

CHAPTER 3

RESEARCH METHODOLOGY

The main purposes of this chapter are to explore the research design according to the nature of the research objectives. The research philosophy is introduced first. Following that, the research methodology and methods based on the theory are discussed. Next, the research strategy is put forward. Then, the method of data collection is explained before discussing data analysis. Last of all, the ethical issues and research limitations are given.

Introduction

Research methodology is considered a system of rules and procedures in solving research problems (Ghauri & Grønhaug, 2005). Research methodology is the body of the research which comprises the details about the research design, sampling procedures, and other technical procedures used for collecting the data (Zikmund, 2003).

Research Philosophy

Saunders, Lewis, and Thornhill (2000) mentions that the research philosophy is the way that individuals think about the development of

knowledge. They also put forward the notion that research philosophy can be divided into two approaches-positivism and phenomenology.

The positivist approach relies on the assumption that the world consists of a social reality which can be observed objectively and analysed statistically to produce law-like generalisations (Saunders et al., 2000). To put it simply, the role of research is to test theories and provide material for the development of laws.

The phenomenological approach is a descriptive, interpretative approach to research based on the assumption that the social world is too complicated for scientific study. The social world of business and management is continually changing with the research and the researcher themselves part of the change (Saunders et al., 2000).

However, Ghauri and Grønhaug (2005) point out that both positivism and phenomenology are considered a significant part of business and management research. In addition, both approaches can be used together in many areas of research.

In this research, a positivist approach was adopted because the whole research process reflects the empirical study of positivism. The research adopted this approach by focussing on a relatively structured methodology with a questionnaire to conduct statistical analysis.

Research Approach

Different researches can be conducted using different approaches. It is widely accepted that deduction and induction are two ways of conducting research. According to Ghauri and Grønhaug (2005), the deductive approach builds hypotheses from existing knowledge and then tests the hypotheses through empirical observation; deductive research is used to explain causal relationships between variables (Saunders et al., 2000). Also, particular instances are assumed from general inferences (Zikmund, 2003). The deductive approach can be regarded as moving from the general to the particular. In contrast, in the inductive approach the research comes before the theory; therefore, the theory is generated from the outcomes of the research (Ghauri & Grønhaug, 2005).

In this research, the deductive approach was implemented, which was also relevant to the positivism philosophy.

Research Strategy

Research strategy is the general plan of the overall approach adopted to answer the research questions (Saunders et al., 2000). There are several types of research strategies, for instance, experiment, survey and case study. In this research, the author used the survey strategy to conduct the research by using a questionnaire. According to Saunders et al. (2000), this strategy is associated with the deductive approach. A survey is a data collection method

employed as vital tool to get opinions, attitudes, descriptions and cause-and-effect relationships (Ghauri & Grønhaug, 2005). Through this method, as well as that of interviews, the author can acquire a large amount of data from groups of people. Besides this, the data collected from the questionnaire are easy to compare due to the fact the data are in standard form.

Nevertheless, some limitations of using the survey strategy have been established. For one thing, a survey is time consuming due to the design and piloting the questionnaire as well as analysing the results. Another is that the data collected by a questionnaire is likely to be narrower than that collected by qualitative methods (Saunders et al., 2000).

Data Collection

According to Ramenyi, Williams, Money, and Swartz (2005), the core of empirical research is based on gathering the evidence to support its findings, and the collection of evidence is considered a significant part of the research strategy. This research gathered data from many sources, both secondary and primary. Internet websites, web pages, studies and reports of institutions and departments, academic journals, historical studies as well as textbooks constituted the secondary data, whereas the data collected from the questionnaire surveys constituted the primary data.

Secondary Data

The secondary data are data collected and recorded previously to the current research, for other purposes by other people. Saunders et al. (2000) point out that secondary data provide a useful source used to answer or to begin to answer the research questions, and consist of raw data and published summaries; moreover, the secondary sources include both quantitative and qualitative data. Use of the secondary data can save time as well as money. What is more, it can help better formulate and understand the research problem, and broaden the base from which scientific conclusions can be drawn. In addition, it can result in primary data being more easily interpreted and better understood (Ghauri & Grønhaug, 2005).

Secondary Data Collection

The secondary data that this research employs are gathered from the following sources:

Library: The researcher gained secondary data for the literature review from many textbooks and academic journals in areas such as internet marketing, e-marketing and online marketing from Ramkhamhaeng University library and the Journal of Market Research from Ramkhamhaeng University library learning services.

Database: This is information that is available on computerized databases such as the internet. For this research, the author obtained many sources of information for completing the literature review.

However, there are some limitations in using secondary data. For one thing, these collected data are collected for different aims and might not be fitting for this research. Moreover, they might have differences in definitions of variables, terminology defined and measurement units. In addition, the data might be out-of-date (Zikmund, 2003). Therefore, primary data were used to solve the limitations.

Primary Data

Primary data are the data made for this research. This is more related to the research objectives and addresses the answers to the research questions. Therefore, it can be seen that primary data are normally used when secondary data are not enough or unable to solve the research question.

Ghauri and Grønhaug (2005) propose that primary data can result in many positive aspects for the research. One thing is that it is quite easy to get the answers to the particular problems. What's more, it tends to be easier to analyse. Moreover, it seems that the questionnaire is more suitable for collecting people's opinions than other methods, like observation. It also appears that secondary data may not show the attitudes, beliefs as well as opinions that are behind the research. In fact, from previous researches, some of them conducted surveys to explore customers' attitudes. An example of this is research that investigated the opinions of customers about fashion merchandise purchasing over the internet.

Nonetheless, there are some limitations in primary data collection. First of all, the quality and scope of information. Sometimes people are reluctant or

refuse to cooperate. This might happen because of a lack of time or a lack of incentive. Secondly, collecting primary data can take a long time and be costly. Besides, it is quite difficult to get access, and it is necessary to be careful about using the appropriate tools, procedures as well as methods of analysis. Last but not least, unexpected factors may influence and interfere with data collection purely for the reason that there is less degree of control in data collection (Ghauri & Grønhaug, 2005).

Primary Data Collection

Ghauri and Grønhaug, (2005) also proposed that there are many types of primary data, which are status and state of affairs data, psychological and lifestyle data, attitude and opinion data, awareness and knowledge data, data on intentions, data on motivations and data on behaviour. As posited Saunders et al. (2000), primary data can be collected by three ways, namely observation, interviews, and questionnaires. In this research, the instrument used for collecting primary data is the questionnaire, which is most likely one of the most popular data collection methods in conducting business research (Ghauri & Grønhaug, 2005).

Questionnaire

A questionnaire survey is a data collection technique that asks individuals to answer the same questions set in a prearranged order, which may be conducted with the respondent face to face with an interviewer (Ticehurst & Veal, 1999; Saunders et al., 2000). However, this also includes

any techniques whereby responses are given to questions without the presence of the interviewer, such as over the telephone (Ghauri & Grønhaug, 2005).

To put it simply, the questionnaire gathers data by asking people to respond to the questions, with the answers being subsequently recorded for use for the research. The questionnaire survey is normally associated with a sample of the population that the researcher is interested in. Also, the information collected from the questionnaire surveys is based on the respondents, and therefore relies on their memories, sincerity as well as the questions themselves that are provided in the questionnaire (Ticehurst & Veal, 1999).

Forms and Types of Questionnaire

The questionnaire survey can take any of two forms: *Interviewer-completed* or *respondent-completed*. Concerning the interviewer-completed questionnaire, an interviewer records the answers from a respondent after reading the questions out to the respondent. In contrast, the questionnaire is respondent-completed when the questionnaires are read and filled out by respondents (Ticehurst & Veal, 1999).

Similarly, Saunders et al. (2000) classifies the questionnaire survey into two broad types: Self-administered and interview-administered. When the questionnaire is completed by the respondent, this is a self-administered questionnaire; for instance, an online questionnaire, delivery and collection questionnaire, and postal questionnaire. When the interviewer records the questionnaire based on the individual answer, this is interview-administered.

This type of questionnaire is a telephone questionnaire and structured interview.

In this research, there were limitations in time as well as cost in conducting the research. Therefore, the questionnaire survey took the form of the respondent-completed type; apart from this, the questionnaire was sent via email for the respondents to complete and return as this method was cheaper and quicker than the interviewer-completed type. The questionnaire used in this research is attached in Appendices A and B. However, the disadvantage of respondent-completion is the low response rate, which can cause bias in the results (Ticehurst & Veal, 1999). Moreover, the author tends to pay more concern on design and presentation of the questionnaire; additionally, the written words of the questionnaire must be clarified (Ticehurst & Veal, 1999; Zikmund, 2003).

Types of Questions

This research contains many types of questions that aim to study the potential of Facebook as a marketing promotional tool. The questionnaire, as can be seen in Appendix A, combines both open-ended and closed-ended questions.

Open-ended questions are beneficial when the author needs an answer that has detail or when the author wants to know the primary factor in the mind of the respondent (Saunders et al., 2000). However, it might be difficult to analyse the answers from this question type because individuals' answers might be distinctive (Zikmund, 2003). Apart from this, open-ended questions

can consume too much time if there are too many (Saunders et al., 2000).

An example of this kind of question is as follows:

Please identify at least one banner ad you've clicked

A closed-ended question is a question that offers an option of answers for the respondent to select. This type of question is easier and quicker for the respondents to answer because of the minimal writing involved (Saunders et al., 2000). However, it is necessary to classify the answers according to standardised categories before collecting the data. This can make it possible to compare, code, tabulate and interpret the data (Zikmund, 2003). An example of this kind of question is:

How much of your shopping for clothes and household items do you do on an online store? Would you say:

All of it _____

Most of it _____

About half of it _____

About one-quarter of it _____

Less than one-quarter of it _____

In the same way, it has been argued that the closed-ended question can be categorized into many types, such as scale questions, ranking questions, category questions, and checklist questions (Saunders et al., 2000; Zikmund, 2003).

In this research, the Likert scale was used as a technique in measuring the attitude of customer towards trust. Saunders et al. (2000) propose that scale or rating questions are normally used for collecting attitude data. In this style of question, the author asks the respondent to specify their agreement or disagreement with a statement or set of statements, or the importance the respondent attaches to an issue (Ticehurst & Veal, 1999). However, it would appear that different answer patterns can bring about the same total scores. Therefore, the same total score might actually reveal different attitudes (Zikmund, 2003). An example of this kind of question is as follows:

How important was each of the following factors in your decision to click any banner ad?

	Very important	Quite important	Not very important	Not at all important
A. Banner Design	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
B. Banner Message	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
C. Banner Colour	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
D. Animation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

Apart from the Likert scale, attitude statements are also used in this research to measure attitude. According to Ticehurst and Veal (1999), attitude statements are used to investigate attitudes of the respondents towards issues. In this style of question, the author uses a scale for respondents to indicate whether they agree or disagree with a statement. An example of this type of question is as follows:

Please read the statements below and indicate your level of agreement or disagreement with them by ticking the appropriate box.

The price of a product bought online is much cheaper than that bought from a High Street store.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Pilot test

It is suggested by Bell (as cited in Saunders et al., 2000) that, ‘however pressed for time you are, do you best to give the questionnaire a trial run’. In pilot testing, the author asks a group of people, which should be at least 10 (Saunders et al., 2000), to comment on the questionnaire before conducting the data collection of the research. In response to the pilot test, the author can avoid respondents having problems in answering the questionnaire; moreover, the author might not have any problems arising from recording the data. Furthermore, a pilot test is likely to assess the validity of questions while the author might also attain the probable reliability of data that will be collected from the research.

In this research, the author piloted the questionnaire before collecting the data, by giving questionnaires to 20 of his friends for completion and return with comments. This helped the author ascertain the clarity of the instructions and language used in the questionnaire.

The researcher also conducted reliability analysis in order to find out the Cronbach’s alpha, which should be higher than 0.6 to indicate highly

consistent data. Most social science research situations accept a reliability coefficient at 0.6 or higher. This is really what is meant when the researchers says they have “high” or “good” reliability. As can be seen from the reliability analysis in Table 1, the Cronbach’s Alpha was 0.857, which is therefore acceptable in terms of reliability. This reliability analysis tested 20 items. From the pilot test, the researcher was confident that this questionnaire had high reliability.

Table 1

Reliability Analysis

Case Processing Summary			
		<i>N</i>	%
Cases	Valid	23	5.8
	Excluded(a)	377	94.3
	Total	400	100.0

Sampling

It is impossible to collect and analyse data from every member of a population due to limitations in time, money and access. Therefore, it is quite necessary for researchers to collect data from a sample of the population, who represent the whole population that the researcher wants to study (Saunders et al., 2000). In this case, various methods of sampling techniques allow the researcher to cut the amount of data needed by considering only the data from a subgroup, not from the whole population (Saunders et al., 2000).

Sampling Method

Sampling techniques are commonly divided into two types: Probability and non-probability sampling. Probability sampling is selecting samples randomly with every member of the population having an equal chance of being selected (Ghauri & Grønhaug, 2005). Non-probability sampling is when the chance of each case being selected from the population is unknown, and the sample is chosen randomly; therefore, some members of the population have more chance to be selected than others (Ghauri & Grønhaug, 2005; Saunders et al., 2000). The non-probability sample technique can be divided into several categories: Quota, purposive, snowball, self-selection, and convenience.

In this research, the author used convenience sampling with the author selecting the sample until the sample size needed for the questionnaire survey in the research was reached. Likewise, the sample was selected with a population discriminator as the author selected respondents who must use and have internet access. Saunders et al. (2000) asserted that convenient sampling is the simplest way to get a sample. However, they also suggested that this method can lead to bias as the sample might not be representative of the whole population.

Sample Size

The questionnaires of this research were given to 400 such individuals, comprising 109 males and 291 females aged around 18-50 years old who surf the internet. The reason why people whose age is under 50 years old were

chosen is that people over 50 years old may have less basic knowledge of computer use as well as knowledge about the internet.

Ethical Issues

For ethical concerns, a clear statement was made at the beginning of the questionnaire concerning the broad nature of the research, how the data would be used, and that anonymity and confidentiality would be ensured. Moreover, it was made clear that respondents were not obliged to answer a question if they did not wish to. For the part of personal information, the questionnaire had only general questions. Furthermore, the questionnaire did not contain very private questions such as questions about credit card numbers or other such questions. In addition, the data from the questionnaire is for educational use only. If a third party does request the data, the researcher will ask for his/her reasons before deciding whether to give him/her the data.

Limitations of the Research

There are some limitations in this research as follows:

1. The Facebook developer always changes the rules, regulations and functions on Facebook and this could affect Facebook users. Therefore, the research findings might differ if the questionnaires were done at different points in time.

2. As it is believed that people in different cultures have different attitudes towards the same things, the questionnaires were conducted only in Bangkok, Thailand. As a result, the research findings might be different if the questionnaires were done in other places.

3. Due to costs and time limitations, the sample size is small size and therefore possibly too small to represent the whole population. Consequently, the results derived from these samples might not be generalizable for the entire population. An extensive range of the sample, particularly sample size, would have been collected for further study in order to obtain the information from the representatives if there had been more time to do this research.

4. Questionnaire design: It is quite difficult to get a perfect questionnaire for data collection and this may lead to bias in this research, and also the questionnaire may not exactly answer the research question even though the author did pilot test the questionnaire before sending them all out to the respondents.