

CHAPTER 3

RESEARCH METHODOLOGY

This chapter provides a comprehensive description of the research methodology employed in this study. The purposes of the study were; a) to investigate what metacognitive reading strategies students use when reading business texts; b) to discover how they use the strategies in actual reading tasks. In addition, this study is designed to explore what similarities and differences exist between the actual uses of strategies among high reading proficiency student (HRPSs) and low reading proficiency students (LRPSs). Additionally, the chapter discusses the details of research design, population and participants, research instruments, and data collection procedures, as well as data analyses and statistical procedures.

3.1 Research Design

The choice of a mixed method for the study was guided by the research questions in Chapter one. In accordance with the purpose of this study, the researcher used both quantitative and qualitative methods, including on survey and comprehension questions, in order to address these questions. This project used a survey as part of its quantitative measure and an interview and observation to gather generalized information qualitatively.

The survey method directly ascertain views about English reading strategies from student and instructor perspectives. It is an important technique when the purpose of the research is to describe and explore experiences, like this study aims: to do canvasses views about reading strategy learning and teaching. In addition, upon the

conclusion of the survey itself, space was provided for thinking aloud, allowing participants to express their views, if any, in areas that may not have been touched on in the survey.

To compensate for the limitations of the survey method, semi-structured interviews were used to gather data. Interviewing is one of the most powerful tools used to understand people's points of view, beliefs and attitudes. Because of its interactive nature, interviewing has many advantages over other types of data collection strategies (Best & Kahn. 1998). The interviews compliment the survey instrument by providing better understanding of contexts, as it offers solid descriptions and explanations for the quantitative data in the study (Lincoln & Guba. 1985).

3.2 Subjects of the Study

The subjects of this research were 36 third year business English major students studying in the first semester, academic year 2012, Faculty of Humanities and Social Sciences, Buriram Rajabhat University.

3.2.1 The Thirty-six Surveyed Students

The participants chosen for this study were 36 third year business English major students studying in the first semester, academic year 2012, Faculty of Humanities and Social Sciences, Buriram Rajabhat University, selected by purposive sampling. For reading a composition, the readers should have prior knowledge of reading process. Thus, the researcher used this technique to choose the subjects because all of them had already attended the reading course entitled "Reading in

Business in the first semester of the academic year 2012. Therefore, they were supposed to have the previous knowledge of reading compositions.

3.2.2 Eight Case-study Participants

A total of 36 surveyed students agreed to take the survey. The selected students were asked to take the TOEIC Test to determine their actual reading proficiency. Eight of these students participated in additional in-depth interviews. These interviews were given so the researcher could obtain a picture of the participants' awareness of and their use of metacognitive reading strategies. Also, determined were the situations when metacognitive reading strategies were utilized. Based on their TOEIC reading test scores, two groups of four students were categorized as high reading proficiency students (HRPSs) and low reading proficiency students (LRPSs).

3.3 Research Instruments

In this section, instructional components are described : Metacognitive Awareness of Reading Inventory Survey (MARSIS), Business English reading texts, classroom observation, and semi-structured interviews.

3.3.1 Metacognitive Awareness of Reading Strategies Inventory Survey (MARSIS)

3.3.1.1 Construction and Development of MARSIS

Making use of questionnaires in a research study is one of the most commonly used techniques to collect data since they “can be objectively scored and analyzed” (Oxford. 1990 : 199). Similar to interviews, they vary from more structured, in which the items can range from “yes or no” answers or indications of

frequency, to less structured questions asking respondents to depict or explain the language learning strategy in a detailed way. The data obtained from highly structured questionnaires are uniformly organized because of the standardized categories provided for all respondents and they lend themselves to statistical analysis (Cohen & Scott, 1996).

A major benefit of large-scale questionnaires pointed out by Cohen and Scott (1996) is that they have the potential to generate and test hypotheses because of the large number of respondents. Oxford (1990:199), on the other hand, asserts that the more structured questionnaires “might miss the richness and spontaneity of less structured formats”.

The researcher used a published instrument known as the Metacognitive Awareness of Reading Strategies Inventory Survey (MARSIS). This MARSIS questionnaire is an adapted form of the Survey Of Reading Strategies (SORS) of Mokhtari and Sheorey (2002). They were used to identify which cognitive reading strategies readers use with the five-point Likert scale questions. It was specifically designed to assess adolescent and adult EFL students’ metacognitive awareness and perceived use of reading strategies while reading academic materials such as textbooks. The instrument was adapted from Mokhtari and Reichard (2002) use with an EFL population in high school, college and university and validity as a dependable measure of these students’ metacognition and reading strategies. It is based on the Metacognition Awareness-of-Reading-Strategies Inventory (MARSI), originally developed by Mokhtari and Reichard (2002) as a tool for measuring native English speaking students’ awareness and perceived use of reading strategies while reading academic or school-related materials. It was validated by a large native

speaker population (N = 825) of students with reading abilities ranging from middle school to college, then field-tested and revised using a population of EFL students at two universities. It has been found to yield consistent and reliable data (internal reliability = .89 or better).

3.3.1.2 MARSIS Structure

Fundamentally, the MARSIS consisted of 30 items, each of which uses a 5-point Likert scale ranging from 1 (“I never or almost never do this”) to 5 (“I always or almost always do this”). Students were asked to read each statement and put a tick in the number box that applies to them, indicating the frequency with which they use the reading strategy implied in the statement. That the higher the number, the more frequent the use of the strategy concerned. Respondents were asked to reflect upon all the items referring to her or his reading of school-related academic materials (such as textbooks, not newspapers or magazines) and to rate the frequency of strategies used base on the five-point Likert scale which were ordering answers from 1 to 5 as follows :

1	=	Never Use
2	=	Seldom Use
3	=	Sometimes Use (50% of the Time)
4	=	Often Use
5	=	Always Use

In addition, the thirty strategies were organized into three categories for the researcher’s convenience of reference and analysis. There are three subscales that are based on the results of a series of factor analysis, namely, Global Reading

Strategies (GRS), Problem Solving Reading Strategies (PSRS), and Support Reading Strategies (SRS), respectively. The three main strategies are adopted from the works of previous study. The thirty items were arranged in the following way: items 1, 3, 4, 6, 8, 12, 15, 17, 20, 21, 23, 24 and 27 come under “GRS” category. Items 7, 9, 11, 14, 16, 19, 25 and 28 come under “PSRS” category, while items 2, 5, 10, 13, 18, 22, 26, 29 and 30 come under “SRS” category. The related broad categories shown in the questionnaire are as follows:

1. (1) I have a purpose in mind when I read.

GRS (3) I think about what I already know to help me understand what I read.

(4) I take an overall view of the text to see what it is about before reading it.

(6) I think about whether the content of the text fits my reading purpose.

(8) I review the text first by noting its characteristics like length and organization.

(12) When reading, I decide what to read closely and what to ignore.

(15) I use tables, figures, and pictures in text to increase my understanding.

(17) I use context clues to help me better understand what I am reading.

(20) I use typographical features like bold face and italics to identify key information.

(21) I critically analyze and evaluate the information presented in the text.

(23) I check my understanding when I come across new information.

(24) I try to guess what the context of the text is about when I read.

(27) I check to see if my guesses about the text are right or wrong.

2. (7) I read slowly and carefully to make sure I understand what I am

PSRS reading.

(9) I try to get back on track when I lose concentration.

(11) I adjust my reading speed according to what I am reading.

(14) When a text becomes difficult, I pay closer attention to what I am reading.

(16) I stop from time to time and think about what I am reading.

(19) I try to picture or visualize information to help remember what I read.

(25) When a text becomes difficult, I reread it to increase my understanding.

(28) When I read, I guess the meaning of unknown words or phrases.

3. (2) I take notes while reading to help me understanding what I read.

SRS (5) When a text becomes difficult, I read aloud to help me understand what I read.

(10) I underline or circle information in the text to help me remember it.

(13) I use reference materials (e.g.a. dictionary) to help me remember it.

(18) I paraphrase (restate ideas in my own words) to better understand what I read.

(22) I go back and forth in the text to find relationship among ideas in it.

(26) I ask myself questions I'd like to have answered in the text.

(29) When reading, I translate from English into Thai.

(30) When reading , I think about information in both English Thai.

As a piloting of the instrument, the questionnaire was administered to 36 students who study in the second year of business English major, Humanities and Social Science at Buriram Rajabhat University. Verbal feedback was provided by these students for refining and clarifying of each question. The questions were further submitted to the advisors for necessary modification. The refined version was then submitted to the advisors and three other university lecturers for comments. Based on their expert input, the statements in the survey were modified several times before the questionnaire was finalized. Therefore, the researcher is confident that the instruments used in this research elicited valid results. The names of the three experts were as follows:

1. Dr. Chookiat Jarat, English Lecturer, Faculty of Education at Buriram Rajabhat University.
2. Dr. Kampeeraphab Intanoo, English lecturer Faculty of Humanities and Social Sciences at Buriram Rajabhat University.
3. Dr. Mork Sarom, English lecturer at the Royal, University of Phnom Penh (RUPP), Cambodia.

Taking into account the MARSIS questionnaire, the limitations of the questionnaire were inferred. The MARSIS questionnaire was used to measure students' metacognitive strategies or awareness of using these reading strategies. One cannot tell with absolute certainty from this instrument alone whether students actually engage in the strategies they report using. Moreover, identifying certain strategies through MARSIS may only indicate that the students know about or are aware of those strategies. Awareness of strategies is not sufficient evidence to explain when, where, why and how the students use these strategies ; other instruments will

be used in order to get more complete and reliable results. A follow-up study and interviews were also used to collect and obtain more authentic and pertinent data.

3.3.2 Business English Reading Texts

The researcher selected TOEIC passages to test subjects' English language reading abilities. TOEIC passages were chosen for several reasons. All subjects participating in the study were the third year students in Business English majors who were currently enrolled in a business reading course. These facts meant that subjects were already familiar with basic business principles and vocabulary words. In addition, TOEIC test questions and passages are well-known, high-quality English as a second language measurement device. They are used by academic institutions, businesses and government agencies around the world. Using 4 passages from TOEIC ensured that research results would not be flawed due to inconsistencies or poor assessment designs.

3.3.3 Semi-structured Interviews

As this stage, a live interview with the subjects is conducted in order to obtain information. The interviewers asked questions and the subjects responded in a face-to-face situation. As Seliger and Michael (1983: 116) stated, the interviews are personal and therefore permit a level of in-depth information gathering, free response, and flexibility that cannot be obtained by other procedures.

In this study, the researcher used the semi-structured interview with the participants. There were 10 interview questions. Most of them were open-ended. The interviews were also given to the participants who appeared to be most active in the classroom observations. They were used to help the researcher discover the "when, where, why and how" in regard to students' use of strategies.

In regard to constructing and developing the interviews questions, the researcher studied various interviewing techniques and methods. The researcher studied the participants' performance on the TOEIC test, the questionnaire, and the classroom observations, and attempted to identify the reading strategies they applied in business reading. Then, a set of question was constructed to develop better insight. The interviews were recorded. All interview questions were examined by the thesis advisor and experts beforehand to ensure their validity. All questions were found to be appropriate for study. After all interviews have been conducted, the researcher transcribed and carried out member checking with the participants.

As pointed out earlier, the structured interview was used to interview the participants. Eight participants from the third year majoring students in Business English were given the same questions. The interview questions consisted of 10 items, so a total of 120 items were discussed. The questions were also given to the high achieving students (HASs) and low achieving students (LASs). It was impossible for the researcher to interview all the students. It is impossible for the researcher to ask enough questions to cover all the possible response in this area.

3.4 Data Collection Procedures

In order to investigate the above issues, the present study adopted a qualitative and quantitative research methodology. To provide evidence that the participants used a variety of metacognitive awareness of English reading strategies to plan, monitor or control, self-regulate, evaluate, and remedy their comprehension on expository texts, the data collection techniques were presented. In this study, several instruments and approaches were used to collect data : the Metacognitive Awareness of Reading

Strategies Inventory Survey (MARSIS), TOEIC test, and semi structured interviews. The details of each instrument and how they were implemented are briefly described as follows:

3.4.1 MARSIS Survey Questionnaire

As pointed out earlier, this research involved 36 participants all of whom were third year students majoring in the Business English at Buriram Rajabhat University.

At the beginning of the study, the researcher measured the students' metacognitive awareness of reading strategies in their Business reading. The survey questions were completed by all the students in one class.

The conditions of the MARSIS Questionnaire completion were described. The researcher explained the instructions in Thai, and then read aloud each item and statement to the learners in both English and Thai. The total time given for the learners to reflect upon each question or statement was approximately 30 minutes. After explaining the purpose of the inventory, the researcher directed the students to read the statement indicating how they use the strategy described in that statement, using the 5- point Likert scale provided after statement. Then, the researcher reminded the students that their responses were to refer only to the strategies they used when reading school – related materials, not leisure materials such as business newspapers or magazines. Furthermore, the students were also encouraged to respond honestly to each statement in the inventory and to ask questions about any aspect of the inventory they did not understand.

The data were gathered, tabulated and analyzed the results when students finished answering the questionnaire. The students' awareness of metacognitive reading strategies could be identified from the results. Then, the researcher identified

the three categories of metacognitive reading strategies and got the students frequency of using strategies.

A pilot study was conducted to check reliability scores of the instruments (e.g., MARSIS, modified MARSIS) for the study and determine whether the reading comprehension test and the expository reading texts for the current study would be appropriate in regards do length, degree of difficulty, and content. In addition, this pilot study was purposed to see what problems would occur while administrating this study and, more importantly, how the research design for this study would work. The data collection procedures for this pilot study were the same as for the current study.

Business English major students (HRPSs = 4, LRPSs = 4) studying at Buriram Rajabhat University participated in this pilot study. The reliability score of the MARSIS (Cronbach's Alpha = .901) was high, but the reliability score of the modified MARSIS (expository texts : Cronbach's Alpha = .738) was moderate. It was advised that wording and style of sentences in the passage for expository text reading were slightly different from those of a traditional expository text. Thus, the researcher decided to use a new passage for the TOEIC text reading which was closer in wording and style to the traditional TOEIC text. The researcher also decided to use only one of the two passages read by the participants in the pilot study for expository text reading because the participants in the pilot study were concerned about too much reading. No serious problems were encountered in conducting the pilot study. More importantly, the pilot study showed that the research design for this study worked well.

3.4.2 TOEIC Test (The test of English for International Communication)

Commissioned by ETS (Educational Testing Service.2012), TOEIC test questions are based on real-life work settings in an international environment such as business meeting, travel, telephone conversation, etc.)

For more than 30 years, the TOEIC test has set the standard for assessing English language skill used in the workplace. Today TOEIC test score are used over 10,000 companies, government agencies and English language learning programs in 120 countries, and more than 6 million TOEIC tests were administrated on the first semester, 2012. So, organizations and job seekers around the world trust TOEIC test scores to help them get ahead of the competition. Also, in Thailand, TOEIC test is used to measure to competence of English learner. There are 2 different types for the TOEIC test, namely, TOEIC listening and reading and TOEIC speaking and writing, which is a new one.

Nowadays, TOEIC devised to two parts; therefore, listening comprehension part and reading comprehension part. The researcher limited herself to this one part, since it was a reading comprehension part for this study that to assess the participants' reading comprehension and the researcher felt that this test would be adequate for that purpose.

3.4.3 Semi-structured Interviews

A third way of collecting data regarding learning strategies was semi-structured interviews. Their types range from unstructured to structured interviews. Since there is no particular questioning technique in unstructured interviews, the data obtained from such an interview is difficult to interpret and categorize. Whereas the data gathered from a structured interview are uniformly organized for all respondents

and lend themselves to statistical analysis (Cohen & Scott. 1996). O'Malley and et al.(1985), have developed a Student Interviews Guide, which asks learners to think about what they generally do when faced with a similar language task. Students are not required to do the task during the interview but they are asked to think about how they typically handle or do the task (O'Malley et,al. 1985). Oxford (1990:197) also adds that "such interviews work well in small groups or with individuals".

As mentioned earlier, the semi-structured interview was used to collect qualitative information. It was suggested that the semi-structured interview allows the interviewer to get information from the pre-set interview items. The interviewees can freely express their perceptions and feelings about the time of the interviews to a certain extent. In addition, the researcher can be more flexible with the way he or she guides the interview, based on his or her perception of what seems appropriate to ask, omit, clarify or include during the sessions (Robson. 1993 ; Yin. 1994).

Therefore, in this study, the semi-structured interview was used to elicit responses concerning the metacognitive reading strategies. They use when reading Business English texts. These subjects, as before, were university students who were studying at Buriram Rajabhat University. Interviews were conducted in a one – on-one interview setting in a relatively quiet location at the provider's facility. These discussions were conversational with the focus of the interview being the understanding of the other person's perceptions about the reading process and their areas of expertise. Each interview was conducted in Thai to make sure that the interviewees did not have any linguistic problems when answering the questions. It took approximately 30 minutes per student. Sets of questions were determined by the research questions based on the literature review, and prepared by the researcher.

These sets of questions were given to and corrected by the thesis advisors and experts for validity and reliability.

Eventually, the follow up interviews were given to the students after class or during the break. Most of the interview questions were open-ended. For example, "When you are reading, if you encounter unknown words or phrases, what do you do?" The participants were then asked to explain the usefulness of their strategies. All the interviews were tape-recorded, and all recordings were transcribed immediately after the interviews.

Data were collected through an individual interview between the researcher and the participants. Initially, the scripted questions were used, but due to the nature of phenomenology, the researcher periodically needed to probe for additional information and explanations from the participants. All interviews were tape-recorded with the interviewee's permission and documented through the researcher's note taking. No interviewee denied permission to record, so there was no need to replace any subject with an alternate.

A pilot study was conducted to check reliability scores of the instruments (e.g., MARSIS, modified MARSIS) for the study and determine whether the reading comprehension test and the expository reading texts for the current study would be appropriate in regards to length, degree of difficulty, and content. In addition, this pilot study was purposed to see what problems would occur while administering this study and, more importantly, how the research design for this study would work. The data collection procedures for this pilot study were the same as for the current study.

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3.5 Data Analysis and Statistical Procedures

Data collection and data analysis occurred concurrently in the qualitative case study that was conducted. During collection of additional data, an analysis of previously collected data was already taking place. In the previous section, the researcher looked at participants, research instruments used, and data collection procedures. For data analysis, this section will emphasize how the data obtained were analyzed, interpreted, and reported. To achieve the research purposes, the following aspects are presented:

3.5.1 Effectiveness of the Research Instruments

To see the validity and reliability of the questionnaire, the construction and development of the questionnaire was used with two main statistical procedures. Firstly, IOC (Index of Items) was employed to determine the validity of the instrument. Secondly, to ensure the reliability of the questionnaire, Coefficient of Cronbach's alpha was also employed to check the consistency of the answers of the responses for the items utilizing the five-point Likert scale.

In addition, charts, columns, percentages, note taking, recording, and an observation checklist were used to analyze the data. The charts, columns and mean percentage analysis were used to interpret the students' metacognitive comprehension of reading strategies and to quantify the frequency of using metacognitive reading strategies. Note taking and the observation checklist were used to measure the students' metacognitive action or strategies in the interaction between the text and the teacher or peer. Tape-recording was used to further investigate the metacognitive process to know "when, where, why and how" the students selected the strategies they could employ.

3.5.2 Analysis of Data from the MARSIS

3.5.2.1 Frequency, Mean (\bar{X}), and Standard Deviation (S.D.)

To achieve the research purpose in terms of analysis and interpretation of the data obtained through the study, different statistical methods with the assistance of SPSS program were employed. These included : 1) frequency ; 2) mean (\bar{X}), and 3) standard deviation (S.D.) What follows are the statistical methods used to analyze data obtained.

Each group's frequency, mean (\bar{X}), and standard deviation (S.D.) of thirty strategies were calculated. Then, they were ranked according to the mean values of these items. Also, the three broad categories of MARSIS were used by these statistical procedures. All data were entered into Statistical Package for the Social Sciences (SPSS) to run the above-mentioned statistics for analysis. However, the three levels of strategy use : "high use", "moderate use", and "low use" based on the holistic mean scores of frequency of strategy use by the research subjects under the present investigation were defined.

Based on the three levels of interpretation of reading strategy used by Oxford and Burry – Stock (1995, cited in Sarom. 2010), these means can be divided into three groups to understand the average scores on the questionnaire. The three levels of interpretation of reading strategy are presented as follows:

Table 3.1

Three Levels of Interpretation Proposed by Oxford and Burry – Stock (1995)

The Key to Understand Average of Usage Group		
High	Always Use	3.50 or above
	Often Use	
Moderate	Occasionally Use	2.50 to 3.49
Low	Seldom Use	Below 2.50
	Never Use	

In order to explain the students' awareness of meta- cognitive reading strategies easily, the researcher decided to do the qualitative research rather than quantitative research when interpreting the scores that were obtained from the questionnaire.

3.5.2.2 t-test of the Difference between Two Groups

To determine whether there were any significant differences between two groups in the level of use of met cognitive English reading strategies between high English reading proficient and low English reading proficient students' questionnaire responses, an independent samples t-test was used to analyze each group of strategies and the whole set of strategies

3.5.3 Analysis of Quality of Procedures for Coding

Coding is an effective method to analyze the data of verbal protocols such as interviews and observations (Green. 1998). Coding is "the relationship between what are termed task- independent process categories and performance on the task in question" (Green. 1998:69). Subsequently, the researcher qualitatively discussed the emerging themes from the interviews and self-reports of English reading strategies and the in – depth analysis of the observations. In other words, the background information and detailed accounts of each individual student's meta -cognitive reading behavior during actual reading tasks were reported. Furthermore, to facilitate the linkage between the strategy items on the MARSIS and those conspicuously observed in the think- aloud sessions, the strategy numbers which appeared on the MARSSIS were also mentioned when discussing the use of each particular strategy. To establish interpreter reliability, the co- coder and the researcher separately coded the data. Disagreements were resolved by discussion.

As mentioned earlier, the present study was guided by three research questions : (1) to investigate what meta- cognitive reading strategies students use for academic purposes, (2) to discover how they use the strategies in actual reading tasks, and (3) to explore what similarities and differences exist between the actual use of strategies among high reading proficiency students (HRPSs) and low reading proficiency students (LRPSs). Table 3.2 below shows the measure and data analysis that was used for each research question:

Table 3.2

Outline of Data Source and data Analysis for Each Research Question

Research Question	Data Source	Data
1. What metacognitive strategies do the third year students majoring in business English use in reading English business texts?	Metacognitive Awareness of Reading Strategies Inventory Survey (MARSIS)	Descriptive statistical analysis of metacognitive awareness of English reading strategies, divided into global, problem solving, and support strategies

Table 3.2 (Cont.)

Research Question	Data Source	Data
2. What difficulties do the third year students majoring in business English encounter when reading English business texts?	1. MARSIS 2. Reading Interviews 3. Self-report of metacognitive English reading strategies	1. Inferential statistics for the MARSIS 2. Emerging themes from the interviews and self-reports 3. Triangulation of the above data
3. How different do the third – year student majoring in business English with high and low reading English proficiency use metacognitive strategies?	1. Semi-structured Interviews 2. Self-report of metacognitive English reading strategies	1. Descriptive statistics for the questionnaire 2. Emerging themes from the interviews and self-reports

3.6 Summary of the Chapter

The focus of this chapter has been to describe the research parameters within which the study was conducted and to establish the methods and procedures for its conduct. The researcher has exercised caution and deliberation in the design of the present study. In the process, this research exercised care in dealing with threats to validity and reliability, In the next chapter, chapter Four, the researcher will turn to the most interesting and significant parts of this research, which are the major

findings and results gained through the various instruments illustrated in this chapter.

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