of customer satisfaction. The following sections comprehensively describe the detail feedback during the implementation.

6.2 Reduction of Customer Complaint.

Despite the completion of the following activities: analyzing situation; identifying problems; and proposing solution, it would however had not practically proven that all those activities done in the early chapter of this thesis have taken the right path in resolving problem. The main purpose of this implementation is to prove that solutions proposed are effective in the way that it helps improve and reduce the problem of customer complaint. Therefore, the methods use in this analysis are Pareto analysis, Cause and Effect diagram, and Why-Why Analysis

The implementation also has an impact upon customer complaint level. Due to the limitation of time factor, researcher was only able to put forward a short term implementation period of one month in examine the improvement. Since, there was no passed recorded on customer complaint, researcher could only collected the data on the month of October 2004 (Table 6-1). In order to collect the frequency of customer complaint, an informal interview was conducted with the manager of management information system function, who is responsible for designing database of every function of the company.

The problem are being rearrange in descending order by starting at the top with the problem that scored highest frequency rating down to the least rating at the bottom

Types of complaints	Frequency	Percentage	Cumulative
1. Long waiting time during payment	28	32.6	32.6
2. Lack of professional staff	20	23.3	55.9
3. Impoliteness of staff	16	18.6	74.5
4. Long waiting time for order print out	6	7.0	81.5
5. No service information providing	5	5.8	87.3
6. Long waiting time for receiving car	4	4.7	92
7. Service center environment	3	3.5	95.5
8. No greeting from service advisor	3	3.5	99
9. Cleanliness of car	1	1.2	100
Total	86	100	

Table 6-1: Customer's complaints data

6.3 Pareto analysis

Pareto analysis is a technique employed for prioritizing problems of any type. The analysis highlights the fact that most problems come from a few of the causes and it indicates what problems to solve and in what order. With the help of manager, the researcher can identified each problem carefully and all agreed on the decision that there are altogether 9 problems in Table 6-1. In this way, the improvement efforts are directed at areas and projects that will have the greatest impact. 20% of 9 problems come down to 2 problems. In selecting the two problems for solving, author use the Pareto chart on Figure 6.1 and select the problems that had the highest weight.

This study will focus on the first problem only, which is the majority complaint because the other problem is not related to lead time. Problem Long waiting time during payment is selected and being employed by Cause and Effect diagram technique. The diagram

illustrates in a clear manner the possible relationships between some identified effect and the causes influencing it. They also assist in helping to uncover the root causes of a problem and in generating improvement ideas.

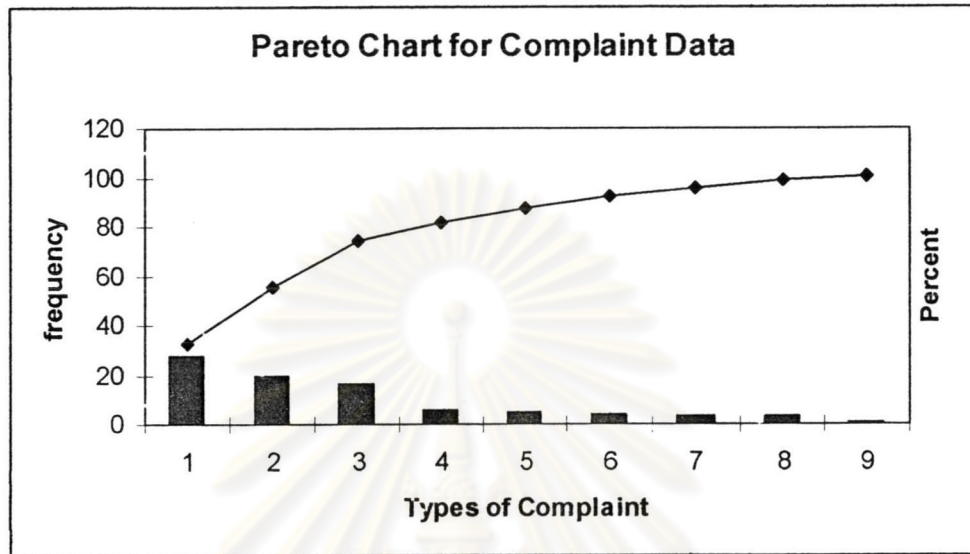


Figure 6-1: Pareto chart for customers' complaints data

6.4 Cause and Effect Analysis

The Cause and Effect diagram helps to determine the main causes and sub-causes that have resulted in an effect (symptom) or quality problem. It had been used as management aiding tool to trace customer complaints, which track down directly to the operations that were involved. The construction of such diagram involves an analyst identifies all the major categories of potential causes for the quality problem. Causes in a cause and effect diagram can be arranged into any categories. For example, the use is with manufacturing major categories are: manpower (personnel), methods (processes), machines, and materials; the use is with administration and service: equipment, policies, procedures, and people.

Cause & Effect diagram to identify root causes(s) for problem of Long waiting time during payment

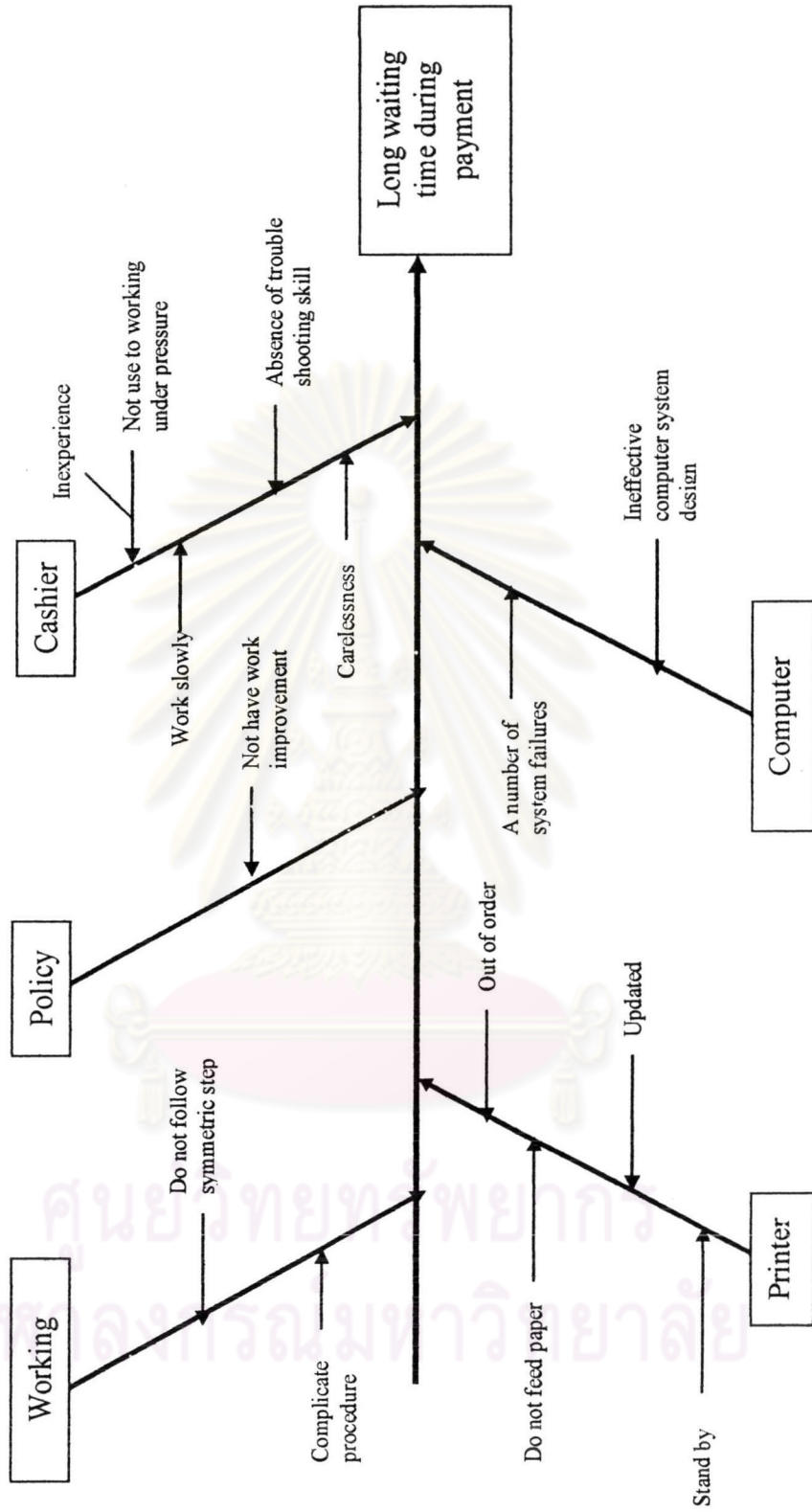


Figure 6-2: Cause and Effect diagram on problem of Long waiting time

From the fishbone diagram (Figure 6-2), there are five main causes and each cause involves a few sub-causes. The detail of each cause is as follows:

Cashier

- a) Carelessness of cashier – losing documents, reworking, missing communication, are all results from this sub-cause and impact on a patient's waiting time.
- b) Absence of trouble shooting skill- When there is a problem, the cashier will not identify causes, share ideas and find a suitable way to avoid it. There, the same problem occurs in the service system repeatedly.
- c) Not use to work under pressure - They had little experience in working under pressure
- d) Work done slowly - This mainly because of the worker responsibility and discipline in work. The worker behavior also had great influence in working style. Since one of most Thais habit is to relax.

Working System

- a) Do not follow systematic steps - The worker tends not to follow the step carefully. They are unaware of their job and often forgot the working step. There are reason behide forgetting the steps, because new procedure came along with a new step of work and sometime too much for the worker to remember. A monthly training is needed to help them get use and record the systematic steps.
- b) Too complicate procedure - Certain step are too complicate and confuse for newly employed staff

Computer System

- a) A number of system failures – When there is computer system failure, a cashier can not check a customer's record. They have to wait for a computer staff to solve the problem
- b) Ineffective computer system design – the customers' records are scanned and kept in a database. A user is permitted to retrieve information only.

Printer

- a) Out of order or breakdown – There are several cause of printer break down. One of them is that the printer condition is too old and often need repairing. Improper usage is another cause of printer breaks down.
- b) Printer updated - Many printers that were to old to repair should be replace with a more ease printer.
- c) No printer on stand by – When printer break down, a cashier can not continue their job. They had to wait until the printer had been repaired.
- d) Paper feed – The printer do not feed the paper properly do too the problem of printer itself and the carelessness of cashier

Policy

- a) Not have work improvement training- The board of executives do not emphasize work improvement training to increase their working skill, service quality, and solve unexpected problems, like computer problems. The company will train their employee when the mother company arrange for them.

6.5 Why-Why analysis

After the Cause and Effect diagram has been completed, the possibly root cause of the effect are being circles. Then Why-Why analysis is being employed in order to identify the real root cause and to see the relationship of causes that lead towards the effect. Why-Why Analysis can be done by Keep asking "Why" until no more answers can be suggested.

In order to analyze a perfect why-why, author interviewed two relevant people, who will definitely be useful in the finding of these analysis customers and cashier. By involving two groups of people, the problem can be explored from different perspective to the problem, which helps identify the root cause more quickly and effectively.

Looking from customer's viewpoint and asking them this follow question: Why is it that took long time in payment? Customer replied that they felt that cashier work very slowly due to not concentrate in work. They also felt that cashier do absence of trouble shooting, which cause them to wait.

On the other hand, when cashier are asked the same question, it seems to cashier that they can work slowly due to the problem of printer. It often out of order and most of the time it does not feed the paper. They also felt that they got to much pressure from customer during the peak time of the day.

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Why-Why Analysis to identify root cause(s) for problem of Long waiting time during payment

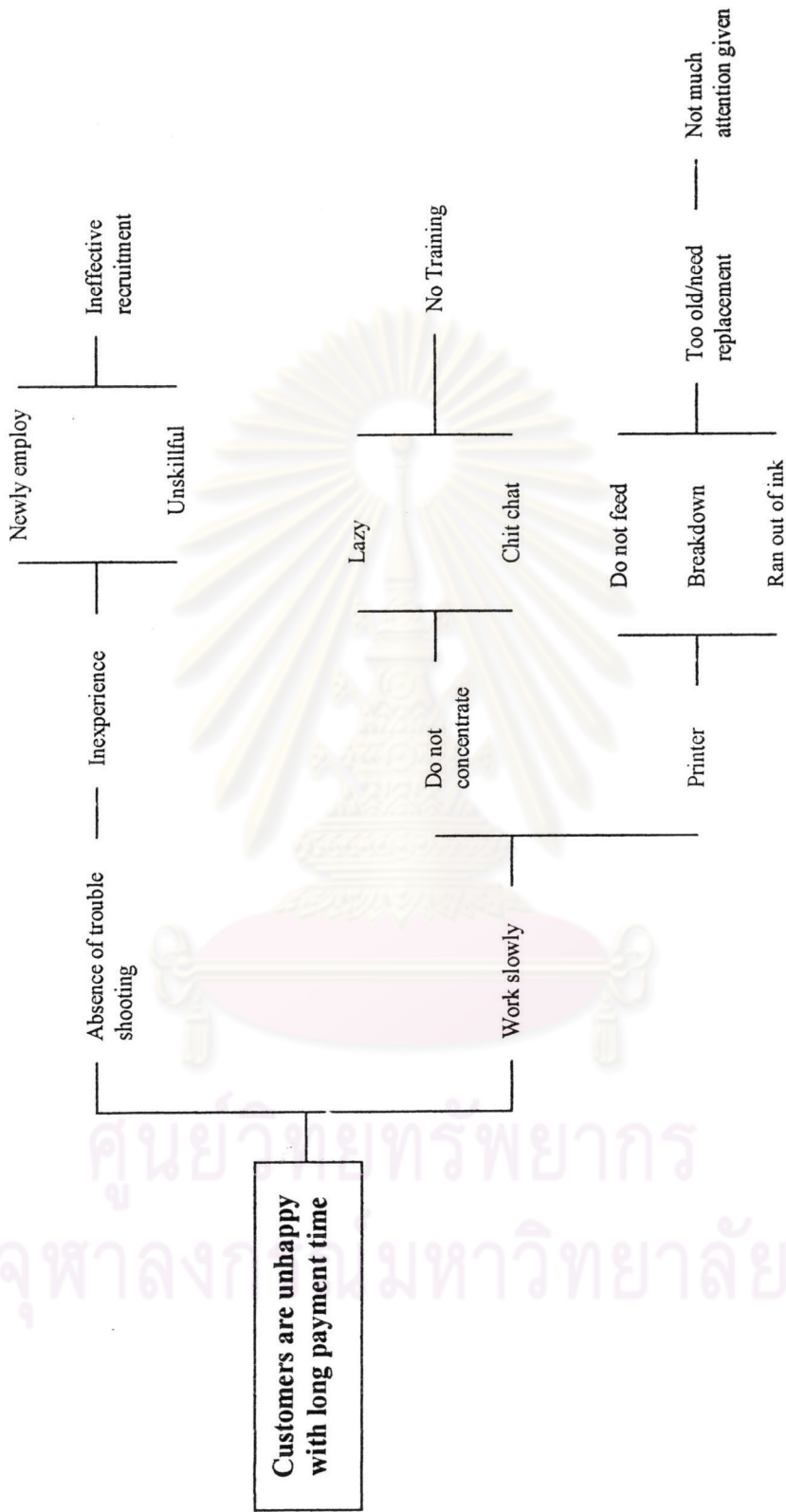


Figure 6-3: Why-Why Analysis to identify root cause(s) for problem of Long waiting time during payment

To sum up, the root cause(s) and possible solution to this problem - Customers are unhappy with long payment time, is down to:

Root Cause	Possible Solution or Prevention
Ineffective recruitment	<p>Instead of employing inexperienced and irresponsible staffs company should spend time doing some serious recruitment base on the experience each applicant had in the past. In additional to that applicants are to be status as trainees, where their work shall be assesses base on the first 3 months probation period</p> <ul style="list-style-type: none"> ➤ Interview to identify knowledge, skills, abilities, and traits ➤ On the job training ➤ Performance appraisal (after the first 3 months)
Staff training	<p>Company must cultivate basis of quality to everyone in the company enabling them to understand the nature and concept of quality in ability to perform quality throughout operation. Company should seek for external guest speaker of practitioner to visit company on a regular basis to educate and share thought and share experiences.</p>
Printer	<p>Company need to put more attention in printer. A newer and more user friendly model are needed to replace an old one. Print the receipt in advance is other alternative solution. It can greatly reduce the waiting time and as well as increase the level of customer satisfaction</p>

Due to the limitation of time factor, researcher was only able to put forward a short term implementation period in which researcher has three month to examine the improvement. Evidence presented in the Table 6-2 below shows that the sum of customer complaint figure during the three months implementation period from mid November 2004 to mid February 2005 has reduced from 22 to 9. The improvement of printer alone will not be able to produce the figure shows in Table 6-2. The earlier implementation on improvement of mileage check flow chart seems to be the reason of producing this figure.

Customer satisfaction level on Long waiting time during payment		
Implementation	Time	Frequency
Before	October	22
After	November	11
	December	9

Table 6-2: Improvement in customer complaint on Long waiting time during payment.

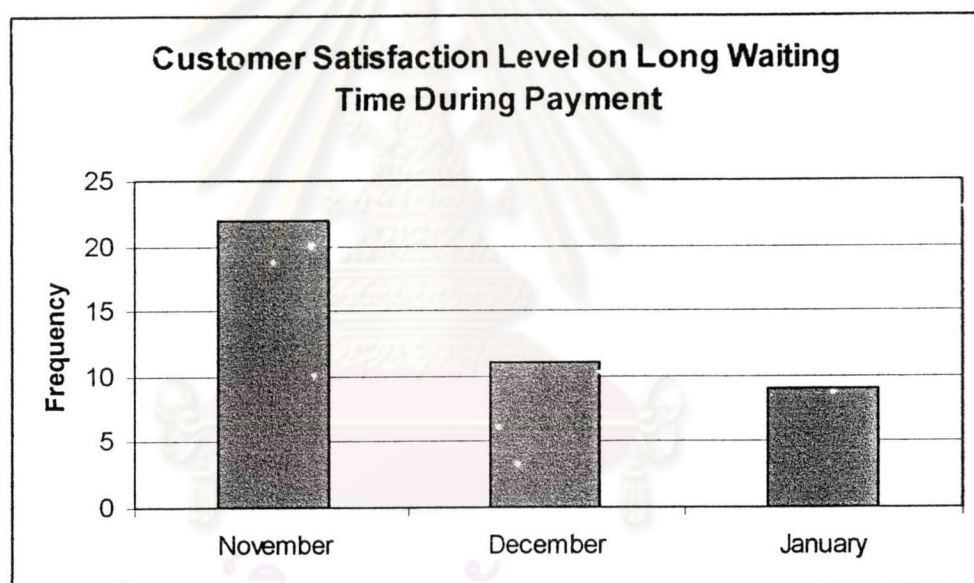


Figure 6-4: Reduction in the number of customer complaint on Long waiting time during payment

6.6 Questionnaire Development

In finding out whether or not the proposed solution has the potential to reduce problem, researcher decided to use a questionnaire. A questionnaire is a very useful tool to find the primary data from the customers. A full copy of questionnaire is filed at the back of this thesis in the Appendix under Data collection section. An effective questionnaire has to be designed efficiently.

There were four major parts in this questionnaire as follows:

1. **The request for cooperation** - This part introduces interviewer and/or interviewing organization that created this questionnaire and explain the objective of this study. The respondents will listen to this information to decide about their cooperation.
2. **The instructions** - These are comments to the respondents about how to use the questionnaire. The explanation has to be clear and interpreted in only one way, so every respondent will understand in the same way.
3. **Information sought** - This is the major part of the questionnaire that will be explained later.
4. **Classification data** - This part collects qualification data or personal data such as address, sex, age, career, and salary. Classification data are typically collected at the end of the questionnaire. However, some sampling procedures require that classification data be collected at the beginning of the interview to determine whether the person qualifies as part of the sampling plan.

6.7 Questionnaire Design

There were six steps of questionnaire design in this study as follows:

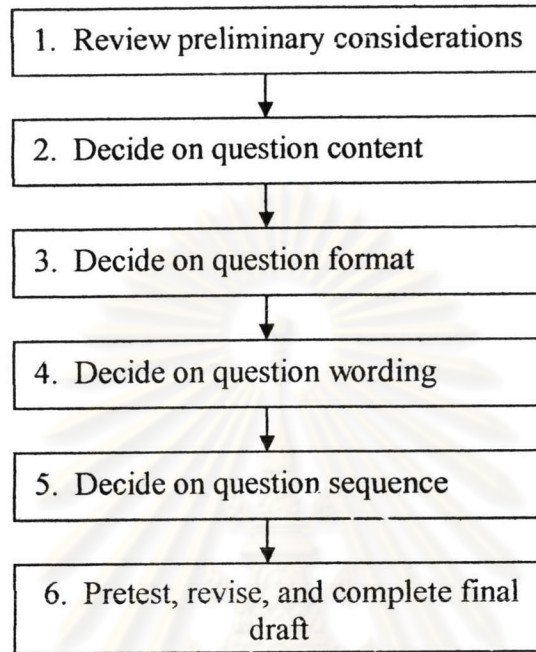


Figure 6-5: Steps in questionnaire design

1. **Preliminary considerations** - Questionnaire design is highly influenced by the characteristics of the respondent group. The more heterogeneous the respondent group, the more difficult it is to design a single questionnaire that is appropriate for everyone. The questionnaire in this study was designed to be comprehensible to all kinds of respondent.

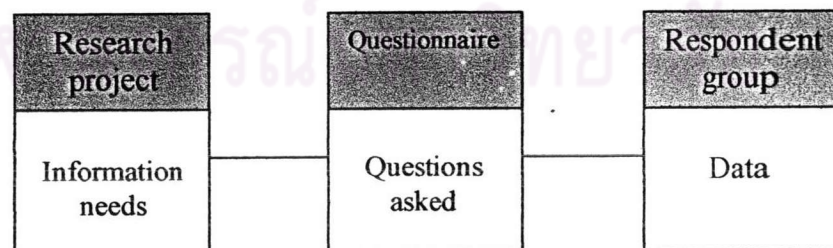


Figure 6-6: Information needs-data linkage

2. **Decide on question content** - The content of the questions is influenced by the respondent's ability and/or willingness to respond accurately. This research tried to use the question content that is easy to understand and every question will not create bad feeling for everyone.
3. **Decide on response format** – This questionnaire required the customers to rate the performance of each problem base on their viewpoint. On the scale of 5 = excellence, 4 = good, 3 = moderate, 2 = poor, 1 = no good. However, some questionnaires are a multiple-choice question because of answering time, limitation and it was easy and fast to administer.
4. **Decide on question wording** - The heart of questionnaire consists of the questions that are the link between the data and the information needs of the study. It is critical that the researcher and the respondent assign the same meaning to the question asked. Otherwise, serious measurement error will be present in the research results. By considering at this point, this study designed the wording of a question as follows:
 - i. Use simple words - The words used in the questionnaire were consistent with the vocabulary level of the respondents.
 - ii. Use clear words - The words that are “clear” have a single meaning, which is known to all the respondents.
 - iii. Avoid leading questions - The leading questions often reflect the researchers or the decision-maker's viewpoint regarding the question's answer. A leading question causes a constant measurement error in the research finding.
 - iv. Avoid biased questions - A biased question includes words or phrases that are emotionally charged and that suggest a feeling of approval or disapproval.

5. **Decide on question sequence** -The order or flow of the questions in the questionnaire can influence the nature of the respondent's answers and be the cause of serious error in the survey finding. This study decided at this point to try to avoid this problem as follows:
- i. Use a simple and interesting opening question - The opening question has to capture the respondent's interest and curiosity immediately. In respondents confidence that they can answer the remaining questions in the questionnaire.
 - ii. Ask general questions first – The general questions should precede specific questions.
 - iii. Place uninteresting and difficult question late in the sequence – In this study, the researcher sequenced the question that were sensitive or complex down in the questionnaire, and then personal questions about age, sex, and income.
 - iv. Arrange questions in logical order – The flow of the questioning process has to be logical from the respondent's perspective. The question order in this study is (1) interest, (2) information, and (3) classification. First, capture the respondent's attention, next elicit the necessary information, and then approach potentially sensitive demographic or classification questions.
6. **Carry out pretesting and revision, and complete the final draft** - Before the questionnaire is ready for field operation, it needs to be pretested and revised. Pretesting refers to the initial testing of one or more aspects of the research design. A pretest is needed to search out areas for improvement. Most questionnaires require at least one pretest and revision before they are ready for field operation.

6.8 Questionnaire Collection

The research was conducted set up a short-term implementation period lasted four months, started from the beginning of August 2004 until the end of December 2004. The implementation of solution to the problem has taken the following step: Researcher has produced thirty copies of new questionnaire on customer satisfaction level. Two sampling group of similar background knowledge is asked to participate in the implementation. The survey is divided into two parts 1) *Before* and 2) *After*, the first sampling group of customers is asked to fill in the first part before the implementation period begins during the month of August and September. Then the second sampling group takes charge to fill the second part on November and December after the implementation.

Customers will be questioned with a new questionnaire, different from the previous survey because the 1st questionnaire was designed to only give researcher and technical team to recognize and choose the problems that call for most attention. Since research had not yet chosen the problems in which to find solution and to base this thesis on, therefore researcher cannot set direct questions specifically aimed to the problems since not yet know which problem to solve. However, now that researcher knows what the problems are, a new questionnaire is composed in order for researcher and the problem solving team to interpret improvement, if at all. Feedback from customers via the survey determines whether or not customers would be satisfied with the improvement, which in turn reduces problems.

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The result of implementation is summarized in the Table 6-3 below.

SUMMARY OF CUSTOMER SURVEY ON IMPLEMENTATION	
<i>Question</i>	<i>Feedback</i>
<i>Before</i>	
1. What is your opinion in overall time use since you arrive till have your car back?	9 customer rated level 3 13 customer rated level 2 8 customer rated level 1
2. Is the job completed on arrangement?	7 customer rated level 3 9 customer rated level 2 14 customer rated level 1
3. What is your opinion in payment time?	7 customer rated level 3 16 customer rated level 2 7 customer rated level 1
4. What is your opinion in waiting for you car after payment?	7 customer rated level 3 9 customer rated level 2 14 customer rated level 1
5. What is your opinion for the cleanliness of your car?	9 customer rated level 5 15 customer rated level 4 6 customer rated level 3

6. Will you come back again to use our service?	14 customer rated level 5 7 customer rated level 4 5 customer rated level 3 4 customer rated level 2
7. Will you introduce your relatives to purchase or use service at ABC Co., Ltd.?	6 customer rated level 4 20 customer rated level 3 3 customer rated level 2 1 customer rated level 1
8. What would you rate company for the effort in trying to improve the management?	7 customer rated level 3 17 customer rated level 2 6 customer rated level 1

Table 6-3: Summary of customer survey taken *BEFORE* implementation

On 1st of August 2004, the first sampling group of customers was asked to fill in the first part of the survey (*BEFORE*). Giving rating on the same category in order for researcher and the team to calculate baseline rating on each category so that it can be compared with feedback rating *AFTER* implementation. The total of customers' ratings on each category is summarised in the table, whereas mean can also be found by dividing the total rating of each category by 30 (total customers involved in the survey).

Question								
Category	1	2	3	4	5	6	7	8
Sum of rating	61	53	60	53	122	121	91	61
Mean	2.0	1.8	2.0	1.8	4.1	4.0	3.0	2.0

N.B Total customers involved are 30 people.

Table 6-4: Calculation of Mean rating for *BEFORE* Implementation

<i>After</i>	
1. What is your opinion in overall time use since you arrive till have your car back?	5 customer rated level 5 14 customer rated level 4 7 customer rated level 3 4 customer rated level 2
2. Is the job completed on arrangement?	4 customer rated level 5 13 customer rated level 4 10 customer rated level 3 3 customer rated level 2
3. What is your reliability and trust toward the company?	11 customer rated level 5 14 customer rated level 4 5 customer rated level 3
4. What is your opinion with handling your car?	18 customer rated level 5 9 customer rated level 4 4 customer rated level 3
5. What is your opinion for the cleanliness of your car?	11 customer rated level 5 11 customer rated level 4 8 customer rated level 3
6. Will you come back again to use our service?	22 customer rated level 5 5 customer rated level 4 3 customer rated level 3

7. Will you introduce your relatives to purchase or use service at ABC Co., Ltd.?	11 customer rated level 5 15 customer rated level 4 4 customer rated level 3
8. What would you rate company for the effort in trying to improve the management?	3 customer rated level 5 24 customer rated level 4 3 customer rated level 3

Table 6-5: Summary of customer survey taken *AFTER* implementation

On 1st of November 2004, two months after customers were asked to fill in the second part, *AFTER*, of the survey giving rating on the same category in order for researcher and the team to identify whether or not each customer has experienced any sign of improvement in any way. The total of customers' ratings on each category is summarised in the table, whereas mean can also be found by dividing the total rating of each category by 30 (total customers involved in the survey).

Question								
Category	1	2	3	4	5	6	7	8
Total rating	110	108	126	138	123	139	127	120
Mean	3.7	3.6	4.2	4.1	4.1	4.6	4.3	4.0

N.B Total customers involved are 30 people.

Table 6-6: Calculation of Mean rating for *AFTER* Implementation

6.5 Result of Questionnaire

After the implementation, researcher then calculate and summaries the Mean rating of eight categories on both BEFORE and AFTER implementation (Table 6-7). Mean Mean Rating can also be calculated by through summing up Mean rating of all eight categories and divide by 8 (total number of categories). Mean Mean rating of Before is valued at 2.6, while After is at 4.1, which the improvement is worked out to be at 42%.

Category	Before (Mean rating)	After (Mean rating)
1. What is your opinion in overall time use since you arrive till have your car back?	2.0	3.7
2. Is the job completed on arrangement?	1.8	3.6
3. What is your opinion in payment time?	2.0	4.2
4. What is your opinion in waiting for your car after payment?	1.8	4.1
5. What is your opinion for the cleanliness of your car?	4.1	4.1
6. Will you come back again to use our service?	4.0	4.6
7. Will you introduce your relatives to purchase or use service at ABC Co., Ltd.?	3.0	4.3
8. What would you rate company for the effort in trying to improve the management?	2.0	4.0
Mean Mean Rating	<u>2.6</u>	<u>4.1</u>

Table 6-7: Rating on Improvement

Table 6-7 clearly shows the improvement of each of the eight categories. There were five categories which improved greatly. Two categories were improved moderately and one had little improvement. The greatly improved categories were opinion in overall time, job completed on arrangement, payment time, time waiting for car after payment, and effort in trying to improve. Customers are happy with the faster service that the company had provided. Customer also happy with the effort of trying to improved a better service, and this help the company to gain more trust and as well as increase the image of the company. The two categories that had little improvement were category 6 and 7. In order to increase the customer satisfaction for this category, the company must do more than just improvement of one department. The last categories that do not have much change were cleanliness, since the company tends to use the same method in washing the car.

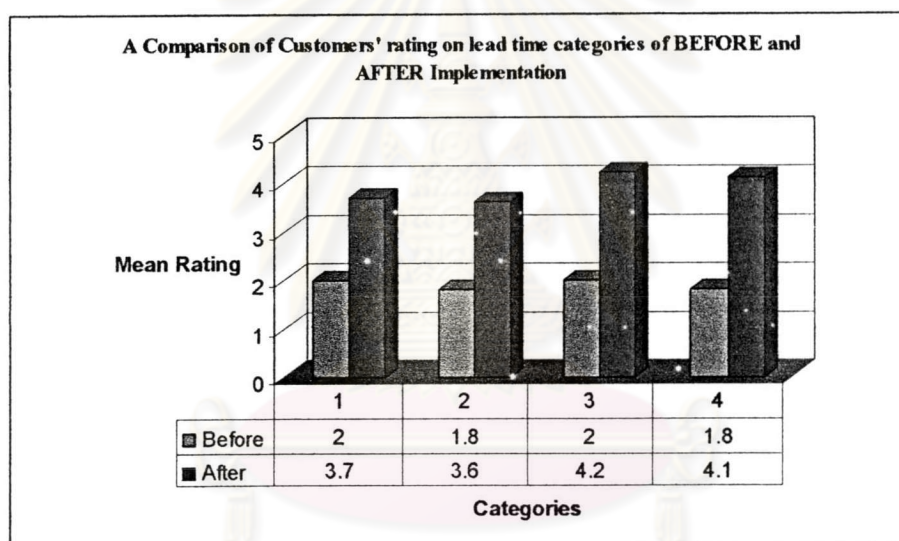


Figure 6-7: The improvement of customer satisfaction after the implementation

Figure 6-7 shows the radar chart on improvement of category 1 to 4. These categories are opinion in overall time use since customer arrive till have their car back, the job completed on arrangement, opinion in payment time, and opinion in waiting for your car after payment. Figure 6-7 again shows that these four categories has increase greatly, which assure the success of implementation and as well as increase in customer satisfaction as stated in thesis objective.