A SURVEY OF MARKET ACCEPTANCE FOR A NEW DAIRY PRODUCT LAUNCH

by

Ms. Chanidapa Polthawornkulchai

A Final Report of the Three - Credit Course
CE 6998 Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer and Engineering Management
Assumption University

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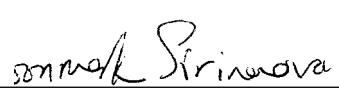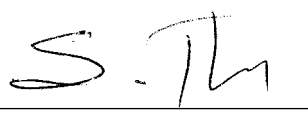Assumption University

July 2001

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Academic Year	July 2001

The Graduate School of Assumption University has approved this final report of the three-credit course. CE 6998 PROJECT, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.

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ABSTRACT

This project was concerned with the market acceptance for a new dairy product launch by investigating consumers' attitude and behavior for what or how product toward CP-Meji pasteurized milk influence them.

The researcher gathered information from a probability sample of 400 randomly selected respondents. The questionnaire was conducted by the technical methodology and used SPSS program to access the results of the consumers' attitude, behavior and which flavor should be considered to launch in the market.

From the result of the research, we find that the most of our respondent is female with 60.8 percent. Majority of aging for sample is between 14-25 years old that respondent 40.0 percent. Employee is the most response of this survey with income Bht 5,001-10,000 per month, which represent 36.5 percent. Majority of education is in level of bachelor degree which represent 45.3 percent and all respondents are known CP-Meji pasteurized milk.

According to this market survey, Vanilla flavor is the most potential one that CP-Meji should concern to be a company new product due to high mean value with 3.585 points so we can use this information of the key market data to conduct the marketing plan by making the campaign and concern to pre launch the product.

Moreover, the finding of this project will help the marketer of Chareon Pokphand Group to support possibility and develop the successful marketing plan of a new dairy product launch toward CP-Meji pasteurized milk.

ACKNOWLEDGEMENTS

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I. INTRODUCTION

For thousand of years, humans have raised animals for the production of milk. The organized production of milk from cows for human consumption is one of the world's oldest farming practices. It has been refined and developed over centuries on very continent. While herbivores, such as sheep, goats and buffalo are important in various regions as milking animals; the cow is the most common milking animal of all.

Today, the very latest technology is being utilized in all area of the diary industry from the farm, where artificial breeding from genetically proven sires is producing superiors milk-yielding cows to the processing plants, where diary products are being efficiently manufactured at an unsurpassed level of hygiene.

Milk is a nutrient-rich, healthy and natural drink suitable for all age groups at any time. (Breast milk is recommended for babies under twelve months.) It is a rich source of calcium and contains other vital nutrients needed for energy, growth and development, and with a fat content of less than 40% it is much lower in fat than many people think.

Thailand is currently being a developing country. The people just beginning period of nutrition awareness. We concern the nutrients rich of milk not more than 10 years ago. Our milk consumption per year person still so far away from others developed countries such as USA, European countries and Japan. As we may know that Chareon Pokphand Group (CP Group) as well known as the biggest Conglomerate Agriculture Company in Thailand. The company foresees that Thailand has a big chance to boost up consumption for this industry. In the year 1995, CP Group has agreed to form joint venture with one of leading integrated dairy company in Japan, Meiji Corporation, established CP-Meiji Company Limited to conduct dairy business

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especially milk in Thailand. I think that this market have potential big growth and also interesting to study.

From the potential of growth in this market, there should have the information to support in this research. In this research, we will divide into 2 sessions. First session of this research will contain the information of current market situation of dairy industry including both World market and Thai market. Second session we will define types and features of each product in the market such as Pasteurized milk or Ultra Heated Treatment (UHT).

Moreover what is a new trend product of this market. For the rest of this project we try to study the business model of CP-Meiji to point out company's marketing mix portion and company advantages in the market for the marketing session. Additional for the next development of company we will conduct feasibility study of potential new product of the company to support possibility of new product launch.

So this research will collect the information that contain the consumer attitude toward CP-Meiji milk product. And the information in this research can adapt along the consumer requirement of taste, price and quality of CP-Meiji Milk product. And also can use the information to adapt in marketing management for customer satisfaction.

1.1 Significance of the Study

Because of CP-Meiji Milk product want to launch a new dairy product. Finding the consumer attitude is necessary. So the information in this research is necessary and can adapt directly responsive to this study.

(1) To know the consumer's attitude toward CP-Meiji Milk product.

4, (2) To use the finding to adapt the methodology and the taste for customer satisfaction.

(3) To provide some key market data for dairy product in Thailand.

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1.2 Objectives of the Study

This project will focus through dairy product of CP-Meiji Company, one of leading dairy Products Company in Thailand. The company currently offers various flavored Pasteurized milk, flavor UHT milk and flavored drinking yogurt.

(1) To study on the consumer behavior toward CP-Meiji dairy product

(2) To provide market data about the feasibility study on the new potential dairy product

(3) To provide some key market data of dairy's product in Thailand.

To formulate marketing -strategies on the new dairy° product and new concept product,

1.3 Scope of the Study

The scope of the study is as follows:

(1) The study will focus on the survey by questionnaire from people in Bangkok Metropolitan Area especially major resident and commercial area.

(2) This project will use SPSS, to process and find expected result from the questionnaire.

1.4 Expected Benefits

Benefits of the study may be itemized below:

(1) The way of data collection for the survey of market acceptance for a new diary product launch.

(2) The way of data and suggest about market acceptance for a new concept product launch.

(3) The key consideration of consumer behavior and view through dairy product of CP-Meiji's product.

(4) The comparable analysis of key market data of dairy product toward leading development country.

IL LITERATURE REVIEW

/ As mentioned in the previous chapter, to know the market acceptance for a new diau product launch. The literature available many be classified as the research. The earlier thoughts and concepts are as following:

2.1 Research

Research is a way to gather information and make a sound decision or judgement or develop new knowledge. A recreation therapist whishes to find a better way to work with patients who are physically limited. A coach wants to know how to build strength safely and effectively in junior high school athletes. A health teacher isn't sure how much time to spend lecturing as opposed to students' discussing, watching films, or listening to guest speakers. A playground supervisor would like to know what programs will be most popular during the summer. In order to find an answer and make a decision in each of these examples, an understanding of research could be very helpful.

2.2 Characteristic of Research

Certain traits seem to characterize competent researchers, which suggests that they should be developed in people who are training to become researches. Awareness of these characteristics may help you to train yourself accordingly, as well as to understand some of the requisites for success as a researcher.

(1) Opened-Minded

Researchers should be open to all possible options in deciding what questions to ask, strategies to use in studying a problem, and possible explanations for results. One shouldn't pigeonhole his or her thinking because it tends to narrow one's focus. Limiting the breadth of one's thinking reduces the likelihood of examining all possibilities. Many great

scientific theories probably emerged due largely to the ability of someone to view a concept in an open, unobstructed manner.

(2)   Knowledgeable in a Specific Subject

The researcher must know a given field fairly well in order to ask appropriate questions. What problems or controversies exist? What constraints have limited the study of a given topic? For example, measurement of body fat even today is limited by the fact that calculation of body fat from underwater weighing is based on the dissection of a small number of cadavers performed decades ago. Equations were developed to predict body density based on the findings from these few cadavers, so use of the same equations for other people with widely varying ages and physical activity levels is not strongly justified.

(3)   Intellectual Curiosity

Few people would muster the time and energy to do research without having a reasonably good amount of intellectual curiosity. One couldn't develop much knowledge of a topic without considerable reading. Heightened curiosity leads to more reading and increased desire to learn. As knowledge is accumulated, intellectually curious people tend to want to know even more. Details become more important as the mind strives to connect and relate concepts and bits of information. This curiosity probably to connect and relate concepts and bits of information. This curiosity probably explains why many researchers do much of their work in one specific topic. As a few research questions are answered, more questions are raised and curiosity seems to lead to more research.

(4)   Perseverance

As stated developing the knowledge and insights needed to do research takes time and effort. The research process itself involves numerous detailed steps often requiring several years for completion. Perseverance is obviously needed. Formulating the exact research question may take many hours of reading and discussion with other researchers. Writing the documents that are required by most universities to obtain approval to perform a study takes time. The study must be planned and explained in detail. The actual collection of data may take months. Then the data are analyzed statistically and the final portions of the research paper are written.

Typically, researchers will submit the study in an abstract form to be presented at a professional meeting. The manuscript is prepared and submitted to a research publication and is reviewed by several expert researchers on the topic who then suggest revisions to the author. The manuscript is revised accordingly and resubmitted in hopes of it then being accepted. It may or may not be accepted for publication, however.

(5)   Honesty

In writing the results of a study for publication or presentation a researcher must be honest to be dishonest. A person might plagiarize or, even more likely, alter data in order to support a given hypothesis or line of reasoning. Considerable pressure to publish and obtain funding for grants exists in many universities. Also, in order to gain a professional reputation, a person may decide to cut corners and do something unethical.

Developing the state of knowledge in a discipline is seriously hindered by those who falsify data. If the item is published, it potentially misleads many other scholars and students. They may then do work based in part on the false findings presented, which may throw them off the track and cause considerable wasted time. Also, much of the information presented in textbooks is based on research findings. Falsification of findings can ultimately lead to students learning erroneous information. Consequently, a bit of misinformation may lead to considerable compounding of the act.

2.3 Advantages of Research

Generalizations based on a mere fraction of the total population (a sample) did not gain acceptance until the beginning of the twentieth century, when a researcher for a liquor distillery in England named W.S. Gossett was faced with the problem of testing the quality of this company's product. Testing the plant's output involved tasting and, therefore, consuming the product. Thus, testing the entire output of the plant, or even as few as one in ten bottles, was clearly not economically feasible. Gossett, therefore, writing under the pseudonym "Student," developed a theoretical basis for making generalizations about the quality of the plant's product by sampling only a small portion of that output.

The foremost advantage of the sample survey technique, as indicated by Gossett's experience, is the ability to generalize about an entire population by drawing inferences based on data drawn from a small portion of that population. The sample survey process can also be used to generalize about nonhuman factors, as Gossett did in his beverage quality control study. The cost of conducting a sample survey is significantly less than that of canvassing the entire population. When implemented properly, the sample survey is a reasonably accurate method of collecting data. It offers an opportunity to reveal the characteristics of institutions and communities by studying

individuals who represent these entities in a relatively unbiased and scientifically rigorous manner.

Surveys can be implemented in a timely fashion. That is, the survey project can be organized so that the actual data gathering is performed in a relatively short period of time. Besides the convenience afforded by this approach, there is also the advantage of obtaining a "snapshot" of the population. Other techniques may involve a longer-term study, during which opinions of facts may change from the beginning of the study to the end.

Well-structured sample surveys generate standardized data that are extremely amenable to quantification and consequent computerization and statistical analysis. This quality has been enhanced through rapid advances in computer technology as well as through the development and refinement of complex analytical statistical software packages and techniques. For purposes of comparisons among individuals, institutions, or communities, surveys offer a further advantage—replicability. A questionnaire that has been used in one city or community can be re-implemented in another community or administered once again in the same community at a later date in order to assess differences attributable to location or time.

The sample survey gained general acceptance starting in 1935, when George Gallup established the American Institute of Public Opinion in order to conduct weekly polls on national political and consumer issues for private and public sector clients. Inasmuch as Gallup was operating a business for profit, and since he was to deliver weekly polls, he was necessarily very sensitive to cost and time factors. Gallup developed a method of sampling fifteen hundred to three thousand respondents—quite a small number compared to other surveys at that time. His method involved establishing sample quotas based on age, sex, and geographic region. In the 1936

(3)   Ample time

The respondent had virtually no time constraints. There is enough time to elaborate on answers and to consult personal records if necessary to complete certain questions.

(4)   Authoritative impressions

The researcher can prepare the mail-out questionnaire form so that it has significant legitimacy and credibility.

(5)   Anonymity

Because there is no personal contact with and interviewer, the respondent may feel that the responses given are more anonymous than is the case with other formats.

(6)   Reduced interviewer-induced bias

The mail-out questionnaire exposes each respondent to precisely the same wording on questions. Thus, it is not subject to interviewer-induced bias in terms of voice inflection, misreading of the questions, or other clerical or administrative errors.

Mail-out questionnaires have certain disadvantages, however, which can be summarized as follows:

(1)   Lower response rate than other methods

Many follow-up and substitutions of sample respondents are required in order to achieve the appropriate sample size and adequate random distribution necessary for purposes of generalization.

(2)   Comparatively long time period

The mail-outs generally requires a few weeks for questionnaires to be returned; follow-ups and replacements are also time-consuming.

presidential election between Franklin D. Roosevelt and Alfred Landon, Gallup forecast a Roosevelt victory, while a Literary Digest poll of 2.5 million telephone subscribers forecast a London landslide. The final results are well known—a Roosevelt victory with 61 percent of the vote. The scientifically implemented small sample thereafter became established as the survey method of choice.

Advancements in the understanding of sample survey methodology now provide even greater accuracy than Gallup had in 1936, with still smaller sample sizes.

2.4 Types of Research

Survey information can be collected by means of any of three different methods of implementation: mail-out, telephone, and in-person surveys.

2.4.1 Mail-Out Surveys

The mail-out format for collecting survey data involves the dissemination of printed questionnaires through the mail to a sample of predesignated potential respondents. Respondents are asked to complete the questionnaire on their own and return it by mail to the researcher. The advantages of the mail-out technique can be stated as follows:

(1)   Cost savings

Other techniques require trained interviewers, and the recruitment, training, and employment of interviewers can be quite costly. Access to respondents by mail can be significantly less expensive than travel for in-person interviews or toll charges for telephone surveys.

(2)   Convenience

The questionnaire can be completed at the respondent's convenience.

(3)   Self-selection

Mail-outs almost never achieve a 100 percent response rate. Hence, even in the best of cases (85 to 90 percent response rate), there can be some bias in the sample. For instance, poorly educated respondents or those with reading or language deficiencies tend to exclude themselves from this form of survey more often than from surveys administered by an interviewer.

(4)   Lack of interviewer involvement

The fact that no interviewer is present means that unclear questions cannot be explained, there is no certainty that the questions will be answered in the order written (which may be important), and spontaneously volunteered reactions and information are not likely to be recorded by the respondent and cannot be probed by an interviewer as would be the case with other methods.

(5)   Lack of open-ended questions

It is more likely that questions requiring an original written response in lieu of fixed answers will be avoided.

2.4.2 Telephone Surveys

The telephone survey is a method of collecting information through the use of telephone interviews between a trained interviewer and selected respondents. The advantages of the telephone survey interviewing process can be stated as follows:

(1) Rapid data collection

Information, especially information that must be timely (for instance, a political public opinion poll related to an upcoming election), can be collected and processed within days. It is possible to complete a telephone

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survey in the time it would take simply to plan a mail-out or in-person survey°

(2)   Lower cost

      The cost of implementing a telephone survey is considerably less than that of an in-person survey, and under certain circumstances it can be less than that of a mail-out survey.

(3)   Anonymity

      A telephone survey is more anonymous than an in-person interview. Hence, the interviewer can conduct in-depth questioning in a less threatening environment than exists in face-to-face situations.

(4)   Large-scale accessibility

      Not only can local surveys be conducted by telephone, but it is also quite feasible to conduct statewide, regional, or national surveys be telephone.

(5)   Assurance that instructions are followed

      As with the in-person interview, the telephone interviewer can make certain that the questions are answered in precisely the order intended so that the integrity of the questionnaire sequence is maintained.

Telephone surveys also have certain disadvantages:

(1)   Less control

      The interviewer has less control over the interview situation in a telephone survey than in an in-person interview. The respondent can easily end the interview at any time simply by hanging up the telephone.

(2)   Less credibility

      The interviewer will have greater difficulty establishing credibility

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and trust with a respondent over the telephone than would be the case in person or by mail.

(3)   Lack of visual materials

Both the mail-out survey and the in-person interview permit the use of visual aids, such as maps, pictures, or charts, as components of the questions. The telephone survey does not provide such an opportunity to the researcher.

(4)   Limited potential respondents

Only people with telephones can be contacted, and therefore it is difficult to reach representative samples of groups that do not possess telephones.

2.4.3 In-Person Interviews

In-person, or face-to-face, surveys are structured to permit an interviewer to solicit information directly from a respondent in personal interviews. The advantage of the in-person survey technique are as follows:

(1)   Flexibility

The interviewer can probe for more detail, explain unclear questions, and use visual aids, such as maps or photographs.

(2)   Greater complexity

Interviewers can administer highly complex questionnaires and provide detailed instructions and lengthy lists of alternative responses that many respondents would find confusing and intimidating if the questionnaire were administered by any other means.

(3)   Ability to contact hard-to-reach populations

Certain groups, for instance the homeless or criminal offenders, are

difficult or impossible to reach by any method other than personal interviews.

(4)   High response rate

The rate of response and the degree to which the survey instruments are completed in full are considerably higher for in-person interviews than for mail-out questionnaires. People often feel more comfortable sharing their feelings and information verbally than in written form and will therefore tend to provide more insight into the issues at hand.

(5)   Assurance that instructions are followed

The interviewer can make certain that the questions are answered in precisely the order intended so that the integrity of the questionnaire sequence is maintained.

In — person interviews also have certain disadvantages:

(1)   High cost

Administering in-person interviews can be very costly in terms of time per interview, travel time, interviewer training, and field supervision.

(2)   Interviewer-induced bias

Although the interviewer obviously serves many useful functions in this process, he or she can also be a source of bias. For example, the interviewer may inadvertently react in some way to a response rather than remaining neutral. This action could affect future responses by the interviewee and, hence, the validity of the entire questionnaire. By the same token, the respondent may alter his or her responses to gain perceived approval from the interviewer.

(3)   Respondents' reluctance to cooperate

If respondents must allow interviewers into their homes to participate in a face-to-face survey, they may tend to be somewhat less inclined to participate than in a telephone survey. Many telephone calls and return visits may be necessary in order to complete an interview.

(4)   Greater stress

The in-person interview format is clearly the most intense and stressful for both the respondent and the interviewer. It tends to be a longer and more complex interviewing process, and it is the only one in which a stranger is present in the respondent's environment. Such situations can cause increased stress and fatigue, which may have unfavorable effects on the quality of the responses.

(5)   Less anonymity

The advantages of the anonymity perceived by the respondent in mail-out and telephone surveys are greatly reduced in the face-to-face format.

(6)   Concerns about personal safety

The meeting of two strangers for purposes of conducting and interview carries with it certain real and perceived risks in terms of the personal safety of both the interviewer and the respondent. This factor has been a significant contributor to the relative decline of this interviewing format.

2.5 Stage of Research Process

To conduct any of the three major types of surveys in a rigorous and unbiased fashion, it is important to adhere to specific procedures and apply them in a systematic

manner. Although the stages are presented here as distinct steps, there is actually a great deal of overlap as the survey research process is pursued and implemented. An overview of the process is presented here, and each stage is fully explained in the chapters that follow. The following list displays these stages, which are explained more fully below it.

Stage 1: Identifying the focus of the study and method of research

Stage 2: Determining the research schedule and budget

Stage 3: Establishing an information base

Stage 4: Determining the sampling frame

Stage 5: Determining the sample size and sample selection procedures

Stage 6: Designing the survey instrument

Stage 7: Pretesting the survey instrument

Stage 8: Selecting and training interviewers

Stage 9: Implementing the survey

Stage 10: Coding the completed questionnaires and computerizing the data

Stage 11: Analyzing the data and preparing the final report

(1) Stage 1: Identifying the focus of the study and method of research

During the initial stage, the researcher must be satisfied that survey research is a more appropriate method of collecting the necessary information for the study under consideration than the other potential data-gathering techniques of secondary research, direct measurement, and observation. Once survey research has been determined to be the most appropriate research method, the researcher has two fundamental tasks to consider. First, the goals and objectives of the study should be elaborated and refined, and second, the researcher should identify the specific format

for collecting the data (mail-out, telephone, or in-person). The latter decision, in particular, will be greatly influenced by the budget available for the study and the time constraints that have been imposed for completion of the project.

(2)   Stage 2: Determining the research schedule and budget

Once the parameters and objectives of the study have been identified, the researcher must establish a timetable for completion of the survey research project. The timetable should be flexible enough to accommodate unforeseen delays and yet be capable of satisfying the needs of the research sponsor. In conjunction with this timetable, a detailed budget should be prepared.

(3)   Stage 3: Establishing an information base

Prior to the development of a survey instrument (questionnaire), it is necessary to gather information about the subject matter under investigation form interested parties and key individuals. Such individuals might be brought together in an informal group setting where relevant issues and problems can be freely discussed and debated. The goals and objectives of the research can be clearly defined, and the practical relevance of the proposed survey can be explained. For example, a research organization may have the objective of studying the travel behavior and travel preferences of economically disadvantages residents in a major city in the United States. At the outset, it would be important to hold a "focus group" meeting, where representatives of social service organizations such as the county welfare agency, economically disadvantaged residents, and the researchers involved in conducting the study gather to exchange ideas and

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concerns. It is hoped that an open and frank discussion will reveal the type of survey information that would be helpful in outlining key issues and identifying relevant sectors of the population to be targeted in such a study.

In some research endeavors, the subject matter is found to be new or vague, and as a result of this lack of general knowledge, it is not immediately feasible to devise a series of specific questions to be used in a formal survey process. In such situations it may be necessary to conduct, as a preliminary technique, some form of semistructured direct observation of the population using professional observes who are trained to record information about the subject population in systematic way. Such semistructured research techniques have been successfully used in anthropological and sociological studies of geographic, economic, and behaviorally distinct subcultures. This base level of information may then be used to devise a questionnaire for the formal survey process. Without such preliminary information, the survey questions could prove to be peripheral or tangential to the goals of the research study. A thorough reconnaissance of information at this point is critical in terms of producing a focused and well-directed study.

(4) Stage 4: Determining the sampling frame

The population that is identified for formal interviewing represents the sampling frame for the survey research project. The researchers should be relatively certain that the selected population possesses the knowledge and information required to fulfill the requirements of the research project. After the general population, or "universe," is defined in a conceptual sense, a list of identifiable and contactable members of this general

population must be obtained. It is from this list that a sample of respondents will be drawn. This list is called the working population. For example, in a survey project concerning residential preferences and relocation tendencies, the general population may be defined as one that has demonstrated some mobility within a given metropolitan area. One way of operationalizing this concept of mobility is to obtain a list of residents who have recently moved.

(5)   Stage 5: Determining the sample size and sample selection procedures

The researcher must attempt to select a sample that is an approximate microcosm of the working population. Generally speaking, given equally representative samples, larger samples yield a higher degree of accuracy than smaller samples. The researcher must weight the desired degree of accuracy against the increased time and cost that a larger sample size entails. Once the overall sample size is determined, several alternative procedures are simple random sampling, systematic random sampling, stratified random sampling, and cluster sampling.

(6)   Stage 6: Designing the survey instrument

The development of the survey instrument or questionnaire is a crucial component of the survey research process. At this stage the researcher must devise a series of unbiased, well-structured questions that will systematically obtain the information identified in Stage 1. Developing the questionnaire can be an extremely detailed and time-consuming process. Decisions must be made concerning the wording of questions and the format depending on whether the survey is face-to-face, mail-out, or telephone. Fixed-answer and open-ended questions must be balances, and

the element of time with respect to questionnaire length should be considered. The longer the questionnaire, the greater the variable costs associated with its implementation, such as interviewing time, computerization of data, and production and distribution costs. Furthermore, longer questionnaires tend to lead to lower response rates. The questionnaire must be easily understood and internally consistent and must lend itself to a appropriate and meaningful data analysis.

Stage 7: Pretesting the survey instrument

After a draft questionnaire has been prepared and the researcher believes that the questions will obtain the information necessary to achieve the goals of the study, it is important to pretest the instrument under actual survey conditions. During the course of the pretest, poorly worded questions will be identified and the overall quality of the survey instrument refined. Based on the experience of the pretest, the questionnaire will be fine-tuned for use in the actual survey process.

Stage 8: Selecting and training interviewers

Telephone and in-person surveys require trained interviewers. These interviewers can be selected from the student ranks, they can be trained professionals, or they can be part-time, nonstudent interviewers. Researchers select interviewers according to the nature of the study and the characteristics of the sample respondents.

Prospective interviewers should be thoroughly trained by the researchers in the use of the questionnaire. It has been found that when interviewers have facility with the survey instrument, they are better able to generate and sustain respondents' interest in the survey. Interviewers

should receive specific instructions on conducting their interviews and should be given guidelines for handling uncooperative respondents.

(9)   Stage 9: Implementing the survey

The implementation of the survey instrument is a critical phase of the research process. Care must be taken that the established random sampling procedure is adhered to and that the timetable is strictly maintained. Ensuring the privacy and minimizing the inconvenience of potential respondents should be a major concern. In addition, a number of ethical standards must be followed by the research process.

(10)   Stage 10: Coding the completed questionnaires and computerizing the data

The final questionnaire must be formatted in such a way that responses can be entered directly into the computer for data processing. Once the questionnaires have been returned, the very important process of "cleaning up" the forms begins. This entails making certain that the appropriate number of entries have been marked for each question, ensuring that there are no extraneous responses, and making sure that enough questions have been answered to validate the questionnaire. Furthermore, all open-ended answers must be categorized and coded on the form itself for ready computer entry. Computer entry can be accomplished either on a centralized mainframe computer system or, when the data storage or speed-of-operation requirements are less rigorous, on personal computers. A variety of statistical software packages are available for either option.

(11)   Stage 11: Analyzing the data and preparing the final report

The recorded data input must be summarized, placed in tabular form, and prepared for statistical analyses that will shed light on the research

issues at hand, using statistical significance tests, measures of central tendency, determinations of variability, and correlations among variables. These formal statistics and data summaries form the basis of the report that will be the culmination of the survey research process.

2.6 Research Design

(1) Quantitative

Quantitative research methods have been considered to be the tradition approach to research in counseling and psychology. Quantitative research is defined as research that is based on measurement and the quantification of data. Whatever the dependent variable of interest in quantitative research, there must be a way to transform it into numbers. Measurement Scales

Four different measurement scales have been identified that are used in quantitative research: (a) a nominal scale, (b) an ordinal scale, (c) an interval scale, and (d) a ratio scale (Table 2.1). Researchers generally differentiate between numerals and numbers. Numerals are defined in terms of symbols, such as letters or words (e.g., *male* and *female),* and the interval between units cannot be assumed to be equal. Nominal and ordinal scales are considered numerals. Numbers are values on which one can perform certain mathematical operations such as adding, subtracting, and so on, and the distance between units is even (e.g., the interval between 101 and 102 is the same as that between 104 and 105). Interval and ratio scales are based on the use of numbers.

These measurement types of scales are considered to be somewhat hierarchical in regal to the different mathematical operations that can be

performed on them. Nominal scales are considered to be the most simplistic and ratio scales the most complex. This means that the most mathematical operations may be performed on ratio types of data and the least on nominal types of data.

A nominal scale refers to one in which the researcher has assigned differences in observations or measurements to distinct categories. It is the least complex scale, one on which the fewest mathematical operations may be performed. Examples of nominal data are gender status (male/female) and ethnicity (African American, Asian, Caucasian, etc.). Nominal scale data, therefore, involves counts for each category. Researchers do at times assign values to nominal scales to compute a limited number of mathematical operations. For example, a researcher may assign a value to different ethnic groups (e.g., Latino = 1, African American = 2, Caucasian = 3, etc.) to perform basic mathematical operations such as determining probabilities.

Ordinal scales involve assigning values to data based on rank or order. This is the second least precise scale of measurement. One example of ordinal data is ranks in the military (private, corporal, sergeant, etc.). Ranks are not overly precise and do not differentiate by equal units. For example, a sergeant is not twice as good as private, but a sergeant outranks a private. Essentially, ranks are not equidistant between points. A second example might be ranking brands of ice cream by taste. If we rank brands A, B, and C, we know that ice cream brand A tastes better than brand B, but we do not know if brand A is twice as good as brand B. Brands A and B may be only slightly different or significantly different.

Interval scales are the third type of measurement in quantitative research and involve the use of numbers with equal units of measurement. However, even though numbers are used, there is no true zero point on the scale. For example, most psychological and educational tests are based on an interval type of scale. An individual can obtain a range of scores on an IQ test, for example 20 to 200, but can an IQ of zero be measured? Someone could theoretically score a zero, but the true score will not be known or cannot be measured because of the limitations of the instrument.

Ratio scales are the last type of measurement and are defined in terms of equal numbered units similar to interval scales, but there is a true zero. Weight is an example of a ratio scale, and the measurement starts at zero. Another example is temperature based on a Kelvin temperature scale. The ratio is the most precise of all the scales and the one in which the greatest number of mathematical operations can be done. Thus, a study can only be considered quantitative when the variables have been operationalized into one of the four scales mentioned.

(2) **Qualitative**

Researchers in the social sciences have long struggled with achieving a sense of respectability for the methods that are used. This struggle has been associated with perceptions of how objective and measurable results are. Guba and Lincoln (1992) noted that the social sciences have long been considered "soft" sciences and less quantifiable compared to "hard" scienceslike mathematics, chemistry, and physics. This struggle, and the desire to be viewed both externally and within the social science fields as closer to "hard" sciences, have resulted in qualitative methods of inquiry

being perceived as less desirable. Sells, Smith, and Sprenkle (1995) have described the historical antagonism between quantitative and qualitative research methods. They noted that in many investigators' views, the traditional quantitative approaches were the only ethically responsible way of conducting research. An added issue for those conducting qualitative research is that the way qualitative data is organized and reported in professional journals is different form the ways used for traditional quantitative research (e.g., the methods section in particular may differ).

Several advantages and disadvantages of qualitative research have been proposed. One advantage is that the researcher can gain a more detailed understanding of the phenomena of interest than with quantitative research. Second, qualitative research is helpful in understanding or explaining unusual situations that could not be identified through large-scale quantitative methods. A third advantage is that the researcher can adjust data collection procedures during the process, based on the issued that arise.

The major difficulty with qualitative methods concerns the validity of generalizing results to the larger population (Gall et al. 1996). By focusing on specific phenomena, the researcher increases understanding of those phenomena but loses a broader perspective. A second limitation of qualitative research involves ethically maintaining the privacy of the individuals studied when the information presented is so specific.

2.7 Method in Conducting Qualitative Research

As has been mentioned, there are several different approaches for conducting qualitative research. One major method is the case study. Although all case study

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research is not qualitative, some case study methods may be (1984). Case study research has long had an important history and influence in psychology and education; Freud and Paiget used this approach to developing much of their theories. Case study is an intensive investigation of a single individual in an effort to treat or intervene with that person and/or to make inferences about others. For example, Freud (Spurling, 1989) developed much of his theory of personality development using case study methods (e.g., the cases of "Dora" and "Little Hans"), Piaget employed his own children as case studies, using this method to develop his insights into cognitive development during infancy.

The case study method of qualitative research may be defined in terms of the intensity of focus on a particular case or set of cases and specific phenomena of the case(s). Case study research is typically, although not always, conducted in a natural setting. Gall et al. (1996) stated that case studies serve three purposes: to achieve detailed descriptions of phenomena of interest, to develop possible explanations of phenomena, and to evaluate the phenomena of interest. To understand the case study as qualitative approach, it may be best to have a description of the characteristics of the approach. Stake (1994) stated, "Perhaps the simplest rule for method in qualitative case work is this: Place the best brains available into the thick of what is going on". This refers to the use of strong observational methods in the naturalistic setting to understand the case of interest. Another way to characterize case study research is by the manner in which the data are collected and analyzed. Data in case study research are typically collected in the form of summaries and extensive note taking of the researcher's observations. Researchers may use triangulation in data collection, which refers to using multiple data collection methods, sources, or observes. The qualitative researcher is generally interested in particular phenomena that shed light on the

processes of events, persons, or things. Qualitative researchers identify a focus of their attention in regard to the phenomena of interest; they also define the unit of analysis to be studied. If researchers are interested in understanding the counseling relationship as the focus, they might choose the relationship unit of analysis. The case study then would be of single client-counselor interactions. Researchers might choose to study more than one counseling "relationship," but the unit of analysis still remains the same, and the researcher in qualitative research uses the case study approach. The researcher may observe the counseling relationship over several sessions and record or describe the process. Recall that qualitative research is generally conducted in the natural setting, so the researcher might observe through a one-way mirror.

An example in education qualitative research might be an interest in the process of interaction between a teacher and his or her students. The unit of analysis might be a group (all those in the classroom). The researcher might enter the classroom as an observer over several days, weeks, or longer. Detailed descriptions would be made of the interactions between the class and the teacher.

Seltzer and Atlas (1994) conducted a case study that focused on the treatment of a conduct-disordered adolescent, using a psychodynamic approach. The researchers noted, "This is a case of a brief therapy with Robert, a 14 years old African American male who was in therapy on an acute adolescent inpatient unit. Robert was diagnosed on admission as having a Conduct Disorder." These researchers, based in psychodynamic theory, used the case description to detail how individual,historical, family, and trauma factors contribute to the development of conduct disorder. The unit of analysis for data collection could here be defined as groups (Robert and the hospital staff with whom he interacted.)

Ethnographic research methods involve intensive study of the characteristics of a given culture from a naturalistic, firsthand experience. As with many other qualitative methods, the ethnographic approach was initially developed by anthropoligists. Shimahara (1988) identified three characteristics of ethnographic research: (a) focusing on investigating cultural patterns in behavior and commonalties of a given culture, (b) determining how members of a culture define and derive meaning from the experiences and events occurring within that culture, and (c) studying these cultural behaviors and patterns in their natural environment. Thus, for those using the ethnographic approach, to research defining characteristics is to focus on culture. Gall et al. (1996) stated that the goal of ethnographic research is to look at "cultural phenomena from the perspective of an outsider, and then [seek] to understand the phenomenon from the perspective of an insider." Both counseling and education have adopted these approaches to conducting research. They offer an effective new paradigm for understanding major concepts and practices in our fields.

Lubeck (1984) provided an example of ethnographic research in education. She studied the differences in the ways that young African American and Caucasian children are taught. More specifically, she was interested in how the teachers in tow setting, one in a middle-class white community and the second in a Head Start facility where the children were African American, structured the environment based on their own personal values, middle class versus lower class.

Lubeck described her methods as follows:

Consequently, the researcher focused on cultural patterns of teaching children based on racial background. Additional, the researcher attempted to identify cultural patterns and phenomena from the perspective of an outsider and sought to understand

the phenomena from the perspective of an insider by becoming a participant. The unit of analysis was the group.

A third method of conducting qualitative research is through a phenomenological approach. Gall et al. (1996) stated that a phenomenological approach to qualitative research is "the study of the world as it appears to individuals when they place themselves in a state of consciousness that reflects an effort to be free of everyday biases and beliefs". In essence, the phenomenological researcher attempts to understand an individual's personal perspective (his or her feelings and reactions) to events under study. A phenomenological method of research is particularly helpful when a researcher wants to identify relevant issues and concepts in the context of a particular event and possibly conduct qualitative research or other types of qualitative research to further understand the event.

Register and Henley (1992) used a qualitative phenomenological approach in studying intimacy. They stated, "The purpose of the present study, then, was to advance further our understanding of intimacy at a most general and descriptive level". Subjects for this study were 11 male and 9 female volunteers drawn from students attending evening college courses. Additionally, subjects were described as white, middle class, and employed at the time of the study.

Thus, in this study the researchers did attempt to understand intimacy from the perspective of the descriptive meaning each subject attached to an identified experience. Analysis of the data was accomplished through thematic approaches.

Specifically, the researchers independently reviewed each of the statement made by the subjects and highlighted them in regard to significant statements. Significant statements were described as "any element of the event that is seen as essential or as a

central structuring agent within that event." The unit of analysis in this study was the relationship.

Historical research is a fourth method of conducting qualitative research, the purpose of which is to systematically understand past events and phenomena to obtain a clearer understanding of current issues. Historical research may involve the use of systematic methods such as the use of diaries, oral records, and relics (Gall et al. 1996). Gall et al. Proposed these steps in historical research: (a) Define the problem or develop a hypothesis, (b) identify potential sources of historical data, (c) evaluate the historical sources, and (d) report and summarize the results.

Morawski (1992) provided an example of historical research when she studied the place of introductory textbooks in American psychology. Her historical study of early psychology textbooks was accomplished through a focus on textual strategies used by the authors. Morawski defined the problems of interest in her research questions. She focused on a specific time period, the late 1800s and early 1900s, and the introductory psychology textbooks written at that time, and described the texts she reviewed. Finally, she summarizes her findings and attempts to make conclusions. For example, she stated in her summary that "by examining psychologists° work, such as textbooks, we can see more closely the macro-and micropolitics of transforming human welfare." As an aside, it is interesting to note the language used by researchers based on their particular approach. Morawski stated, "My sojourn into this realm of deprecated relics necessarily required a mapping of the literary terrain and compilation of a bibliography." The use of the word "relics" is informative as to the approach used by the researcher.

2.8 Advantages and Disadvantages of Qualitative Research

Table 2.1. Advantages and Disadvantages of Qualitative Research.

Advantages	Disadvantages
1. Able to obtain a detailed understanding of a person, event, or phenomenon	1. Limitations in generalizing the results to the larger population
2. Able to study events or phenomena in the natural environment	2. Potential for bias in interpreting data
3. Flexibility in responding to events or phenomena (e.g., can alter flow of interview to address uniqueness of event or phenomenon)	3. Lack of consistency in methods of data collection
4. Generally does not require extensive resources to conduct	4. Potential for loss of privacy for individuals studied because of intensive description of individual cases
5. Helpful in understanding unusual or exceptional situations	
6. Helpful in the initial exploration of individuals, events, or phenomena	

2.9 Question Format: Opened-Ended or Closed-Ended

Most questions in a questionnaire have closed-ended response choices or categories. Such questions provide a fixed list of alternative responses and ask the respondent to select one or more of them as indicative of the best possible answer. In

contrast, open-ended questions have no preexisting response categories and permit the respondent a great deal of latitude in responding to them.

(1) Closed-Ended Question

(a) Advantages of Closed-Ended Questions

There are several advantages to closed-ended questions. One is that the set of alternative answers is uniform and therefore facilitates comparisons among respondents. For purposes of data entry, this uniformity permits the direct transferal of data from the questionnaire to the computer without intermediate stages. An other advantage is that the fixed list or response possibilities tends to make the question clearer to the respondent. A respondent who may otherwise he uncertain about the question can be enlightened as to its intent by the answer categories. Furthermore, such categories may, in fact, remind the respondent of alternatives that otherwise would not have been considered or would have been forgotten.

The respondent's answers can be directed by a fixed list of alternatives, which limits extraneous and irrelevant responses. If, instead, the question were opened-ended, as shown below, the responses might not be quite so specific.

Sensitive issues are frequently better addressed by asking questions with a preestablished, implicitly "acceptable" range of alternative answers rather than by asking someone to respond with specificity to an issue that might be considered particularly personal. For example, for medical purposes, and abortion clinic might require information about a client's history in terms of previous abortions.

The questions "have you ever had an abortion? If so, how many have you had?" will tend to intimidate certain respondents who have had prior abortions and who perceive that abortion carries with it a strong social stigma. Their responses, therefore, might be biased toward minimizing the actual number. Recognizing that this tendency exists and always will in regard to socially sensitive issues, the researcher would improve response accuracy by constructing the question

Phrasing sensitive questions in this way, with alternative responses that extend significantly beyond normally expected behavior, implies that an accurate response is not outside the realm of social acceptability. (In this case, it implies that many other young women may have similar histories and that having had an abortion is not necessarily aberrant behavior.)

Other types of sensitive questions may involve issues more closely associated with privacy than with social acceptability. This situation is encountered when that subject of a question is income. A respondent may very well feel that his or her privacy is violated when he or she is asked, "What is your annual household income?"

Giving alternative choices in the form of income ranges will tend to mitigate such feelings and will therefore generate a much higher level of response.

Fixed response are less onerous to the respondent, who will find it easier simply to choose an appropriate response than to construct one. Thus, use of fixed-alternative questions increases the likelihood

that the response rate for particular questions, and for the questionnaire in general, will be higher.

(b) Disadvantages of Closed-Ended Questions

There are, however, certain disadvantages to closed-ended questions that researchers should consider when developing a questionnaire. For example, there is always the possibility that the respondent is unsure of the best answer and may select one of the fixed response randomly rather than in a thoughtful fashion. The advantage of ease of response, therefore, comes with some potential negative consequences. In a similar vein, a respondent who misunderstands the question may randomly select a response or select an erroneous response.

Opened-ended questions, in which the respondent is asked to answer in his or her own words, can mitigate these drawbacks. However, as is discussed below, opened-ended questions also have certain shortcomings.

Closed-ended questions, in a sense, compel respondents to choose a "closet representation" of their actual response in the form of a specific fixed answer. Subtle distinctions among respondents cannot be detected within the preestablished categories. This particular drawback is frequently addressed by inserting another alternative in the fixed-response format: "Other, please specify——— This alternative represents an excellent compromise between closed- and opened-ended response formats in that it is an open-ended question within a closed-ended format.

For simplicity and ease of response, however, the use of this option must be carefully controlled. The decision to include an "Other" response category for a particular question must be based on evidence obtained during the pretest of the survey instrument. If the evidence shows that a relatively large number of responses to the question do not conform to the preliminary set of fixed alternatives, then the researcher should formulate additional fixed categories for the responses that appear frequently and retain the "Other, please specify" category for the responses that appear less frequently. If there is no indication that an "Other" category is needed, it should not be included.

There is an increased possibility that the simplicity of the fixed-response format may lead to a greater probability of inadvertent errors in answering the questions. For instance, and interviewer or a respondent may carelessly check a response adjacent to the one that was actually intended. Opened-ended questions eliminate the possibility of such unintended responses. In addition, closed-ended questions tend to constrain the breadth of subject matter addressed within the questionnaire and prevent respondents from expressing their opinions to the fullest extent possible. To obviate this shortcoming, the researcher may choose to use one or more general opened-ended questions during the course of the survey.

(2) Opened-Ended Questions

Opened-ended questions are used by researchers in situations where the constraints of the closed-ended question outweigh the inconveniences of

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the opened-ended question for both the researcher and the respondent. It is recommended that open-ended questions be used sparingly and only when needed. To the extent that they are used, the researcher must be aware of certain inherent problems.

First, opened-ended questions will inevitably elicit a certain amount of irrelevant and repetitious information. In addition, the satisfactory completion of an opened-ended question requires a greater degree of communicative skills on the part of the respondent than is true for a closed-ended question. Accordingly, the researcher may find that these questions elicit responses that are difficult to understand and sometimes incoherent.

A third factor is that statistical analysis some degree of data standardization. This entails the interpretative, subjective, and time-consuming categorization of opened-ended responses by the researchers. And finally, opened-ended questions take more of the respondent's time. This inconvenience may engender a higher rate of refusal to complete the questionnaire.

2.10 Sequence of Question

The order in which questions are presented can affect the overall study quite significantly. A poorly organized questionnaire can confuse respondents, bias their responses, and jeopardize the quality of the entire research effort. The following series of guidelines for sequencing questions has been created to enable the researcher to develop a well-ordered survey instrument.

(1) Introductory Questions

The first questions should be related to the subject matter stated in the preamble but should be relatively easy to answer. Introductory questions

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should elicit a straightforward and uncomplicated opinion or derive basic factual-but not overly sensitive-information. The main purpose of the early questions is to stimulate interest in continuing with the questionnaire without offending, threatening, confusing, or boring the respondent.

It can be noted that the first two questions are of a basic, factual nature. The third question, although eliciting an opinion, is uncomplicated; however, it is germane to the key focus and sufficiently stimulating to secure the respondent's continued interest.

(2) Sensitive Questions

Certain questions deal with sensitive issues, such as religious affiliation, ethnicity, sexual practices, income, and opinions regarding highly controversial ethical and moral dilemmas. It is highly recommended that these questions be placed late in the questionnaire, for two primary reasons.

First, if respondents react negatively to such questions and decide to terminate the questionnaire, the information obtained on all previous questions may still be usable in the overall survey results, because enough information may have been obtained to warrant acceptance of the\interview as a completed case with only a few questions remaining unanswered. Second, if rapport has been established between the interviewer and the respondent during the course of the survey process, there is an increased likelihood that the respondent will answer sensitive questions that come late in the questionnaire.

(³) Related Question

Questionnaires generally have a certain frame of reference, as indicated by their goals and objectives. Within this overall context, there are several categories of questions. For instance, the questionnaire soliciting opinions from native Americans contained questions relating to housing characteristics, schools, public services, crime and police issues, economic development, employment issues, transportation, tribal decision making, recreation, shopping patterns, and socioeconomic data.

Proper questionnaire design dictates that related questions be placed together within the questionnaire so that the respondent can focus and concentrate on specific issues without distraction. In order to facilitate this, it is sometimes appropriate to separate categories of questions by providing a distinct heading that characterizes each section.

On the other hand, if these same questions were to be commingled with questions from other categories, the resulting questionnaire would be much less likely to product clear, well-formulated responses.

While it is generally desirable to arrange questions pertaining to a particular subject in the same section of the questionnaire, it is also important to be cognizant of creating a patterned series of responses. Consecutive questions that tend to evoke reflexive responses, given without adequate thought, should be minimized.

Note that the sequence of questions in Exhibit 2.4, which is part of a commercial business survey, could well produce and automatic, unidirectional set of responses unless the respondent is sensitized to the subtle, but important, differences among the questions. This process of

sensitizing will tend to minimize the risk of reflexive responses and is accomplished in this example by underlining and italicizing the essential distinctions.

Alternative approaches to minimizing this risk of patterned responses may include the use of opened-ended questions (without fixed alternative responses), questions that change the order to the fixed responses from question to question, or questions that vary substantially in terms of wording or length. The potential disadvantages of such tactics are that the respondent's thought focus may be disrupted or the respondent might become confused, thereby defeating the purpose of grouping these questions in the first place. Because several considerations must be balanced in the grouping of questions, the pretest becomes of paramount importance to identify the potential for inadvertently eliciting response patterns and to minimize any such impact on the study.

(4) Logical Sequence

There is frequently a clear, logical order to a particular series of questions contained within the survey instrument. For instance, and appropriate time sequence should be followed. If questions are to be posed concerning and individual's employment or residence history, they should be structured in such a way that the respondent is asked to answer them in a sequential or temporal order-for instance, from the most recent to the least recent over a specified period of time.

(5) Filter or Screening Questions

Other portions of the questionnaire might involve establishing the respondent's qualifications to answer subsequent questions. Through what

are called "filter" or "screening" questions, as shown in Exhibit 2.5, the researcher can determine whether succeeding questions apply to the particular respondent. The first question requires that some respondents be screened out of certain subsequent questions. Only those who have participated in the city's recreational program are asked how they learned about the program. Both existing participants and non-participants, however are asked about their intended use of a community pool and preferred payment programs, with a further screening out of questions pertaining to pool use for those respondents who have no intention of using the pool at all.

Under some circumstances, filtering questions may be used to disqualify certain respondents from participation in the survey process at all.

(6) Reliability Checks

On occasion, when a question is important or is particularly sensitive or controversial, the degree of truthfulness or thoughtfulness of the response may be in doubt. In such situation, it may be appropriate to include in the questionnaire a check of the respondent's consistency of response by asking virtually the same question in a somewhat different manner and at a different place within the survey instrument.

The researchers suspected that there might be a casual or less careful response pattern to this question, in which respondents might indicate their willingness to live downtown without giving the matter adequate thought.

(7)   Following Up Opened-Ended Questions

As mentioned, it is desirable to have relatively simple, fixed-answer questions wherever possible. However, most surveys find it necessary to seek information that cannot be fully answered within the fixed-answer format. In such cases, follow-up opened-ended questions are asked in a manner that connects them to the fixed-answer question.

Efforts should be made to place such open-ended questions as late in the questionnaire (or appropriate section of the questionnaire) as possible, while remaining cognizant of the need to have a logical and temporal order of questions.

(8)   Opened-Ended Venting Questions

At the very end of the entire questionnaire, it is often beneficial to use one or more opened-ended "venting" questions-ones in which the respondent is asked to add any information, comments, or opinions that pertain to the subject matter of the questionnaire but have not been addressed in it.

2.11 Questionnaire Length

The questionnaire should be as concise as possible while still covering the necessary range of subject matter required in the study. The researcher must be careful to resist the temptation of developing questions that, although interesting, are peripheral or extraneous to the primary focus of the research project.

The purpose of being sensitive to questionnaire length is to make certain that the questionnaire is not so long and cumbersome to the respondent that it engenders reluctance to complete the survey instrument, thereby jeopardizing the response rate.

As questions increase in complexity and difficulty, the questionnaire may be perceived as being tedious and longer than it actually is. Hence, the researcher must factor in such considerations as the number of questions and the time and effort required of the respondent to complete them.

As general guidelines, telephone interviews should occupy no more than twenty minutes of the respondent's time; mailed questionnaires should take thirty minutes or less, including opened-ended responses; and in-person interviews should be limited to forty-five minutes to one hour. These are maximum time frames. Ideally, telephone surveys should take ten minutes, mail surveys should need approximately fifteen minutes, and in-person surveys should take less than thirty minutes.

2.12 Attitude Rating Scale

Using rating scales to measure attitudes is perhaps the most common practice in business research. This section discusses many rating scales designed to enable respondents to report the intensity of their attitudes.

(1) Simple Attitude Scaling

In its most basic form, attitude scaling requires that an individual agree or disagree with a statement or respond to a single question. For example, respondents in a political poll may be asked whether they agree or disagree with the statement "The president should run for re-election," or an individual might be asked to indicate whether he likes or dislikes labor unions. Because this type of self-rating scale merely classifies respondents into one of two categories, it has only the properties of a nominal scale. This, of course, limits the type of mathematical analysis that may be utilized with the simplified or basic scale. Despite the disadvantages,

simple attitude scaling may be used when questionnaires are extremely long, when respondents have little education, or for other specific reasons.

A number of simplified scales are merely checklists. A respondent indicates past experience, preference, and the like merely by checking an item. In many cases these may be adjectives that describe a particular object.

Most attitude theorists believe that attitudes vary along continua. An early attitude researcher pioneered the view that the task of attitude scaling is to measure the distance between "good to bad," "low to high," "like to dislike," and so on. Thus the purpose of an attitude scale is to find an individual's position on a continuum. If this is the case, simple scales do not allow for making fine distinctions in attitudes. Several other scales have been developed to help make more precise measurements.

(2) Category Scales

Some rating scales have only two response categories: agree and disagree. Expanding the response categories provides the respondent more flexibility in the rating task. Even more information is provided if the categories are ordered according to a descriptive or evaluative dimension. Consider the questions below:

Each of these category scales is a more sensitive measure than a scale with only two response categories. It provides more information.

Wording is an extremely important factor in the usefulness of these scales.

(3) Summated Ratings Method: The Likert Scale

Business researcher's adaptation of the summated ratings method, developed by Rensis Likert, is extremely popular for measuring attitudes

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because the method is simple and administer. With the Likert scale, respondents indicate their attitudes by checking how strongly they agree or disagree with carefully constructed statements that range from very positive to very negative toward the attitudinal object. Individuals generally choose from five alternatives: strongly agree, agree, uncertain, disagree and strongly disagree; but the alternatives may number from 3 to 9.

Strong agreement indicates the most favorable attitudes on the statement nd the weight of 5 is assigned to this response. The statement used as an example is positive toward the attitude. If a negative statement toward the object, the weights would be reversed, and "strongly disagree" would be assigned the weight of 5. A single scale item on a summated rating scale is an ordinal scale.

A Likert scale may include several scale items to form an index. Each statement is assumed to represent an aspect of a common attitudinal domain. The total score is the summation of the weights assigned to an individual's total response.

In Likert's original procedure a large number of statements are generated and then an item analysis is performed. The purpose of the item analysis is to ensure that final items evoke a wide response and discriminate among those with positive and negative attitudes. Items that are poor because they lack clarity or elicit mixed response patterns are eliminated from the final statement list. However, many business researchers do not follow the exact procedure prescribed by Likert. Hence a disadvantage of the Likert-type summated rating method is that it is difficult to know what a single summated score means. Many patterns of response to the various

statements can produce the same total score. Thus identical total scores may reflect different "attitudes" because of the different combinations of statements endorsed.

(4) Semantic Differential

The Semantic differential is a series of attitude scales. This popular attitude measurement technique consists of identification of a company, product, brand, job, or other concept followed by a series of seven-point bipolar rating scales. Bipolar adjectives, such as "good and bad," "modern and old-fashioned," or "clean and dirty," anchor the beginning and end (or poles) of the scale.

The subject makes repeated judgements of the concept under investigation on each of the scales. The scoring of the semantic differential can be illustrated by using the scale bounded by the anchors "modern" and "old-fashioned." Respondents are instructed to check the place that indicates the nearest appropriate adjective. From left to right, the scale intervals are interpreted as extremely modern, very modern, slightly modern, both modern and old-fashioned, slightly old-fashioned, very old-fashioned, and extremely old-fashioned. A weight is assigned to each position on the rating scale. Traditionally, scores are 7, 6, 5, 4, 3, 2, 1, or +3, +2, +1, 0, -1, -2, -3.

Many researchers find it desirable to assume that the semantic differential provides interval data. This assumption, although widely accepted, has its critics, who argue that the data have only ordinal properties because the weights are arbitrary. Depending on whether or not the data are assumed to be interval or ordinal, the arithmetic mean or the

median will be utilized to plot the profile of one concept, product, unit, etc., compared with another concept, product, or unit.

The semantic differential technique was originally developed by Charles Osgood and others as a method for measuring the meaning of objects or the "semantic space" of interpersonal experience. Business researchers have found the semantic differential versatile and have modified the use of the scale for business applications. Replacing the bipolar adjectives with descriptive phrases is a frequent adaptation in image studies. The phrases "aged a long time," "not aged a long time," "not watery looking," and "watery looking" were used in a beer-brand image study. A savings and loan association might use the phrases "low interest on savings," and "favorable interest on savings." These phrases are not polar opposites, but behavioral researchers have found that respondents often are unwilling to use the extreme negative side of a scale. Organizational research with industrial salespeople, for example, found that in rating their own performance, salespeople would not use the negative side of the scale. Hence it was eliminated, and the anchor opposite the positive anchor showed "satisfactory" rather than "extremely poor" performance.

Numerical Scales

Numerical scales have numbers as response options, rather than "semantic space" or verbal descriptions, to identify categories (response positions). If the scale items have five response positions, the scale is called a 5-point numerical scale; with seven response position, it is called a 7-point numerical scale; and so on.

This numerical scale utilizes bipolar adjectives in the same manner as the semantic differential. In practice, researchers have found that for educated populations a scale with numerical labels for intermediate points on the scale is as effective a measure as the "true" semantic differential.

(6)   Constant-Sum Scale

Suppose United Parcel Service (UPS) wishes to determine the importance of the attributes of accurate invoicing, delivery as promised, and price to organizations that use its service in business-to-business marketing. Respondents might be asked to divide a constant sum to indicate the relative importance of the attributes.

The constant-sum scale works best with respondents having a higher educational level. If respondents follow instructions correctly, the results approximate interval measures. As in the paired-comparison method, as the number of stimuli increases this technique becomes more complex.

(7)   Stapel Scale

The Stapel scale was originally developed in the 1950s to measure the direction and intensity of an attitude simultaneously. Modern versions of the scale use a single adjective as a substitute for the semantic differential when it is difficult to create pairs of bipolar adjectives. The modified Stapel scale places a single adjective in the center of an even number of numerical values (for example, ranging from +3 to —3). It measures how close to or how distant from the adjective a given stimulus is perceived to be.

The advantages and disadvantages of the Stapel scale are very similar to those of the semantic differential. However, the Stapel scale is markedly

easier to administer, especially over the telephone. Because the Stapel scale does not call for the construction of bipolar adjectives, as does the semantic differential, the Stapel scale is easier to construct. Research comparing the semantic differential with the Stapel scale indicates that results from the two techniques are largely the same.

(8) Graphic Rating Scales

A graphic rating scale presents respondents with a graphic continuum. The respondents are allowed to choose any point on the continuum to indicate their attitudes. Typically, a respondent's score is determined by measuring the length (millimeters) from one end of the graphic continuum to the point marked by the respondent. Many researchers believe scoring in this manner strengthens the assumption that graphic rating scales of this type are interval scales. Alternatively, the researcher may divide the line into predetermined scoring categories (lengths) and record respondents' marks accordingly. In other words, the graphic rating scale has the advantage of allowing the researchers to choose any interval they wish for purposes of scoring. The disadvantage of the graphic rating scale is that there are no standard answers.

Graphic rating scales are not limited to straight lines as sources of visual communication. The purpose of a graphic rating scale with picture response options or another type of graphic continuum is to enhance communication with respondents. A frequently used variation is the ladder scale, which also includes numerical options.

Research investigating children's attitudes has utilized "happy face" scales With the "happy face" scale, children are asked to indicate which

face shows how the feel about candy, a toy, or some other concept. Research with the "happy face" scale indicates that children are prone to choose the faces at the ends of the scale. Although this may be because children's attitudes may fluctuate more widely than those of adults or because they have stronger feelings both positively and negatively, it is a disadvantage of the scale.

(9)   Thurstone Equal-Appearing Interval Scale

Louis Thurstone, an early pioneer in attitude research, developed the concept in 1927 that attitudes vary along continua and should be measured accordingly.

Construction of a Thurstone scale is a rather complex process that requires two stages. The first stage is a ranking operation, performed by judges, who assign scale values to attitudinal statements. The second stage consists of asking subjects to respond to the attitudinal statements.

His Thurstong method is time-consuming and costly. From a historical perspective it is valuable, but its current popularity is low. Because it is rarely utilized in most applied business research, it will not be discussed further here.

(10)   Scales Measuring Behavioral Intentions and Expectations

The behavioral component of an attitude involves the behavioral expectations of an individual toward an attitudinal object. Typically, this represents an intention or a tendency to seek additional information. Category scales that measure the behavioral component of an attitude attempt to determine a respondent's "likelihood" of action or intention to perform some future action.

The wording of statements used in these scales often include phrases such as "I would recommend," "I would write," or "I would buy" to indicate action tendencies.

2.13 The Advantages and Disadvantages of Attitude Rating Scales

Table 2.2. The Advantages and Disadvantages of Attitude Rating Scales.

Rating Measure	Subject Must:	Advantages	Disadvantages
Category scale	Indicate response Category	Flexible, easy to Respond	Items may be ambiguous; with few categories, only gross distinctions can be made
Likert scale	Evaluate statements on 5-point scale	Easiest scale to Construct	Hard to judge what a single score means
Semantic differential and numerical scales	Choose points Between bipolar adjectives on relevant Dimensions	Easy to construct; norms exist for comparison	Bipolar adjectives must be found; data may be ordinal, not interval
Constant sum scale	Divide a constant sum among response alternatives	Scale approximates interval measure	Difficult for respondent with low education levels
Stapel scale	Choose points on a scale with a single adjective in center	Easier to construct than semantic differential, easy to administer	Endpoints are numerical, not verbal, labels
Graphic scale	Choose a point on a continuum	Visual impact, unlimited scale points	No standard answers

Table 2.2. The Advantages and Disadvantages of Attitude Rating Scales. (Continued)

Rating Measure	Subject Must:	Advantages	Disadvantages
Graphic scale picture response	Choose a visual picture	Visual impact	Hard to attach verbal explanation to response

2.14 Primary versus Secondary

We classify information sources into primary and secondary types. Primary data are collected by you and agents known to you, especially to answer your research question---for instance, when you observe certain production operations and measure their cost, or when MindWriter surveys its CompleteCare customers to see what changes would improve customer satisfaction, or when the students conduct a survey to see who would patronize a membership dining club. Studies made by others for their own purposes represent secondary data to you.

Primary and secondary sources each have strengths and weaknesses. Using primary sources, researchers can collect precisely the information they want. They usually can specify the operational definitions used and can eliminate, or at least monitor and record, the extraneous influences on the data as they are gathered. However, secondary sources are indispensable in otheother ways. *p+1Xere is nothing wrong with using primary data under many circumstances, or secondary data under different circumstances or, rarely and prudently, substituting one for the other when either might be suitable. But the basis for substitution has to be well understood and good judgment applied.

Secondary data are used for three research purposes. First, they fill a need for a specific reference or citation on some point---perhaps in a research proposal, to

demonstrate why the proposed research fills a void in the knowledge base. Research typically calls for early exploration to learn if the past can contribute to the present study. Data from secondary sources help you decide what further research needs to be done and can be a rich source of hypotheses.

You may also seek reference benchmarks against which to test other findings. From a sample survey, you could estimate the percentage of the population that has certain age and income characteristics. These estimates could then be checked against census data. Second, secondary data are an integral part of a larger research study or of a research report to justify having bypassed the costs and benefits of doing primary research. In essence, the researcher tries to keep from reinventing the wheel.

Third, secondary data may be used as the sole basis for a research study, since in many research situations one cannot conduct primary research because of physical, legal, or cost influences. Historians' methods are the classic example but are hardly the only one. Retrospective research often requires the use of published data. The federal government frequently solves this problem for many organizations with the massive amount of data it publishes each year.

2.15 Reliability Analysis

Procedure for evaluating multiple-item additive scales. The procedure provides a large number of reliability coefficients for multiple-item scales. Its subcommands encompass many different approaches to reliability definition and estimation. In general, the concept of reliability refers to how accurate, on the average, the estimate of the true score is in a population of objects to be measured.

(1)   Alpha

A factor extraction method that considers the variables in the analysis to be a sample from the universe of potential variables. It maximizes the alpha reliability of the factors.

(2)   The variables you have chosen to make up a scale in reliability analysis

Reliability analysis allows you to study the properties of measurement scales and the items that make them up. The Reliability Analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Intraclass correlation coefficients can be used to compute interrater reliability estimates.

(3)   Example

Does my questionnaire measure customer satisfaction in a useful way? Using reliability analysis, you can determine the extent to which the items in your questionnaire are related to each other, you can get an overall index of the repeatability or internal consistency of the scale as a whole, and you can identify problem items that should be excluded from the scale.

(4)   Statistics.

Descriptives for each variable and for the scale, summary statistics across items, inter-item correlations and covariances, reliability estimates, ANOVA table, intraclass correlation coefficients, Hotelling's T-square, and Tukey's test of additivity.

(5)   Models

The following models of reliability are available:

(a) Alpha (Cronbach), This is a model of internal consistency, based on the average inter-item correlation.

(b) Split-half. This model splits the scale into two parts and examines the correlation between the parts.

(c) Guttman. This model computes Guttman's lower bounds for true reliability.

(d) Parallel. This model assumes that all items have equal variances and equal error variances across replications.

(e) Strict parallel. This model makes the assumptions of the parallel model and also assumes equal means across items.

III. RESEARCH METHODOLOGY

3.1 Research Overview

This research focused on market research in launching new product. The population that is obtained in this survey is the people in Bangkok. There were approximately 10,000,000 people who were the population of this survey.

3.2 Research Survey

Using Interviews for successful Data Collection, we prepared to collect data as following personal interview.

The characteristics of personal interview are:

(1) Two-way conversation initiated by an interviewer to obtain information from a respondent.

(2) Asking face to face

(3) Most often takes plan at the respondent's place of work, whether home, officer or school.

We plan to contact with some officer in CP Meiji for interview for primary data.

3.3 Steps to Establish the Questionnaire

3.3.1 Determine Our General and Specific Research Question

With all types of structured data collection we have to set a clear idea of the objective for the interview and data needs of the study. The clear idea of the objective study is to know the trend of people in new taste of product. We need to collect interview with some officers in CP Meiji Company. The information that we needed was the case with the construction of questionnaire. We realize in every parts of interview that should set the question in questionnaire.

3.3.2 Drafting the Question in Questionnaire

We begin to draft the question in questionnaire. All questions are carefully drafted and worded so that ambiguity is minimized. It is useful in drafting the question for questionnaire.

We use closed-ended question. It is specific and frequently restricts the options available to the student respondents. The advantages of closed-ended question are that it can save time, enable to classify and record easily. It has disadvantages in using closed-ended question also. It is limited in that the respondent does not let us know how much information the respondent really has about the questions. The respondents may not like the available options and cannot easily respond.

3.3.3 Draft the Questionnaire Scale

There are four common scale formats serve in questionnaire model.

(1)   Fill in the blanks

This common format asks questions and leaves a blank for response. The stem should be a complete sentence rather than just a phrase. Normally, the answer should not be more than word, number or phrase.

(2)   Multiple choice

These questions are similar to the fill in the blank type except that the respondent is given a choice of answer and must check one. Sometimes there are discrete response options (i.e. sex; male or female) in other instances a range of value is presented

It is generally preferable to provide the respondent with choices than to present a blank to fill in. However, this model requires us to have an idea of the range of possible response. And we are putting the line for the respondents.

(3)   Comment

This model is similar in format to fill in the blank question. It poses a question and leaves adequate space for a short paragraph. This format is essential for in depth understanding. Furthermore, the information is difficult to analyze and can often be obtained in other ways. We are concerned that in all question-types, which require a narrative response, the amount of space provided would depend on the degree of detail we expect.

(4)   Likert scales

Likert scales is one of the most useful question forms. The respondents if presented a sentence and is asked to agree or disagree. A clear statement is make and the respondent is asked to indicate whether the statement reflected his or her views. For an effective Likert scale used to observe the sentence, we applied the following rules to adapted in the questionnaire construction as the statement should be short, the statement should cover the entire range of expected response, using single sentence, avoid the use of words that may not be understood by the intended responses.

While Likert scale can have many response points, the five-point scale is the most practical for most common purposes. It is easy to respond, to analyze and sufficient for most needs. We are arranged in 5 levels as the following:

For market research in taste of product line

5 Absolutely Required

4 Especially Required

3 Required

2 Not much Required

1 Not Required

3.4 Design the Questionnaire

We are planning the procedure to write down the questionnaire. The questionnaire is prepared from the studies of book, documents that involved in appraising the market research in new taste of new product line in English language. We have the interviewing to clarify any questions in the questionnaire about the study and inform the respondent about the confidentiality and the use of data.

The format of questionnaire is extremely important because it is a major factor in determining whether the questionnaire is complete. There are some important aspects in designing the questions in questionnaire. The certain types of questionnaire layouts can reduce confusion and contribute to valid responses. Response option for multiple choice, Fill in the blank and Likert Scales. The questions we use closed-ended questions for not boredom for respondent when doing the questionnaire and opened-ended comment for respondent in their opinion also.

We are as concerned and follow definitely the criteria above while construct the questionnaire.

3.5 Questionnaire Analysis

(1) Population and sample size

The population for people in Bangkok are approximately 10,000,000 people. The sample size can be found by the formula

$$n = N/(1+Ne^2)$$

where n = the size of group to take samples from

e = tolerance of sampling error for this research not more than 5%

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$$N \quad = \quad \text{total population}$$

$$\text{So} \quad n \quad = \quad 10{,}000{,}000/(1+10{,}000{,}000*0.\,05^2)$$

$$= \quad 400$$

These are the sample of this research

(2)   Research Instrument

In this project, the questionnaire will used to analyze the attitude of people in new taste of product line.

(3)   Collection of the Data

The data will be collected from the questionnaire that people in Bangkok filled in. This data will present the attitude of people of new flavor in new product line. This data will use as analysis in this project.

(4)   Statistical Measurement

The statistical program for computation in this study is the SPSS. The following statistical procedures were employed to resolve the specific question raised in this study.

Part 1   Status of the respondent

The researcher analyzed the data in the form of table as the following:

The number of students by sex

The number of student by age

The number of student by occupation

The number of student by income

The number of student by education

Part 2   The attitude of people of new taste in new product.

This part is designed it measure the attitude of consumer for a new flavor product launch. There are 14 main questions in Part 2 and have sub

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questions in questions no. 8) and these questions will used to evaluate in this part. For the sub questions, there are 5 choices in each sub-question in which each has a sub-scale having a score as:

Strongly Prefered	=	5
Well Prefered	=	4
Fair	=	3
Somewhat Prefered	=	2
Not Prefered	=	1

So each full score of 12 sub questions is equal 60 points

The score range declaration of attitude of people of new taste in new product line.

Strongly Prefered	=	4.21 - 5.00
Well Prefered	=	3.41 - 4.20
Fair	=	2.61 - 3.40
Somewhat Prefered	=	1.81 - 2.60
Not Prefered	=	1.00 - 1.80

The question no. 1 to no. 7 and no. 9 to no.14 are additional items to find the respondent idea in CP Meiji product.

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IV. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

4.1.1 Gender of Sample

Table 4.1. Gender of Sample.

Alternative	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male	157	39.3	39.3	39.3
Female	243	60.8	60.8	100.0
Total	400	100.0	100.0	

First question of this market survey to find gender of our sample. The result show that majority of our sample is Female. The figure shows that 60.8 percent, which is 243 respondents are female. The rest of samples are male with number of 157 people, which represent the rest of 39.3 percent.
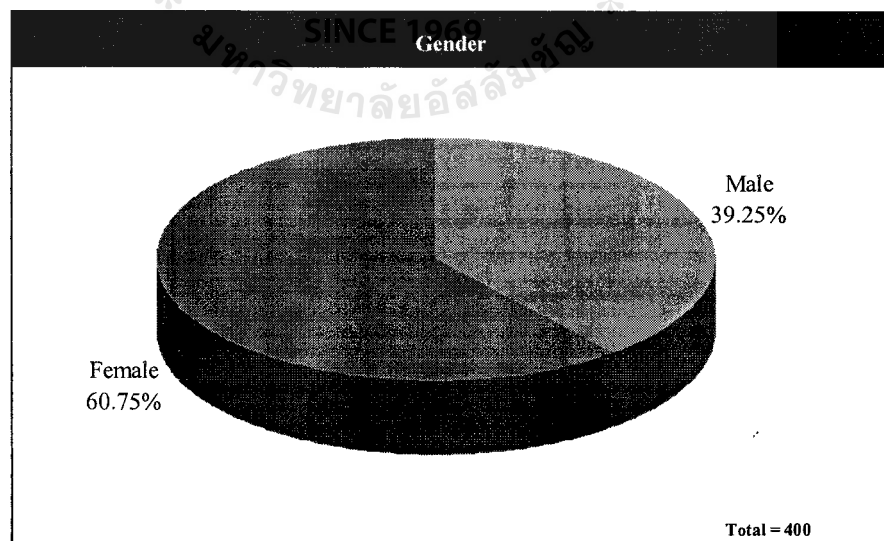

Figure 4.1. Classified respondents by Gender.

4,1.2 Aging of Respondent

Table 4.2. Aging of Respondent.

Age	Frequency	Percentage	Valid Percentage	Cumulative Percentage
14 < age <= 25 yrs.	160	40.0	40.0	40.0
25 >age <= 35 yrs.	136	34.0	34.0	74.0
35 < age <= 45 yrs.	65	16.3	16.3	90.3
>45 yrs.	39	9.8	9.8	100.0
Total	400	100.0	100.0	

This question will categories range of aging from total respondent. We try to group of aging in 4 categories and the result show by this following number. Most of respondent is in the range of age between 14 — 25 years old and represent 40 percent. Second ranking is range of age between 25 — 35 years old and represents 34 percent. The third and fourth range are age between 35 — 45 years old and over 45 years old that represents 16.3 and 9.8 percent.
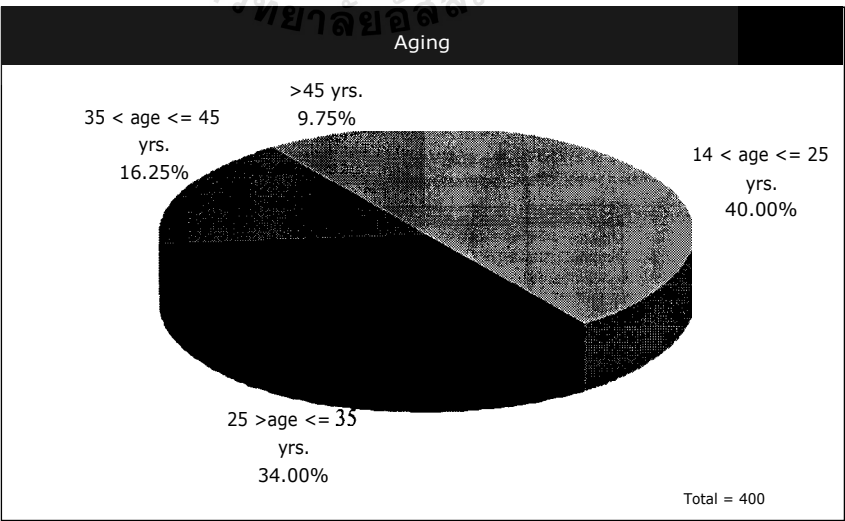

Figure 4.2. Classified Aging of Respondent.

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4.1.3 Occupation of Respondent

Table 4.3. Occupation of Respondents.

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Government officer	72	18.0	18.0	18.0
Own business	31	7.8	7.8	25.8
State enterprise employee	36	9.0	9.0	34.8
Employee	135	33.8	33.8	68.5
Student	110	27.5	27.5	96.0
Others	16	4.0	4.0	100.0
Total	400	100.0	100.0	

Employees is the most occupation of total respondent, the figure show that 33.8 percent is employee. The following ranking is student and represent 27.5 percent. The other significant occupation is Government officer the figure show 72 respondents of total 400 respondents and represents 18.0 percent. And the rest of all are State enterprise employee, 9.0 percent, Own business, 7.8 percent and others, 4.0 percent.
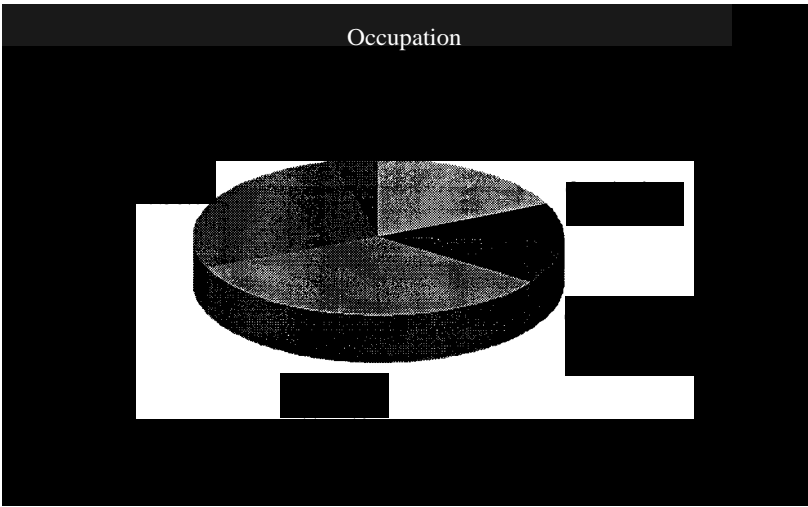

Figure 4.3. Classified Occupation of Respondents.

4.1.4 Income of Respondent

Table 4.4. Income of Respondent.

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Below Baht 5,000	132	33.0	33.0	33.0
Baht 5,001-10,000	146	36.5	36.5	69.5
Baht 10,001-15,000	71	17.8	17.8	87.3
Baht 15,001-20,000	39	9.8	9.8	97.0
Baht 20,001-25,000	8	2.0	2.0	99.0
More than Baht 25,000	4	1.0	1.0	100.0
Total	400	100.0	100.0	

The majority of respondent income is in the range of Bht 5,001 — 10,000, the figure represent 36.5 percent. The income below Bht 5,000 is second range of respondent's income, 33.0 percent represents. The third range is Bht 10,001 — 15,000, 17.8 percent represents. Other rest of range are Bht 15,001 — 20,000, 9.8 percent, range Bht 20,001 — 25,000, 2.0 percent, and more than Bht 25,000 is 1.0 percent of total 400 respondents.
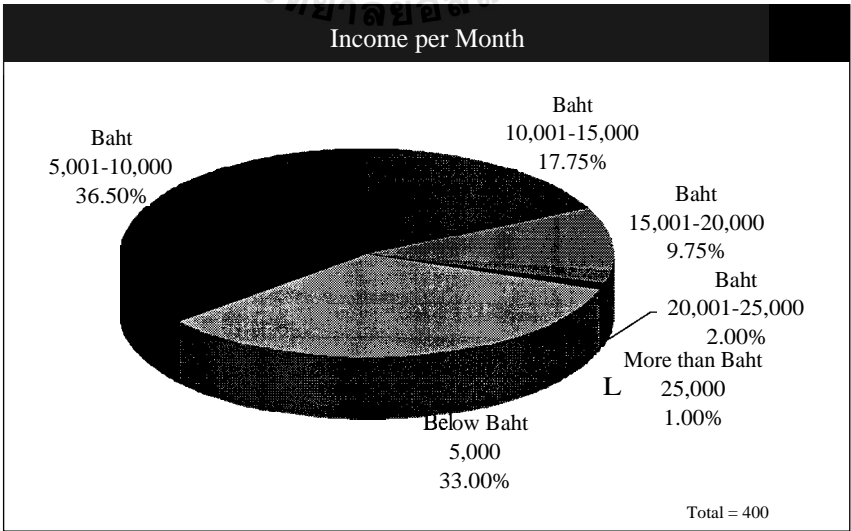

Figure 4.4. Classified Income per Month of Respondents.

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4.1.5 Education of Respondent

Table 4.5. Education of Respondent.

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Below secondary school	20	5.0	5.0	5.0
Secondary school	88	22.0	22.0	27.0
Diploma	99	24.8	24.8	51.8
Bachelor's degree	181	45.3	45.3	97.0
Higher than bachelor's degree	12	3.0	3.0	100.0
Total	400	100.0	100.0	

The result of this survey regarding Education show by the following: The majority of education of respondent is Bachelor degree, 181 people represent 45.3 percent. The 24.8 percent of total respondent is received Diploma level. Following by the secondary school level that shows 22.0 percent. The rest of all are received below secondary school, 5.0 percent. Only 3.0 percent are received degree higher than bachelor degree.
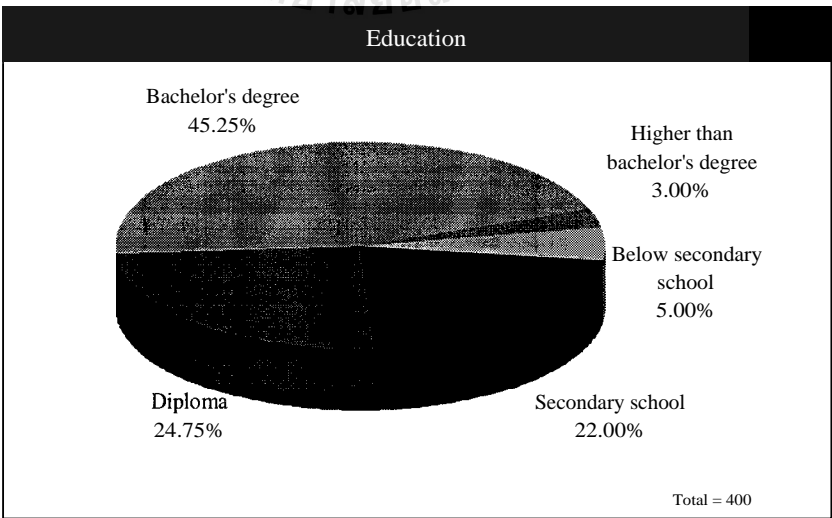
Figure 4.5. Classified Education of Respondents.

4.1.6 Do You Know CP-Meiji Pasteurized Milk?

Table 4.6, Do You Know CP-Meiji Pasteurized Milk?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Yes	400	100.0	100.0	100.0

From total 400 respondent, they absolutely know the product and CP-Meiji brand. The result shows 100 percent.
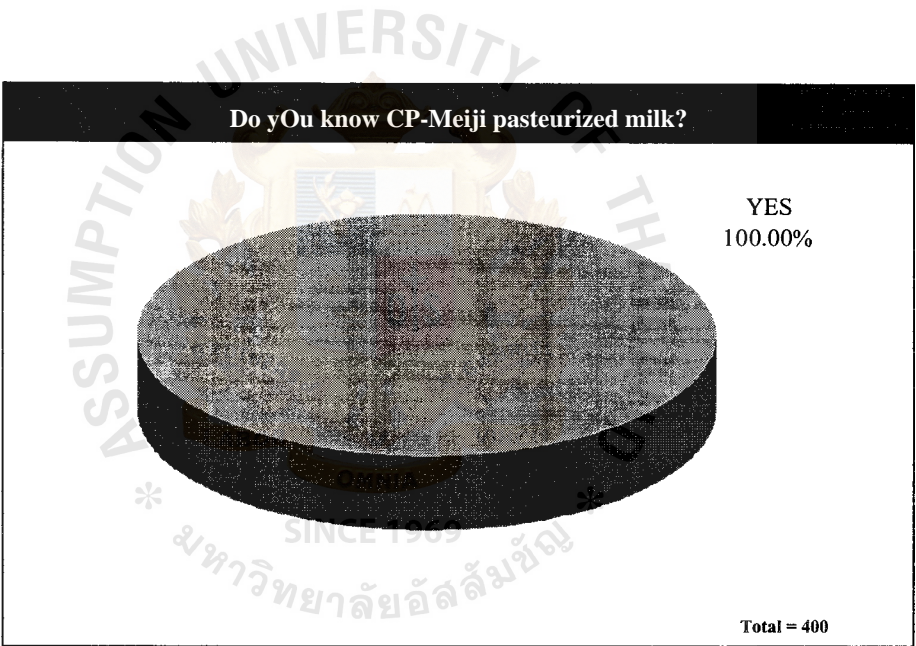
Figure 4.6. Classified Do Respondents Know CP-Meiji Pasteurized Milk.

4.1.7 How Often Do You Drink CP-Meiji Pasteurized Milk?

Table 4.7. How Often Do You Drink CP-Meiji Pasteurized Milk?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Everyday	80	20.0	20.0	20.0
Twice a week	45	11.3	11.3	31.3
Once a month	26	6.5	6.5	37.8
Occasionally	249	62.3	62.3	100.0
Total	400	100.0	100.0	

The objective of this section is to find "How often that our respondent drink pasteurized milk?" The result comes after market survey that 62.3 percent represent 249 people occasionally drink CP-Meiji pasteurized milk. From 80 people that represent 20.0 percent drink CP-pasteurized milk everyday. The other responses show 11.3 percent drink it twice a week, and 6.5 percent drink it once a month.
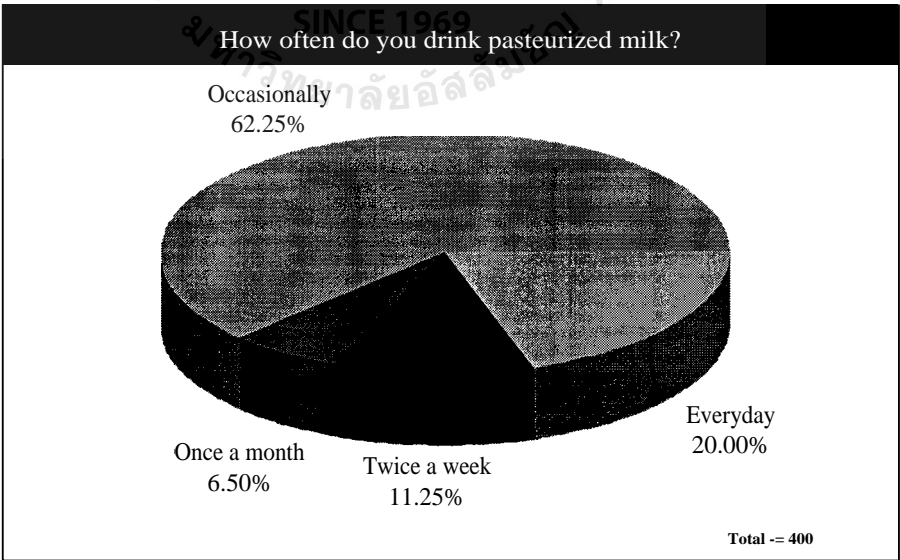

Figure 4.7. Classified How Often Do Respondents Drink CP-Meiji Pasteurized Milk.

4.1.8 Why Do You Choose to Buy CP-Meiji Pasteurized Milk?

Table 4.8. Why Do You Choose to Buy CP-Meiji Pasteurized Milk?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Favorable taste	85	21.3	21.3	21.3
Cheap price	60	15.0	15.0	36.3
Easy to buy	114	28.5	28.5	64.8
Various choices of taste	86	21.5	21.5	86.3
Reliable quality	52	13.0	13.0	99.3
Others	3	.8	.8	100.0
Total	400	100.0	100.0	

We try to find reason that consumer buy CP-Meiji pasteurized milk. So this question we ask our respondent that "Why do you choose to buy CP-Meiji pasteurized milk. And the result come up that "Easy to buy" is the first reason why consumer buy this product, 114 people represent 28.5 percent. The second reason is "Various choices of taste" number of 86 people represents 21.5 percent. Favorable taste come by third, slightly difference from second, 85 people represent 21.3 percent. Price is fourth reason by number of 60 people represent 15.0 percent. The rest of reason are "Reliable of quality" represent 13.0 percent and others reason represent 0.8 percent. This question also show that our marketing channel is one of the key that consumer choose to buy our products.
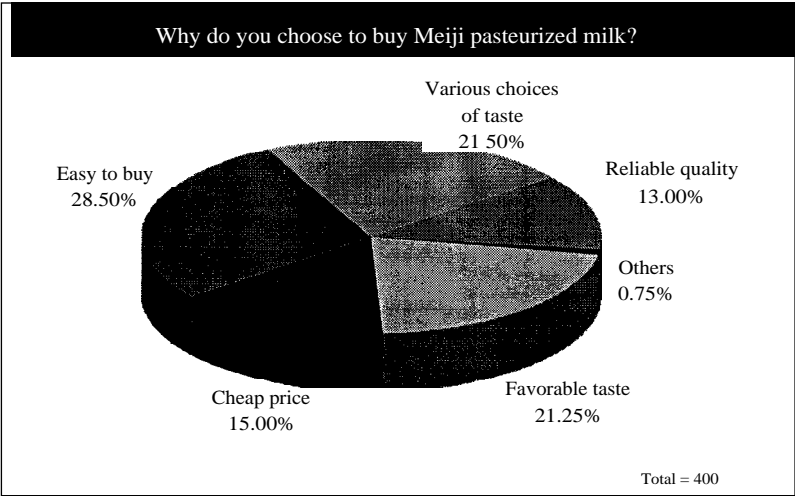
Figure 4.8. Classified Why Do Respondents Choose to Buy CP-Meiji Pasteurized Milk.

4.1.9 What Is the Flavor of CP-Meiji Pasteurized Milk That You Normally Drink?

Table 4.9. What Is the Flavor of CP-Meiji Pasteurized Milk That You Normally Drink?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Sweet	79	19.8	19.8	19.8
Fresh	78	19.5	19.5	39.3
Low fat	76	19.0	19.0	58.3
Cocoa	39	9.8	9.8	68.0
Coffee	31	7.8	7.8	75.8
Strawberry	38	9.5	9.5	85.3
Fresh mixed calcium	59	14.8	14.8	100.0
Total	400	100.0	100.0	

We try to identify "Which flavor of Meiji pasteurized milk that consumer normally drink?" After we launch this market survey, the result shows that top three flavor are Sweetened milk, Fresh milk, Low fat milk, represent a bit closely percentage

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at 19.8, 19.5 and 19.0 percent with number of respondent by the following 79, 78 and 76 people. Fresh mixed calcium come after at fourth with number of 59 people represent 14.8 percent. All the rest of ranking are Cocoa, Strawberry and Coffee flavor with number of respondent by the following 39, 38 and 31 people represent 9.8, 9.5 and 7.8 percent.
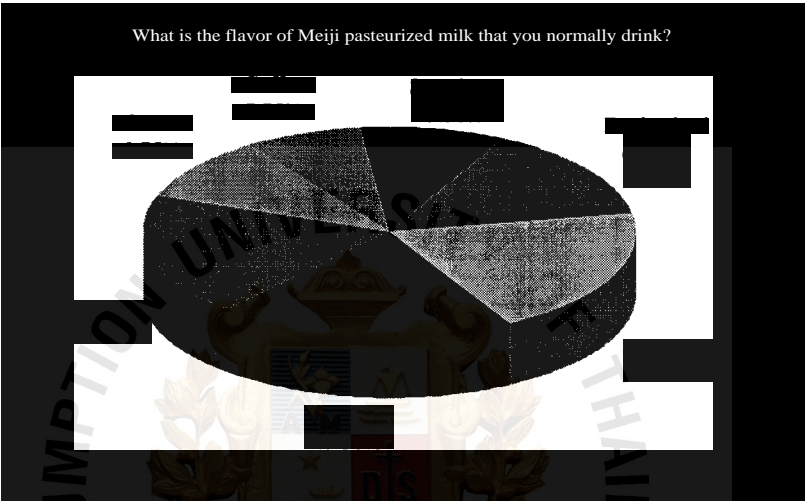
Figure 4.9. Classified What Is the Flavor of CP-Meiji That Respondents Normally Drink.

4.1.10 In Your Opinion, Which Flavor Do You Think Its Taste Should Be Improved?

Table 4.10. Which Flavor Do You Think Its Taste Should Be Improved?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Sweetened	33	8.3	8.3	8.3
Fresh	44	11.0	11.0	19.3
Low fat	29	7.3	7.3	26.5
Cocoa	27	6.8	6.8	33.3
Coffee	31	7.8	7.8	41.0
Strawberry	35	8.8	8.8	49.8
Fresh mixed calcium	14	3.5	3.5	53.3

Table 4.10. Which Flavor Do You Think Its Taste Should Be Improved? (Continued)

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Every flavor are good	187	46.8	46.8	100.0
Total	400	100.0	100.0	

After the result of above section we want to know that "Which flavor that consumer think its should be improved?" We coming surprised that majority of respondent think every flavor of CP-Meiji pasteurized milk are good, number of 187 people represent 46.8 percent agrees on that.

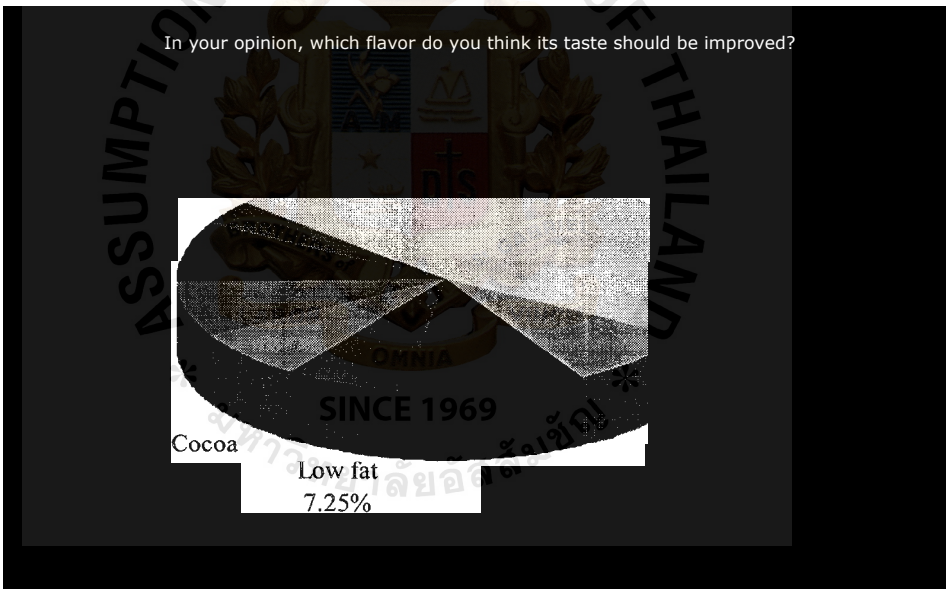Figure 4.10. Classified Flavors That Respondents Think Its Taste Should Be Improved.

So the flavor that should be improved becomes Fresh milk, 44 people represent 11.0 percent respond for this item. Strawberry come with 35 respondent and represents 8.8 percent. Percentage at 8.3 with 33 people thinks Sweetened flavor should be improved. Coffee, Low fat and Cocoa flavor coming with 31, 29 and 27 respondent and

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represent 7.8, 7.3 and 6.8 percent. The Fresh mixed calcium is come to last with only

14 people response and represent 3.5 percent.

4.1.11 If CP-Meiji Will Launch a New Flavor of Pasteurized Milk, Are You Interested?

Table 4.11. If CP-Meiji Will Launch a New Flavor of Pasteurized Milk, Are You Interested?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Most interested	55	13.8	13.8	13.8
Interested	212	53.0	53.0	66.8
Fair	97	24.3	24.3	91.0
Not interested	36	9.0	9.0	100.0
Total	400	100.0	100.0	

The purpose of this question is to find whether our respondents are interested if CP-Meiji launch a new flavor of pasteurized milk. And the result show by this following. The majority of our respondent shows respond in interested way, with 212 people represent 53.0 percent. Fair opinion show with number of 97 people, which represent 24.3 percent. Most interested opinion responses with 55 people which represent 13.8 percent. Only 36 people are not interested which represent 9.0 percent.
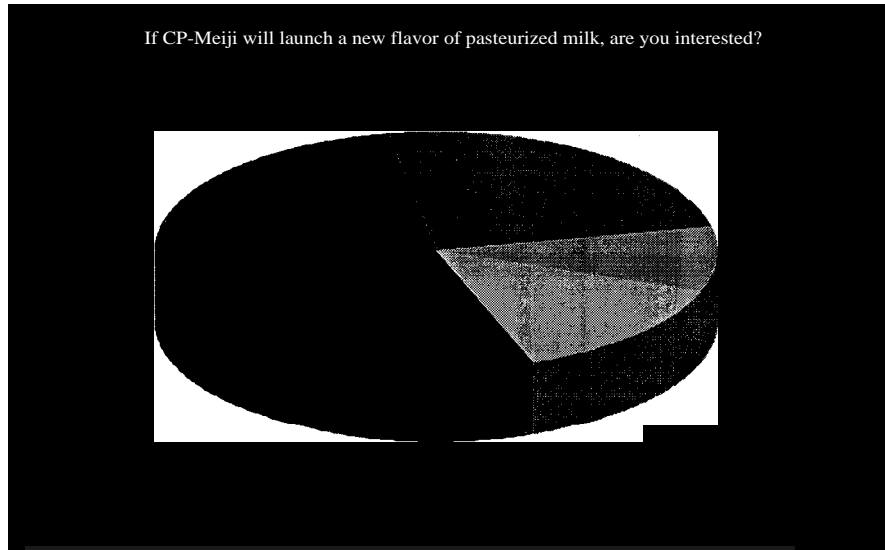
Figure 4.11. Classified Respondents Interested in New Flavor of CP-Meiji Pasteurized Milk.

4.1.12 Currently, Do You Think CP-Meiji Offers Enough Varieties of Flavors?

Table 4.12. Currently, Do You Think CP-Meiji Offers Enough Varieties of Flavors?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Enough	303	75.8	75.8	75.8
Not enough	97	24.3	24.3	100.0
Total	400	100.0	100.0	

We try to find our consumer opinion regarding do CP-Meiji offers enough of varieties of flavor. The result coming up with 303 people think CP-Meiji pasteurized milk offers enough of varieties flavor, which represent 75.8 percent. Controversial 97 people do not think that CP Meiji offer enough of varieties flavor, which represent the rest 24.3 percent.
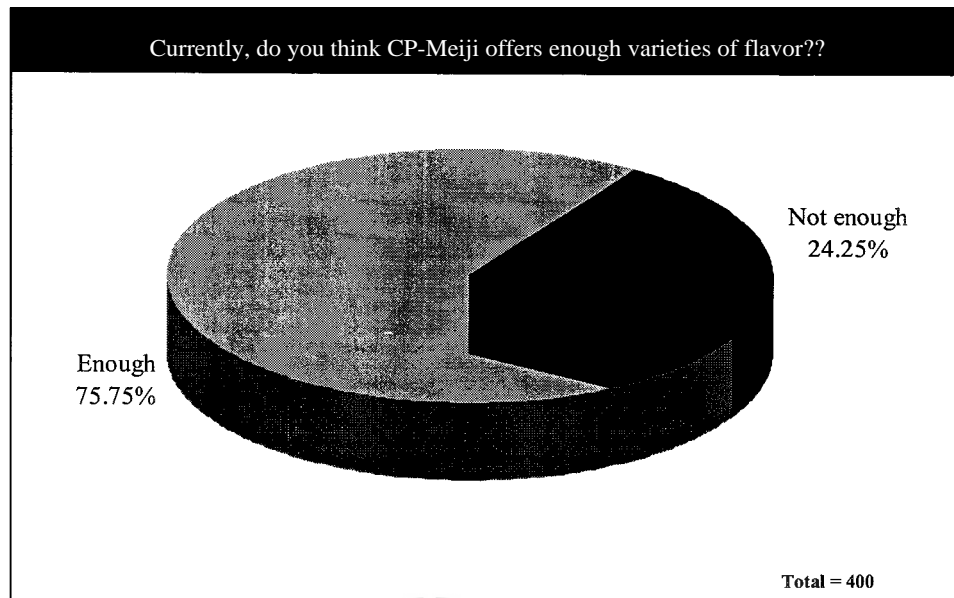
Figure 4.12. Classified Do Respondents Think CP-Meiji Offers Enough Varieties of Flavors.

4.1.13 If CP-Meiji Launches the New Flavor, Will You Buy It?

Table 4.13, If CP-Meiji Launch the New Flavor, Will You Buy It?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Certainly	162	40.5	40.5	40.5
Maybe	216	54.0	54.0	94.5
No	22	5.5	5.5	100.0
Total	400	100.0	100.0	

In assumption that if CP-Meiji launch the new flavor of product, will our respondent will buy it? We divide in 3 answer certainly, may be and no buy for new flavor. Our result show that most of respondent may be buy this new product with number of response 216 people, which represent 54.0 percent. Second come up with

75

certainly buy it with 162 people, which represent 40.5 percent. Only 22 people will not

buy new product, which represent 5.5 percent.
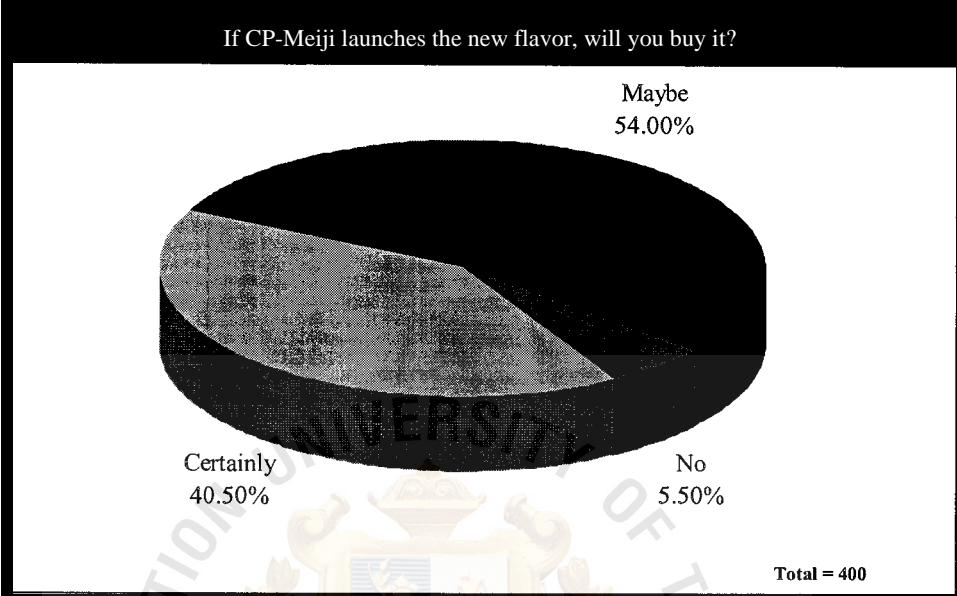
Figure 4.13. Classified How Respondent Decide to Buy the New Flavor, If CP-Meiji Launch.

4.1.14 What Do You Think about the Price of CP-Meiji, Comparing with Other

Brands?

Table 4.14. What Do You Think about Price of CP-Meiji, Comparing with Other Brands?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Very expensive	4	1.0	1.0	1.0
Expensive	48	12.0	12.0	13.0
Fair	290	72.5	72.5	85.5
Cheap	41	10.3	10.3	95.8
Very cheap	17	4.3	4.3	100.0
Total	400	100.0	100.0	

The one factor that we want to focus is pricing. We want to know that how our respondent think about price of CP-Meiji product comparing with other brands. Majority of response give us answer that CP-Meiji product are fair with number 290 people and represent 72.5 percent. Number of 48 people thinks that CP-Meiji products are expensive, which represent 12.0 percent. Other 41 people think that CP-Meiji products are very cheap compare with other brands, which represent 10.3 percent. Some of 17 people think that CP-Meiji products are very cheap, which represent 4.3 percent. Only 4 people view that CP-Meiji products are very expensive and represent only 1.0 percent.

Figure 4.14. Classified Respondents Think about the Price of CP-Meiji, Comparing with Other Brands.

4.1.15 You Usually Buy CP-Meiji Pasteurized Milk from........

Table 4.15. You Usually Buy CP-Meiji Pasteurized Milk from.....

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
School/University	32	8.0	8.0	8.0
Supermarket	189	47.3	47.3	55.3
Retail store/Convenient store/Mini mart	179	44.8	44.8	100.0
Total	400	100.0	100.0	

This question will give us the view of our respondent on where is the place that they usually buy CP-Meiji products. The two major venue that our respondent buy CP-Meiji products are Supermarket and Retail store/ Convenient store/ Mini Mart with number of response 189 and 179 people, which represent 47.3 and 44.8 percent. Some of 32 people buy products from school or university, which represent 8.0 percent.
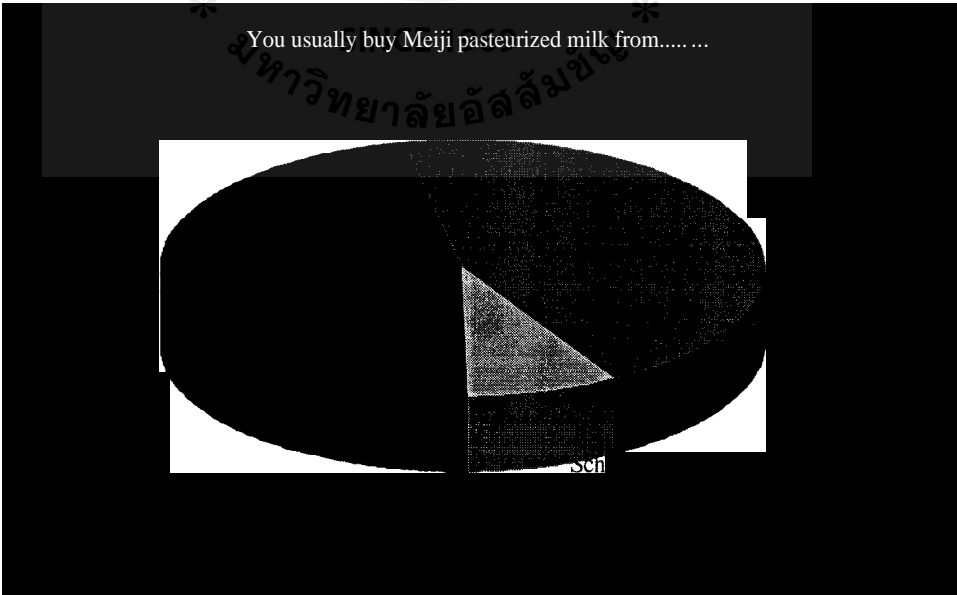

Figure 4.15. Classified Where Respondents Usually Buy CP-Meiji Pasteurized Milk.

4.1.16 What Size of CP-Meiji Bottle Do You Usually Buy?

Table 4.16. What Size of CP-Meiji Bottle Do You Usually Buy?

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Small (200 CC.)	159	39.8	39.8	39.8
Medium (450 CC.)	152	38.0	38.0	77.8
Large (830 CC.)	82	20.5	20.5	98.3
Extra large (2000 CC.)	7	1.8	1.8	100.0
Total	400	100.0	100.0	

The sizing of package for CP-Meiji products is one factor that we want to study. The small (200cc.) and medium (450cc.) size of CP-Meiji products are the most popular among our respondent. The result shows 159 and 152 people agree on that point, which represent 39.8 and 38.0 percent. Large (830cc.) size will be buy only 82 people of respondent, which represent 20.5 percent. Only 7 people will buy extra large (2,000cc.) size, which represent 1.8 percent of total 400 respondents.
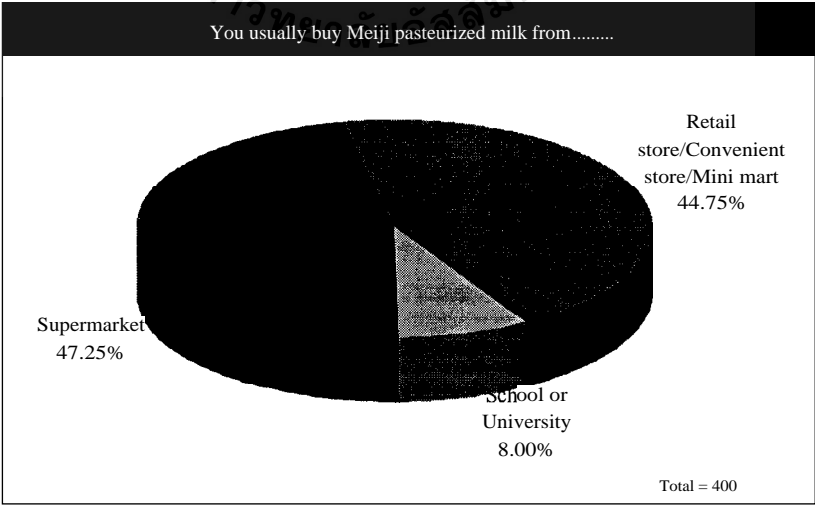

Figure 4.16. Classified Size of CP-Meiji Bottle That Respondents Usually Buy.

4.1.17 If You Would Like to Buy CP-Meiji Pasteurized Milk, But Your Favorite Flavor

Is Not Available, You Will.....

Table 4.17. If You Would Like to Buy CP-Meiji Pasteurized Milk, But Your Favorite
Flavor Is Not Available, You Will

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Wait unit it is available	18	4.5	4.5	4.5
Change to other flavors of Meiji	166	41.5	41.5	46.0
Change the store	67	16.8	16.8	62.8
Change the brand	88	22.0	22.0	84.8
Change to other kinds of milk eg., UHT	61	15.3	15.3	100.0
Total	400	100.0	100.0	

The objective of this question is to find out our respondent solution when CP-Meiji products are not available. We give them 5 actions alternative Wait until it's available, Change to other flavors of CP-Meiji, Change store, Change to other brands and change to other kind of milk eg. UHT. We can see the most response in the way that respondent will change to other flavor of CP-Meiji products with 166 people, which represent 41.5 percent. 88 people will change to other brands represent 22.0 percent. Changing the store is third ranking by number of 67 people, which represent 16.8 percent. The fourth ranking alternative is change to other kinds of milk with number of 61 people, which represent 15.3 percent. Some of 18 people will wait until that product available, which represent 4.5 percent.
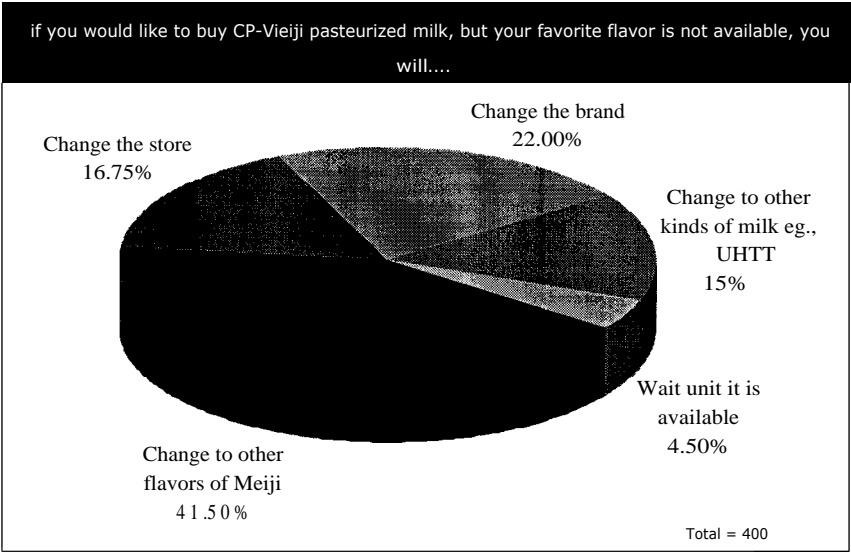
Figure 4.17. Classified Respondents' Reaction If Favorite Flavor of CP-Meiji Is Not Available.

4.2 Cross Tabulation of Results

First on gender of respondent that support for vanilla flavor we can see that approximately 60% is female who strongly preferred for vanilla flavor.
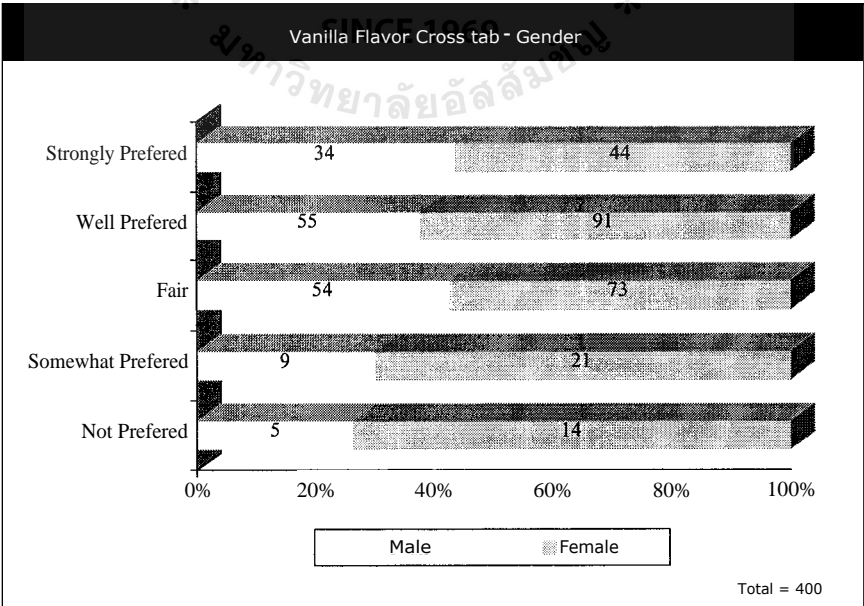
Figure 4.18. Cross Tab on Gender Who Strongly Preferred for Vanilla Flavor.

Range of aging who strongly preferred for vanilla flavor we can see that more than 40 percent of supporter are in range between 14 to 25 years old. Moreover if we combined the range over 25 years old to 35 years old who strongly preferred vanilla flavor it can be count approximately more than 75 percent of samples.
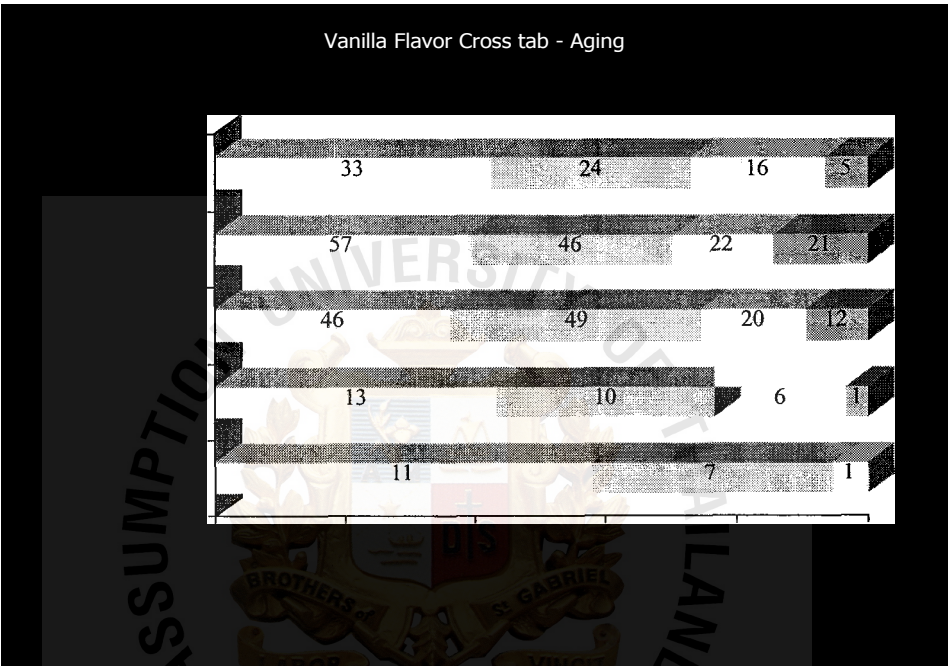
Figure 4.19. Cross Tab on Aging Who Strongly Preferred for Vanilla Flavor.

Employee and students are main occupation that strongly preferred to vanilla flavor these two occupations they can take more than 50 percent from total who strongly preferred vanilla flavor. See Figure 4.20.
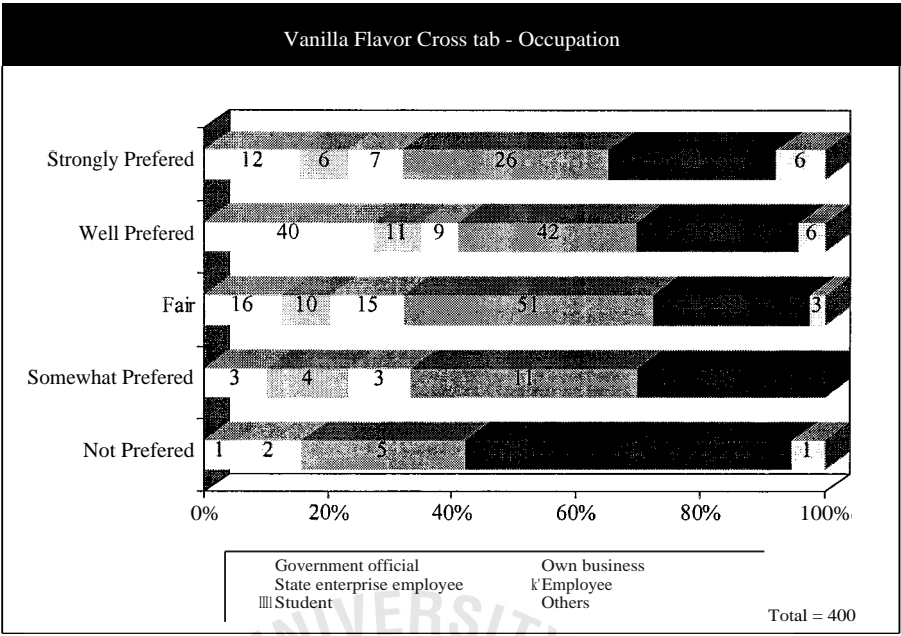
Figure 4.20. Cross Tab on Occupation Who Strongly Preferred for Vanilla Flavor.

By average income of people who preferred vanilla flavor are in the range of income between two categories of below Bht 5,000 and between Bht 5,000 — 10,000. See Figure 4.21.
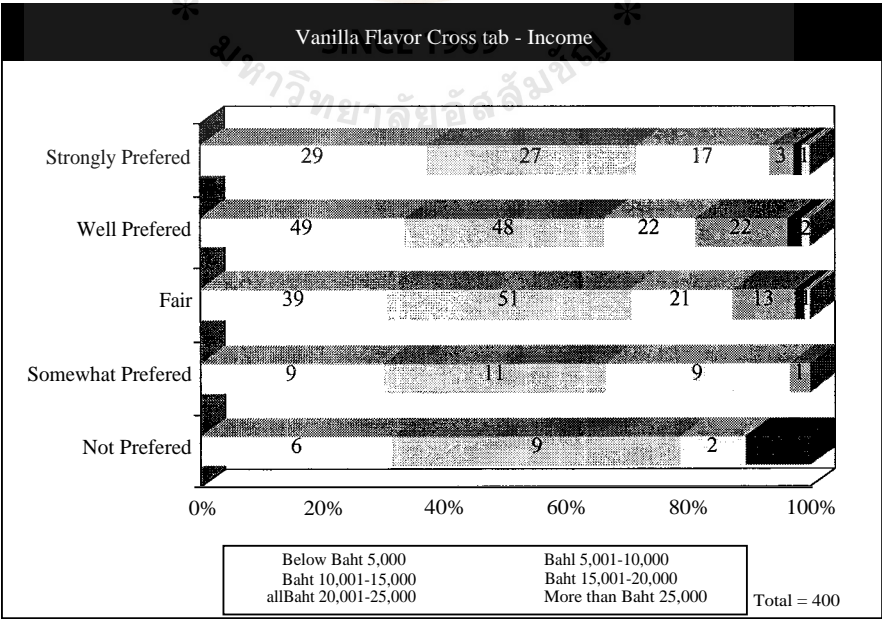
Figure 4.21. Cross Tab on Income Who Strongly Preferred for Vanilla Flavor.

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Bachelor degree and diploma are the majority level that strongly preferred vanilla

flavor, which count more than 70 percent. See Figure 4.22.
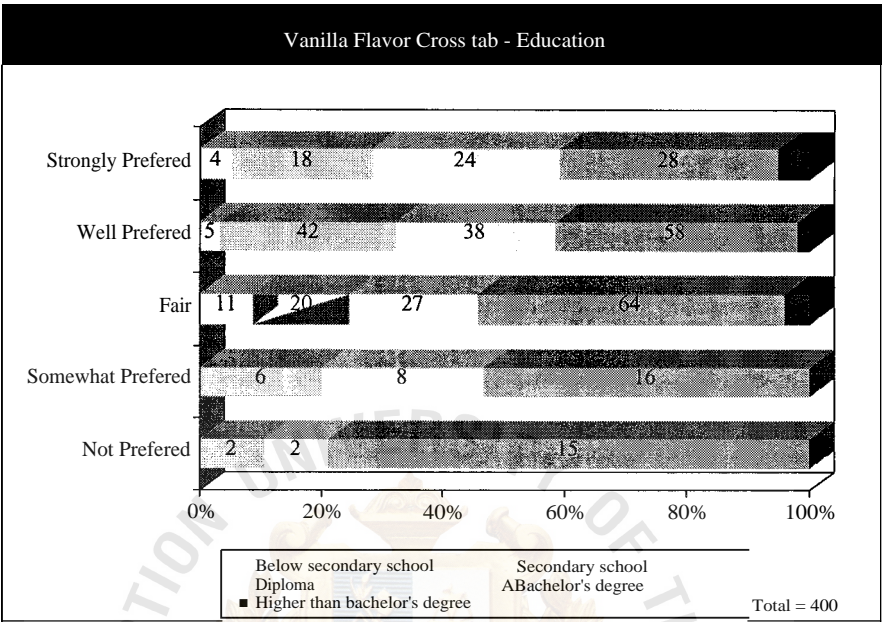
Figure 4.22. Cross Tab on Education Who Strongly Preferred for Vanilla Flavor.
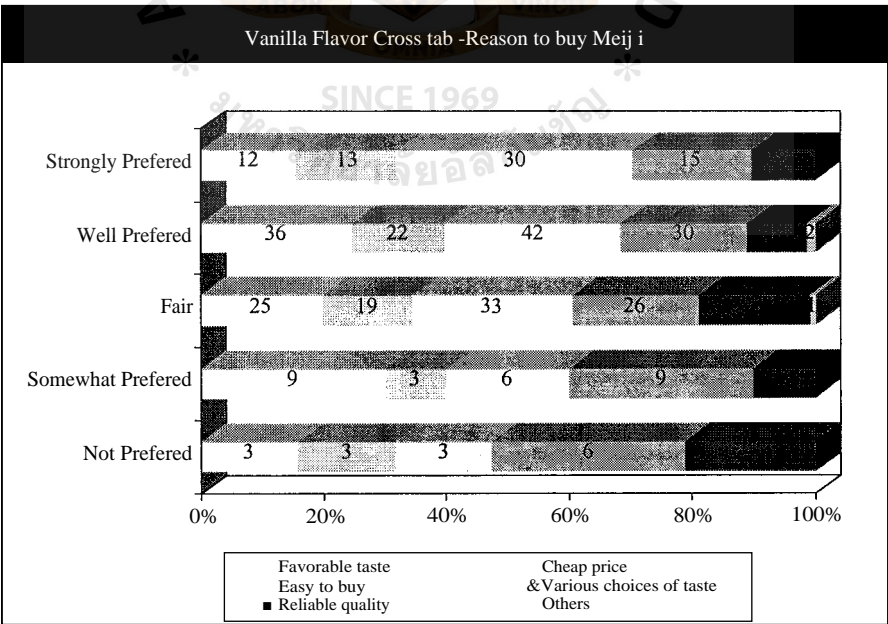
Figure 4.23. Cross Tab on Reason To Buy Meiji Who Strongly Preferred for Vanilla
Flavor.

We found that easy to buy is one major reason for those who would like CP-Meiji to launch new flavor of vanilla to market. So this is the one reason for management to provide more market channel to achieve goal. See Figure 4.23.

Placement is correlated with consumer's reason that choose to buy our new products so we can find this answer from Figure 4.24 that supermarket and convenient store are count more than 90% of total who strongly and well preferred.
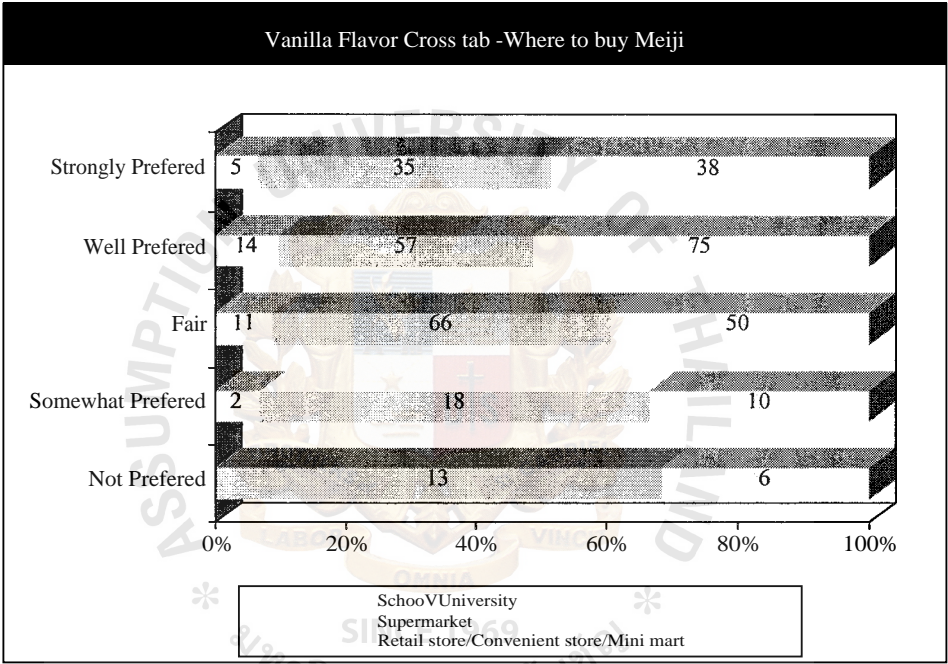
Figure 4.24. Cross Tab on Where to Buy Meiji Who Strongly Preferred for Vanilla Flavor.

Which size should be the pilot for pre launch of vanilla flavor? This question will come to management mind. We can answer this question by get the result of cross tab on size that respondent for vanilla flavor. From Figure 4.28, we can see that small (200 cc.) and medium size (450 cc.) are represent more than 70 percent of total respondent. That means company should be concern to pre launch both small and medium size in order to get to the right target which preferred either size and flavor.

85
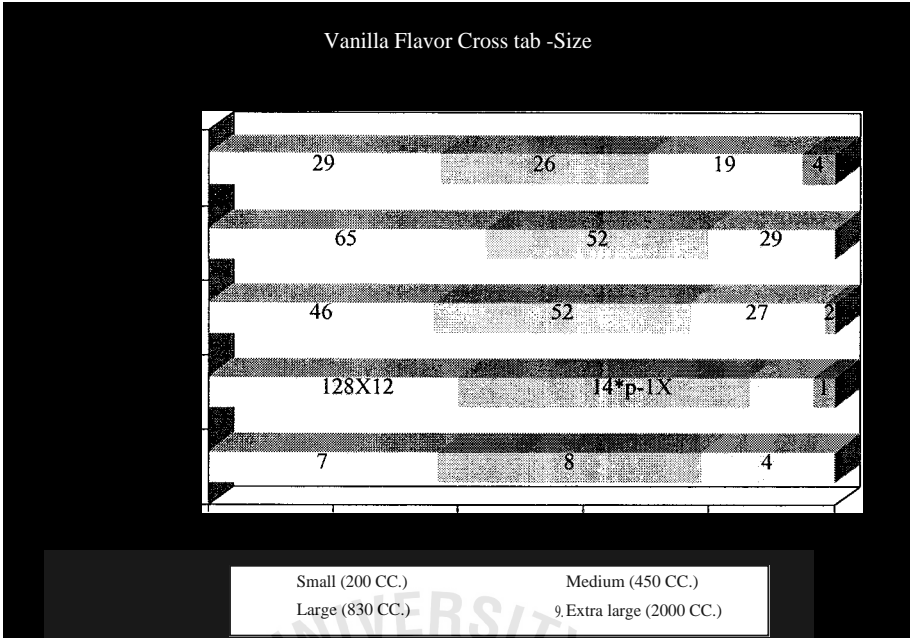
Figure 4.25. Cross Tab on Where to Buy Meiji Who Strongly Preferred for Vanilla Flavor.

4.3 Reliability Analysis

Regarding reliabilities of this survey we should consider that this survey quite one of high reliabilities scores due to Alpha value at 0.7323. Normally the value that close to 1 is means the best reliability for any survey. The following is detail in calculation of Alpha.

RELIABILITY ANALYSIS - SCALE (ALPHA)

		Mean	Std Dev	Cases
1.	V13.1	3.2925	1.0220	400.0
2.	V13.2	3.5850	1.0346	400.0
3.	V13.3	3.3775	1.0112	400.0
4.	V13.4	2.9000	.9810	400.0
5.	V13.5	3.2100	.9916	400.0
6.	V13.6	3.3100	.9088	400.0
7.	V13.7	2.8550	.9881	400.0
8.	V13.8	2.9700	1.0255	400.0
9.	V13.9	3.1100	1.0127	400.0
10.	V13.10	3.2275	.9865	400.0
11.	V13.11	3.1700	.9867	400.0
12.	V13.12	3.4075	.9869	400.0

				N of
Statistics for	Mean	Variance	Std Dev	Variables
SCALE	38.4150	36.1532	6.0127	12

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
V13.1	35.1225	31.7870	.2882	.7249
V13.2	34.8300	30.4973	.4013	.7100
V13.3	35.0375	31.8206	.2901	.7246
V13.4	35.5150	30.3156	.4513	.7037
V13.5	35.2050	30.6646	.4102	.7090
V13.6	35.1050	32.0992	.3135	.7211
V13.7	35.5600	30.1317	.4651	.7018
V13.8	35.4450	30.5884	.3978	.7105
V13.9	35.3050	31.5108	.3181	.7210
V13.10	35.1875	30.3582	.4435	.7047
V13.11	35.2450	29.8897	.4903	.6985
V13.12	35.0075	33.7518	.1245	.7444

Reliability Coefficients

N of Cases = 400.0   N of Items = 12

Alpha = .7323

V. CONCLUSIONS AND RECOMMENDATIONS

This chapter presents conclusion and recommendation regarding survey of market acceptance for a new CP-Meiji pasteurized milk launch.

5.1 Conclusions

From the total size of 400 respondents that living in metropolitan area of Bangkok with random test during weekday and weekend. We have summarizes result of this market survey to find out consumer behavior and attitude toward CP-Meiji's product. To achieve this purpose we create the questionnaire that contains valuable question regarding CP-Meiji product. First of all, we summarizes general overview of this survey by the following, most of our respondent is female with 60.8 percent. Majority of aging for respondent is in between 14 — 25 years old that represent 40.0 percent. Employee is the most response of this survey With incoming Bht 5,001 — 10,000 per month which represent 36.5 percent. Majority of education is in level of bachelor degree, which represent 45.3 percent. Moreover all respondents are know CP-Meiji pasteurized milk and other product.

Then we are going to focus on the consumer's attitude and behavior toward CP-Meiji product. Our majority of respondents are occasionally drink pasteurized milk of CP-Meiji, which represent 62.3 percent. The top two reason that consumer choose to buy Meiji milk are easy to buy with various choices of flavor that CP-Meiji provided, which count more than 50 percent of total respondent. Equally portion of three best seller flavor are sweetened, fresh and low fat milk, which approximately 19.0 percent. Currently, In our respondent opinion are thinking that every flavor of Meiji products are good, which represent 46.8 percent. But some of them think that fresh milk should be improved with 11.0 percent.

Supermarket and other convenient store are the most place that our respondent are usually buy Meiji pasteurized milk, which represent more than 90 percent. From consumer perspective, they feel that Meiji's price is fair compare to other brands. Regarding packing size that our respondent normally buy, small (200 cc.) and medium (450 cc.) are represent closely 80 percent. In case that the specific products are not available at the moment our respondent will react in changing to other flavor of Meiji.

To launch new flavor of pasteurized milk, we ask our respondent whether they think CP-Meiji offers enough varieties of flavors and we come up with 75.8 percent feels enough of varieties flavor. So the next step we want to know the response if CP-Meiji launch a new flavor whether they are interested in this new flavor. Most of them are interested, which represent 53.0 percent. Moreover only 9.0 percent are not interested in the new flavor product. Then we step more aggressive to ask our sample that will they gonna buy this new flavor. The answer comes up with they may be buy it which count 54.0 percent. And the figure show only 5.5 percent that will not buy the product.

So the next question come to us that what kind of flavor that consumer will preferred. From our market survey show that by mean of response on categories strongly preferred at approximately 41. Four out of twelve that consumer think that CP-Meiji should launch for new products. There are Vanilla, Mocha Almond, Peppermint and Ice tea by following score 78, 65, 53 and 52 (see Figure 4.26). For the other flavor that still in range of mean are Prune, Cantaloupe, Black currant and Apple that means there are some potential to launch that flavor for our new product. Moreover, from the survey show that the lowest scores are Passion fruit and Mango flavors that means these two flavor are not to be a good potential for our new product.

Controversial, we have to look out that what kind of flavor that our consumer denied to be a new flavor of CP-Meiji pasteurized. The result come in line with the above strongly preferred because the top three of flavors that consumer think that it's should not become CP-Meiji product are Passion fruit 50 points and Mango 39 points and the third is Kiwi flavor 38 points By average means approximately 26 points.
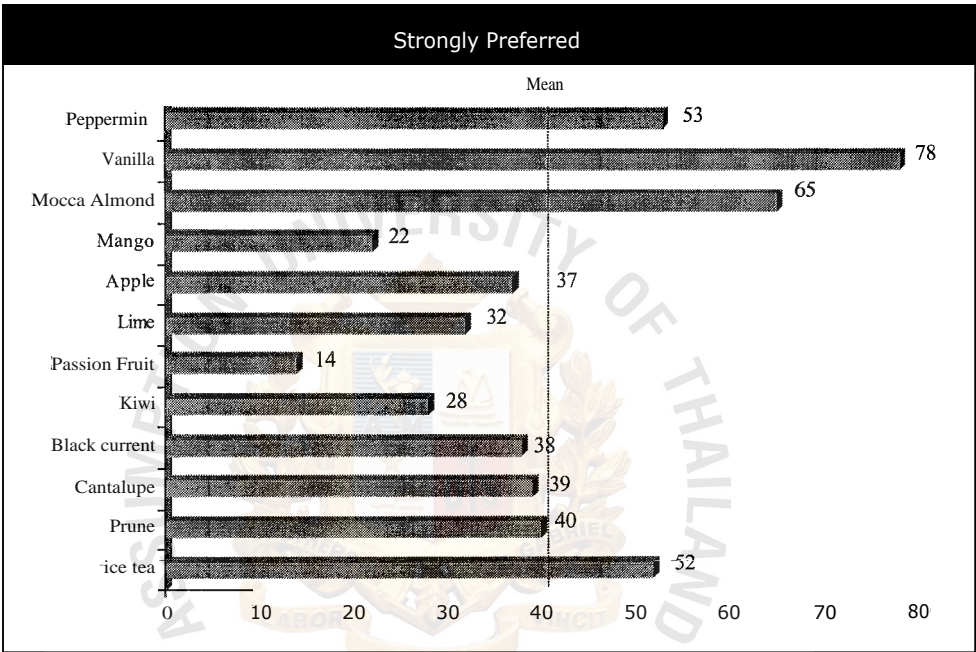
Figure 5.1. Classified Flavors That Consume Are Strongly Preferred.

From the Figure 5.1 we can see the result of that Vanilla and Mocha Almond as well are in the group that received lowest scores for not preferred to be a new products of CP-Meiji. Our conclusion from this result can answer our purpose of this survey that Vanilla flavor is the most potential flavor that CP-Meiji should be concern to be a new product of company.
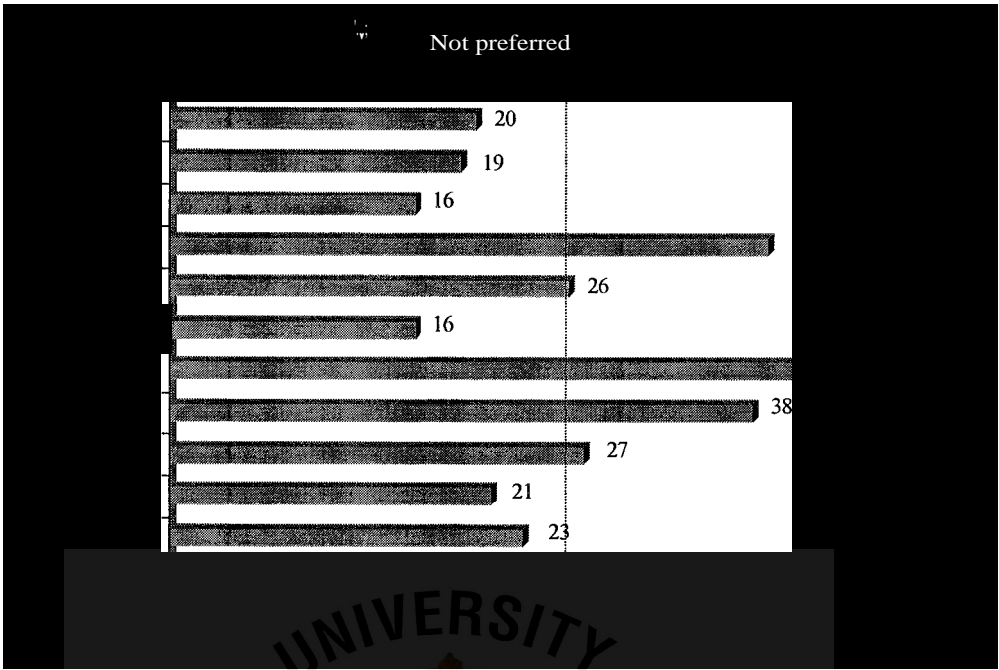
Figure 5.2. Classified Flavors That Consume Are Not Preferred.

5.2 Recommendations

In this recommendation section we will focus on which flavor that CP-Meiji should and / or should not be launch for company new product. We apply statistic based on this market survey. The Figure below can show descending meaning value of varieties of selective new flavors from our preliminary survey.
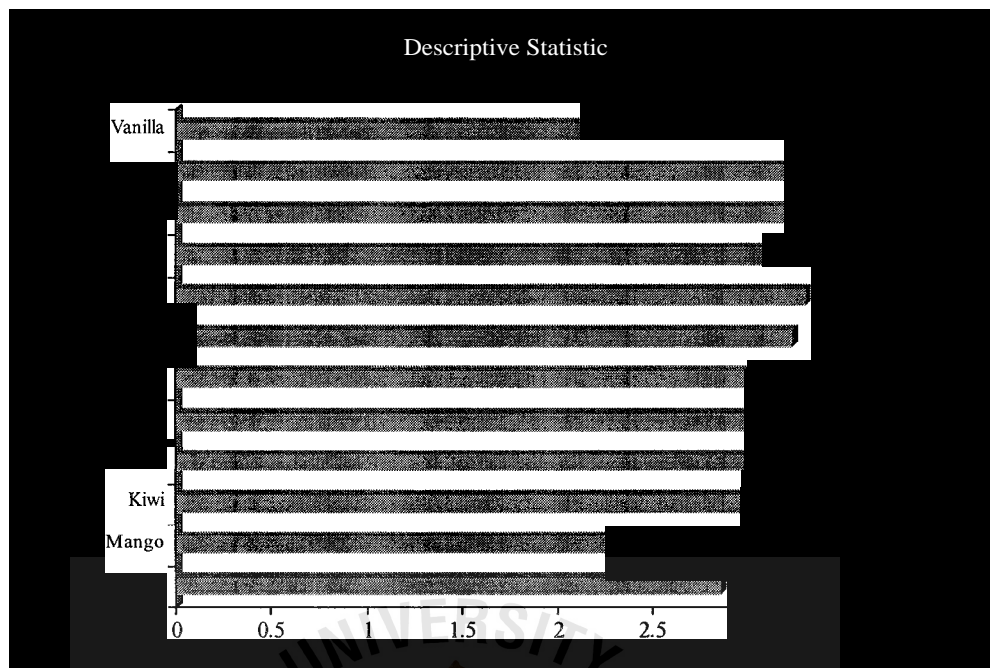
Figure 5.3. Descriptive Statistic for New Potential Flavor Of CP-Meiji Pasteurized Milk.

We experience from this market survey that Vanilla flavor is the most potential one that CP-Meiji should concern to be company new products due to high mean value among another flavor with 3.585 points. So we can imply with market theory that from Thai consumer behavior will most response if CP-Meiji launch new vanilla flavor. Ice tea is runner up flavor that gonna be launch after the first vanilla one with value at 3.408 points. The third is Mocha Almond flavor with mean value at 3.378 points. The fourth coming up with Lime flavor which get value at 3.310 points of mean. Peppermint is in the fifth with 3.2925 points of mean. Next one is Cantaloupe flavor with 3.227 points. Apple is in seventh place with 3.21 points. And the couples last ranking are Mango and Passion Fruit that received only 2.900 and 2.855 points of mean.

Only that we know which flavor has potential to be a profitable product of company. But it's not enough for marketing purpose to launch this product successful.

We should concern that what kind of consumer that response for vanilla flavor to place our product on the right place and the right time, so we focus on general information for who response for this vanilla flavor.

5.3 Marketing Strategy

After collect all the information regarding CP-Meiji pasteurized milk, we can recommend company basic step to achieving launch the new flavor product of company. Currently Vanilla is the hottest potential flavor in Thai market. In order to make this campaign successful, we know that female is major potential gender with average age between 14 — 35 years old. The first stage for launch vanilla product we should produce in the small and medium size and place to supermarket and convenient store channel. Moreover we can add some promotion campaign in the school or any major company because most of vanilla respondent are student and employee. CP-Meiji should search more distribution channel because our consumer reason to buy our products is easy to buy. With this market strategy we think CP-Meiji will achieve launch new flavor of pasteurized milk.

APPENDIX A

QUESTIONNAIRE

Questionnaire

Part I e Personal Data

1. Sex
   II Male   11 Female

2. Your age
   Ll 14 < age S 25 yrs.   E   25 > age 35 yrs.
   LI 35 < age 5 45 yrs.   > 45 yrs.

3. Your occupation is
   El Government official   El Own business
   CI   State enterprise employee   CI Employee
   •   Student   CI Others, please
   specify.........................

4. Your income/month
   •   Below Baht 5,000   Baht 5,001 - 10,000
        Baht 10,001 - 15,000   ▪   Baht 15,001 - 20,000
        Baht 20,001 - 25,000   More than Baht 25,000

5. Your education is
   171 Below secondary school   CI   Secondary school
   El Diploma   Bachelor's degree
   CI Higher than bachelor's degree   CI   Others, please specify...................

Part II o Attitude of respondent toward CP-Meiji pasteurized milk

6, Do you know CP-Meiji pasteurized milk?
   a) Yes   b) No

7. How often do you drink pasteurized milk?
   a) Everyday   b) Twice a week
   c) Once a week   d) Once a month
   e) Occasionally   f) Others, please
   specify.........................

8. Why do you choose to buy Meiji pasteurized milk?
   a) Favorable taste   b) Cheap price
   c) Easy to buy   d) Various choices of taste
   e) Reliable quality   0 Others..............................

9. What is the flavor of Meiji pasteurized milk that you normally drink?
   a) Sweet   b) Fresh
   c) Low fat   d) Cocoa
   e) Coffee   Strawberry
   g) Fresh mixed calcium   h) Others..............................

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10. In your opinion, which flavor do you think its taste should be improved?
   a) Sweet
   b) Fresh
   c) Low fat
   d) Cocoa
   e) Coffee
   f) Strawberry
   g) Fresh mixed calcium
   h) Every tastes are good

11. If CP-Meiji will launch a new taste of pasteurized milk, are you interested?
   a) Most interested
   b) Interested
   c) Fair
   d) Not interested

12, At present, do you think CP-Meiji offers enough varities of taste?
   a) Enough
   b) Not enough

13. From the list below, what is the new taste that you prefer the most?

Taste	Strongly Prefered	Well Prefered	Fair	Somewhat Prefered	Not Prefered
Peppermint					
Vanilla					
Mocca Almond					
Mango					
Apple					
Lime					
Passion Fruit					
Kiwi					
Black current					
Cantalupe					
Prune					
Ice tea					

14. If CP-Meiji launches the new taste, will you buy it?
   lll Certainly   7ll Maybe   El No

15. What do you think about the price of Meiji pasteurized milk, comparing with other brands?
   a) Very expensive
   b) Expensive
   c) Fair
   d) Cheap
   e) Very cheap

16. You usually buy Meiji pasteurized milk from
   a) School/university
   b) Supermarket
   c) Retail store/convenient store/mini mart d) Others.................................

17. What size of CP-Meiji bottle do you usually buy?
   a) Small
   b) Medium
   c) Large
   d) Extra large

18. If you would like to buy CP-Meiji pasteurized milk, but your favorite flavor is not available, you will.........
   a) Wait until it is available
   b) Change to other flavours of Meiji
   c) Change the store
   d) Change the brand
   e) Change to other kinds of milk eg., UHT f) Others................

19. Additional
Comments°...
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