

การใช้กลวิธีการอ่านโดยนักศึกษาจีนที่เรียนวิชาเอกภาษาอังกฤษธุรกิจ



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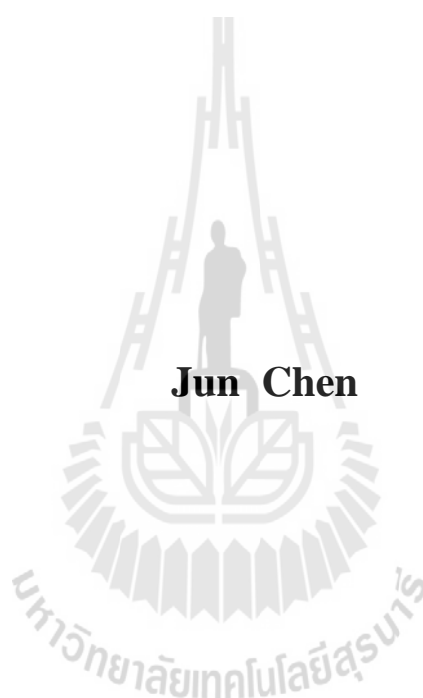
วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรดุษฎีบัณฑิต

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**READING STRATEGIES EMPLOYED BY CHINESE
UNIVERSITY BUSINESS ENGLISH MAJORS**



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**READING STRATEGIES EMPLOYED BY CHINESE
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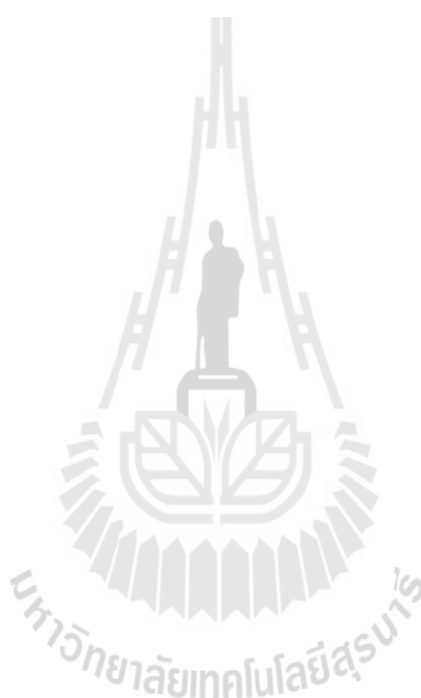
การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาการใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการ
ของนักศึกษาจีนระดับมหาวิทยาลัยวิชาเอกภาษาอังกฤษธุรกิจเมื่ออ่านตำราภาษาอังกฤษธุรกิจ
2) ศึกษารูปแบบการใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการของนักศึกษากับตัวแปร 4 ตัวแปร
ได้แก่ เพศ ระดับการอ่านภาษาอังกฤษในหลักสูตรวิชาเฉพาะทาง ระดับความสามารถทางการ
อ่านภาษาอังกฤษเชิงวิชาการและระดับความวิตกกังวล 3) เพื่อศึกษาปัจจัยที่มีผลต่อการใช้กลวิธีการ
อ่านภาษาอังกฤษเชิงวิชาการของนักศึกษาระดับมหาวิทยาลัยวิชาเอกภาษาอังกฤษธุรกิจและศึกษา
ปัจจัยที่เกี่ยวข้องกับตัวแปรทั้ง 4 ตัวแปร และ 4) เพื่อหาเหตุผลว่าทำไมนักศึกษาจึงใช้กลวิธีการ
อ่านภาษาอังกฤษเชิงวิชาการบ่อยหรือไม่บ่อย

กลุ่มตัวอย่างในการวิจัยครั้งนี้ประกอบด้วยนักศึกษาระดับมหาวิทยาลัยวิชาเอก
ภาษาอังกฤษธุรกิจจำนวน 926 คน จากมหาวิทยาลัยจำนวน 6 แห่ง ในภาคตะวันออกเฉียงใต้ของ
ประเทศสาธารณรัฐประชาชนจีน โดยวิธีสุ่มตัวอย่างแบบกลุ่มและแบบเฉพาะเจาะจง เครื่องมือ
หลักในการวิจัยครั้งนี้ ได้แก่ แบบสอบถามกลวิธีการอ่านภาษาอังกฤษธุรกิจ และการสัมภาษณ์
กึ่งโครงสร้าง นอกจากนี้แบบทดสอบความสามารถทางภาษาอังกฤษธุรกิจได้ถูกสร้างขึ้นเพื่อ
ทดสอบระดับความสามารถในการอ่านภาษาอังกฤษเชิงวิชาการ และแบบทดสอบระดับความวิตก
กังวลของการอ่านภาษาต่างประเทศซึ่งถูกสร้างขึ้นเพื่อศึกษาระดับความวิตกกังวลในการอ่านเชิง
วิชาการของนักศึกษา

สำหรับการวิเคราะห์ข้อมูลทางสถิติ ได้นำสถิติเชิงบรรยายมาวิเคราะห์ระดับความถี่ของ
การใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการของนักศึกษา และการใช้การวิเคราะห์ความ
แปรปรวนและการทดสอบไค-สแคว์ใช้ในการวิเคราะห์หาความสัมพันธ์ระหว่างความถี่ของการใช้
กลวิธีอ่านภาษาอังกฤษกับตัวแปรทั้ง 4 ตัวแปร นอกจากนี้การวิเคราะห์ปัจจัยถูกนำมาใช้ใน
การศึกษาปัจจัยหลักที่นักศึกษาใช้กลวิธีการอ่านภาษาอังกฤษและศึกษาปัจจัยที่มีความสัมพันธ์กับ
ตัวแปรทั้ง 4 ตัวแปร รวมถึงข้อมูลที่ได้จากการสัมภาษณ์ผู้วิจัยนำมาวิเคราะห์ข้อมูลเชิงคุณภาพ

ผลการวิจัยพบว่านักศึกษาระดับมหาวิทยาลัยวิชาเอกภาษาอังกฤษธุรกิจใช้กลวิธีการอ่าน
ภาษาอังกฤษเมื่ออ่านตำราภาษาอังกฤษธุรกิจอยู่ในระดับปานกลาง ความถี่ของการใช้กลวิธีการ
อ่านภาษาอังกฤษเชิงวิชาการของนักศึกษามีความสัมพันธ์อย่างมีนัยสำคัญกับ 4 ตัวแปร นอกจากนี้

ยังพบว่ามี 4 ปัจจัยหลักที่มีผลต่อการการใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการของนักศึกษา ซึ่งมีความสัมพันธ์กับตัวแปรที่ทำการศึกษาทั้ง 4 ตัวแปร จากการวิเคราะห์ข้อมูลการสัมภาษณ์ ยังพบอีกว่า นักศึกษาให้เหตุผลที่ใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการบ่อยจำนวน 11 ข้อ และมีเหตุผลจำนวน 9 ข้อที่นักศึกษาใช้กลวิธีการอ่านภาษาอังกฤษเชิงวิชาการไม่บ่อย



JUN CHEN : READING STRATEGIES EMPLOYED BY CHINESE
UNIVERSITY BUSINESS ENGLISH MAJORS. THESIS ADVISOR :
ASSOC. PROF. CHANNARONG INTARAPRASERT, Ph.D., 323 PP.

READING STRATEGIES/BUSINESS ENGLISH MAJORS/ESP

The present study has been designed a) to investigate types of reading strategies employed by Chinese university Business English majors when they read Business English texts; b) to examine the patterns of variations of the students' reading strategy use in relation to their gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety; c) to explore the main underlying factors in the students' use of reading strategies and find out the factors strongly related to the four variables investigated; and d) to find out the reasons why the students reported employing certain reading strategies frequently and certain strategies infrequently.

The participants in the present study were 926 university Business English majors selected from 6 universities in Southwest China by Cluster and purposive sampling methods. A reading strategy questionnaire for Business English reading and semi-structured interviews were the main instruments used to collect the data for the present investigation. In addition, a Business English proficiency test was constructed to examine the students' levels of reading proficiency; and a foreign language reading anxiety scale was adapted to determine the students' levels of reading anxiety.

The data obtained through the reading questionnaires were analyzed quantitatively with different statistical methods. The simple descriptive statistics were

used to describe levels of frequency of the students' strategy use; the Analysis of Variance (ANOVA) and the Chi-square tests were used to examine the variations of the students' strategy use in relation to the four investigated variables at the overall, category and individual levels. The factor analysis was used to explore the underlying factors in the students' reading strategy use and examine the factors that have strong relationships with the four variables. In the end, the content analysis was used to analyze the data obtained through the semi-structured interviews.

The results revealed that as a whole, the university Business English majors reported medium frequency of reading strategy use when they read Business English texts. The frequency of the students' reading strategy use varied significantly according to the four variables, i.e. gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. Four factors were extracted through the factor analysis. It was found that the four extracted factors had strong relationships with the four different variables. Eleven reasons for why the students employed certain strategies frequently and nine reasons for why the students employed certain strategies infrequently emerged from the content analysis.

School of Foreign Languages

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Student's Signature _____

Advisor's Signature _____

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BE	Business English
BEC	Business English Certificate
BERCT	Business English Reading Comprehension Test
CBI	Content-based Instruction
EFL	English as a Foreign Language
ESP	English for Specific Purposes
ESL	English as a Second Language
FL	Foreign Language
FLRAS	Foreign Language Reading Anxiety Scale
L2	Second language
N.S.	No Significance
POS	Post-reading Strategy
PRS	Pre-reading Strategy
SCD	Strategies for Coping with Difficulties
SCT	Strategies for Comprehending the Text
S.D.	Standard Deviation
SPSS	Statistical Package of the Social Sciences
WHS	While-reading Strategy
SQBER	Strategy Questionnaire for Business English Reading



CHAPTER 1

BACKGROUND TO THE STUDY

1.1 Introduction

This investigation has been designed to explore the use of reading strategies by Chinese university Business English majors when they read Business English texts. This chapter is an introduction to the thesis. It provides the background and context for the present investigation. It begins with the introduction about reading strategies and purpose of this research. The ensuing sections cover Business English teaching in China, the objectives of the study, the key terms used in the present study, and the significance of the study. Finally, the outline of the thesis will be presented.

Foreign language learning can be viewed as the acquisition of the appropriate reception and production process (Cheng, 2010). Reading is a main reception process in foreign language learning. It is a complex, cognitive skill in which the reader constructs meaning by relating information from the text to his or her prior knowledge (Bimmel, 2001). It is an active process which involves the reader and the reading material in building meaning (Anderson, 1999). Reading stands a very important position in language learning, if we consider the study of English as a second language around the world, reading is the main reason why students learn the language (Esky, 1970). Reading plays a crucial role in language learning. It is through

reading that the language learners acquire a lot of knowledge of the target language. The abilities of reading are very essential to understand a language and acquire information from reading materials. According to Badrawi (1992, p. 16), “Reading is a helpful language skill needed for obtaining information, fostering and reacting to ideas, developing interests and, finally, deriving pleasure by reading through understanding or comprehension.”

Reading is considered as one of the most important skills which language learners should obtain; it helps to build vocabulary and leads to lifelong learning and improvement in first and second language skills (Chen and Zhang, 2007). For many students, reading is by far the most important of the four skills in a second language, particularly in English as a second or foreign language (Carrel, Devine and Eskey, 1988). In addition, at advanced proficiency levels in a second language, the ability to read the written language at a reasonable rate and with good comprehension has long been recognized as important as oral skills, if not more important (Eskey, 1970). Anderson (1999) points out that reading is an essential skill for students learning English as a foreign language; and for many, reading is the most important skill to master. Adamson (1993) claims that of all the language skills, it is accepted that reading is the most important skill for academic achievement when compared with the other language skills, i.e. listening, speaking and writing. It is generally acknowledged among language teachers and learners that the ability to read in a foreign language is one of the most important skills required of students. Moreover, due to the complexity

inherent in the reading process, reading is also a skill that is regarded as one of the most difficult to develop to a high level of proficiency (Grabe, 2002).

In second language teaching/learning situations for academic purposes, especially in the higher education for academic materials written in English, reading is paramount. Without solid reading proficiency, second language readers cannot perform at levels they must in order to succeed (Carrel, Devine and Eskey, 1988). Since university students need to read a lot of academic materials written in English, they can actually benefit a lot from academic reading; English reading proficiency has become an important requirement for them. They are expected to understand what they read regardless of the subject matter they study. Therefore, reading skills are of significant importance in such environments (Ozek, 2006). Harmer (2000) lists three reasons for the importance of English reading for the students: 1) students want to be able to read English texts for their careers, study or pleasure; 2) reading provides exposure to English for language students, which facilitates their acquisition of vocabulary, grammar, punctuation, and the way sentences, paragraphs and texts are constructed; and 3) reading good texts can elicit interesting topics, stimulate discussion, excite imaginative responses and be the springboard for well-rounded, fascination lessons.

For the students in the ESL and EFL contexts, effective reading is critical. In a review of the developments in the second and foreign language reading research, Grabe (1991) points out that the importance of the reading skills in academic contexts

have led to considerable research on reading in a second language. Reading is a complex and interactive process that involves features of readers, texts and tasks. To achieve the reading purposes, the reader must actively interact with the texts. Reading skills must be applied properly and effectively by the readers in order to achieve proficient reading. The important elements of skillful reading include not only the ability to decode the text rapidly, accurately and fluently (at the orthographic, lexical, structural and textural levels) but also background and world knowledge or schemata, reading experience, interest, cognition, motivation, and reading purpose (Grabe and Stoller, 2007). As discussed in Afflerbach, Pearson and Paris (2008), reading success depends on both a command of those reading skills such as vocabulary recognition and phonological awareness that facilitate rapid decoding, as well as the strategic ability to solve reading problems and the knowledge and experience to know when to apply them.

Reading is an active and strategic process, in which the reader's skills and knowledge interact with the characteristics of the text such as genre, the wording and structure of the text (Schellings, Aanoutse and Leeuwe, 2006). Strategic awareness and monitoring of the comprehension process are critically important aspects of skilled reading. Researchers investigating reading comprehension monitoring among skilled and unskilled readers have long recognized the importance of strategic awareness in reading comprehension. As Sheorey and Mokhtari (2001, p. 433) point out, "It is the combination of conscious awareness of the strategic

reading processes and the actual utilization of reading strategies that distinguishes the skilled from unskilled readers". According to Paris and Jacobs (1984), skilled/good readers often engage in deliberate activities that require planning, flexible strategies, and periodic self-monitoring. They think about the topic, look forward and backward in the passage, and check their own understanding as they read, while unskilled/poor readers often seem oblivious to these strategies and the need to use them. Skilled/good readers are better at monitoring their reading comprehension process than unskilled/poor readers (Block, 1986; Hosenfeld, 1977; Kong, 2006; Sarig, 1987; Block, 1992; Nambiar, 2009). Previous studies on reading in a second or foreign language showed that reading strategies can indeed assist readers to understand the texts they read (Brown and Palincsar, 1984; Mi-Jeong Song, 1998; Reinhart and Isabell, 2002; Salataci and Akyel, 2002).

In China, it is generally acknowledged that teachers of English in primary and middle schools have been deeply influenced by the traditional teaching method and the traditional examination system. They spend a large amount of time in teaching grammars, vocabulary and sentence structures in class. Reading skills development has not been given sufficient attention (Wan and Li, 2005). When teaching English reading, teachers usually focus on explaining the content of the reading texts, as well as analyzing the grammar points and new words. They seldom train the students how to read efficiently and effectively through the use of different reading strategies. In fact, many teachers themselves do not have much knowledge about reading strategies (Li

and Qin, 2005). They do not know how to teach their students to employ reading strategies to enhance their reading comprehension and solve their difficulties and problems in reading. Therefore, Most Chinese students have learned English for almost 10 years before they enter the universities. They have acquired the basic grammatical rules and vocabulary for reading in English. However, they do not appear to have sufficient training with regard to how to selectively and efficiently apply reading strategies in dealing with academic English materials. Many of them fail to develop adequate second language reading strategies. Consequently, they find reading a major difficulty (Cheng, 2010). Therefore, it is necessary and practical to study the university students' reading strategies and help them to develop strategic reading awareness.

Up to present, no empirical research has been carried out exclusively to investigate how the university Business English majors, more specifically the Business English majors of the universities in Southwest China, employ reading strategies when they read their academic materials. Therefore, the present investigation aimed to fill this gap. The university Business English majors belong to English-medium programs. They must study business courses in English and they have to read a large quantity of specialized materials written in English. To do this kind of content-based reading, it is a challenge for the students because they must master the content knowledge of the materials; meanwhile, they have to learn the specialized English language. To achieve efficient academic reading, reading strategies play a very important role. Therefore, it is of practical significance to

conduct research to investigate the reading strategies employed by the university Business English majors.

1.2 Business English Teaching in China

Business is about buying and selling or, more broadly, exchanging and exploiting resources and capabilities. It uses the language of commerce, finance, industry, and providing goods and services. Business English is communication with other people within a specific context (Frendo, 2005). It is the English language used in the business context. The characteristics of Business English are proposed by Ellis and Johnson (2002) as a sense of purpose, social aspects and clear communication. They explain that Business English is the language used in business meetings and discussions to achieve desired outcomes. The purpose is clear towards the business goals; business people have a need to make contact with others, social contacts are often highly ritualized; furthermore, the language used in this area must be clear, logical and concise in order to achieve communication goals.

“Business English must be seen in the overall context of English for Specific Purposes (ESP), as it shares the important elements of needs analysis, syllabus design, course design, and materials selection and development which are common to all fields of work in ESP” (Ellis and Johnson, 2002, p. 3). Hutchinson and Waters (1987) also state that Business English is considered as a branch of English for Specific Purposes (ESP) in English teaching.

Business English is currently the area of greatest activity and growth in ESP (Dudley-Evan and St John, 1998). Business English is the fastest growing area of English for Specific Purposes. There is increasing demand for business English courses, teachers and materials (Lockwood, 2002). As one of the most important branches of ESP, Business English has become very popular and it is getting more and more emphasis from people around the world. The use of English as the language for business is increasingly widespread. Millions of people all over the world use English in their everyday business activities. As a result of the increasing demand for Business English, English courses are offered by many language schools, colleges and universities worldwide (Ellis and Johnson, 2002).

The teaching of Business English has had a history of over 50 years in China, during which the curricula, syllabi, courses, and materials of Business English teaching in China have all gone through substantial changes (Zhang, 2007). The time for Business English teaching can be dated back to the early 1950s, when the College for Senior Cadres of Commerce, the first college training personnel for foreign trade was established in Beijing (Chen, 2001). The college admitted students to its “English Translation” program with the goal of producing translators and interpreters in the field of foreign trade. To this end, students were required to master a foreign language oriented to foreign trade and learn the knowledge about foreign trade. Afterwards, some colleges and universities, following this education mode, started to enroll Business oriented English majors in succession.

In the early 1980s, China implemented “The Reform and Opening Policies”. The country began to open up to the outside world and move towards a market economy. With the increasing economic exchanges with foreign countries, people began to realize it vitally necessary to master the English language used in the international business context. The society needed the talents who mastered Business English language as well as the knowledge of international business. In order to adapt to the needs of the society, more and more colleges and universities began to attach importance to Business English teaching (Wang, 1997). The 1990s witnessed a boom in Business English teaching in China. The number of colleges and universities offering Business English programs increased dramatically. The Ministry of Education emphasized that Business English teaching was one of the major ways to produce multi-talents apart from the literature and linguistics-oriented English teaching for the English major in the universities (He, Yin, Huang and Liu, 1999).

In 2007, Business English was officially ratified as a major in the universities by the Ministry of Education. At present, Business English is highly recognized as one of the most popular disciplines in China. According to Zhu, Wu and Guo (2009), there are at least 800 higher education institutions where Business English is taught as a major or a course. Despite the boom of Business English in China, theoretical guidance in this subject is falling far behind and the teaching varies enormously among different universities (Zhang, 2007). Meanwhile, it has become a common concern in Business English teaching to raise students’ reading awareness

and competence. Most recently, the “Curriculum Design for Business English Undergraduate Program in China” has been under heated discussion. Wang (2009) has pointed out that the learning objectives for students of Business English include linguistic knowledge and skills, business knowledge, intercultural communication competence, and comprehensive humanistic qualities.

The economy and education in Southwest China is still underdeveloped. The history of Business English teaching is comparatively short and the experience in teaching Business English is still inadequate when compared with the developed areas of China (Chen, 2012). Up to now, only a few universities in each of the provinces in Southwest China have set up the Business English program. For example, only three universities have this program in Guizhou Province. In Yunnan Province, four universities have this program. In Chongqing City, six universities have this program. In addition, many of these universities only have a very short history in the Business English program. For example, Guizhou University of Finance and Economics started the Business English program in 2003 (Guizhou University of Finance and Economics, 2013); Guizhou University started this program in 2004 (Guizhou University, 2014); Yunnan University of Finance and Economics started this program in 2007 (Peng, 2013); Kunming University started this program in 2007 (Kunming University, 2011). Sichuan International Studies University started this program in 1998 (Sichuan International Studies University, 2013), and Chongqing Technology and Business University started this program in 2002 (Chongqing Technology and Business University, 2011).

Business English teaching program in China is a kind of content-based instruction (CBI), in which most of the specialized courses concerning business and economics are taught in English. Reading plays a crucial role in this program, as the students must learn the specialized courses through reading the academic texts written in English. Cheng (2010) points out that academic reading strategies are very important for the students in English-medium programs because of the role of reading comprehension in their academic success. However, many of the Business English teachers are inexperienced in teaching the ESP courses and they do not have confidence to teach Business English courses as most of them graduated from the English linguistic or literature areas (Tang, 2010 and Chen, 2012). Many of them do not know how to develop the students' reading skills in content-based reading. Reading Business English is still a big challenge for many students of Business English.

1.3 Objectives of the Present Study

As mentioned earlier, the purpose of this study was to investigate the employment of reading strategies by the university Business English majors in Southwest China. Specifically, the study has been designed to examine the university Business English major students' overall use of the reading strategies, as well as the relationships between the reading strategy use and the students' gender, levels of exposure to Business English courses, levels of reading proficiency and levels of

reading anxiety. Specifically, the research objectives of the present investigation are:

1. To investigate the overall use of the reading strategies and the frequency of the reading strategies employed by the university Business English majors in Southwest China;
2. To examine whether the reading strategies employed by the Business English majors vary significantly in terms of their gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety;
3. To explore the main underlying factors in the reading strategies used by the Business English majors, and find out the factors strongly related to the four variables investigated; and
4. To find out why the students reported employing certain reading strategies more frequently than other strategies.

1.4 Significance of the Study

University students of English as a second language or English as a foreign language have to read academic texts in English. However, many students enter university education underprepared for the reading demands placed on them (Dreyer and Nel, 2003). They show inability to read selectively, that is, to extract what is important for the purpose of reading and discard what is insignificant (Benson, 1991). They often present a low level of reading strategy knowledge (Dreyer, 1998) and lack the strategies needed to successfully comprehend expository texts. Also, they often

select ineffective and inefficient strategies with little strategic intent (Wood, Motz and Willoughby, 1998). Reading strategies reveal how readers conceive a task, what textual cues they attend to, how they make sense of what is read and how they react when they do not understand (Block, 1986). The unsuccessful language learners, who are often unaware of their own cognitive process, must be helped to acquire and use the reading strategies that have been found to be successful (Mokhtari and Reichard, 2004). Researchers and educators in ESL and EFL education should be vitally concerned with approaches that can help the learners improve their reading skills.

To a great extent, students' academic success in English-medium programs in China and abroad hinges on their ability to read English. However, many Chinese university students in these kinds of programs do not appear to be very skillful in how to selectively and efficiently apply reading strategies in dealing with both the English language and the content-based reading materials simultaneously. Consequently they find reading a major difficulty in English-medium programs. As a matter of fact, many of them fail to develop adequate second language reading strategies (Cheng, 2010). The students of Business English face the difficulties and problems mentioned above when reading Business English texts. Given this perspective, the importance of the present investigation on the employment of the university Business English majors becomes clear.

Identifying and analyzing the university Business English major students' reading strategies in academic contexts may be of help in understanding the readers'

complex reading processes. Some crucial information about the integration of individual and socio-cultural processes in reading comprehension may also be obtained. This research may contribute to improving the students' Business English reading competence, and then help them learn Business English better. Additionally, this study will presumably bring some pedagogical implications for Business English teachers, especially the Business English teachers who graduated from linguistic or literature fields and do not have much knowledge about business and economics. The results of this study may serve as a guide for Business English teachers to arouse the students' awareness of reading strategies and thus improve their reading efficiency.

In addition, understanding the students' cognition processes in specialized English reading may be significant to curriculum and program developers in ESP to design reading materials and reading programs efficiently and effectively. In the end, this study can fill a research gap in reading strategies as no related research has been conducted in China before. Therefore, to study the reading strategies employed by the Business English majors in Chinese universities is worthy and meaningful.

1.5 Definitions of Key Terms Used in the Present Study

1.5.1 Business English Majors

“Business English majors” in the present study refers to the university students majoring in the business-oriented English program. This program is a content-based instruction (CBI) program. The students of this program are required to

learn the English language used in the context of international business communication as well as master the content knowledge about international trade and economics using English as medium.

1.5.2 Reading Strategies

“Reading strategies” in the present study is defined as the skills, techniques, methods and behaviors that the university Business English majors employ to enhance their reading comprehension or solve their reading problems and difficulties when reading Business English texts. For example, the students may pay their attention to the keywords, the foot/end notes, the references, and graphics to aid and facilitate their reading comprehension or guess the meanings of the words or the sentences from the context to overcome their comprehension breakdowns.

1.5.3 Level of Reading Proficiency

In the present study, “level of reading proficiency” refers to the reading ability of the Business English majors in reading Business English texts. It was determined by their reading scores in the Business English reading test. The students’ levels of reading proficiency have been classified as ‘high’, ‘moderate’ and ‘low’ based on their scores in the test.

1.5.4 Level of Exposure to Specialized Courses

“Level of exposure to specialized courses” refers to the degree that the students contact with the specialized courses of Business English. In this study, the students’ levels of exposure to specialized courses have been classified as less (the

first and second year students) and more (the third and fourth year students), as the students in Business English program mainly learn language courses in the first two years and specialized courses in the last two years.

1.5.5 Level of Reading Anxiety

According to Horwitz, Horwitz and Cope (1986), foreign language (FL) anxiety is “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process.” “The level of reading anxiety” in the present study refers to the degree of the students’ anxiety when they read English texts. The students’ levels of reading anxiety have been classified into three levels: high, moderate and low based on their responses to the Foreign Language Reading Anxiety Scale (FLRAS).

1.6 Outline of the Thesis

The present study includes six chapters. Chapter One has provided the background of the present research. It begins with the introduction of the role of reading strategies in reading and the importance and necessity of the present study. Then, some issues of Business English and Business English teaching in China have been discussed. This is followed by the research objectives of this research, the significance of the present study, and finally the key terms for the present study.

Chapter Two deals with the literature review. It introduces the roles of reading in ESL and EFL learning, the definitions of reading, purposes of reading,

reading process, factors that influence reading in an L2/FL, theories of reading, reading models, and definitions and classifications of reading strategies. Finally, the related studies about reading strategies abroad and in China are reviewed.

Chapter Three mainly presents the research methodology for the present investigation. It includes the purpose of the study and the research design, theoretical framework and rationales for selecting the variables for the present investigation, research questions, participants for the present study and data collection methods. The chapter ends with how to analyze, interpret, and report the obtained data.

Chapter four presents the results of quantitative data analysis. It includes three main parts. The first part reports the results of descriptive statistical analysis. It describes the frequency of the students' reading strategy use at the overall, category and the individual levels. The second part presents the variations in frequency of the students' reading strategy use in terms of the four investigated variables, i.e. the students' gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. The statistical methods for data analysis in this part include ANOVA and Chi-square tests. The third part presents the results of factor analysis. It explores the underlying factors in the students' reading strategy use and determines the strong relationships between these factors and the four investigated factors.

Chapter Five reports the results of the qualitative data obtained from the semi-structured interviews. It first compares the frequently and infrequently used

reading strategies reported by the students in the questionnaires and interviews. Then, the reasons for using certain reading strategies frequently and the reasons for using certain reading strategies infrequently as reported by the students are presented.

The last chapter, Chapter Six, summarizes the main research findings of the present study in response to the research questions 1-4. This is followed by the discussion of the research findings and the implications from the research for the teaching and learning of Business English for University teachers and students respectively. Finally, the limitations of the present investigation and suggestions for future research are discussed.

1.7 Summary

This chapter has given an overall description of the present study. It provides the background to the investigation and put the study in context. This is followed by a brief overview of Business English teaching in China. Then, the research objectives, the significance of the study and key terms of this study are briefly discussed. Lastly, the outline of the thesis is presented. The next chapter is to review the related literature concerning reading and reading strategies abroad and in China.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 Introduction

The main purpose of this chapter is to review the related literature on reading strategies and locate the present study in the context of the previous research. In order to provide a comprehensive introduction about reading strategies, some general and fundamental knowledge about reading will be presented and discussed first. It will start off with the discussion about the definitions of reading by different researchers, and the subsequent sections cover reading process, purposes of reading, factors related to reading in L2/FL, reading theories and reading models. This is followed by the definition and classifications of reading strategies. Finally, some research works on reading strategies abroad and in China will be presented.

Reading is one of the most important language skills that students should be equipped with. It is through reading that the students access a lot of information concerning the target language and culture. Many foreign language students often regard mastery of reading to be one of their most important goals in their language learning experience and various pedagogical purposes served by written texts help reading receive this special focus (Richards and Renandya, 2002). As reading holds a vital status in language learning, it has been greatly valued by the educators and researchers.

Since 1970s, reading skills have received increasing attention in terms of both research and their applications to the foreign language classrooms (Gascoigne, 2005). There has been sustained interest in promoting reading as a significant and viable means of language development for second and foreign language (L2 and FL) learners (Day and Bamford, 1998). In the past decades, researchers have conducted a lot of studies on reading. The research areas cover the definition of reading, reading process, purposes of reading, factors related to reading, theories of reading, reading models and reading strategies, etc. Reading research has demonstrated that different text types may call for the use of different reading strategies. Studies examining the reading strategies of good and poor readers have shown different use of strategies pertaining to text type. Expert readers are able to use a variety of strategies flexibly and in conjunction with one another (Grabe and Fredricka, 2003). The following section deals with the discussion about the definition of reading.

2.2 Definitions of Reading

There are different views about the definition of reading. Researchers have defined the term “reading” differently according to their personal perception, beliefs or reading purposes. Following are some examples about the definition of reading proposed by different researchers.

- Brumfit (1980, p. 3) defines reading as “an extremely complex activity involving a combination of perceptual, linguistic and cognitive abilities”.
- McWhorter (1990, p. 4) defines reading as “an active process of identifying important ideas and comparing, evaluating and applying them.”

- According to Richards (1997, p. 15), “Reading is what happens when people look at a text and assign meaning to the written symbols in that text.”
- Urquhart and Weir (1998, p. 22) define reading as “The process of receiving and interpreting information encoded in language form via the medium of print.”
- Anderson (1999, p. 1) defines reading as “an active and fluent process which involves the reader and the reading material in building meaning.”
- Alderson (2000, p. 3) defines reading as “the interaction between a reader and the text.”
- According to RAND Reading Study Group (2002, p. x), reading is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language”.
- According to Snowling and Hulme (2005, p. 6), “Reading is information processing: transforming print to speech, or print to meaning”.
- Grabe and Stoller (2007, p. 51) define reading as “the ability to understand information in a text and interpret it appropriately.”

Although the term “reading” has been defined differently, some main characteristics of reading can be concluded from the definitions above. First of all, reading is seen as a receptive process that the reader conducts to get the information from the text. Secondly, reading is an active interaction between the readers and the text. Reading is active and holistic but not passive or stable. Thirdly, reading includes both decoding and meaning making, the reader needs to receive and interpret information encoded in the language. Lastly, reading is regarded as a kind of activity and ability to interpret the information in the texts.

2.3 Reading Process

The definitions of reading given by the researchers in Section 2.2 indicate that many researchers regard reading as a kind of cognitive process (Grellet, 1981; McWhorter, 1990; Irwin, 1991; Urquhart and Weir, 1998; Anderson, 1999). “The process is what we mean by ‘reading proper’: the interaction between a reader and the text” (Alderson, 2000, p. 3). Goodman (1995, p. 12) states that “Reading is a receptive language process. It is a psycholinguistic process in that it starts with a linguistic surface representation encoded by a writer and ends with meaning which the reader constructs”.

Schellings, Aanoutse and Leeuwe (2006) propose that reading is a complex process consisting of numerous processes, which strongly influence one another. The perception of letters, the rapid identification of words, the detection of the function and the meaning of the different words within a sentence, the connection of the consecutive sentences, the construction of the sentences to a meaningful and coherent whole, and the integration of the information with prior knowledge are important processes. The rapid identification of words, the construction and integration of meaning constitute the core of the reading process.

According to Grabe (2009, p. 14), “Reading is understood as a complex combination of processes.” He describes these processes as: rapid, efficient, comprehending, interactive, strategic, flexible, purposeful, evaluative, learning and linguistic processes.

- *Reading is a rapid and efficient process.* Reading is efficient not only in terms of the overall reading rate, but also in terms of the ways that various processing skills work together smoothly. While reading, the reader coordinates rapid and automatic word recognition, syntactic analysis, meaning formation, text comprehension building, inference making, critical evaluation, and linking to prior knowledge.

- *Reading is centrally a comprehending process.* Comprehension is a central goal of reading. The readers read to understand what the writer intended to convey in writing, though they also do more. Reading is seen as the ways that a reader interprets a given text.

- *Reading is an interactive process.* Reading combines many cognitive processes working together at the same time. Reading is also an interaction between the reader and the writer.

- *Reading is a strategic process.* A number of the skills and processes used in reading call for effort on the part of the reader to anticipate text information, select key information, organize and mentally summarize information, monitor comprehension, repair comprehension breakdowns, and match comprehension output to reader goals.

- *Reading is a flexible and purposeful process.* The reader adjusts reading processes and goals as his/her purpose shifts, as comprehension is impeded, or as interest varies.

- *Reading is an evaluative process.* At one level, evaluation is tied to being strategic and purposeful in that the readers evaluate how well they are reading (or monitor the reading). Evaluation also occurs when the readers decide how they should respond to a text.

- *Reading is a learning process.* Ongoing evaluations make reading a learning process. With almost any text the readers read, the evaluation process makes reading a learning process as the readers make decisions about how to respond to the text.

- *Reading is a linguistic process.* Comprehension is unable to be achieved without linguistic knowledge. The processing of linguistic information is central to reading comprehension (Perfetti, Landi, and Oakhill, 2005).

Reading process includes many dimensions, i.e. different components are involved in the reading process.

Richek, Caldwell, Jennings and Lerner (1996, p. 11) conclude some of the components of good reading.

- Knowing what reading is and how to deal with books (emergent literacy).
- Recognizing words accurately (word recognition-accuracy)
- Recognizing words with ease and fluency (word recognition-fluency)
- Understanding and being able to study and learn what is read (comprehension and studying).
- Understanding language structures and word meanings (language and meaning vocabulary).

- Responding actively to reading (the reading / writing connection)
- Enjoying and appreciating reading (motivation and reading environment).

In sum, reading is a complex process consisting of numerous processes, which strongly influence one another. The process of good reading involves many different dimensions. Knowing some information about the reading process will be very helpful for language learners to understand how the information embedded in the texts are interpreted and acquired, and this may help them understand reading better.

2.4 Purpose of Reading

Reading purposes are the aims, goals or objectives of the readers when reading the text (Grabe and Stoller, 2007). Reading purposes are one of the important factors that may affect the reading efficiency and reading results. Clear reading purposes may lead language learners to be successful readers. “Successful reading includes the ability to adjust processing in such a way that learning goals, as a function of reading purpose, are met” (Linderholm and van den Broek, 2002, p. 778). In turn, “Reading ability can be improved by teaching how to read for particular purposes” (Anderson, 2000, p. 397). Herri-Augstein, Smith, and Thomas (1982) propose that reading purpose is important for two reasons: 1) the way one reads a text varies with purposes; and 2) the success for reading can only be checked against purposes.

Understanding the purposes of reading is very crucial for readers as reading is always purposeful not only in the sense that readers read in different ways based on different purposes, but also in the sense that any motivation to read a given text is triggered by some individual purposes or tasks, whether imposed internally or externally (Grabe, 2009). When reading, a reader normally reads with a particular purpose and a variety of reading strategy employment in relation to the decisions he or she made for starting to read as well as the types of reading materials. Further, the overall goal of reading is not to remember the specific details but to have a good grasp of the main ideas and supporting ideas, and to relate those main ideas to background knowledge (Grabe and Stoller, 2007).

Grabe (2009) points out that the combination of daily encounters with texts and the needs to read in different ways in educational and professional settings requires that the readers read differently depending on the text and their goals (and motivations). When the readers read for different purposes, they engage in many types of reading, particularly in academic settings. He classifies purposes of reading into six major types:

- *Reading to search for information (scanning and skimming)*. When readers want to locate some specific information, they engage in search processes that usually include scanning and skimming. Both skimming and scanning are processes carried out at very high speed. The combination of scanning (identifying a specific graphic form) and skimming (building a simple quick understanding of the text) allows a reader to search for information.

- *Reading for quick understanding (skimming).* In order to save the time, people also use skimming for quick understanding the texts and the materials. For example, the readers skim when they want to determine what a text is about and whether or not they want to spend more time reading.

- *Reading to learn.* Reading to learn is often carried out in academic and profession settings. The readers read to learn when the information in a text is identified as important (often by a teacher or text book) and when that information will be used for some task or may be needed in the future. Reading to learn places more processing demands on the reader because the reader is expected to remember the main ideas and many supporting ideas and be able to recall this information as needed.

- *Reading to integrate information.* This reading purpose requires that the reader synthesize (and learn) information from multiple texts or bring together information from different parts of a long text.

- *Reading to evaluate, critique, and use information.* This kind of reading often occurs in academic and professional settings. The readers are often required to evaluate and critique information from multiple texts, or from one long text. At this level of reading, extensive inference making and background knowledge come into play and the reader engages very actively in reinterpreting the text for his or her own purposes.

- *Reading for general comprehension.* This is the most common purpose for reading among fluent readers. This is the reading that takes place when the

readers read a good novel, an interesting newspaper story or feature article, or a magazine when we are relaxing. In fact, reading for general comprehension involves a complex set of processes when carried out by fluent readers. It is true that general comprehension processes provide a foundation for other reading purposes.

There are certainly other ways to classify purposes for reading. For instance, Grellet (1981) classifies reading purposes into reading for pleasure and reading for information (for example, in order to find out something or in order to do something with the information the reader gets). Ruiqi (2007) puts forward to reading purposes as reading for getting information and reading for pure fun or enjoyment. In an empirical study, Swanborn and Glopper (2002) classify reading purposes into three categories, i.e. reading texts for fun, reading for learning about the topics of the texts, and reading for text comprehension. In order to explore the impact of the readers' different reading purposes on reading strategies use, Zhang and Duke (2008) divided reading purposes into 1) seeking specific information, 2) acquiring general knowledge, and 3) being entertained.

2.5 Factors Affecting Reading in a Foreign Language

Many factors may affect the reading process and the reading results. Although reading in the L1 share numerous important basic elements with reading in a second or foreign language, the processes also differ significantly (Richards, 1997). Grabe (1991) notes that students beginning reading in an L2 have a different

knowledge base than they had when they started to read in their L1. Most L1 readers have known a large number of words before they begin to read, and they have some ability to handle the basic grammar of their own language. L2 readers have neither of those advantages. He also notes that older beginning L2 readers have advantages over beginning L1 students, including more world knowledge, more highly developed cognitive abilities, the ability to use metacognitive strategies, and frequently more motivation.

Identifying and categorizing the factors that influence reading in an L2/FL can make these factors easier to remember and help the researchers understand the readers' behaviors better. Some researchers develop overarching categories to describe these factors (Richards, 1997). Grabe (1991, p. 386) identifies three factors affecting reading in a second language: "L2 acquisition and training background differences, language processing differences, and social context differences". *L2 acquisition and training background differences* refer to the fact that second language readers begin the L2 reading process with very different knowledge from L1 readers, which may affect their reading comprehension in a second language. Transfer effects from *language processing differences* can also cause difficulties for L2 readers. For example, the word order variation, relative clause formation, complex noun phrase structures, and other complex structural differences between languages can mislead the ESL reader, particularly at beginning stages. The *social contexts* of literacy use in the reader's first language may also influence his/her reading comprehension in a

second language. For example, the literacy skills that the readers have in their first language and the social context of their use of reading in their first languages may have a profound effect on their abilities to develop academic reading skills in a second language.

Scarcella and Oxford (1992) discuss four factors that may affect L2 reading: grammatical competence (knowledge of grammar), sociolinguistic competence (ability to use language appropriately in various social contexts), discourse competence (knowledge of acceptable patterns in written and spoken language), and strategic competence (ability to use a variety of language strategies to communicate successfully).

Chun (1997) lists some of the main factors affecting reading that are not normally considered in L1 reading research: 1) differences in background knowledge, that is, L2 readers start with a smaller L2 vocabulary knowledge than L1 speakers possess when beginning to read in their native language, but L2 readers start with greater world knowledge; 2) differences in language processing, that is, the transfer effects or interference from L1 to L2 on the orthographic, lexical, syntactic, and discourse levels; and 3) differences in the social context concerning literacy, that is, expectations about reading and how texts can be used.

In addition, Richards (1997), concludes a more detailed list of factors that influence reading in an L2/FL:

- Cognitive development and cognitive style orientations at time of beginning L2 / FL study.

- Language proficiency in the L1
- Metacognitive knowledge of L1 structure, grammar, and syntax
- Language proficiency in an L2/FL
- Degree of difference between the L1 and FL
- Culture orientation

The culture orientation includes the following aspects:

- 1) Attitudes toward text and purpose for reading
- 2) Types of reading skills and strategies in the L1
- 3) Types of reading skills and strategies appropriate in the L2/FL
- 4) Beliefs about the reading process (use of influence, memorization, and nature of comprehension)
- 5) Knowledge of text types in the L1 (formal schemata)
- 6) Background knowledge (content schemata)

In short, identifying and categorizing the factors that affect reading in an L2/FL can make the readers understand their reading processes more deeply. This may help the readers to be aware of their own reading behaviors while reading. Taking these factors into consideration, the readers may adjust their reading habits and thus improve their reading proficiency. Teachers of reading in an L2/FL must understand the factors that influence their students' reading processes. L2/FL reading teachers who can recognize these factors at work are better equipped to help their students.

2.6 Theoretical Framework of Reading Research

This section discusses the theoretical framework for reading and reading research. The application of reading theories to language teaching has a very recent history. Until about 50 years ago, reading theories were generally given second place to the theories about language and language learning (Hood, Solomon and Burns, 1996). The reading theories demonstrate the considerable changes in how theorists have conceived of the reading process and in the recommended teaching approaches. Knowing some theories about reading will be very beneficial for language learners to understand the nature of reading. Based on the purpose of the study, the cognitive, metacognitive, and schema theories in reading will be reviewed.

2.6.1 Cognitive Theory

Recognition involves accessing information stored in memory. In the case of visual word recognition, this typically involves retrieving information about a word's spoken form and meaning from its printed form (Snowling and Hulme, 2005). The basis of understanding is referred to by psychologists as cognitive structure. "Cognitive" means "knowledge" and "structure" implies organization, and that indeed is what the readers possess—an organization of knowledge. Cognitive structure is more like a summary of past experience. Prior knowledge and "nonvisual information" are the mental resources that enable us to make sense of "visual information" arriving through the eyes (Smith, 2004). Cognitive theory adopts the analogy of a computer program and makes use of a lot of concepts taken from computer science, such as

information processing, short-term memory and long-term memory (Schneider, 2002). Long-term memory is one's permanent source of understanding of the world. The knowledge that the language learners must already possess in order to understand written language must be part of the long-term memory. Remembrance of the sense the language learners have made of past experience is the foundation of all new understanding of language and the world (Smith, 2004). The cognitive theory emphasizes the active mental processes involved in language learning, and not simply the forming of habits as the behaviorist views (Schmidt and Richards, 2002).

Work in the field of cognitive psychology greatly influences the understanding of reading, which involves complex cognitive process, and what learners can contribute in this process largely depends on the purpose of reading, the familiarity of the topic, and the text length and the organization of the text type (Chen and Zheng, 2007). Cognitive psychology analyzes complex intellectual processes and proposes theories about what is happening inside a reader's brain based on the reader's external behavior. A cognitive theory of reading assumes that an active reader integrates the existing knowledge and new information with some strategies to construct a meaning from the texts (Alvermann and Pheps, 2002). Furthermore, the cognitive theory has been seen as guiding procedures that students can use to help them complete their reading tasks (Rosenshine, 1997).

2.6.2 Metacognitive Theory

Metacognition refers to “the knowledge about cognitive states and abilities that can be shared among individuals while at the same time expanding the construct to include affective and motivational characteristics of thinking” (Paris and Winograd, 1990, p. 15). Smith (2004) also asserts that metacognition means literally “cognition about cognition” or thought about one’s own thought. Metacognitive processes are presumed to take place when one thinks about his/her own thinking, for example, when one reflects on whether he/she knows something, whether he/she is learning, or whether he/she has made a mistake. Metacognition could be regarded as a new label for the old-fashioned concept of ‘reflection’. In his classic article “Metacognition and Cognitive Monitoring”, Flavell (1979) describes the process of cognitive monitoring as occurring through the actions and interactions of four classes or interrelated phenomena: Metacognitive knowledge, metacognitive experiences, goals (or tasks), and actions (or strategies).

Indeed, researchers agree that awareness and monitoring of one’s comprehension processes are important aspects of skilled reading. Such awareness and monitoring processes are often referred to in the literature as metacognition, which can be thought of as the knowledge of the readers’ cognition about reading and the self-control mechanisms they exercise when monitoring and regulating text comprehension (Mokhtari and Reichard, 2002). Researchers investigating reading comprehension monitoring among skilled and unskilled readers have long recognized

the importance of metacognitive awareness in reading comprehension because it distinguishes between skilled and unskilled readers. Skilled readers, according to Snow, Burns, and Griffin (1998, p. 62), comprehend well. They differ from unskilled readers in “their use of general world knowledge to comprehend text literally as well as to draw valid inferences from texts, in their comprehension of words, and in their use of comprehension monitoring and repair strategies”. Unskilled readers (typically young developing readers and some inexperienced adolescents and adults), on the other hand, are quite limited in their metacognitive knowledge about reading. They do relatively little monitoring of their own memory, comprehension, and other cognitive tasks (Paris and Winograd, 1990).

2.6.3 Schema Theory

Bartlett (1932, cf Ajideh, 2003) first proposed the concept of schema. He suggested that memory takes the form of schemata, which provide a mental representation or framework for understanding, remembering and applying information. He believed that the memory of discourse is not based on straight reproductions, but is constructive. This constructive process uses information from the encountered discourse, together with knowledge from past experience related to the discourse at hand to build a mental representation. The past experience, Bartlett argued, cannot be an accumulation of successive individuated events and experiences, it must be organized and made manageable –“the past operates as an organized mass rather than as a group of elements each of which retains its specific character”.

According to Ajideh (2003, p. 4), a schema is “a hypothetical mental structure for representing generic concepts stored in memory. It is a sort of framework, or plan, or script. Schemata are created through experience with people, objects, and events in the world. Schemata can be seen as the organized background knowledge, which leads us to expect or predict aspects in our interpretation of discourse”. Anderson and Pearson (1984) view a schema as an abstract knowledge structure. A schema is abstract in the sense that it summarizes what is known about a variety of cases that differ in many particulars. Similarly, Hebb (2000) states that schemata are mental representations of what we know and expect about the world, information on long-term memory is stored in interrelated networks of schemata, and new information that could be associated with existing schema is easier to understand, to find and to use. There are three different kinds of schemata in the reading domain: content schemata, formal schemata, and linguistic schemata. Content schema is a reader’s background or world knowledge relevant to what he is reading. Formal schema refers to the organizational forms and rhetorical structures of written texts. Linguistic schema refers to the understanding of letters and sounds (Singhal, 1998).

Schema theory places a heavy emphasis on the importance of the readers’ background knowledge. A text does not carry meaning by itself; the reader brings information, knowledge, emotions and experiences to the printed words (Brown, 2001). Hayes and Tierney (1982) suggest that presenting the background knowledge relating to the topic to be learned assists readers in learning from the text. Salomon

and Perkins (1989) point out that abstract formulation of schema can provide the bridge from one context to another. When reading, the reader makes use of his/her schemata to complete the information suggested by the author. In this case, a schema serves as a bridge for a reader to connect the new information with the old information. Since no readers start reading with a blank mind, the schema theory is important to reading comprehension. Research indicates that the readers' prior knowledge have strong positive relationships with their reading comprehension.

In sum, reading is a complex mental process. Readers use their cognition, metacognition, and/or schema to recall their existing experience or some information that they have learned, and then integrate the former knowledge with new information to understand the meaning of the texts. The three reviewed theories are very important ones of the previous studies on reading, which, to some extent, can explain what really happens in the brain while the reader interacts with printed materials. Understanding the reading theories can help us know about the reading process and how the readers decode the texts. It will also be very beneficial for the researchers to conduct research on reading strategies.

2.7 Reading Models

Models characterize theories of reading, providing ways to represent a theory, or part of a theory; they explain what reading involves and, in more detailed versions, how reading works (Sadoski and Paivio, 2007). In the reading process, the

readers play an important and active role during the interaction with the text. In looking for ways to describe the interaction between the readers and the texts, linguists and L2/FL professionals, exploring the similarities and differences between reading in the L1 and L2/FL, have also created models that describe what happens when people read (Goodman, 1967; Smith, 1971; Widdowson, 1978, 1983; Carrell, 1987). Barnett (1989) summarizes these models and includes that there are three main models of how reading occurs: the bottom-up model, the top-down model and the interactive model.

2.7.1 Bottom-up Model

The bottom-up model views reading as “matching the written symbols with their aural equivalents and blending these together to form words and derive meaning” (Nunan, 1999, p. 252). It analyzes reading as a process in which small chunks of text are adsorbed, analyzed, and gradually added to the next chunks until they become meaningful (Barnett, 1989). The central notion behind the bottom-up theory is that reading is basically a matter of decoding a series of written symbols into their aural equivalents (Nunan, 1991). In this sense, reading is a process of decoding written symbols into their aural equivalents in a linear fashion and arriving at the meaning of the words is therefore the final step in the process (Nunan, 1999). This model suggests that reading follows a mechanical pattern in which the reader creates a piece-by-piece mental translation of the information in the text, with little interference from the reader’s own background knowledge (Grabe and Stoller, 2007).

According to the Bottom-up theory, the reader constructs the text from the smallest units (letters to words to phrases to sentences, etc.) and that the process of constructing the text from those small units becomes so automatic that readers are not aware of how it operates. Decoding is an earlier term of this process (Richards, 1997). The reader first begins with the written text; identifies features of letters; links these features together to recognize letters; combines letters to recognize spelling patterns; links spelling patterns to recognize words; and then proceeds to the levels of sentence, paragraph, and text processing (Vacca et.al, 2003). In this way, meaning was arrived at through a mental sequence of decoding, starting with the recognition of individual sound and words, going on to the matching of sound to print and then the gradual building up of sounds into words (Hood, Solomon and Burns, 1996).

Cambourne (1979) provides the following illustration of how the bottom-up process is supposed to work: Print → Every letter discriminated → Phonemes and grapheme matched Blending pronunciation meaning. According to this model, the reader processes each letter as it is encountered. These letters or graphemes are matched with the phonemes of the language, which is assumed the reader already knows. These phonemes, the minimal units of meaning in the sound system of the language, are blended together to form words. The derivation of meaning is thus the end process in which the language is translated from one form of symbolic representation to another. However, Nunan (1991) points out that the assumption that phonic analysis skills are all that is needed to become a successful independent reader is questionable with first as well as second language readers.

The bottom-up theory focuses more on the printed texts. The readers are expected to get the meaning by recognizing letters and words. They are put in a fairly passive position in which they decode whatever written in the text in a mechanical way. In this mechanical reading process, the readers translate information in the texts piece-by-piece with little interference from their background knowledge. However, Grabe (2009) argues that such an extreme view of reading is not accurate, and no current model of reading depicts reading as a pure bottom-up process.

2.7.2 Top-down Model

The top-down model assumes that “reading is primarily directed by reader goals and expectations” (Grabe and Stoller, 2007, p. 25). Readers bring a great deal of knowledge, expectations, assumptions, and questions to the text and, given a basic understanding of the vocabulary, they continue to read as long as the text confirms their expectations (Goodman, 1967). According to the top-down theory, the readers fit the text into knowledge (cultural, syntactic, linguistic, and historical) they already possess, and then check back when new or unexpected information appears (Richards, 1997). The readers confirm their predictions by means of syntactic, lexical meaning, contextual information, grapheme or phoneme features provided by texts (Barnett, 1988).

In the top-down view of second language reading, the readers are active participants in the reading process. They process information, make and confirm predictions by relating the information and predictions to their past experience and

knowledge of the language (Carrell et al, 1988). In this process, the readers' prior experience or background knowledge they bring to the text, which is known as schematic knowledge, plays a significant role in the reading process (Aebersold and Field, 1997). In this view, not only the readers' prior linguistic knowledge (linguistic schemata) and level of proficiency in the second language, but also the readers' prior knowledge of the content area of the text (content schemata) as well as of the rhetorical structure of the text (formal schemata) are important (Carrell et al, 1988), for they provide the readers with a basis for comparison, thus for making predictions.

Cambourne (1979) provides the following schematization of the top-down model: Past experience, language intuitions and expectations → Selective aspects of print → Meaning → Sound, pronunciation (if necessary). From the diagram, it can be seen that this model emphasizes the reconstruction of meaning rather than the decoding of form. The interaction of the reader and the text is central to the process, and the reader brings to this interaction his/her knowledge of the subject at hand, knowledge of and expectations about how language works, motivation, interest and attitudes towards the content of the text. Rather than decoding each symbol, or even every word, the reader forms hypotheses about text elements and then 'samples' the text to determine whether or not the hypotheses are correct.

The top-down model assumes that the readers actively control the comprehension process, directed by their goals, expectations, and strategic processing. The top-down model highlights the interaction of all processes with each other under

the control of some central monitoring mechanism. Under extreme interpretations, it is not clear what the reader could learn from a text if she/he must first have expectations about all the information in the text. Few reading researchers support strong top-down views (Grabe, 2009).

2.7.3 Interactive Model

The interactive model theory combines both the top down and the bottom up models of reading. This model claims that reading is both a cognitive and perceptual process in which the reader takes the responsibility of using his/her previous knowledge and experiences, and codes the features of the text in order to make or establish meaning (Wray and Medwell, 1997). The interactive model is the typical compromise solution, though there are many different ways to understand the notion of “interactive”. The basic assumption is that useful elements from bottom-up and top-down views can be combined in some massively interactive set of processes (Grabe, 2009).

According to the Interactive model theory, both top-down and bottom-up processes are occurring, either alternatively or simultaneously. These theorists describe a process that moves both bottom-up and top-down, depending on the type of text as well as on the reader’s background knowledge, language proficiency level, motivation, strategy use, and culturally shaped beliefs about the reading (Richards, 1997). The view behind this model is that one can take useful ideas from a bottom-up perspective and combine them with key ideas from a top-down view (Anderson,

1999). Gascoigne (2005) also indicates that the interactive model places an emphasis on the interaction between the reader and the text. They are reader driven. They are not linear but rather cyclical views of the reading process in which textual information and the reader's mental activities have a simultaneous and equally important impact on comprehension.

Interactive theory also suggests that successful readers rely on different aspects of bottom-up or top-down skills and strategies according to the kinds of texts they are reading. In one instance decoding may be used extensively, whereas on other occasions, non-visual information may be more important. Saricoban (2002) also states that successful readers use a combination of both the top-down and bottom-up strategies. Hee and Zhao (2007) also echo that successful readers tend to use top-down strategies and successful reading comprehension requires using a combination of top-down and bottom-up strategies corroborating with the schema theorists' view of reading comprehension.

In summary, the top-down model developed in contrast to the earlier bottom-up model, to explain the more active role of the reader in comprehending the text. The interactive model brought together the concepts of the bottom-up and top-down models to explain the complex reading process. From the review of the development of the reading models, we can see the importance of reading models in explaining the reading process, which may help us understand the nature of reading better.

2.8 Reading Strategies

Basically, reading strategies can be any comprehension-enhancing action taken by the readers. The strategic readers are believed to draw on a variety of strategies to accomplish a purpose in reading. Both reading in L1 and L2 involve the use of various strategies that assist readers understanding the reading materials (Carrel, 1991). When readers encounter comprehension problems, they also use some strategies to overcome their difficulties. Researchers have long recognized that reading strategies are strongly associated with success in reading. Block (1986) point out that reading strategies can indicate how readers deal with reading tasks, what cues should be used, how readers can understand what they read, and what they do when they encounter the problems in reading. Reading strategies are of interest not only for what they reveal the ways readers interact with the reading texts, but also for how the readers' strategy use is related to effective reading comprehension (Carrell and Carson, 1997).

The use of reading strategies is fundamental to successful reading as reading strategies can help learners improve their reading comprehension, enhance efficiency in reading and overcome their reading difficulties or problems. According to Song (1998), reading strategies are important because they help learners to improve their reading comprehension, and to enhance efficiency in reading. Effective readers are more aware of strategy use than less effective readers. Empirical studies indicate that success in reading is linked to the quality and quantity of reading strategies used

(Oxford, 1989; Brown, 1989 and Alderson, 2000). Furthermore, reading strategies are essential for readers to achieve a better understanding of the texts they read, especially academic texts. In order to have a better understanding of the nature of reading strategies, the subsequent sections aim to discuss the definitions and classifications of reading strategies provided by different researchers.

2.8.1 Definitions of Reading Strategies

In a broad sense, the methods readers use to aid reading comprehension and overcome reading difficulties are called 'reading strategies'. However, there are variations in terms of the nature of reading strategies among researchers. The term "reading strategies" may be interpreted in different ways, thus different researchers may define the term "reading strategies" differently based on their own perceptions or beliefs. Although consensus among researchers for a precise definition of "reading strategies" is difficult, the definitions given by the researchers share some common characteristics. What follow are some examples of definitions of reading strategies produced by different researchers:

- Paris, Lipson, and Wixson (1983, p. 293) define reading strategies as "deliberate cognitive steps that learners can take to assist in acquiring, storing, and retrieving new information and that therefore can be accessed for a conscious use."
- Cook and Mayer (1983, p. 90) have defined reading strategies as "behaviors that a reader engages in at the time of reading and that it is related to some goals."
- Barnett (1988, p. 151) defines reading strategies as "the comprehension processes that readers use in order to make sense of what they read. This process may involve skimming, scanning, guessing, recognizing cognates and word families, reading for meaning, predicting, activating general knowledge, making inferences, following references, and separating main ideas from supporting ideas".

- Cohen (1990, p. 83) defines reading strategies as “those mental processes that readers consciously choose to use in accomplishing reading tasks”.
- Anderson (1991, p. 460) defines reading strategies as “deliberate, cognitive steps that readers can take to assist in acquiring, storing and retrieving new information”.
- Wallace (1992, p. 146) refers reading strategies to “ways of reading which readers employed flexibly and selectively and vary depending on the text-type, and the context and the purpose of reading”.
- Davies (1995) defines a reading strategy as “a physical or mental action used consciously or unconsciously with the intention of facilitating comprehension and reading.
- Brantmeier (2002, p. 1) has defined reading strategies as “the comprehension processes that readers use in order to make sense of what they read.”
- Grabe and Stoller (2007, p. 51) define reading strategies as “a set of abilities under conscious control of the reader.”

Although the definition of reading strategies varies according to different researchers, some main characteristics of reading strategies can be identified according to the definitions given by the researchers: Firstly, the role of reading strategy use is to enhance or aid reading comprehension. Secondly, reading strategies are regarded as mental behaviors, operations or processes. Thirdly, reading strategies are conscious and deliberate. This means that the readers are aware of what they do and how they do when they read. Lastly, reading strategies are flexible and selective. Readers will choose different reading strategies depending on the text-type, the context and the purpose of reading.

2.8.2 Classifications of Reading Strategies

Different scholars have different ways of classifying reading strategies. The researchers classify reading strategies from different perspectives based on the theories or practical studies. The following are some examples.

2.8.2.1 Reading Strategy Classification by Block (1986)

Block (1986) categorizes the reading strategies into two levels: general comprehension and local linguistic strategies. General strategies include comprehension-gathering and comprehension-monitoring strategies. Local strategies deal with attempts to understand specific linguistic units.

Category 1: General Strategies

- Anticipating content
- Integrating information
- Questioning information in the text
- Interpreting the text
- Using general knowledge and associations
- Commenting on behavior or process
- Monitoring comprehension
- Correcting behavior
- Reacting to the text

Category 2: Local Strategies

- Paraphrasing
- Rereading
- Questioning meaning of a clause or sentence
- Questioning meaning of a word
- Solving vocabulary problems

2.8.2.2 Reading Strategy Classification by Anderson (1991)

Using think-aloud protocol procedures to get the data, Anderson (1991) classifies the reading strategies reported by the language learners into five

main categories. These categories include supervising strategies, supporting strategies, paraphrasing strategies, establishing coherence strategies, and test-taking Strategies.

The following is the classification of these reading strategies:

Category 1: Supervising Strategies

- Referring to the experimental task
- Recognizing loss of concentration
- Stating failure to understand a portion of the text
- Stating success in understanding a portion of the text
- Adjusting reading rate in order to increase comprehension
- Formulating a question
- Predicting the meaning of a word or the text content
- Referring to lexical items that impede comprehension
- Confirming/disconfirming an inference
- Referring to the previous passage
- Responding affectively to text conten

Category 2: Supporting Strategies

- Skipping unknown words
- Expressing a need for a dictionary
- Skimming reading material for a general understanding
- Scanning reading material for a specific word or phrase
- Visualizing

Category 3: Paraphrasing Strategies

- Using cognates between L1 and L2 to comprehend
- Breaking lexical items into parts
- Paraphrasing
- Translating a word or a phrase into the L1
- Extrapolating from information presented in the text
- Speculating beyond the information presented in the text

Category 4: Establishing Coherence Strategies

- Rereading
- Using context clues to interpret a word or phrase
- Reacting to author's style or text's surface structure
- Reading ahead
- Using background knowledge
- Acknowledging lack of background knowledge

- Relating the stimulus sentence to personal experiences

Category 5: Test-taking Strategies

- Guessing without any particular considerations
- Looking for the answers in chronological order in the passage
- Selecting an answer because the others did not seem reasonable
- Selecting an alternative through deductive reasoning
- Matching the stem or alternatives to a previous portion of the text
- Selecting a response because it is stated in the text
- Selecting a response based on understanding the material read
- Making reference about time allocation
- Reading the questions and options after reading the passage
- Reading the questions and options before reading the passage
- Changing an answer after having marked one
- Receiving clues from answering one question
- Stopping reading the options when they reach the answer
- Expressing uncertainty at correctness of an answer chosen
- Skipping a questions and returning to it later
- Skipping a question that is not understood
- Marking answers without reading in order to fill the space
- Recognizing the incorrect answer marked during the think-aloud protocol

2.8.2.3 Reading Strategy Classification by Sheorey and

Mokhtari (2001)

Sheorey and Mokhtari (2001) carried out a research work to examine differences in the reported use of reading strategies of native and non-native English speakers when reading academic materials. They designed a questionnaire called Survey of Reading Strategies (SORS) to collect the data. The reading strategies in this study are classified into three main categories as follows:

Category 1: Metacognitive Strategies

- Setting purpose for reading
- Previewing text before reading
- Checking how text content fits purpose
- Noting text characteristics
- Determining what to read

- Using text features (e.g. tables)
- Using context clues
- Using typographical aids (e.g. italics)
- Predicting or guessing text meaning
- Confirming predictions

Category 2: Cognitive Strategies

- Using prior knowledge
- Reading aloud when text becomes hard
- Reading slowly and carefully
- Trying to stay focused on reading
- Adjusting reading rate
- Paying close attention to reading
- Pausing and thinking about reading
- Visualizing information read
- Evaluating what is read
- Resolving conflicting information
- Re-reading for better understanding
- Guessing meaning of unknown words

Category 3: Support Strategies

- Taking notes while reading
- Underlining information in text
- Using reference materials
- Paraphrasing for better understanding
- Going back and forth in text
- Asking oneself questions

2.8.2.4 Reading Strategy Classification by Mokhtari and

Reichard (2002)

Mokhtari and Reichard (2002) design a “Metacognitive Awareness of Reading Strategies Inventory (MARSI)” to assess adolescent and adult readers’ metacognitive awareness and perceived use of reading strategies while reading academic or school-related materials. They classify the reading strategies into three categories: Global Reading Strategies, Problem-Solving Strategies, and Support Reading Strategies.

Category 1: Global Reading Strategies

- Setting purpose for reading
- Activating prior knowledge
- Checking whether text content fits purpose
- Predicting what text is about
- Confirming predictions
- Previewing text for content
- Skimming to note text characteristics
- Making decisions in relation to what to read closely
- Using context clues
- Using text structure
- Using other textual features to enhance reading comprehension

Category 2: Problem-solving Strategies

- Reading slowly and carefully
- Adjusting reading rate
- Paying close attention to reading
- Pausing to reflect on reading
- Rereading
- Visualizing information read
- Trying to get back on track when losing concentration
- Guessing meaning of unknown words

Category 3: Support Reading Strategies

- Taking notes while reading
- Paraphrasing text information
- Revisiting previously read information
- Asking self questions
- Using reference materials as aids
- Underlining text information
- Discussing reading with others
- Writing summaries of reading

2.8.2.5 Reading Strategy Classification by Saricoban (2002)

Saricoban (2002) carried out a research to investigate the reading strategy use between the successful and less successful readers at an upper-intermediate level in the classroom reading. The reading strategies in this study

are classified as strategies for the pre-reading stage, strategies for the during-reading stage and strategies for the post-reading stage.

Category 1: Strategies for the pre-reading stage

- Finding answers to given questions based on the text;
- Giving their personal opinions about the topic;
- Questioning the reason the author is writing about the topic;
- Questioning the whole range of ways to write a particular text;
- Questioning the generating of their own list of questions.

Category 2: Strategies for the during-reading stage

- Reading through the passage;
- Underlining difficult words and phrases;
- Figuring out the meanings of these words and phrases from context;
- Re-reading the text;
- Solving doubts by questioning;
- Focusing on the most important ideas of a text.

Category 3: Strategies for post-reading stage

- Summarizing;
- Evaluating;
- Synthesizing;
- Commenting;
- Reflecting.

2.8.2.6 Reading Strategy Classification by Taraban (2004)

To measure college students' use of reading strategies for comprehension and for studying while reading school-related materials, Taraban (2004) develop 'the Metacognitive Reading Strategies Questionnaire (MRSQ)'. By factor analysis, the reading strategies are classified into analytic strategies and pragmatic strategies. The analytic strategies are related to cognitions aiming at reading comprehension. The pragmatic strategies are related to behaviors aiming at studying and academic performance. The following is the list of these reading strategies.

Category 1: Analytic Strategies

- Evaluating the contribution of the reading text
- Anticipating how the knowledge from the text will be used
- Drawing on the knowledge of the topic to help comprehension
- Reconsidering and revising the background knowledge
- Reconsidering and revising the questions about the topic
- Considering other possible interpretations to the text
- Distinguishing prior information and new information
- Inferring information from the text
- Evaluate the reading to the reading goals
- Searching out information relevant to the reading goals
- Anticipating information will be presented later
- Trying to determine the meaning of unknown words
- Checking whether current information had been anticipated
- Exploiting personal strengths in order to better understand
- Visualizing the descriptions
- Noting how hard or easy a text is to read.

Category 2: Pragmatic Strategies

- Making notes in order to remember the information.
- Highlighting important information for easy spotting.
- Writing questions and notes in the margin
- Underlining the information in order to remember it.
- Reading the text many times to remember the information.
- Rereading the text when having difficulty in comprehension.

2.8.2.7 Reading Strategy Classification by Abbott (2006)

Abbott (2006) used verbal report data collected from Arabic- and Mandarin-speaking English as second language (ESL) learners to identify the reading strategies. Analyses of the verbal protocols identify 12 main reading strategy categories, which then are grouped under two bigger categories.

Category 1: Bottom-up, Local Strategies

- Breaking lexical items into parts
- Scanning for explicit information requested in the item
- Identifying a synonym or a paraphrase of the literal meaning of a word, phrase, or sentence

- Relating verbal information to accompanying visuals
- Matching key vocabulary in the item to key vocabulary in the text
- Using knowledge of grammar or punctuation
- Using local context cues to interpret a word or phrase

Category 2: Top-down, Global Strategies

- Skimming for gist/identifies the main idea, theme, or concept
- Connecting information presented in different sentences
- Drawing an inference based on information presented in the text
- Speculating beyond the text
- Recognizing discourse format

2.8.2.8 Reading Strategy Classification by Ozek (2006)

Ozek (2006) makes use of the data from the self-report questionnaire and think-aloud protocol to investigate ELT students' use of reading strategies. The reading strategies are grouped into pre-reading, while-reading, and post-reading. Pre-reading strategies include five strategies; while-reading strategies contain fourteen strategies and post-reading strategies consist of five strategies. The classification of the strategies is as follows:

Category 1: Pre-reading Strategies

- Using the title
- Skimming the text
- Thinking about the previous knowledge on the topic of the text
- Reading the first line of each paragraph
- Using pictures/ illustrations

Category 2: While-reading Strategies

- Consulting the dictionary for important words
- Guessing the meaning of a word from the context
- Skipping some unknown words
- Reading without translating word-for-word
- Thinking aloud during reading
- Guessing the meaning of a word from the grammatical category
- Thinking of situation to remember a word

- Visualizing events
- Recognizing organization
- Taking notes
- Assimilating the text with the passage events
- Assimilating the text with the background information
- Rereading a sentence.

Category 3: Post-reading Strategies

- Classifying words according to their meanings
- Classifying words according to their grammatical categories
- Summarizing the main ideas
- Rereading the text to remedy comprehension failures
- Rereading the text to remember important information

2.8.2.9 Reading Strategy Classification by Lee-Thompson (2008)

Utilizing think-aloud and retelling procedures, Lee-Thompson (2008) focuses on the identification of strategies that American university students apply to read Chinese texts and classifies the reading strategies as bottom-up strategies and top-down strategies.

Category 1: Bottom-up Strategies

- Scanning for unfamiliar words
- Marking the text
- Using textual resources
- Writing Pinyin and/or English equivalent
- Rereading
- Skipping
- Translating

Category 1: Bottom-up Strategies (contd)

- Substituting
- Using visual aids
- Applying linguistic knowledge
- Using context

Category 2: Top-down Strategies

- Previewing

- Paraphrasing
- Using background knowledge and personal experience
- Anticipating
- Hypothesizing
- Formulating questions
- Identifying main idea
- Taking notes
- Making a summary
- Planning
- Attending selectively
- Monitoring comprehension
- Identifying problems
- Evaluating performance
- Evaluating strategy use

2.8.2.10 Reading Strategy Classification by Cheng (2010)

Taking five Chinese graduates as participants and using interviews, think-aloud sessions and learning logs to collect the data, Cheng (2010) carried out an empirical study to explore Chinese EFL students' reading strategies in academic contexts. Using O'Malley and Chamot's (1990) and Oxford's (1990) classifications of learning strategies as guidelines, she classifies the reading strategies obtained from the data into four categories: Metacognitive Strategies, Cognitive Strategies, Social Strategies and Affective Strategies.

Category 1: Metacognitive Strategies

- Setting reading goals
- Planning
- Making comments/evaluation
- Confirming/verifying/revising hypotheses
- Identifying reading problems
- Raising questions
- Looking for answers
- Being aware of strategy use
- Reasoning

Category 2: Cognitive Strategies

- Analyzing sentence structures
- Analyzing word formation
- Identifying key words
- Identifying word collocation
- Checking coherence and consistency of textual information
- Identifying main ideas
- Looking for specific information
- Invoking prior knowledge
- Paraphrasing immediate textual information
- Making summaries
- Verbalizing from graphics
- Noticing the format of the whole text
- Noticing graphics
- Noticing footnotes/endnotes
- Attending to references
- Identifying topic sentences
- Identifying intended audience
- Guessing/Making references
- Reading aloud
- Memorizing
- Rereading/reviewing
- Skipping
- Taking notes
- Switching languages
- Marking the text
- Using the dictionary
- Photocopying/purchasing

Category 3: Social Strategies

- Asking other people
- Discussing with other people
- Using other resources such as books and internet

Category 4: Affective Strategies

- Being confident
- Being interested/or motivated
- Giving up after attempting to evaluate the suitability/correctness of the textual information and accepting it
- Managing/adjusting boredom/stress/frustration

2.8.2.11 Reading Strategy Classification by Luo (2010)

Luo (2010) conducted an investigation to explore the reading strategies employed by Chinese university students. The reading strategies in this study are divided into three categories: strategies for before-reading stage, strategies for while-reading stage and strategies for after-reading stage.

Category 1: Strategies for before-reading stage:

- Search for the meanings of new vocabulary items;
- Read the title of the text;
- Go through the text quickly;
- Read the first and the last paragraphs;
- Look at pictures/charts/tables/figures in the text (if any);
- Look at questions about the text (if any);
- Scan for main ideas;
- Think of your background knowledge about the text;
- Read the abstract or an introductory part;
- Look for the parallel article(s) in Chinese (if any);
- Predict what might happen in the text.

Category 2: Strategies for while-reading stage

- Search for the meanings of new vocabulary items;
- Appeal for assistance from other people about the meaning of a new vocabulary item;
- Analyze a sentence structure;

Category 2: Strategies for while-reading stage (contd)

- Take notes the important information;
- Guess the meaning of the text from context;
- Reread certain part(s) of the text;
- Read certain parts of the text slowly;
- Avoid difficult parts;
- Highlight important information or difficult vocabulary items by underlining;
- Think about the meaning of the reading text in Chinese;
- Make a summary of certain part(s) of the reading text in either Chinese or English, or both;
- Try to relax when you feel nervous when reading;

- Encourage yourself to keep on reading when encountering any difficulties.

Category 3: Strategies for after-reading stage

- Search for the meanings of new vocabulary items;
- Discuss the reading text with classmate(s) or friend(s);
- Make a summary of the whole reading text;
- Retell yourself or other people about what has been read;
- Review your own notes;
- Translate the reading text into Chinese using Chinese script;
- Reflect the performance;
- Evaluate the performance;
- Give yourself a reward or treat when you do well in reading;

In conclusion, the classifications listed above have shown the ways how the previous researchers classify the reading strategies based on the theories, the research purposes, the research contexts or the researchers' interests. As we can see, different researchers have different ways to classify the reading strategies. Most of the classifications derive from the researchers' own experience or the empirical studies. Viewing the classifications by different researchers, some classifications are very common or outstanding. Examples are 1) pre-reading strategies, while-reading strategies and post-reading strategies; 2) global strategies, problem-solving strategies and support strategies; and 3) cognitive strategies, metacognitive strategies and social/affective strategies.

2.9 Related Studies on Reading Strategies

Since reading strategies are very important in second and foreign language reading, researchers have been paying their continuous attention to this field. A large

amount of research has been conducted on reading research. This research has made great contributions to the study of reading strategies and second language acquisition. This section focuses on reviewing the past research conducted to provide a general framework of reading strategy research. These works are divided into two parts: Research on reading strategies conducted abroad and research on reading strategies conducted in China.

2.9.1 Research on Reading Strategies Conducted Abroad

As one of the main factors that may affect the results of reading, reading strategies have been given much attention by the researchers since the 1970s. An initial review of related literature and other research materials appear to reveal that Hosenfeld (1977) was probably the first researcher who carried out research on learners' reading strategies, followed by a number of researchers. Examples are Block (1986), Sarig (1987), Barnett (1988), Carrell (1989), and Anderson (1991). Taking different language learners as participants and using different research methods, researchers have conducted a great deal of research on reading strategies from different perspectives. Some examples are shown in Table 2.1.

Table 2.1 Research Works on Reading Strategies Conducted Abroad

Hosenfeld, C. (1977). A preliminary investigation of the reading strategies of successful and nonsuccessful second language learners	
Purpose(s) of Study	To discover the differences of strategy use between the successful and non-successful readers
Participants	Ninth grade students learning French; 20 successful readers and 20 poor readers
Instrument(s)	Think-aloud reports
Variables	Reading proficiency level
Data Analysis	Coding scheme
Results	Successful readers kept meaning of passage in mind while assigning meaning to sentences; whereas poor readers focused on solving unknown words or phrases.
2. Block, E. (1986). The comprehension strategies of second language readers	
Purpose(s) of Study	To provide a detailed description of the comprehension strategies used by ESL students designated as non-proficient readers.
Participants	9 university level ESL and native English students in a remedial reading course
Instrument(s)	Think-aloud reports
Variables	Reading proficiency level
Data Analysis	Coding scheme
Results	1. More successful readers: a) used their general knowledge; b) focused on the overall meaning of the text; c) integrated new information with old; and d) differentiated main ideas from the supporting points. 2. The poor readers rarely did any of the above.
3. Sarig, G. (1987). High level reading in the first and foreign language: Some comparative process data	
Purpose(s) of Study	To determine the difference of reading strategies used by both successful and less successful readers at an upper-intermediate level.
Participants	10 Female native Hebrew readers studying English as a foreign language
Instrument(s)	Think-aloud reports
Variables	1. Reading proficiency level; 2. L1 reading strategy transfer.
Data Analysis	1. Coding scheme; 2. Descriptive statistics.
Results	1. The participants transferred strategies from L1 into L2 reading. 2. Meaning base (global strategies) led to both successful and unsuccessful reading comprehension. 3. Clarification and simplification strategies contributed to unsuccessful reading comprehension in L1 and L2.
4. Barnett, M. A. (1988). Reading through context: How real and perceived strategy use affects L2 comprehension	
Purpose(s) of Study	To determine the difference in the strategy use by both successful and less successful readers at an upper-intermediate level.
Participants	278 university level students learning fourth semester French; some students were taught reading strategies and others were not.
Instrument(s)	Strategy use questionnaire
Variable(s)	Reading proficiency level
Data Analysis	Descriptive statistics
Results	1. Higher comprehension scores achieved by participants who considered context while reading; 2. Participants who were taught strategy use understood passages better.

5. Kletzien, S. B. (1992). Proficient and less proficient comprehenders' strategy use for different top-level structures.	
Purpose(s) of Study	To examine proficient and less proficient high school comprehenders' use of strategies as they read three passages with different top-level structures: collection, causation, and comparison.
Participants	24 tenth and eleventh graders who were divided into proficient and less proficient comprehenders.
Instrument(s)	1. Interview; 2. Questionnaire.
Variable(s)	Reading proficiency level
Data Analysis	1. Descriptive statistics; 2. Repeated measures ANOVA
Results	<ol style="list-style-type: none"> Both groups of readers used similar strategies, such as rereading, using previous knowledge, inference and reading subsequent text. Use of inferences was more valuable than other strategies on the collection passage, and use of author's structure was more valuable on the causation passage than on the other passages for the proficient comprehenders. Proficient comprehenders differed from less proficient comprehenders in their greater use of previous knowledge on the collection passage and their greater use of vocabulary strategies on the causation and comparison passages.
6. Najar, R.L. (1998). A Study of cognitive learning strategy use on reading tasks in the L2 classroom	
Purpose(s) of Study	To determine the relationship of cognitive learning strategy use and task performance.
Participants	204 freshman students at a Japanese university
Instrument(s)	Reading texts and comprehension questions
Variable(s)	Reading tasks
Data Analysis	1. Descriptive statistics; 2. ANOVA; 3. Post-hoc Scheffé test.
Results	<ol style="list-style-type: none"> Not all learning strategies are equally effective in helping the learners identify main ideas and understand the content. Some strategies are more effective than situations where there is no evidence of a strategy being used. Strategies which involve main idea recognition and organizing the information into levels lead to more successful task performance.
7. Taillefer, G and Pugh, T. (1998). Strategies for professional reading in L1 and L2	
Purpose(s) of Study	To explore and compare the students' reading strategies in L1 and L2.
Participants	39 French native speakers in the second year of 3-year undergraduate programs. They were divided into three groups by strength and weakness in L1 and L2.
Instrument(s)	1. Questionnaire; 2. Reading proficiency test.
Variable(s)	1. Language proficiency level of L1 and L2; 2. Reading proficiency of L1 and L2.
Data Analysis	1. Descriptive statistics; 2. ANOVA; 3. Chi-square.
Results	<ol style="list-style-type: none"> General reading strategies differentiated efficient readers from poor ones both in L1 and L2, but problem-solving strategies were the main obstacle in L2. The process, or strategic approach employed correlated very strongly with the product, or score in L2 and fairly strongly in L1.

8. Sheorey, R and Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers	
Purpose(s) of Study	To examine differences in the use of reading strategies of native and non-native English speakers when reading academic materials
Participants	302 college students (150 native-English-speaking US and 152 ESL students)
Instrument(s)	The survey of reading strategies (SORS)
Variables	1. Self-rated ability in reading English; 3. Gender; 3. Self-rated English proficiency.
Data Analysis	1. T-test; 2. ANOVA.
Results	<ol style="list-style-type: none"> 1. The ESL group mean for support reading strategies (SRS) is considerably higher than the US group mean. 2. Both groups attribute the same order of importance to the categories of reading strategies in the survey. 3. High reading ability students show comparable degrees of higher use for metacognitive and cognitive reading strategies than lower-reading-ability students in the respective groups. 4. In the US group, the females show greater awareness of reading strategies than males. This gender effect is not reflected in the ESL sample.
9. Miyanaga, C. (2002). The effects of anxiety on learners' reading performance and the use of reading strategies.	
Purpose(s) of Study	To investigate the relationship among readers' reading anxiety level, reading proficiency level, and use of reading strategies
Participants	245 Japanese university students
Instrument(s)	<ol style="list-style-type: none"> 1. A practice TOEFL 2. The Foreign Language Reading Anxiety Scale (FLRAS) 3. A reading metacognitive questionnaire
Variable(s)	1. Anxiety level; 2. Reading proficiency level.
Data Analysis	1. Descriptive statistics; 2. Multiple regressions.
Results	<ol style="list-style-type: none"> 1. Anxiety exerted a significant negative influence on the students' reading performance in English. 2. The students' metacognitive awareness was a significant predictor of their reading ability. 3. Persistence (not giving up reading, going back and rereading) turned out to be a factor which distinguished better readers from poor readers, and more anxious from less anxious students. 4. More anxious students tended to rely on word-level local reading strategies and to consider pronouncing words as difficult and ineffective.
10. Saricoban, A. (2002). Reading strategies of successful readers through the three-phase approach	
Purpose(s) of Study	To examine the strategies effective readers employ in pre-reading, reading and post-reading stages of instruction in classroom language learning
Participants	110 preparatory students for language studies
Instrument(s)	A reading strategy inventory
Variable(s)	Reading proficiency level
Data Analysis	Chi-square
Results	<ol style="list-style-type: none"> 1. The successful learners and the less successful learners do not significantly differ in the use of the strategies at the pre-reading stage. 2. Successful readers differed in some strategies in while-reading and post-reading stages.

11. Botsas, G. and Padeliadu, S. (2003). Goal orientation and reading comprehension strategy use among students with and without reading difficulties.	
Purpose(s) of Study	To provide an analysis of goal orientation parameters with respect to reading comprehension strategy use for students with and without reading difficulties.
Participants	122 5th and 6th graders from schools in three prefectures of Northern Greece.
Instrument(s)	1. Questionnaire; 2. Think-aloud protocol.
Variable(s)	1. Goal orientations; 2. Students with and without reading difficulties.
Data Analysis	1. Descriptive statistics; 2. One-way and two-way ANOVA.
Results	<ol style="list-style-type: none"> 1. Students without difficulties used more deeper, more sophisticated and complex strategies compared to those of students with difficulties (who used fewer and more surface strategies). 2. Students without difficulties appeared to metacognitively monitor their comprehension process while students with difficulties were either ignorant of the existing comprehension problems or bridged meaning gaps in inappropriate ways.
12. Phakiti, A. (2003). A closer look at gender and strategy use in L2 reading	
Purpose(s) of Study	To examine gender differences in cognitive and metacognitive strategy use
Participants	384 Thai university students
Instrument(s)	1. Reading comprehension test; 2. Reading strategy questionnaire.
Variable(s)	1. Gender; 2. Reading proficiency.
Data Analysis	1. Descriptive statistics; 2. MANOVA.
Results	<ol style="list-style-type: none"> 1. Males and females did not differ in their reading comprehension performance and their use of cognitive strategies. 2. Males used metacognitive strategies significantly higher than females. 3. Within the same achievement groups (highly successful, moderately successful, and unsuccessful), there were no gender differences in either reading performance or use of cognitive and metacognitive strategies.
13. Martinez, A. C. L. (2008). Analysis of ESP university students' reading strategy awareness	
Purpose(s) of Study	To study the reported strategy use of English for Specific Purposes (ESP) university students.
Participants	157 non-native-English speaking Spanish students from the University of Oviedo.
Instrument(s)	The metacognitive awareness of reading strategy inventory (MARSI)
Variable(s)	1. Overall use of reading strategies, 2. Gender.
Data Analysis	1. Descriptive statistics, 2. ANOVA.
Results	<ol style="list-style-type: none"> 1. There was a moderate to high overall use of reading strategies. Students showed higher reported use for problem-solving and global reading strategies. 2. Females reported significantly higher frequency of strategy use and trended to use support reading strategies more than males.

14. Anastasiou, D. and Griva, E. (2009). Awareness of reading strategy use and reading comprehension among poor and good readers.	
Purpose(s) of Study	To explore the primary school students' awareness of reading strategies and to identify possible differences between poor and good readers, in terms of frequency and efficiency. Furthermore, it aimed at exploring the relation between reading strategy awareness and reading comprehension.
Participants	18 poor readers and 18 good readers, aged between 11 and 12 selected from a total of 201 sixth grade students.
Instrument(s)	1. Retrospective interviews 2. Reading test scores
Variable(s)	Reading proficiency level
Data Analysis	1. Coding; 2. Descriptive statistics.
Results	1. Poor readers were less aware of the more sophisticated cognitive strategies, and on the other hand they reported a limited number of meta-cognitive strategies in comparison with good readers. 2. Both cognitive and meta-cognitive strategy awareness made a unique contribution to reading comprehension.
15. Cogmen, S. and Saracaloglu, A. (2009). Students' usage of reading strategies in the faculty of education	
Purpose(s) of Study	To identify the reading strategies that the college students use while they are reading the academic materials
Participants	230 college students attending the Faculty of Education
Instrument(s)	1. Metacognitive reading strategies questionnaire (MRSQ) 2. Reading proficiency tests
Variables	1. Gender; 2. Class; 3. Department; 4. Number of books that a student read in a year.
Data Analysis	1. Descriptive statistics; 2. Correlation; 3. T-test; 4. One way ANOVA.
Results	1. Students use both analytic and pragmatic strategies in "often use" level. 2. According to gender, class and department, there is no significant difference on the analytic strategies dimension, but there are significant differences on the pragmatic strategies dimension. According to the number of books read in a year, there is a significant difference on the analytic strategies dimension, but there is no significant difference on the pragmatic strategies dimension 3. There is a significant and positive relationship between strategy use and academic success.
16. Saengpakdeejit, R. (2009). An employment of reading strategies by science-oriented students learning English at the Thai government universities.	
Purpose(s) of Study	To investigate reading strategies used by Thai university students
Participants	1096 science-oriented university students at Thai government universities.
Instrument(s)	1. Interview; 2. Questionnaire.
Variable(s)	1. Reading proficiency level; 2. Gender; 3. High school background; 4. Location of the university; 5. Field of study.
Data Analysis	1. Descriptive statistics; 2. ANOVA; 3. Chi-square; 4. Factor analysis.
Results	1. The students reported medium frequency of strategy use. 2. There are relationships between reading strategy use and students' gender, field of study, and level of reading proficiency.

17. Malcolm, D. (2009). Reading strategy awareness of Arabic-speaking medical students studying in English	
Purpose(s) of Study	To compare the academic reading strategy use of readers at varying initial English proficiency level and year of study.
Participants	160 students at a medical university
Instrument(s)	Questionnaire
Variable(s)	1. Language proficiency level; 2. Year of study.
Data Analysis	ANOVA
Results	<ol style="list-style-type: none"> 1. While all students reported high use of strategies overall, significant differences were found in reported use of metacognitive strategies in general and specific strategies related to translating from English to Arabic. 2. Students of low initial English proficiency and those in their first year reported translating more, while upper year students translated less and used more metacognitive strategies.
18. Cantrell, S. C. and Carter, J. C. (2009). Relationships among learner characteristics and adolescents' perceptions about reading strategy use.	
Purpose(s) of Study	To investigate relationships among adolescent students' perceived use of academic reading strategies and reading achievement, age, and gender.
Participants	550 sixth-grade and 1570 ninth-grade students
Instrument(s)	<ol style="list-style-type: none"> 1. Meta-cognitive awareness of reading strategies inventory (MARSI) 2. The Group reading assessment and diagnostic evaluation (GRADE)
Variable(s)	1. Reading achievement; 2. Age; 3. Gender.
Data Analysis	MANOVA
Results	<ol style="list-style-type: none"> 1. Good readers used global and problem-solving strategies to a greater extent than poor readers. Surface-level problem-solving strategies were more strongly related to higher reading achievement than deep-level problem-solving strategies. Poor readers used support strategies to a greater extent than good readers, and surface-level support strategies were more strongly related to lower reading achievement than deep-level support strategies. 2. The negative relationship between support strategy use and reading ability was stronger for younger adolescents than for older adolescents. 3. Females reported using all types of academic reading strategies to a greater extent than males.
19. Akyol, H. and Ulusoy, M. (2010). Pre-service teachers' use of reading strategies in their own readings and future classrooms.	
Purpose(s) of Study	To determine the pre-service teachers' use of reading strategies and use of these strategies in their future teaching practices.
Participants	505 pre-service teachers enrolled in one of the major universities in Ankara.
Instrument(s)	Questionnaire and semi-structured interview
Variable(s)	1. Gender; 2. Majors.
Data Analysis	1. Descriptive statistics; 2. ANOVA; 3. Interview.
Results	<ol style="list-style-type: none"> 1. The pre-service teachers employed 28 out of 38 reading strategies most of the time, but interview results illustrated that they reported using very limited scope of reading strategies. 2. There was no significant difference between female and male pre-service teachers' use of reading strategies. 3. There was a significant difference among the pre-service teachers regarding the use of reading strategies in terms of majors.

20. Poole, A. (2010). The reading strategies used by male and female English language learners: A study of Colombian high school students	
Purpose(s) of Study	To discover if Colombian high school ELLs are active strategy users and whether or not there are significant differences between male and female strategy use.
Participants	199 Colombian ELLs (103 males, 96 females) studying in three private Colombian high schools
Instrument(s)	Survey of reading strategies questionnaire (SORS).
Variable(s)	1. Overall level of reading strategy use; 2. Gender.
Data Analysis	1.Descriptive statistics ; 2.T-test
Results	1. Both male and female students are moderate strategy users overall. 2. Females reported using significantly more strategies overall and on the global and support subcategories than males. In addition, they reported using nine individual strategies significantly more than males.
21. Sani, B., Chik, M., Nik, Y. and Raslee, N. (2011). The Reading motivation and reading strategies used by undergraduates in University Teknologi, MARA Dungun, Terengganu	
Purpose(s) of Study	To find the connection between reading motivation and reading strategy use; to discover the differences between male and female students' reading motivation and reading strategy use.
Participants	245 undergraduates
Instrument(s)	1. A reading strategy inventory; 2. A motivation questionnaire
Variable(s)	1. Gender. 2. Motivation. 3. Program difference.
Data Analysis	1. Descriptive statistics; 2. T-test; 3. ANOVA; 4. Correlation Coefficient
Results	1. The undergraduates' reading motivation was of moderate level and they mostly use the cognitive reading strategies instead of the meta-cognitive reading strategies. 2. The undergraduates' motivation to read had an influence on the use of the reading strategy. 3. Although females had higher reading motivation than males, both groups only use the cognitive reading strategies. 4. Significant difference in strategy use existed among the five Diploma programs.
22. Tabatabaei, O. and Assari, F. (2011). Investigating strategic processes of L2 reading comprehension among collegiate Iranian ESP learners across three academic fields of study.	
Purpose(s) of Study	To explore strategic processes of English reading comprehension among Iranian ESP learners across three academic fields of medicine, computer engineering and law
Participants	90 intermediate ESP learners were selected from a population of 180 volunteers.
Instrument(s)	Survey of reading strategies (SORS)
Variable(s)	Academic field of study
Data Analysis	1.Descriptive statistics; 2.One-way ANOVA.
Results	1. All of the ESP learners were intermediate reading strategy users who demonstrated a clear preference for problem solving strategies regardless their academic fields of study. 2. ESP learners indicated variations in their individual reading strategy preferences and weaknesses across the three academic fields of study.

23. Tabataba'ian, M. S. and Zabihi, R. (2011). Strategies used by four Iranian EFL learners in reading ESP and GPE texts: A Think-aloud case study	
Purpose(s) of Study	To investigate the differences between strategies used in reading ESP and GPE texts
Participants	4 EFL learners studying in an upper-intermediate level at College of Ferdowsi University in Mashhad.
Instrument(s)	Think-aloud protocol.
Variable(s)	Different types of reading texts
Data Analysis	1. Qualitative analysis (coding); 2. Chi-square
Results	1. The results indicated that while cognitive strategies were used quite often in reading both types of texts, socio affective strategies were not used at all. 2. Some differences were observed between the types of cognitive and metacognitive strategies used by the subjects for reading ESP and GPE texts. Drawing on background knowledge is done more often when learners read ESP texts.
24. Lee, M. L. (2012). A study of the selection of reading strategies among genders by EFL college students	
Purpose(s) of Study	To probe the question whether foreign language reading strategies use among EFL college freshmen differ according to different genders and the differences of frequency using types of reading strategies.
Participants	159 college freshmen from a university of technology with varied majors
Instrument(s)	Strategy Inventory for EFL Students' Reading
Variable(s)	Gender
Data Analysis	1. Descriptive statistics; 2. T-test; 3. ANOVA; 4. Pearson correlation.
Results	The differences between male and female students on the types of reading strategies were significant, male students reported greater strategy use than their female counterparts regarding memory, cognitive, compensation strategies, while fewer males than females used strategies of meta-cognitive and social-affective while reading. In addition, males were more worried about unknown words compared to their counterparts while reading.
25. Nordin, N.M., Rashid, S.M., Zubir, S.I. and Sadjirin. R. (2013). Differences in reading strategies: how ESL learners really read	
Purpose(s) of Study	To investigate the reading strategies used by ESL learners at tertiary level and investigate whether there was any significant different in the type of strategies used by each group of ESL achievers.
Participants	40 semester-one undergraduates from the Faculty of Chemical Engineering, University Malaysia Pahang
Instrument(s)	A survey questionnaire
Variable(s)	Reading proficiency
Data Analysis	1. Descriptive and inferential statistics; 2. ANOVA.
Results	Both of the ESL high and low achievers frequently used certain reading strategies to grasp the meaning of the text. The ESL high achievers also reported to use post-reading strategies significantly more frequently as compared to the ESL low achievers who tended to use while-reading strategies more frequently.

Table 2.1 shows a summary of the previous research works on reading strategies conducted in countries other than in China, ranging from 1977 to 2013. These studies have demonstrated the ways in which the researchers have conducted research on reading strategies. The factors considered by the researchers in reading strategy studies mainly involve the research purposes, the participants, instruments for data collection, investigated variables, and methods of data analysis.

With regard to the research purposes, the researchers mainly aimed to explore the reading strategies employed by different language learners (Hosenfeld 1977 and Block 1986); to investigate the patterns and frequency of the readers' reading strategies used (Vianty 2007 and Martinez 2008); to compare the reading strategies used between native and non-native English speakers (Sheorey and Mokhtari 2001); and to determine the relationships between the reading strategies and the investigated variables, etc. The investigated variables in these studies include the learners' reading proficiency (Barnett 1988, Sheorey and Mokhtari 2001; Nordin, Rashid, Zubir, and Sadjirin, 2013), gender (Cantrell and Carter, 2009; Lee, 2012), field of study (Cogmen and Saracaloglu, 2009; Akyol and Ulusoy 2010), goal orientation (Saricoban, 2002), reading tasks (Najar 1998), age (Cantrell and Carter 2009), motivation (Sani, Chik, Nik and Raslee, 2011), attitude (Tercanlioglu 2004), anxiety level (Chieko 2002), type of the reading material (Tabataba'ian and Zabihi, 2011), year of study (Malcolm, 2009), Program difference (Sani, Chik, Nik and Raslee, 2011), Education background (Saengpakdeejit, 2009), Location of the university (Saengpakdeejit, 2009).

The participants in the previous research works reviewed above ranged from young children to adult learners, including primary school students, middle school students, university students, postgraduates and adults. However, most of the participants were the students at the tertiary level. They can be classified into English majors / non-English majors, native speakers / non-native speakers, L1 and L2 learners, ESP students / non-ESP students, etc. Regarding the instruments of data collection, the researchers usually adopted questionnaires, interviews, think-aloud protocols and reading proficiency tests, etc. In terms of the methods of data analysis, researchers often used the descriptive statistics, T-test, ANOVA, repeated measures, chi-square test, correlation analysis, factor analysis, multiple regressions, and qualitative analysis (coding).

The results from most of the past research works revealed that the reading strategies employed by different language learners may vary significantly; there were some certain relationships between the reading strategy use and the investigated variables, such as reading proficiency, gender, reading purposes, reading motivation, reading anxiety and field of study. However, some other studies achieved different conclusions. Some studies showed that some variables had no strong relationships with the participants' use of reading strategies. Some investigated variables having strong relationships with the reading strategies in some studies showed no significant correlations to the readers' strategy use in some others.

2.9.2 Research Works on Reading Strategies Conducted in China

In China, the research on reading strategies started very late. Through the literature review, it seems that the researchers began to pay their attention to reading strategy research since 2000s. However, the studies in this area are very few and far from enough in China. The following are some selected research works on reading strategies in English conducted in the Chinese context (see Table 2.2).

Table 2.2 Research Works on Reading Strategies Conducted in China

1. Liu, D. D. (2002). 中国英语学习者的阅读策略研究 (A study on the reading strategies employed by Chinese English learners)	
Purpose(s) of Study	To investigate the use of reading strategies employed by Chinese EFL learners and find out the differences in the employment of reading strategies between successful and unsuccessful readers
Participants	43 English majors of Year 3
Instrument(s)	1. Reading scores of TEM 4; 2. Questionnaire.
Variable(s)	Reading proficiency level
Data Analysis	1. Descriptive statistics; 2. Correlation analysis; 3. Qualitative analysis
Results	The study reveals that Chinese EFL learners use reading strategies frequently and there are obvious differences between successful and unsuccessful readers in terms of strategy use.
2. Liu, Y. C. (2002). 学习成功者与不成功者使用英语阅读策略差异的研究 (Differences of reading strategies used by the successful and unsuccessful readers)	
Purpose(s) of Study	To compare the difference between the strategies used by successful readers and unsuccessful readers.
Participants	193 non-English majors
Instrument(s)	Questionnaire
Variable(s)	Reading proficiency level
Data Analysis	1. Descriptive statistics; 2. Independent sample t-tests
Results	1. Among the 45 reading strategies, 11 reading strategies existed significant difference between the successful readers and unsuccessful readers. 2. Successful readers reported using more metacognitive strategies than unsuccessful readers.

3. Yang, X. H. and Zhang, W. P. (2002). The correlation between metacognition and EFL reading comprehension of Chinese college students	
Purpose(s) of Study	To investigate the correlation between metacognition and EFL reading comprehension of Chinese college students.
Participants	125 non-English major university students.
Instrument(s)	1. Questionnaire; 2. Reading proficiency test.
Variable(s)	1. Metacognition; 2. Reading proficiency.
Data Analysis	1. Descriptive statistics; 2. Correlation analysis; 3. Independent t-test; 4. Multiple regression.
Results	1. The students' metacognition status is tightly and positively related to their EFL reading performance. 2. Metacognition has an impact on both EFL proficiency and EFL reading performance.
4. Liu, H. J. (2004) 元认知策略与英语阅读的关系 (The relationship between the metacognitive strategies and reading proficiency)	
Purpose(s) of Study	To study the relationship between metacognitive strategies and English reading
Participants	64 English-major students from Nanjing Normal University
Instrument(s)	Metacognitive strategy questionnaire
Variable(s)	Reading Proficiency level
Data Analysis	1. Descriptive statistics; 2. One-way ANOVA; 3. Correlation
Results	1. The Chinese students majoring in English use metacognitive strategies more or less in English reading. 2. Among the four categories of metacognitive strategies, the students use the category of selective attention the most while the evaluating category the least. 3. Some positive relationship between the frequency of overall metacognitive strategy use and the results of English reading.
5. Liu, Y. L. and Zhang, J. (2008). An empirical study of reading strategies employed by non-English majors: taking students of certain college of Guangdong university of technology as samples	
Purpose(s) of Study	1. To compare the difference of strategy use between successful readers and unsuccessful readers. 2. To study the correlation between the cognitive strategy use and their performance on reading.
Participants	202 non-English majors of a College of Guangdong University of Technology
Instrument(s)	1. Reading proficiency test; 2. Questionnaire.
Variable(s)	Level of reading proficiency
Data Analysis	1. Descriptive statistics; 2. Independent sample t-tests.
Results	1. Results show that successful readers use reading strategies more frequently than less successful ones. 2. There is correlation between the cognitive strategy use and their performance on reading.

6. Zhang, L. J. and Wu A. (2009). Chinese senior high school EFL Students' metacognitive awareness and reading-strategy use	
Purpose(s) of Study	To assess metacognitive awareness and reading strategy use of Chinese senior high school students who are learning English as a foreign language
Participants	270 Chinese senior high school students
Instrument(s)	Questionnaire
Variable(s)	English proficiency level
Data Analysis	1. Descriptive statistics; 2. ANOVA.
Results	1. The students used the 3 categories of strategies at a high-frequency level. 2. The high-proficiency group outperformed the intermediate group and the low-proficiency group in 2 categories of reading strategies: global and problem-solving; but no statistically significant difference was found among the 3 proficiency groups in using support strategies.
7. Luo, H. F. (2010). English reading text comprehension strategies by EFL university students	
Purpose(s) of Study	To investigate the reading strategy employment by university students, as well as the relationship between reading strategy use and students' gender, fields of study, levels of reading proficiency, teachers' gender, types of university, and students' extensive reading.
Participants	1368 university students in Southwest China.
Instrument(s)	1. Questionnaire. 2. Interview
Variable(s)	1. Gender; 2. Field of study; 3. Level of reading proficiency; 4. Teachers' gender; 5. Type of university; 6. Students' extensive reading.
Data Analysis	1. Descriptive statistics; 2. ANOVA ; 3. Chi-square.
Results	1. As a whole, Chinese university students reported employing reading strategies at the moderate level. 2. Significant variations were found in relation to students' gender, fields of study, levels of reading proficiency, and extensive reading. 3. Teachers' gender and types of university were not found to be related to students' choices of reading strategy use.
8. Li, Y. and Wang, C. (2010). An empirical study of reading self-efficacy and the use of reading strategies in the Chinese EFL context	
Purpose(s) of Study	To explore the relationship between reading self-efficacy and the use of reading strategies
Participants	139 sophomore English majors of a university in southwest China.
Instrument(s)	1. Reading self-efficacy questionnaire; 2. Reading strategies questionnaire.
Variable(s)	Level of reading self-efficacy
Data Analysis	1. Descriptive statistics; 2. Pearson correlations coefficients 3. Independent sample t-tests; 4. Multivariate analysis of variance.
Results	1. Reading self-efficacy was significantly positively related to the use of reading strategies in general and the use of three subcategories of reading strategies: metacognitive strategies; cognitive strategies; and social/affective strategies. 2. Highly self-efficacious readers reported significantly more use of reading strategies than those with low self-efficacy.

9. Luo, H. F. and Han, D. (2011). An empirical study on reading strategy employment by English majors in a newly upgraded university.	
Purpose(s) of Study	To investigate the reading strategies employed by English majors in a newly upgraded university.
Participants	299 English major students from Tongren University, Guizhou Province.
Instrument(s)	Questionnaire
Variable(s)	1. Gender; 2. Level of academic years.
Data Analysis	1. Descriptive statistics; 2. Independent sample t-tests.
Results	1. The students did not use reading strategies frequently in reading. 2. There is no significant difference existing for strategy use between male students and female students. 3. There is no significant difference between the reading strategies used by the advanced group and the basic group.
10. Lien, H. Y. (2011). EFL learners' reading strategy use in relation to reading anxiety	
Purpose(s) of Study	To investigate EFL learners' reading strategies use in relation to reading anxiety after their participation in extensive reading as a supplemental course requirement
Participants	One hundred and eight EFL college freshmen
Instrument(s)	1. A survey of Foreign Language Reading Anxiety Scale (FLRAS); 2. A modified Survey of Reading Strategies (SORS).
Variable(s)	1. Reading anxiety; 2. Gender.
Data Analysis	1. Descriptive statistics; 2. Pearson correlations coefficients; 3. T-test
Results	The results indicate a negative correlation between reading anxiety and reading strategies. It was also found that EFL learners with low anxiety levels tended to use general reading strategies such as guessing, while EFL learners with high anxiety levels employed basic support mechanisms, such as translation, to help themselves understand texts. Some reading strategies were more used by high-anxiety level readers than low-anxiety level readers.

Table 2.2 illustrates the research works on English reading strategies available in China. As shown in the table, these studies mainly focused on investigating the relationships between the reading strategies and reading proficiency/reading achievement. The studies in this area were mainly conducted in the university context and the participants mostly were university students. The participants were usually classified as English majors and non-English majors. The researchers usually employed questionnaires, think-aloud protocols and interviews to

collect the data. In terms of the research variables, most of the researchers mainly investigated the reading proficiency/reading self-efficacy/language proficiency. Only a few researchers have taken other variables into consideration., such as gender (Luo, 2010; Luo and Han, 2011; and Lien, 2011); field of study, teacher' gender, type of university, and students' extensive reading (Luo, 2010). For methods of data analysis, the researchers often use descriptive statistics, correlation analysis, T-test, ANOVA, MANOVA, chi-square, multiple regression, and qualitative analysis (coding).

The results of these research works indicate that there are some correlations between the readers' reading proficiency and their reading strategy use. The strategies used by proficient readers and non-proficient readers vary significantly. For some other variables, such as gender, field of study, academic year and extensive reading also show some correlation with the students' reading strategy use. Some other variables, such as teachers' gender and type of university, are not correlated with the reading strategies used by the readers. These studies further confirmed that most of the variables investigated above may influence the language learners' reading strategy use. Most of the results of these research works are in accordance with the research findings of the reading strategies abroad.

2.10 Summary

This chapter has reviewed some important theories and studies relating to reading and reading strategies. It mainly involves two aspects, i.e. the theoretical background and the past research works. The first aspects reviewed the important theories relating to the present study, including the definitions of reading, reading process, purpose of reading, factors affecting reading in a foreign language, theoretical framework of reading, and reading models. The main purpose of this part is to provide a theoretical overview for the present study. The second aspect was the literature review of the related studies on reading strategies conducted abroad and in China. The main purpose of this part is to have an overview about how the previous studies on reading strategies have been conducted, including the purposes of study, participants, instruments, variables methods of data analysis, etc. The next chapter is to discuss how the present study has been conducted. It will focus on the introduction of the research methodology designed for the present study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is to give a brief account of the research methodological issues relating to the present study. It starts with the discussion on the theoretical framework and rationales for selecting the variables. Next, the research questions of the present investigation are presented. Then, the research methodology of the present investigation, including the sampling techniques, the characteristics of the participants and the instruments for data collection are elaborated. In the end, the methods of analyzing, interpreting and reporting the obtained data are explained.

“Research is a systematic process of inquiry consisting of three elements or components: (1) a question, problem, or hypothesis, (2) data, and (3) analysis and interpretation of data” (Nunan, 2002, p. 3). Reducing to its most essential elements, research is a process of identifying something unknown and then collecting data to make it known. After identifying a research problem, we need to develop a plan for investigating it. Careful planning is the key to conducting a worthwhile and sound research study (Gall, Gall and Borg, 2007). The research must be guided by the research plan, and the research plan must be designed according to the research purposes. As suggested by Robson (1993), any research works can be classified in

terms of its purpose and the research strategy used. However, in practice, one research can have two or more research purposes, as Nueman (2006, p. 33) states: “studies may have multiple purposes, e.g. both to explore and to describe, but one purpose is usually dominant”. Babbie (2008) explains the classification of the purposes of research work as follows:

Exploration: The researcher aims at examining a new interest. The participants of the research studies are relatively new. The exploratory studies yield new insights into the topic under study.

Description: The researcher aims at describing situations or events. The researcher observes then describes what has been observed. The descriptive studies answer the questions of what, where, when and how. Many qualitative research studies primarily aim at description.

Explanation: The researcher aims at explaining things. Thus, the researcher usually addresses questions of why. With the help of statistics, the researcher is able to get a clearer explanation of the topics under study.

As the main purpose of the present research is to explore the employment of the reading strategies employed by the Business English majors in the universities in Southwest China and the reasons why these students use these reading strategies, the main purpose of the present study can be classified as “Exploration”.

Research must be guided by a research design from the very beginning (Robson, 1993). Research design situates the researcher in the empirical world, and

connects the research question to data. The research design is the basic plan for a piece of research, and includes four main ideas. The first is the strategy. The second is the conceptual framework. The third is the question of whom or what will be studied, and the fourth concerns the tools and procedures to be used for collecting and analyzing empirical materials (Punch, 2005). Research design can be quantitative, qualitative or both.

Robson (1993) suggests that survey studies are appropriate with the 'who, what, where, how many and how much' research type of question. They are used for collecting information in standardized form from groups of people, usually employing questionnaires or interviews. As the main purpose of this research is to investigate the students' use of reading strategies, based on the nature and properties of the present investigation, a survey study is the most appropriate for the present investigation. However, in order to deepen and broaden the results of the study and find out why the students use some strategies more frequently than others, the semi-structured interview has been used to supply an in-depth and detailed description of the reading process, because interviews can help the researcher get in-depth information from the participants. So, this research is mainly quantitative, and qualitative research is used as a supportive one. The following section is devoted to a description of the theoretical framework and rationales for variable selecting.

3.2 Theoretical Framework and Rationales for Variables Selecting

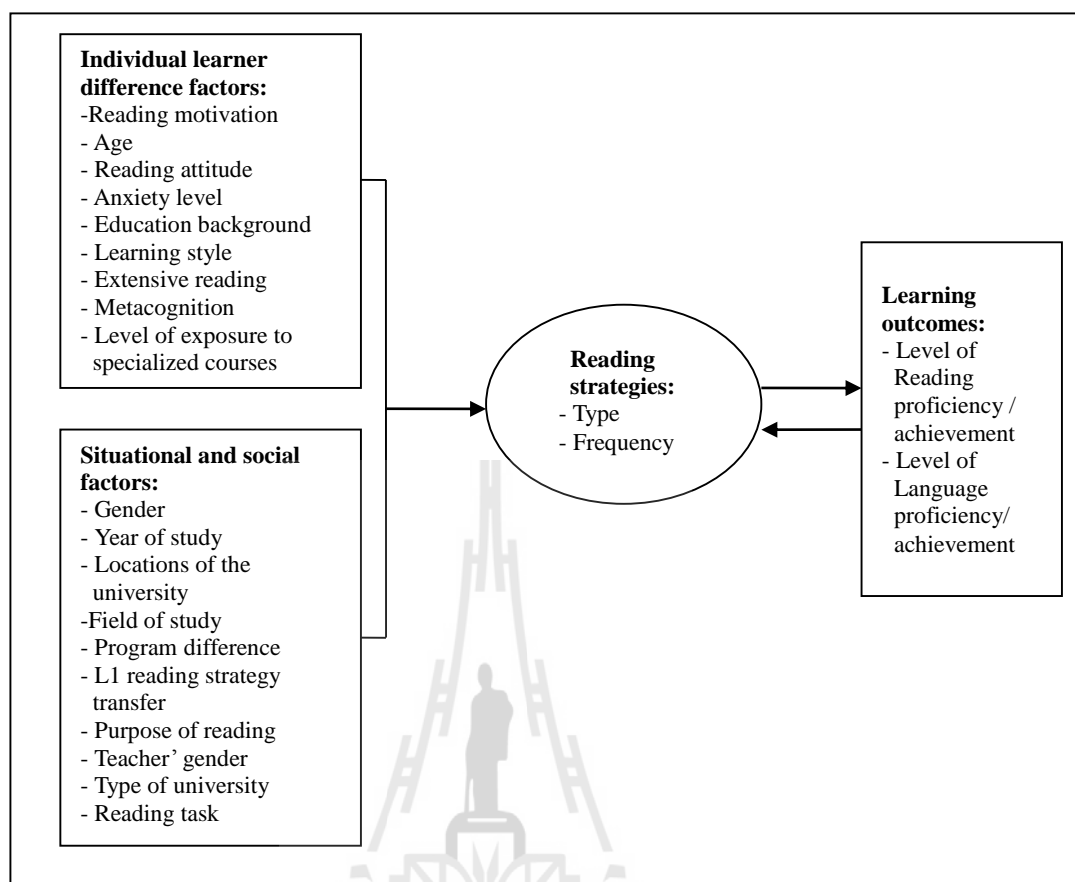
3.2.1 Theoretical Framework for the Present Study

This section is to set up the theoretical framework of this research and discuss the rationales of selecting the variables for the present study. According to Intaraprasert (2000), reviewing the related research works, literature, and other related materials can aid the researcher to develop a theoretical framework, locate the investigation in the context of past research works and the opinions of other researchers. It is also helpful for the researcher to create the rationales for selecting and rejecting variables for his/her own research. Bearing this in mind, the theoretical framework and the rationales of variable selecting for the present investigation were based on the theories of second language acquisition and the previous studies.

Ellis' (1994) model of language learning strategies provides good theoretical guidelines for the theoretical framework of this study. This model describes the relationships between learning strategies, individual learner differences, situational factors, and learning outcomes. According to this model, the factors of two major areas are hypothesized to influence the learners' choices of learning strategies. The factors of individual differences (beliefs, affective states, general factors, and previous learning experiences) together with various situational factors (the target language being studied, whether the setting is formal or informal, the nature of the instruction, and the specific tasks learners are asked to perform) determine the learners' choice of learning strategies. These then influence the learning outcomes,

including two aspects: the rate of acquisition and the ultimate level of achievement. The success that the learners experience and their level of L2 proficiency can also affect their choice of strategies.

Based on the theoretical framework of Ellis (1994) and the related literature review in Chapter Two, an adapted theoretical framework of reading strategies has been developed (Figure 3.1). This framework illustrates that the types and frequency of reading strategies of the learners are hypothesized to be influenced by three main categories of factors, i.e. individual learner difference factors (reading motivation, age, reading attitude, reading anxiety, education background, learning style, extensive reading and metacognition, etc.), situational and social factors (gender, year of study, location of the university, field of the study, program difference, L1 reading strategy transfer, purpose of reading, teacher' gender, type of university and reading tasks, etc.) and learning outcomes (level of reading proficiency/achievement or level of language proficiency/achievement). On the other hand, the use of reading strategies by the language learners may also influence the learning outcomes.



(Adapted from Ellis, 1994, p. 530)

Figure 3.1 Factors Related to the Use of Reading Strategies

In the present research, four variables have been taken into consideration: the students' gender, level of exposure to specialized courses, level of reading proficiency, and level of reading anxiety. These four variables are hypothesized to influence the reader's choices of reading strategies. However, the relationship between reading strategies and reading proficiency is bidirectional. That is to say, the students' use of reading strategies may affect their reading proficiency, and in turn the level of students' reading proficiency can also influence the learners' choices of reading strategies. Two of the variables, i.e. the students' gender and level of reading

proficiency, have been widely investigated, and the other two variables, i.e. the students' level of exposure to specialized courses and level of reading anxiety, have seldom been taken into consideration by the researchers in the field of reading strategies.

In China, the related studies concerning the variables of gender, reading proficiency and reading anxiety are still very few, and no empirical study has been found to investigate the variable of the students' level of exposure to specialized courses. Furthermore, to the best knowledge of the researcher, the four variables mentioned above have never been investigated in the context of Business English reading in China. Therefore, the uninvestigated variable as well as the three investigated variables is still worth investigating in the Chinese EFL context, especially in the Chinese Business English teaching and learning context (the ESP context). As Intaraprasert (2000) points out, whether the variables are correlated with the strategy employment of the language learners depend on the contexts of the investigation. Thus, the investigation of the correlations between the reading strategy use of the Business English learners and the four variables mentioned above in the Chinese ESP context is necessary and significant.

3.2.2 Rationales for Selecting the Variables for the Present Study

Many factors may affect the reader's choice of strategies. Examples are: degree of awareness, stage of learning, task requirements, teacher expectations, age, gender, nationality/ethnicity, general learning style, personality traits, motivation level,

and purpose for learning the language (Oxford, 1990). This section discusses the basic assumptions about the relationships between the students' employment of reading strategies and the selected four variables based on the previous studies and the theories about reading and L2 acquisition.

3.2.2.1 Gender

Gender is often neglected as a variable in language learning by writers and researchers. However, Sunderland (2000) points out, a wide range of language phenomena, such as literacy practices, language tests, test performance, self-esteem, styles, and strategies, have been shown to be in connection with learners' gender. Males and females have their own ways of using strategies to learn a foreign or second language (Intaraprasert, 2000). Gender has been regarded as a social factor that influences language learners' use of learning strategies (Oxford, 1990; Ellis, 1994, 2008). In their study of university students learning foreign languages, Oxford and Nyikos (1989) claimed that gender had a profound effect on strategy choice. Since male and female students tend to be represented or to behave or feel differently, the potential for gender to affect language learning cannot be ignored.

In the previous studies on reading strategies, some researchers have taken the variable of learner's gender into consideration (Anderman, 1992; Sheory and Mokhtari, 2001; Phakiti, 2003; Cogmen and Saracaloglu, 2009; Saengpakdeejit, 2009; Cantrell and Carter, 2009; Akyol and Ulusoy, 2010; Poole, 2010; and Sani et al, 2011). The results of many studies have shown that some correlations exist between the

readers' gender and their reading strategy use. Some studies revealed that the use of reading strategies between males and females are significantly different. For example, Anderman (1992) found that females used surface strategies less than males, and deep cognitive strategies more than males. Sheorey and Mokhtari (2001) examined 150 native-English-speaking US and 152 ESL students, and the results showed that in the US group, the females showed greater awareness of reading strategies than males. This gender effect was not reflected in the ESL sample. Cantrell and Carter (2009) found that females reported using all types of academic reading strategies to a greater extent than males. Similarly, in Poole's (2010) study, females reported using significantly more strategies overall and the global and support subcategories than males. However, in some other studies, the researchers got some different results. Phakiti (2003) found that males and females did not differ in their reading comprehension performance and their use of cognitive strategies. Unexpectedly, males reported significantly higher use of metacognitive strategies than females.

In their study, Akyol and Ulusoy (2010) found that there was no significant difference between female and male pre-service teachers' use of reading strategies. In the Chinese context, only two studies by one researcher (Luo, 2010; 2011) have been found to investigate the effect of gender on reading strategies; however, the results of the two studies were not consistent. The study in 2010 revealed that the males and females were significantly different in the use of reading strategies, while the study in 2011 showed that no significant differences existed between males and females in the

use of reading strategies. Therefore, the gender variable still needs to be further investigated in China, especially in the ESP context.

3.2.2.2 Level of Exposure to Specialized Courses

Schema theory emphasizes the influence of learners' background knowledge on reading comprehension. Brown (2001) classifies schemata into two categories: content schemata and formal schemata. The former refers to our knowledge of people, the world, culture and the universe, whereas the latter refers to our knowledge of the structure of texts. The background knowledge relating to the topic may assist the readers in learning from the text (Hayes and Tierney, 1982). Research on schema theory indicates that there are strong positive relationships between readers' prior knowledge (schemata) and their reading comprehension. Some research shows that some reading strategies, such as previewing text and examining the title and subheadings, can help to improve students' comprehension of both explicit and implicit information (Grave and Cooke, 1980). Wenden (1991) states that the use of strategies is the outcome of a variety of factors, especially the subjects' background knowledge about subject matter content and about learning, the nature of the materials to be learned and the product or outcome that the learner has in mind.

The Business English program in China mainly focuses on students' language skill improvement in the first two years (the lower level) although the students will also learn some basic courses about business. Language learning is in the first place and content learning is in the second in this phase. In the third and fourth

years (the higher level), the students mainly learn the courses of the specialized area using English as medium. In this phase, content learning is in the first place and language learning is in the second. The degrees of contacting with the business content between the students of the two stages are obviously different. According to Oxford (1990), the stage of learning is one of the factors that may influence learners' strategy choice. Therefore, it can be hypothesized that the students of the two groups may adopt different reading strategies to deal with the content-based English reading. The level of exposure to specialized materials can be seen as a factor of learning experience that may have an impact on the students' choices of reading strategies. So far, this factor has not been taken into consideration in the previous studies of reading strategies. For this reason, it is worthy to take this variable into this study to examine whether there are relationships between the readers' use of reading strategies and their levels of exposure to the specialized courses, especially in the ESP context.

3.2.2.3 Level of Reading Proficiency

According to Ellis (1994), language learning strategies may influence the language learning proficiency /outcomes /achievement, but in turn, language learning proficiency /outcomes / achievement can also affect learners' choice of language learning strategies. Many researchers (Hosenfield, 1977; Block, 1986; Sarig, 1987; Barnett, 1988; Carrell, 1989; Anderson, 1991; Anderman, 1992; Kletzien, 1992; Taillefer, and Pugh, 1998; Sheory and Mokhtari, 2001; Saricoban, 2002; Dhieb-Henia, 2003; Tercanlioglu, 2004; Anastasiou and Griva, 2009; Saengpakdeejit, 2009;

Malcolm, 2009; and Cantell and Carter, 2009) have conducted studies to investigate the relationship between learners' levels of reading proficiency/achievement and their use of reading strategies. This line of research has investigated to what extent skilled reading is different from less skilled reading.

Block (1986) used think-aloud protocols and verbal report to examine the reading strategies used by 9 university level ESL and native English students in a remedial reading course. The results showed that more successful readers used their general knowledge; focused on the overall meaning of text; integrated new information with old; differentiated main ideas from the supporting points, while, the poor readers rarely did any of the above. Anderson (1991) carried out a study to investigate the individual differences of reading strategies employed by adult second language learners. The results from his study showed both successful and unsuccessful readers seemed to use the same pattern of reading strategies, but successful readers appeared to apply reading strategies more effectively and appropriately. Sheorey and Mokhtari (2001) examined the difference of reading strategies employed by US and ESL students when reading academic materials, the results revealed that both US and ESL high reading ability students showed comparable degrees of higher reported usage for metacognitive and cognitive reading strategies than lower-reading-ability students in the respective groups. Anastasiou and Griva' s study (2009) revealed that poor readers were less aware of the more sophisticated cognitive strategies, and on the other hand they reported a limited

number of metacognitive strategies in comparison with good readers. Similarly, the study by Maarof and Yaacob (2011) showed that advanced proficiency students used more strategies reading in L2 when compared with the other group of students.

In China, a few researchers have carried out some studies to investigate whether there are correlations between learners' levels of reading proficiency and their use of reading strategies (Liu, 2002; Liu, 2004; Kong 2006; Zhang and Wu, 2009; and Luo, 2010). These studies revealed that learners' reading proficiency levels correlated with their strategy use to some extent. Liu (2002) used 193 non-English majors as participants to compare the differences between the strategies used by successful readers and unsuccessful readers. The results showed that among the 45 reading strategies, 11 reading strategies existed significant differences between the successful readers and unsuccessful readers. Successful readers reported using more metacognitive strategies than unsuccessful readers. Some studies (Liu, 2004; Liu and Zhang, 2008; Zhang and Wu, 2009; and Luo 2010) revealed that there were some correlations between the reading strategy use and their performance in reading. Generally, successful readers used reading strategies more frequently than less successful ones. However, Kong's (2006) study showed that L2 proficiency level did not seem to predict the readers' use of higher level thinking strategies.

Up to now, no researcher has carried out research with university Business English majors in China to investigate the relationship between their reading strategy use and reading performance. As Intaraprasert (2000) states, with the same variable to

investigate the relationship and strategy use may have different results due to the various contexts of the investigation. Therefore, it is worthy to conduct research to investigate the relationship between the reading proficiency level and the reading strategy employment of this specific group of ESP learners.

3.2.2.4 Level of Reading Anxiety

Horwitz et al (1986) define foreign language (FL) anxiety as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p.128). Further, the essence of FL anxiety is the threat to an individual’s self-concept caused by the inherent limitations of communicating in an imperfectly mastered second language. Two aspects of FL reading would seem to have great potential for eliciting anxiety: (a) unfamiliar scripts and writing systems and (b) unfamiliar cultural material. FL researchers have recognized the existence of FL anxiety and its potential for significant interference with language learning and production. For example, the study of Saito, Horwitz and Garza (1999) revealed that reading in an FL could be anxiety-provoking to some students. Whereas general FL anxiety was found to be independent of target language, levels of reading anxiety were found to vary by the target language and seem to be related to the specific writing systems. In addition, students’ reading anxiety levels increased with their perceptions of the difficulty of reading in their FL, and their grades decreased in conjunction with their levels of reading anxiety and general FL anxiety.

Anxiety is an important factor of affective states that may influence the choice of language learning strategies (Ellis, 1994, 2008). However, there has been relatively little discussion on the relationships between reading anxiety and reading strategies. Through an extensive review of the literature, only two related articles have been found (Miyanaga, 2002 and Lien, 2011). Using 245 Japanese university students as research participants, Miyanaga (2002) conducted a research to investigate the relationships among learners' reading anxiety levels, reading proficiency levels, and use of reading strategies. The results showed that anxiety exerted a significant negative influence on the students' reading performance in English. The students' metacognitive awareness was a significant predictor of their reading ability. Persistence (not giving up reading), going back and rereading, turned out to be factors which distinguished better readers from poor readers, and more anxious from less anxious students. More anxious students tended to rely on word-level local reading strategies and to consider pronouncing words as difficult and ineffective. Lien's study (2011) showed a negative correlation between reading anxiety and reading strategies. EFL learners with low anxiety levels tended to use general reading strategies such as guessing, while EFL learners with high anxiety levels employed basic support mechanisms, such as translation, to help themselves understand texts. Some reading strategies were more used by high-anxiety level readers than low-anxiety level readers. Additionally, females tended to be slightly more anxious than males in reading.

Through the literature review, no empirical studies have been conducted to investigate the relationship between reading anxiety and reading strategies in Chinese ESP context; therefore, it is meaningful and interesting to conduct such a research to examine whether there is any correlation between the university Business English majors' levels of reading anxiety and their use of reading strategies in the context of Business English teaching and learning in China.

3.3 Research Questions

The present investigation has been designed to investigate the reading strategies employed by the university Business English majors when they read the English texts of the content area. Based on the research purposes and the theoretical framework of this research, this study was to examine the students' overall use of the reading strategies, as well as the relationship between the students' reading strategy use and the four proposed variables, i.e. gender, level of reading anxiety, level of reading proficiency and level of exposure to specialized materials. Specifically, the research has been designed to answer the following questions:

1. What is the frequency of the reading strategies employed by the university Business English majors at different levels, i.e. overall, category and individual?
2. Do the reading strategies employed by the university Business English majors vary significantly in terms of gender, level of reading proficiency,

level of exposure to specialized courses and level of reading anxiety? If they do, what are the main patterns of variation?

3. What are the main underlying factors in the reading strategies used by the university Business English majors? Are there any factors strongly related to the four variables (gender, level of reading proficiency, level of exposure to specialized courses and level of reading anxiety)? If so, what are they?
4. Why do the university Business English majors employ certain strategies frequently and certain strategies infrequently?

3.4 Participants for the Present Study

3.4.1 Rationales for the Sampling

To select the participants to a research, it is necessary to clarify the concepts of population and sample. “A population is an aggregate of all cases that conform to some designated set of criteria. Population elements are single members or units of a population; they can be such things as people, social actions, events, places, time or things.” While “A sample is a count of all population elements (members or units) from a population; it is used to make statements about the whole population” (Blaikie 2000, p.198). In short, population refers to all members of the group being studied and sample refers to the small-subgroup chosen for study.

It is often impossible, impractical, or extremely expensive to collect data from all the potential units of analysis covered by the research problem. Researchers can draw precise inferences on all the units (a set) based on a relatively small number of units (a subset) when the subsets accurately represent the relevant attributes of the whole set (Chava and David, 1996). The basic principle of sampling is that it is possible to produce findings without the need to collect data from each member of a survey 'population'. For survey researchers, this can be an attractive proposition. It means that they might be able to save time and money by reducing the amount of data they need to collect without, at the same time, reducing the accuracy of their findings (Denscombe, 2010). As Blaikie (2000) states, studying a whole population may be slow and tedious; it can be expensive and is sometimes impossible; it may also be unnecessary. Given limited resources, sampling can not only reduce the costs of the study, but, given a fixed budget, it can also increase the breadth of coverage.

In order to generalize from the findings of a survey, the sample must not only be carefully selected to be representative of the population, it also needs to include a sufficient number (Denscombe, 2010). In modern sampling theory, a basic distinction is made between probability and nonprobability sampling. The distinguishing characteristic of probability sampling is that for each sampling unit of the population, the researcher can specify the probability that the unit will be included in the sample. In the simplest case, all the units have the same probability of being included in the sample. This sampling method includes simple random sampling, systematic sampling,

stratified sampling, and cluster sampling. In nonprobability sampling, there is no way of specifying the probability of each unit's inclusion in the sample, and there is no assurance that every unit has some chance of being included. This kind of sampling includes convenience sampling, purposive sampling and quota sampling (Chava and David, 1996). A sampling plan is not independent of the other elements in a research project, particularly its research purposes and questions (Punch, 2005). The choice of sampling technique depends on how the various techniques fit the needs of the researcher and the kind of research he/she proposes to undertake (Denscombe, 2010). Creswell (2008) also points out that the types of sampling which the researchers employ in their studies are based on the factors, such as the amount of rigor they seek for their studies, the characteristics of population and the availability of the participants.

The present study aimed to investigate the reading strategies employed by the university Business majors in Southwest China; it was a large-scale survey investigation. Based on the rationales of sampling methods and the actual conditions of this research, the researcher of the present study decided to use cluster sampling method and the purposive sampling method to get the sample for the investigation. Cluster sampling involves first selecting larger groupings, called cluster, and then selecting the sampling units from the clusters. Cluster sampling is frequently used in large-scale studies because it is the least expensive sample design. Purposive sampling method refers to selecting sample units subjectively in an attempt to obtain a sample that appears to be representative of the population (Chava and David, 1996).

For the present study, the population has been divided into three clusters: Guizhou Province, Yunnan Province and Chongqing City. In Guizhou Province, there are three universities that have Business English majors. They are Guizhou University, Guizhou University of Finance and Economics, and Guizhou Minzu University. Four universities in Yunnan Province have Business English majors; they are Yunnan University, Yunnan University of Finance and Economics, Yunnan Industry and Commerce College, and Kunming University. In Chongqing City, six universities have Business English majors, i.e. Sichuan International Studies University, Chongqing University, Southwest University, Chongqing Jiaotong University, Chongqing Technology and Business University, Chongqing Three Gorges University. By cluster sampling method, the researcher of the present study first selected two universities from each cluster. Then the participants were purposively chosen from each of the universities based on the convenience and availability.

Regarding the sample size, Bell (1999) points out that the number of subjects in an investigation necessarily depends on the amount of time a researcher has. Additionally, Robson (2002), and Cohen, Manion and Morrison (2000) indicate that there is not a straightforward answer to the sample size as it depends on many factors, such as the research purpose, objectives, research time constraints, the nature of the population as well as the style of the research. For example, a survey style usually requires a large sample, particularly if inferential statistics are to be calculated. Krejcie and Morgan (1970) propose some criteria for the sample sizes of different populations. Based on these criteria, a sample size for a given population of 50000 is

381. The population of the present study could not be over this number. However, as the present study was a large-scale survey study and the population distributed in a large area, the researcher decided to include more participants to compose a bigger sample to increase the representation, generalizability and reliability. Considering the available conditions of the present study, the researcher has chosen approximate 150 students from each university, totally 926 students from 6 universities, to collect the quantitative data using questionnaires.

According to Almond, Cameto, Johnstone, Laitusis, Lazarus, Nagle and Sato (2009), a sample size for qualitative research like interviews with 20 to 30 participants achieves saturation. As the sample size for the quantitative research in the present study was already big, the researcher enrolled a comparatively bigger sample size for the interview in accordance. Therefore, in the second stage, forty-eight students were selected for the interview.

3.4.2 Characteristics of the Participants

As presented in the previous section, in total 926 students were selected to respond to the questionnaire. Among them, 312 students were from two universities in Guizhou Province, 310 students from two universities in Yunnan Province and 304 students from Chongqing City. Of the 48 students for the semi-structured interview, 16 of them were selected from each province (8 were selected from each university, among whom 2 were selected from each year of study). Fifty percent of them were males and females respectively. The distribution of the selected participants from each province/city is illustrated in Table 3.1.

Table 3.1 Participants of the Present Study

Province/ City	Number of participants	
	Questionnaire	Interview
Guizhou Province	312	16
Yunnan Province	310	16
Chongqing City	304	16
Total	926	48

Table 3.2 shows the number of the 926 participants in relation to each variable. We can see that there were 252 males and 674 females; 462 students with more exposed to specialized courses and 464 students with less exposed to specialized courses; 294, 325 and 307 students with the high, moderate and low levels of reading proficiency respectively; and 277, 261 and 288 students with high, moderate and low levels of reading anxiety respectively.

Table 3.2 Number of Participants in Relation to Each Variable

Variable		Number	Overall Number
Students' Gender	Male	252	926
	Female	674	
Level of exposure to specialized courses	More	462	926
	Less	464	
Level of reading proficiency	High	294	926
	Moderate	325	
	Low	307	
Level of reading anxiety	High	277	926
	Moderate	261	
	Low	288	

The number of the 48 interviewees in relation to each of the four investigated variables is presented in Table 3.3 below.

Table 3.3 Number of Interviewees in Relation to Each Variable

Variable		Number	Overall Number
Students' Gender	Male	24	48
	Female	24	
Level of exposure to specialized courses	More	24	48
	Less	24	
Level of reading proficiency	High	19	48
	Moderate	13	
	Low	16	
Level of reading anxiety	High	11	48
	Moderate	20	
	Low	17	

After the samples have been selected, the next step is to collect the data. In the following section, the researcher will discuss the methods in reading strategy research and how the data have been collected for the study.

3.5 Research Methods in Reading Strategy Research

Punch (2005, p. 19) states, “different research questions require different methods to answer them. The way a question is asked has implications for what needs to be done, in research, to answer it. Quantitative questions require quantitative methods to answer them, and qualitative questions require qualitative methods to answer them.” In the studies of L2 reading strategies, researchers have attempted

various methods to collect the data in terms of their research purposes. Through the extensive literature review, the researcher of the present study found that the data collection methods in the L2/EFL reading strategy research mainly include: 1) questionnaires; 2) interviews; and 3) think-aloud protocols. The following section will discuss the nature, the merits and shortcomings of each method.

3.5.1 Written Questionnaires

Questionnaire is one of the most common means of collecting information on thoughts, feelings, attitudes, beliefs, values, perceptions, personality and behavioral intentions of research participants (Johnson and Christensen, 2012). They are “printed forms that ask the same questions of all individuals in the sample and for which respondents record their answers in verbal form” (Gall, Gall and Borg, 2007, p. 228). Questionnaire items can be relatively closed or open ended. A closed item is one in which the range of possible responses is determined by the researcher. An open item is one in which the subject can decide what to say and how to say it. While responses to closed questions are easier to collect and analyze, one often obtains more useful information from open questions. It is likely that responses to open questions will more accurately reflect what the respondent wants to say (Nunan, 2002).

Wiersma and Jurs (2005) emphasize that selected–response or forced-choice items in a close-ended questionnaire “enhance consistency of responses across respondents”. That is to say the response can be given a number or value so that a statistical interpretation for responses can be assessed. The responses in closed-ended

questions seem to be more objective than those in the open-ended questions. Ary et al (2006) state that constructing close-ended questions is time-consuming. However, by restricting the response set, the close-ended questionnaire is easy to administer. It can be coded then put into a computer for analysis. Open-ended questions allow the participants to express their own thoughts and ideas. Creswell (2005) suggests that open-ended questions can be used when the researcher does not know the response possibilities and wants to explore the options of the respondents. Since open-ended questions require more thoughts from the participants, considerable effort is required from the participants to fill in the questionnaires.

Questionnaires have two advantages over interviews for collecting research data. The cost of sampling respondents over a wide geographic area is lower, and the time required to collect the data typically is much less. However, questionnaires cannot probe deeply into respondents' beliefs, attitudes, and inner experience. Also, once the questionnaire has been distributed, it is not possible to modify the items, even if they are unclear to some respondents (Gall, Gall and Borg, 2007). The data from questionnaires may be superficial. There is little or no proof of honesty or seriousness of responses. This may be seen as a challenge for a novice researcher with regards to his or her own ability to deal with such limitations. More importantly, while analysis may be easy, but time-consuming, interpretation can be problematic (Robson, 1993; and Walker, 1985).

In reading strategy investigations, A large number of studies on L2 reading strategies have been conducted through the use of questionnaires, such as Barnett (1988), Anderman (1992), Taillefer and Pugh (1998), Sheorey and Mokhtari (2001), Chieko (2002), Saricoban (2002), Botsas and Padeliadu (2003), Phakiti (2003), Tercanlioglu (2004), Vianty (2007), Martinez (2008), Cogmen and Saracaloglu (2009), Saengpakdeejit (2009), Malcolm (2009), Cantrell and Carter (2009), Akyol and Ulusoy (2010), Poole (2010), Maarof and Yaacob (2011), Sani, et al (2011), and Tabatabaei and Assari (2011). Despite the shortcomings, the advantages of questionnaires are obvious. Thus, the questionnaire has become one of the main instruments to collect the data in reading strategy studies.

3.5.2 Interviews

The oral interview has been widely used as a research tool in applied linguistics. It is a way that can be used as an instrument to investigate students' language learning strategies by asking students to explain and describe what language learning strategies they use and how they use them when they deal with language learning (Ellis, 1994). Interviews consist of oral questions asked by the interviewer and oral responses by the research participants. The major advantage of interviews is their adaptability. Skilled interviewers make an effort to build trust and rapport with respondents, thus making it possible to obtain information that the individual probably would not reveal by any other data collection method. They also can follow up a respondent's answers to obtain more information and clarify vague statements (Gall,

Gall and Borg, 2007). As Ary, et al. (2006) assert, interview is a means for data collection allowing the researcher to make immediate follow-up and clarification of the participant's responses. To the view of Mackey and Gass (2005), interview allows the researcher to obtain the data in which they are probably unable to observe directly, such as self-reported perceptions or attitudes.

Some researchers (e.g. Fontana and Frey, 1994; and Nunan, 2002) classify interviews as structured, semi-structured and unstructured interviews in terms of their degree of formality. In a structured interview, the agenda is totally predetermined by the interviewer, who works through a list of set questions in a predetermined order. The questions are planned and standardized in advance; pre-coded categories are used for responses. The respondent is asked a series of pre-established questions and there is little room for variation in response. By contrast, an unstructured interview is guided by the responses of the interviewee and the interviewer exercises little or no control over the interview. Interview questions are not pre-planned and standardized, but instead there are general questions to get the interview going and to keep it moving. This makes the direction of the interview relatively unpredictable. While in a semi-structured interview, the interviewer has a general idea of where he or she wants the interview to go, and what should come out of it, but does not enter the interview with a list of predetermined questions.

Whatever type of interview a researcher wants to use as a method for data collection, he or she should consider the nature of the research and the degree of

control he or she wishes to exert. As the semi-structured interview has the nature of flexibility, it has found favor with many researchers, particularly those working within an interpretative research tradition (Nunan, 2002). Besides the flexibility it gives to the interviewer, the semi-structured interview also gives the interviewee a degree of power and control over the course of the interview. However, to make profitable use of its flexibility, it calls for skills and experience in the interviewer. The lack of standardization raises concerns about reliability. Biases are difficult to rule out, and the interview may be time-consuming (Robson, 1993). Creswell (2009) also argues that data obtained through the interview are filtered through the views of the interviewees. In addition, an interview requires a plenty of time to transcribe the data.

Interviews are very popular among qualitative researchers because interviews can be used to obtain in-depth information concerning participants' thoughts, beliefs, knowledge, reasoning, motivations and feelings about intended topics (Johnson and Christensen, 2012). Many studies on reading strategies have gathered the data through the use of interviews, as in Kletzien (1992); Tercanlioglu (2004); Anastasiou (2009); Saengpakdeejit (2009); Akyol and Ulusoy (2010); and Maarof and Yaacob (2011).

3.5.3 Think-aloud Protocols

Like interviews and questionnaires, think-aloud protocols can also provide valuable information on students' strategy use. "Think-aloud techniques, as the name suggested, are those in which subjects complete a task or solve a problem and

verbalize their thought processes as they do so. The researcher collects the think-aloud protocol on tape and then analyzes it for the thinking strategies involved” (Nunan 2002, p. 117). In think-aloud tasks, also known as online tasks, individuals are asked what is going through their minds as they are solving a problem or completing a task. Through this procedure, a researcher can gather information about the way people approach a problem-solving activity (Mackey and Gass, 2005). Similarly, Oxford (1990) states that, by thinking aloud, the student lets his or her thoughts flow verbally in a stream-of-consciousness fashion without trying to control, direct, or observe them.

Think-aloud protocols play a central role in the ‘Problem Solving Theory’. Reading, from this perspective, is conceptualized as a process of problem solving. Emphasis is put on the strategies readers employ to solve problems and to construct meaning (Cheng, 2010). In think-aloud sessions, the participants are asked what is going on through their mind as they are solving a problem or completing a task. Think-aloud procedure provides introspective data, and it can get fresh information as this kind of technique can help the researcher get closer to the mental actions of the individual while completing the tasks. The researcher can also use audio-recording tools to collect the data for further analysis. Think-aloud protocol provides more detailed information because the students describe strategies while doing a language task, however this method is basically used with one-on-one, and it takes a great deal of time. Reflecting strategies related to the task at hand, students may not have time to

look back on the task and evaluate their performance when the task is completed Oxford (1990). Besides, Mackey and Gass (2005) claim that verbal report data are questionable in terms of their validity and reliability. The major drawback of using verbal report is the accuracy of reporting. Further, Branch (2000) points out the drawback of think-aloud method that some participants may find it difficult to deal with the load of problem solving along with speaking.

Despite these drawbacks and limitations, the think-aloud technique continues to be an effective method for providing the most objective and on-line information about the processes of L2 reading. The value of thinking aloud lies in that it is “extremely revealing about the dynamics of comprehension difficulties and how understandings of text shift in reaction to comprehension difficulties and surprises in text” (Pressley and Afflerbach 1995, p. 38). L2 research has benefited greatly from the extensive use of think-aloud procedures. Many Researchers used think-aloud method to examine the strategies that L2/FL readers use for dealing with comprehension difficulties (Hosenfeld, 1977; Block, 1986; Sarig, 1987; Botsas, 2003; Cheng, 2010; and Tabataba’ian and Zabihi, 2011).

3.6 Data Collection Instruments for the Present Investigation

Data collection methods are highly related to the research questions and types of research. The matching of questions and methods is crucially important, as the research findings are highly dependent on the data collection, which is often

known as “data elicitation” (Macky and Gass, 2005, p. 44). Through the review of the data collection methods in L2 and EFL reading strategies above, we can see that no method is perfect, and each method has its own strengths and drawbacks. To choose which methods to use to collect the data, the main point that the researcher should bear in mind is that the data collection method must suit the research purposes and types of the study. The method used must be able to collect ample information to answer the research questions (Creswell, 2009).

Having studied the main methods of data collection in reading strategy research, the researcher decided to employ multiple data collection methods in the present investigation. As the present study was mainly a survey and the main purpose was to examine the reading strategies adopted by the students, the researcher employed questionnaires to collect the quantitative data and then use semi-structured interviews to collect qualitative data as semi-structured interviews have the advantage of flexibility. In addition, a reading proficiency test was used to test the participants’ reading ability.

3.6.1 Questionnaires

As mentioned in Section 3.5.2, the questionnaire is one of the main instruments for collecting data in reading strategy research. Questionnaires are at the most productive “when used with large numbers of respondents in many locations; when what is required tends to be fairly straightforward information – relatively brief and uncontroversial; when there is a need for standardized data from identical

questions – without requiring personal, face-to-face interaction; when the respondents can be expected to be able to read and understand the questions – the implications of age, intellect, language, and eyesight need to be considered; when the social climate is open enough to allow full and honest answers” (Denscombe, 2010, p. 156). As the data for this study would be collected from different locations and it was large-scale research, considering the advantages of questionnaires and the nature of this study, questionnaires were used as the primary instrument for data collection at the first stage. Two sets of questionnaires have been used in the present investigation: 1) the Reading Strategy Questionnaire, and 2) the Foreign Language Reading Anxiety Scale. The following is the detailed information of the two kinds of questionnaires.

3.6.1.1 Reading Strategy Questionnaire

A lot of scholars in reading strategy research have used different reading strategy questionnaires/inventories to investigate the reading strategies employed by L2 or EFL learners. After taking an extensive review of these studies and careful consideration about the context and the population of the present study, the researcher developed a more comprehensive questionnaire suitable for this investigation mainly based on the studies of Anderson (1991), Sheorey and Mokhtari (2001), Mokhtari and Reichard (2002), Taraban (2004), Cheng, 2010), and Luo (2010). The researcher carefully selected 39 items from these studies to compose a new questionnaire. Of the 39 strategy items, 16 items were adopted without any modification, while the other 23 items were slightly modified. The purpose of the

modification was to make the meaning clearer and suitable for the students. The following are some examples of the adopted and modified strategy items.

Category 1: Adopted Items

- Set purposes of reading (original from Mokhatari and Reichard, 2002)
- Draw on the prior knowledge about the topic (original from Taraban, 2004)
- Read the first and last paragraphs (original from Luo, 2010)

Category 2: Modified Items

- Analyze word formation (original from Cheng, 2010)
Analyze the word formation of unknown words (after modified)
- Adjust reading rate (original from Sheorey and Mokhtari, 2001)
Adjust reading rate accordingly (after modified)
- Read the title of the text (original from Luo, 2010)
Read the title of the text carefully (after modified)

The 39 adopted and modified strategy items were classified into three main categories: Pre-reading Strategies (PRS), While-reading Strategies (WHS) and Post-reading Strategies (POS). The While-reading Strategies (WHS) were further divided into two sub-categories: Strategies for Comprehending the Text (SCT) and Strategies for Coping with Difficulties.

The reading strategy questionnaire contained two parts. The first part was about the background information of the participants, which included the respondent's gender, year of study and the name of the university, etc. The second part included the items of the reading strategies. The written questionnaire used in the present investigation consisted of 39 close-ended questions and an open-ended question. The

close-ended questions were composed of the selected strategy items; the open-ended question gave the participants the freedom to list the reading strategies they often used while reading, which were not included in the questionnaire.

In the close-ended questions, a 4-point rating scale adapted from Intaraprasert (2000) has been used to value the frequency of the strategy use. The scale has been valued as 1, 2, 3, and 4 as illustrated below.

Scale 1= Never Scale 2= Sometimes Scale 3= Often Scale 4= Always or almost always
--

After the reading questionnaire had been constructed, the researcher's supervisor and a few PhD students in this field helped to check the items and the wording to validate the questionnaire.

Before the main study, the questionnaire had been piloted. A pilot study is a small-scale rehearsal of larger data collection. It may help researchers increase the reliability, validity as well as practicality of the questionnaire (Oppenheim, 2003). As Intaraprasert (2000) suggests, piloting cannot only help with wording of questions but also with procedural matters such as the question sequences and the reduction of non-response rates. Before the piloting, the questionnaire was translated into Chinese version with the help of the researcher's two colleagues to increase the comprehension and avoid misunderstanding and ambiguity. One hundred and eighty university Business English majors from the research population were purposively selected to

participate in the pilot study, among which 10 students were selected for the interview. The participants who were involved in the pilot study were excluded in the main study. In the pilot study, some problems were found with a few strategy items. For example, some students reported that they felt confused about the meaning of a few strategy items and the wording of some strategies was not good. Based on the students' comments, evaluations and suggestions, the researcher and his two colleagues examined, improved and finalized the items of the reading strategy questionnaire.

Following the close-ended question items was the open-ended question. In this part, the students expressed their own opinions freely. Some new and useful strategy items emerged from the students' self-report. The useful and practical information emerged from the open-ended questions in the questionnaire and the interviews were carefully selected to put in the reading questionnaire. Examples are: *'Use specialized terms as clues or indications'*, *'Pause and think about what is read from time to time'* and *'Conclude the mistakes one made'*. In the end, the final version of the reading questionnaire consisted of 45 strategy items. The Cronbach's alpha was used to assess the internal reliability of the questionnaire items. The estimated reliability of the questionnaire in the pilot study with 180 participants was .87. The estimated reliability of the questionnaire based on the responses of 926 participants in the main study was .91, which was much higher than the acceptable reliability coefficient of .70. which is the rule of thumb for research purposes (Fraenkel and Wallen, 2000).

3.6.1.2 Foreign Language Reading Anxiety Scale

In order to measure the reading anxiety level of the participants, the Foreign Language Reading Anxiety Scale (FLRAS) designed by Saito, Horwitz and Garza (1999) was adopted in the present study. Saito et al (1999) designed the inventory to measure the readers' foreign language reading anxiety levels in three foreign language courses—Spanish, Russian, and Japanese. The FLRAS elicits the students' self-reports of anxiety over various aspects of reading, their perceptions of reading difficulties in their target language, and their perceptions of the relative difficulty of reading as compared the difficulty of other language skills.

The FLRAS contains 20 items scored on a 5-point rating scale, ranging from 'strongly agree' to 'strongly disagree'. The theoretical ranges of the FLRAS scales are from 20 to 100. In the present study, the reading anxiety of the participants were divided into three levels: 'high', 'moderate' and 'low' based on the total scores of each student obtained from their answers.

3.6.2 Semi-structured Interview

In the second step, the semi-structured interview was used to collect the qualitative data. The purpose of using the semi-structured interview was to get the in-depth information about the students' use of the reading strategies. It could help the researcher to find out the in-depth reasons why the students preferred some strategies and why they did not favor some others.

One of the most important reasons why the researcher of the present study employed the semi-structured interview was for the sake of the logic of triangulation. The findings from one type of study could be checked against the findings derived from the other type. Another, due to some unavoidable limitations of the questionnaire, it was difficult for the researcher of the present study to gather rich and detailed information about the respondents' choices of reading strategies. As Punch (2005) asserts, "Qualitative research may facilitate the interpretation of relationships between variables." He further states that quantitative research allows the researcher to establish relationships among variables, but is often weak when it comes to explore the reasons for those relationships; however, a qualitative study can be used to help explain the factors underlying the broad relationships that are established. Gall et al. (2007, p. 228) also remarks that "a skilled interviewer can make effort to build trust and rapport with respondents, thus making it possible to obtain information that the individual probably would not reveal by any data collection method."

The semi-structured interviews were conducted after the participants finished responding to the questionnaires. The semi-structured questions were constructed based on the research purposes and the research questions. In order to establish a good rapport between the interviewer and the interviewees, some warm-up questions were included. Therefore, the interview questions included two parts. The first part contained mainly the questions about the personal background information to establish good relationships. The questions in the second part mainly focused on

eliciting the reasons why the participants employed certain strategies frequently and infrequently when they read Business English materials. The researcher tried to search for the information about what strategies the students preferred and did not prefer and why they liked and did not like some strategies from the interview data.

To ensure the validation of the interview questions, these interview questions were cross-checked by the supervisor and four Ph.D students of English Language Studies. In order to let the interviewees feel relaxed, comfortable and confident in expressing themselves during the interviews, the interviews were conducted in Chinese. These interview questions were translated into Chinese, and three teachers of Business English reading were invited to check and discuss the wording of the Chinese translation version to avoid ambiguity.

After the interview questions had been designed, the pilot study was conducted before the main study. The purpose of piloting an interview was to see whether or not the interview questions worked properly; whether there was anything wrong with the question items, question sequences, timing, recording, or other technical problems that may happen in the actual data collection scheme; and whether they were clear for the interviewees (Intaraprasert, 2000). The interview questions were piloted with 8 students (4 males and 4 females) to see whether these question items were clear for them. After the piloting, the researcher rechecked and reconsidered the question items, and then revised some question items according to the results of the pilot interviews. The final version of interview questions is illustrated in Table 3.3.

Table 3.4 Sample of Interview Questions

The Sample of Interview Questions	
Part 1	1. What is your name?
	2. Do you like Business English? Why? /Why not?
	3. Do you think reading is important in Business English learning? Why/ why not?
Part 2	4. Do you encounter any problems or difficulties when reading Business English? If you do, what problems or difficulties do you have and how do you usually solve them?
	5. What strategies do you frequently use, and what strategies do you seldom use before reading Business English texts? Why?
	6. What strategies do you frequently use, and what strategies do you seldom use while reading Business English texts? Why?
	7. What strategies do you frequently use, and what strategies do you seldom use after reading Business English texts? Why?
	8. Are there any other strategies do you often use while reading Business English in addition to the ones listed in the questionnaire?
	9. Do you have any suggestions or comments for teaching and learning Business English reading?

3.6.3 Business English Reading Comprehension Test

Determining the levels of the students' Business English reading proficiency was a very important issue as the students' reading proficiency level was one of the four variables in the present investigation. There may be more than one way to determine the students' levels of reading proficiency, such as making use of students' previous records or basing on the students' determination on their own perception. However, by comparison, the test scores may be a more reliable reflection of the students' ability (Intaraprasert, 2000). Bearing this in mind, the researcher designed a reading test termed as 'Business English Reading Comprehension Test' or BERCT, to determine the reading proficiency levels of the Business English majors. This section presents how the BERPT was constructed. Some key issues about the

construction of the present test, such as the rationales for constructing the test, the construct of the test, the authenticity of the reading tasks, the level of difficulty, the reliability and validity of the test, the time available and the length of the test will be discussed.

3.6.3.1 Rationales for Constructing the BERCT

The purpose of reading proficiency test is to determine the students' reading proficiency levels. To assure the reliability of the results of the test, the testing method must be taken into careful consideration. According to Intaraprasert (2000), it is very important for the researcher to take the testing method into consideration in order to get the most valid and reliable results of the test scores of the students.

The development of a reading test involves many stages. Alderson, Clapham and Wall (1995) propose the following model of test construction and evaluation:

1. Identifying test purpose
2. Developing test specification
3. Guidelines for and training of item/task writers and moderation of their products
4. Pre-testing, analysis of results and revision of test
5. Training examiners and administrators
6. Monitoring examiner reliability
7. Reporting scores and setting pass marks
8. Test validation
9. Post-test reports
10. Developing and improving tests

In this model, the development of test specifications is seen as central, it includes many important issues, such as test purpose, the learners taking the test, test

level, test construct, number of sections to the test, time for the test, text types, text length, text complexity/difficulty, language skills to be tested, task types, number of test items and criteria of scoring. Some issues, such as the test purpose, the learners taking the test and the test level, have been stated. The following will discuss some other key points relating to the present test. It begins with the discussion of the test construct of the BERCT.

Reading involves making meaning from a text. According to Mckay (2006), readers employ three main cueing systems when they read; they rely on graphophonic cues at the word level, syntactic cues at the sentence level and semantic cues at the whole text level. The characteristics of reading abilities involve the reader's organizational knowledge (grammatical knowledge and textual knowledge) and pragmatic knowledge (function knowledge and sociolinguistic knowledge). Grabe (2009) lists 14 major component abilities in reading comprehension as follows:

1. Fluency and reading speed
2. Automaticity and rapid
3. Search processes
4. Vocabulary knowledge
5. Morphological knowledge
6. Syntactic knowledge
7. Text-structure awareness and discourse organization
8. Main-idea comprehension
9. Recall of relevant details
10. Inferences about text information
11. Strategic-processing abilities
12. Summarization abilities
13. Synthesis skills
14. Evaluation and critical reading

Reading assessments are meant to provide feedback on the skills, processes, and knowledge resources that represent reading abilities. Assessment of reading proficiency is important as a way to understand students' overall reading abilities and to determine if students are appropriately prepared for further learning and educational advancement. Commonly, this type of assessment is referred to as standardized testing. Clapham (1993) proposes that, to demonstrate students' level of reading comprehension, students should be capable of fulfilling the following tasks:

1. Identifying content
2. Identifying a sequence of events and procedures
3. Finding main ideas
4. Identifying ideas in the text and relationships between them.
5. Identifying relationships
6. Reaching a conclusion by relating supporting evidence to the main idea.
7. Exploring ideas
8. Drawing logical inferences
9. Drawing conclusions

Reading researchers have frequently attempted to identify the readers' reading abilities by giving them a series of passages and asking them different types of questions to test their different levels of understanding of the passages. Alderson (2000) proposes a variety of techniques that are employed in the testing of reading:

1. Multiple-choice
2. Short-answer questions
3. Sentence completion
4. Notes/summary/diagram/flow chart/table completion
5. Choosing from a 'heading bank' for identified paragraphs/sections
6. Identification of writer's view/attitudes/claims
7. Classification
8. Matching lists
9. Matching phrases

Similarly, Grabe (2009) summarizes most major task options used in standardized reading assessments as follows:

1. Cloze
2. Gap-filling formats (rational cloze test)
3. C-tests (retain initial letters of words removed)
4. Cloze elide (remove extra word)
5. Text segment ordering
6. Text gap
7. Choosing from a “head bank” for identified paragraphs
8. Multiple-choice
9. Sentence completion
10. Matching (and multiple matching) techniques
11. Classification into groups
12. Dichotomous items (T/F/not stated, Y/N)
13. Editing
14. Short answer
15. Free recall
16. Summary (1 sentence, 2 sentences, 5-6 sentences)
17. Information transfer (graphs, tables, flow charts, outlines, maps)
18. Project performance
19. Skimming
20. Scanning

These theoretical foundations, as the components of reading abilities, types of assessment and reading tasks stated above, should be used as a guide when constructing a reading proficiency test. In addition, to construct a good English reading proficiency test, some other important factors, such as authenticity of the reading tasks, level of difficulty, reliability and validity of the test, time available and length of the test, must be also taken into careful consideration. The next sections will deal with these issues for constructing the test paper for the present study.

3.6.3.2 Construction of the Test

Taking the issues of reading assessment stated above and the purpose of the test of the present study into consideration, the researcher constructed the BERCT by selecting the reading texts from the authentic BEC (Business English Certificate) tests. The BEC is a collaborative program between the Chinese National Education Examinations Authority (NEEA) and the University of Cambridge Local Examinations Syndicate (UCLES). It is designed to test English language ability used in the business context. Individual learners who wish to obtain a business-related English language qualification sit for this test. The BEC certificate is widely recognized by universities, foreign companies and enterprises in China. It is a proof that the learner has the proficiency required to use English effectively in the workplace. Many university students in China, including the university students majoring in English (especially Business English), international trade and business, take part in the BEC test each year. The test was introduced to China in 1993 with three levels – BEC Preliminary, BEC Vantage, and BEC Higher. BEC Preliminary is an intermediate-level qualification that gives the learners the practical everyday skills they need to succeed in an English-speaking working environment and in international business. BEC Vantage is an upper-intermediate level qualification that shows the learners can use English with confidence in a business environment. BEC Higher is a high-level exam, taken by people who need to prove that they have a high level of English for business purposes.

In the reading part of BEC Preliminary, there are five different types of tasks: multiple choice, matching, right/wrong/doesn't say, gap-filling and note completion. The Reading part is 25% of the total score. In the reading paper of BEC Vantage, there are five different types of tasks: matching, gap-filling, multiple choice, multiple-choice cloze and proofreading. The Reading paper is 25% of the total score. In the reading paper of BEC Higher, there are also five different types of tasks: matching, multiple choice, multiple-choice cloze, open cloze and proofreading. The reading paper is 25% of the total marks.

Considering the different types of reading tasks in the BEC test, difficulty of reading tasks in each level and the different reading abilities of the participants, after discussing with the researcher's supervisor and three experienced teachers of Business English reading in China, the researcher decided to construct the BERCT comprising seven parts (reading tasks) selected from the authentic BEC reading tests. Part One and Part Two were selected from BEC Preliminary; Parts Three, Four and Five were from BEC Vantage; Parts Six and Seven were selected from BEC Higher. As a result, the BERCT included seven parts with seven different types of tasks, containing 61 task items. Table 3.4 shows the components of BERPT.

Table 3.5 Components of the BERCT

Components	Items	Level of BEC Test	Type of task	Test Focus
Part One	1- 8	Preliminary	Multiple choice	Understanding short notices, messages, etc
Part Two	9-16	Preliminary	Right/Wrong/ Doesn't Say	Locating detailed factual information
Part Three	17-24	Vantage	Matching	Identifying specific information and details
Part Four	25-30	Vantage	Gap-filling	Understanding text structure and meaning
Part Five	31-44	Vantage	Proofreading	Identifying errors
Part Six	45-55	Higher	Multiple-choice Cloze	Understanding vocabulary and text structure
Part Seven	56-61	Higher	Multiple choice	Understanding general points and specific details

Part One: Multiple-Choice

This part contained 8 short texts selected from BEC Preliminary, each of which was accompanied by a multiple-choice question containing three options. In all cases the information was brief and clear and the difficulty of the task did not lie in understanding context but in identifying or interpreting meaning. The focus of this part was on understanding short real-world notices, messages, etc.

Part Two: Right/Wrong/Doesn't Say

This part was selected from BEC Preliminary. It contained a text 'Vacancies for Store Managers' accompanied by eight 3-option multiple-choice questions. Each question presented a statement and the test takers were expected to indicate whether the statement was A 'Right' or B 'Wrong' according to the text, or whether the information was not given in the text (C 'Doesn't say'). Students were not expected to

understand every word in the text but they should be able to pick out salient points and infer meaning where words in the text were unfamiliar. The questions referred to the factual information in the text, but candidates were required to do some processing in order to answer the questions correctly. This part aimed to test the students' ability to locate detailed factual information.

Part Three: Matching

This part was selected from BEC Vantage. It was a matching task, with the emphasis on scanning and reading for gist. There were four short texts on a related theme 'IT services'. Although the context of each text was similar, there was also information that was particular to each text. The texts were labeled A-D. A set of eight statements related to the texts was presented. The students were expected to match each one to the relevant text. The questions in this part tended to focus mostly on the identification of specific information and details, although some questions may focus on gist.

Part Four: Gap-filling

This part was selected from BEC Vantage. It was a gap-filling task, comprising a text 'ACQUISITION' that had 6 sentences removed from it, and a set of seven sentences labeled A-G. Students were required to fill in each gap by choosing the sentences they thought fit in terms of meaning and structure. Only one sentence fit each gap. This part tested students' understanding of text structure as well as meaning.

Part Five: Proofreading

This part was selected from BEC Vantage. It included a text ‘Client Meetings’ with 14 question items. It was a task of error identification to test the students’ understanding of sentence structure and their ability to identify errors. This exercise was related to the ‘real-world’ task of checking a text for errors. The text contained 14 numbered lines, which were the test questions. In this task, students were required to identify the words that were introduced into the text in error.

Part Six: Multiple-choice Cloze

This part was selected from BEC Higher, including a single business-related text with mainly lexical gaps. It comprised a text ‘Customer Relationship Management’ testing the students’ knowledge of lexis and text structure. The task type of this part was a multiple-choice cloze. It was a modified cloze, in other words, a gapped text in which the gaps were carefully chosen. There were 11 multiple-choice questions, most of which tested vocabulary. The students’ task was to choose the correct option from the 4 available to fill each gap. The focus of this part was on vocabulary and text structure.

Part Seven: Multiple Choice

This part was selected from BEC Higher, which aimed to test students’ understanding general points and specific details. It was a 4-option multiple-choice task involving a longer text about management styles on authentic source material. This task consisted of a text accompanied by 6 multiple-choice questions, which were placed after the text.

To sum up, there were totally 61 task items in the BERPT. Each item was assigned a score of one, thus the total score of the test was 61. After the BERPT had been constructed, it was piloted with 180 students selected from different years of study. The time for the test was 90 minutes. The students were approximately equally divided into three groups based on their testing scores. The students with testing scores of 32 or higher were classified as ‘high proficiency’; the students with testing scores ranging from 22-31 were classified as ‘moderate proficiency’ and those with testing scores of 21 or below were classified as ‘low proficiency’.

After the test, item analysis was used to check the quality of the question items. The reliability and validity of the test paper were also tested before the main study. The next section will present the item analysis of the BERCT.

3.6.3.3 Item Analysis

When preparing test items, the item writer must make some judgments regarding the level of difficulty, discrimination power, and content validity of the test items. Although the question items of the BERPT were selected from the authentic BEC tests, some of these items may not be suitable for the test takers of the present study. Item analysis was conducted to test the quality of the question items in the BERPT. Item analysis is a procedure or simple statistical way for checking individual items (Madsen, 1983). It is the process of examining the students’ responses to each test item to judge the quality of the items. Specifically, it is to examine the difficulty and discriminating ability of the item as well as the

effectiveness of each alternative (Mehrens and Lehmann, 1978). Hughes (1989, p. 160) comments the importance of the item analysis as “Even individual items make their own contribution to the total test. Some contribute more than others, and it is the purposes of item analysis to identify those that need to be changed or replaced.”

Basically, an item analysis provides the test constructor three things: 1) how difficult each item is; 2) whether the question ‘discriminates’ the difference between high and low students; and 3) which distractors are working as they should (Madsen, 1983). Henning (1987, p. 43) points out, “Very often, weak items cannot be identified or removed without a ‘try-out’ or pilot administration of the test”. Therefore, for the present study, to ensure the quality of the reading test paper before the main study, it was essential to conduct an item analysis using the students’ testing scores obtained through the pilot reading proficiency test.

In the present study, the ‘third Technique’ proposed by Madsen (1983, p. 180) was employed to carry out the item analysis. With this technique, the students’ scores were grouped into the top scoring third, the middle third and the bottom third. For each item, a table was constructed showing how many students in the top and bottom scoring thirds got the answer correct. These top and bottom scoring thirds were chosen to be used with the statistical method in order to calculate the level of difficulty and power of discrimination of each test item. Mehrens and Lehmann (1978, 1984) suggest that this technique is suitable when the number of subjects taking the test is over one hundred. In the present investigation, the number of students for the pilot test was one hundred and eighty.

To calculate the Facility Value of each item, the following formula suggested by Mehrens and Lehman (1978) was adopted:

$$Difficulty = \frac{R}{T} \times 100$$

where R = number of students who answered item correctly
 T = total number of students in the high and low groups

(Source: Mehrens and Lehman (1978, p. 326))

The item discrimination index for each item is computed by subtracting the number of students in the low group who answered the item correctly (R_L) from the number in the high group who got the item right (R_H), and dividing by the number of students in either group. Thus, the formula is presented as the following:

$$Discrimination = \frac{R_H - R_L}{(1/2)T}$$

(Source: Mehrens and Lehman (1978, p. 326))

Regarding the ideal power of discrimination and the level of difficulty, Mehrens and Lehmann (1978) state that the higher the power discrimination, the better, and that the level of difficulty is dependent upon many factors, but the most important ones are the purpose of the test and the type of objective items used. To select ideal test items, the ones with the values of 0.20-0.80 for the level of difficulty, and .20-1.00 for the power of discrimination are considered acceptable and no change or improvement is needed as suggested in Garrett (1966, cf. Castillo, 1990). In the present study, only the items that meet the acceptable criteria of level of difficulty and

power discrimination mentioned above were selected in the BERCT for the main study. Those items that did not reach the criteria were discarded. As the test for the present investigation was examined as a whole rather than as individual parts, it should comprise both easy and difficult items for motivational purposes. The results of the item analysis provided the researcher many valuable insights into the quality of the test. The results of the item analysis of the 61 question item in the BERCT in the pilot stage are presented in Table 3.5. The numbers of students in good and poor groups who got the item correct are shown, as well as the values of level of difficulty and power of discrimination of each item. The remark is given to indicate the test items which are acceptable or discarded.

As shown in Table 3.5, of the total 61 items, 56 were accepted as good test items as they met the acceptable criteria for both the facility value and power of discrimination. Five items (Items 3, 10, 18, 25 and 46) were discarded as they were too easy or too difficult and the power of discrimination was extremely low. From the results of item analysis, we can see that although the standard BEC has been considered as good test with high quality, not every item was acceptable for the students in the present study, as still some items did not reach the criteria of facility value and power of discrimination for good items. In the end, the researcher decided to remove the five discarded items from the BERCT. As a result, the final version of the BERCT for the main study comprised of 56 items.

Table 3.6 Results of Item Analysis of the Reading Texts

Item number	High N= 60	Low N=60	Level of Difficulty	Power of Discrimination	Remark
1	57	23	0.5	0.6	Acceptable
2	45	18	0.4	0.5	Acceptable
3	24	16	0.3	0.1	Discarded*
4	33	20	0.4	0.2	Acceptable
5	20	11	0.3	0.2	Acceptable
6	38	22	0.5	0.3	Acceptable
7	36	21	0.5	0.3	Acceptable
8	51	41	0.8	0.2	Acceptable
9	37	19	0.5	0.3	Acceptable
10	23	23	0.4	0.0	Discarded*
11	47	33	0.7	0.2	Acceptable
12	35	11	0.4	0.4	Acceptable
13	37	19	0.5	0.3	Acceptable
14	23	14	0.3	0.2	Acceptable
15	45	34	0.7	0.2	Acceptable
16	39	23	0.5	0.3	Acceptable
17	33	11	0.4	0.4	Acceptable
18	19	15	0.3	0.1	Discarded*
19	24	12	0.3	0.2	Acceptable
20	27	15	0.4	0.2	Acceptable
21	23	12	0.3	0.2	Acceptable
22	25	15	0.3	0.2	Acceptable
23	29	15	0.4	0.2	Acceptable
24	28	16	0.4	0.2	Acceptable
25	18	11	0.2	0.1	Discarded*
26	20	5	0.2	0.3	Acceptable
27	22	8	0.3	0.2	Acceptable
28	23	8	0.3	0.3	Acceptable
29	17	8	0.2	0.2	Acceptable
30	20	3	0.2	0.3	Acceptable
31	46	29	0.6	0.3	Acceptable
32	35	15	0.4	0.3	Acceptable
33	32	12	0.4	0.3	Acceptable
34	26	5	0.3	0.4	Acceptable
35	41	8	0.4	0.6	Acceptable
36	32	9	0.3	0.4	Acceptable
37	45	16	0.5	0.5	Acceptable
38	42	18	0.5	0.4	Acceptable

Table 3.6 Results of Item Analysis of the Reading Texts (cont.)

Item number	High N= 60	Low N=60	Level of Difficulty	Power of Discrimination	Remark
39	39	16	0.5	0.4	Acceptable
40	31	13	0.4	0.3	Acceptable
41	22	4	0.2	0.3	Acceptable
42	21	9	0.3	0.2	Acceptable
43	27	16	0.4	0.2	Acceptable
44	29	10	0.3	0.3	Acceptable
45	39	19	0.5	0.3	Acceptable
46	16	8	0.2	0.1	Discarded*
47	31	17	0.4	0.2	Acceptable
48	28	7	0.3	0.4	Acceptable
49	30	8	0.3	0.4	Acceptable
50	33	21	0.5	0.2	Acceptable
51	39	20	0.5	0.3	Acceptable
52	42	20	0.5	0.3	Acceptable
53	30	13	0.4	0.3	Acceptable
54	19	6	0.2	0.2	Acceptable
55	20	11	0.3	0.2	Acceptable
56	41	16	0.5	0.4	Acceptable
57	35	18	0.4	0.3	Acceptable
58	25	13	0.3	0.2	Acceptable
59	21	12	0.3	0.2	Acceptable
60	35	22	0.5	0.2	Acceptable
61	26	14	0.3	0.2	Acceptable

Besides the power of discrimination, and the level of difficulty of test items, test reliability and validity must be taken into consideration so that the scores of the test takers are sufficiently reliable for the researcher to determine their levels of proficiency. The next sections deal with the procedures how the reliability and validity of the test for the present investigation were carried out.

3.6.3.4 Test Reliability

Reliability refers to the extent to which a test or procedure produces similar results under constant conditions on all occasions (Bell, 1999). Internal reliability refers to the consistency of the results obtained from a piece of research. External reliability refers to the extent to which independent researchers can reproduce a study and obtain results similar to those obtained in the original study (Nunan, 2002). The ways of estimating reliability basically include the equivalent-forms method and internal-consistency methods (Bell, 1999; Davies et al, 1999; and Fraenkel and Wallen, 2000).

The equivalent-forms method needs two different but equivalent forms of the test administered to the same group of individuals during the same time period, or the same test can be administered to the same group of subjects on two occasions, which is called test-retest reliability (Bell, 1999; and Davies et al, 1999). The time between the administrations is normally limited to no more than two weeks in order to minimize the effect of learning upon subjects' true scores (Davies et al, 1999). On the other hand, the internal-consistency method requires only a single administration of an instrument. There are mainly two internal consistency estimates: the split-half and the coefficient alpha. The split-half coefficient is obtained by computing scores for two halves of a scale; in contrast, consistency with coefficient alpha is assessed among items. To establish split-half reliability, the scores are computed for the first and the second halves of a scale. The value of the reliability coefficient is a function

of the consistency between the two halves (Green, Salkind and Akey, 2000). Davies et al (1999) note that, with the split-half procedure, it is important that the two halves are comparable with regards to equivalent difficulty.

The internal-consistency method is a widespread approach to the assessment of reliability (Phillips, 1971). For the present investigation, this method was found appropriate as the test was administered to the students only once. As a result, the researcher decided to adopt the internal-consistency method to test the reliability of the reading test. The split-half procedure was employed for the analysis. The result revealed that the reliability of the BERPT was .89, which was considered acceptable, as it was higher than the acceptable criterion of .70 as suggested by Fraenkel and Wallen (2000).

3.6.3.5 Test Validity

It is generally accepted that test reliability alone is not enough. Validity is another important factor that the researcher must take into consideration. The texts for the present study were the authentic ones in the BEC tests; however, they comprised the texts from different levels and also different types of tasks. Whether the test was suitable for the target population was still a question. Therefore checking the validity of the test was also a must. Validity has been defined as “the extent to which a test measures the ability or knowledge that is purported to measure” (Henning 1987, p. 89). According to Nunan (2002), validity refers to the extent to which one has really observed what one set out to observe, and the extent to which

one can generalize one's findings from the subjects and situations to other subjects and situations. Validity is the one of the most important ideas to consider when preparing or selecting an instrument for use as the validity may tell us whether the instrument measures or describes what it is supposed to measure or describe. There are a few types of validity concerned, among which Mehrens and Lehmann (1978) and Raatz (1985) suggest that content validity is of most concern to the test constructor. Castillo (1990) points out that usually the first approach to establish the validity is through getting 'experts' to judge whether the test consists of questions covering the areas being measured, and whether the test appears to measure what it purports to measure.

Intaraprasert (2000) indicates that the texts should be validated in terms of appropriacy, familiarity and degree of specialization. In addition, the perceiving level of difficulty was taken into consideration in the present study. Therefore, to validate the BERPT, the questionnaires with the questions concerning the appropriacy, familiarity, specialization and level of difficulty for evaluating the test content and types of tasks were given to the subject specialists: five teachers of Business English reading and two teachers of testing. The purpose of doing this was to obtain the data for the following issues: 1) Whether the texts used in the test were appropriate for the Business English majors; 2) Whether the test could evaluate the students' reading abilities appropriately; 3) Whether the Business English majors were familiar with the texts used in the test and the types of tasks; 4) Whether the topics of the texts used in

the test were specialized to the Business English majors; and 5) Whether the level of difficulty of the test items was appropriate for the Business English majors. In addition to the teachers, a few students who had taken the test in the pilot stage were also interviewed with the similar questions to obtain the information about the students' evaluation on the test.

The data obtained revealed that all the texts used in the test were appropriate for the participants of the present study and they could test the students' reading abilities from different angles. The students interviewed, especially the students who were preparing for the BEC tests, agreed that they were familiar with the content of the texts, as well as the types of reading tasks. The teachers as the subjects' specialists also held this point, and they all agreed that these types of tasks were the ones that their students usually did in their subject area. The content of the texts were not too specialized in business as the BEC tests' emphasis is on the students' language abilities in business contexts; the texts were suitable for the present study as the participants had different levels of exposure to specialized courses. Although the test contained some very easy and very difficult question items, the specialists believed that the test was good as a whole to test the students' reading abilities of different proficiency levels. Based on the results of validation, the researcher believed that the test was appropriate to be used in the present investigation.

3.7 Analyzing, Interpreting and Reporting Data

This section describes the methods of analyzing, interpreting and reporting the data obtained from the questionnaires and the semi-structured interviews. In order to answer the research questions of the present study, different methods of data analysis were used. The data analysis was dealt with quantitatively and qualitatively.

3.7.1 Quantitative Data Analysis: Reading Strategy Questionnaire

The data obtained from the questionnaires were quantitative; therefore, the quantitative data analysis methods were used. These methods included 1) the descriptive statistics, 2) the analysis of variance (ANOVA), 3) the post-hoc multiple Comparisons, 4) the Chi-square test, and 5) the factor analysis.

3.7.1.1 Descriptive Statistics

Descriptive statistics are numerical and graphical methods used to summarize data and bring forth the underlying information. The numerical methods include measures of central tendency and measures of variability. Measures of central tendency provide information about a representative value of the data set. Arithmetic mean (simply called the mean), median and mode are the most common measures of central tendency (Gaur and Gaur, 2007). In the present study, to answer the first research question, i.e. What is the frequency of the reading strategies employed by the university Business English majors at different levels, i.e. overall, category and individual?, descriptive statistics were used to analyze the overall mean of the students' strategy use and the mean scores of each category of the reading strategies.

According to Intaraprasert (2000), the frequency of the students' strategy use can be classified into three levels according to the mean scores of the strategy use by the participants: 'high use (3.00-4.00)', 'moderate use (2.00-2.99)', and 'low use (1.00-1.99)'. In the present study, the frequency levels of the overall strategy use and each category were evaluated based on the criterion proposed by Intaraprasert (2000) above.

3.7.1.2 Analysis of Variance (ANOVA)

ANOVA (Analysis of Variance) is a method of statistical analysis used to test the significance of differences among the means of two or more groups of variables (Nunan, 1989). It uncovers the main and interaction effects of classification or independent variables on one or more dependent variables (Gaur and Gaur, 2007). In order to answer the second research question, i.e. Do the reading strategies employed by the university Business English majors vary significantly in terms of gender, level of reading proficiency, level of exposure to specialized courses and level of reading anxiety? If they do, what are the main patterns of variation?, ANOVA was used to analyze the data to examine whether there were significant differences among the independent groups. Specifically, this statistical method was adopted to test whether the students' choices of reading strategies varied significantly depending on the four variables, namely: 1) gender, 2) reading proficiency level, 3) level of exposure to specialized courses, and 4) level of reading anxiety.

3.7.1.3 Post-hoc Multiple Comparisons

The analysis of variance (ANOVA) is used to assess whether means on a dependent variables are significantly different among groups. The post hoc Multiple Comparisons is performed after a mean comparison of more than two groups shows a significant difference in the analysis of variance (Mackey and Gass, 2005). Rejecting of the null hypothesis in ANOVA only tells us that all population means are not equal. Multiple comparisons are used to assess which group means differ from which others (Gaur and Gaur, 2007). That is, if the overall ANOVA is significant and a factor has more than two levels, follow-up tests are usually conducted". (Green, Salkind and Akey, 2000). In the present investigation, as the variables of reading proficiency and reading anxiety were classified into three levels of high, moderate and low, the post hoc Scheffé test was used to check them further if significant differences were found in the two variables by ANOVA.

3.7.1.4 Chi-Square Tests

The Chi-square test is one of the very popular methods for testing hypotheses on discrete data (Gaur and Gaur, 2007). The Chi-square test is used to analyze data which are in form of frequencies (Nunan, 2002). It is performed to determine whether there is a relationship between the variables when the data are in the form of frequency (Mackey and Gass, 2005). In the context of the present investigation, the chi-square tests were performed to examine the significant variations in student's reported strategy use at the individual item level. This

statistical method was used to analyze the data to answer the second research question at the individual item level. Regarding the chi-square tests in the present investigation, the scales of 1 and 2 ('Never' and 'Sometimes') were consolidated into "low use", while the scales of 3 and 4 ('Often' and 'Always or Almost always') were consolidated into "high use". The purpose of consolidating the 4 rating scales into 2 (high and low) is to "obtain the cell size with expected values high enough to ensure a valid analysis" (Green and Oxford 1995, p. 271).

3.7.1.5 Factor Analysis

Factor analysis (FA) is a statistical procedure dealing with how well various items are related to one another and form factors. The purpose of this analysis is to represent those things that are related to one another by a more general name that is what we call 'factors' (Salkind, 2008). Factor analysis is a technique used to identify a small number of factors underlying a large number of observed variables. The variables that have a high correlation between them, and are largely independent of other subsets of variables, are combined into factors.

There are basically two types of factor analysis: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). EFA is usually used to explore the underlying dimensions that could have caused correlations among the observed variables. CFA is used to test whether the correlations among the observed variables are consistent with the hypothesized factor structure (Gaur and Gaur, 2007).

In the context of the present investigation, factor analysis was used to analyze the data to answer the third research question, i.e. What are the main underlying factors in the reading strategies used by the university Business English majors? Are there any factors strongly related to the four variables? If so, what are they?. The EFA was performed to uncover the underlying factors in the students' reading strategy use. Further, the relationships between the factors and the four variables were examined through factor analysis to answer the fourth research question.

3.7.2 Qualitative Data Analysis: Semi-structured Interview

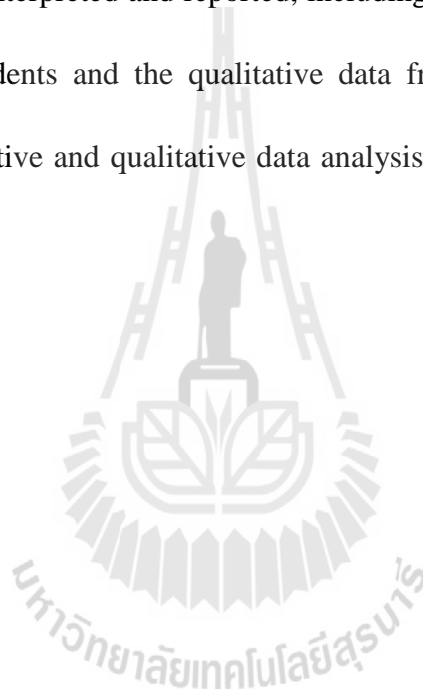
To answer the last research question, i.e. Why do the university Business English majors adopt certain strategies frequently and certain strategies infrequently?, the data from the semi-structured interviews were analyzed qualitatively with thematic analysis. Thematic analysis refers to the process of analyzing data according to commonalities, relationships and differences across a data set (Gibson and Brown, 2009). The word 'thematic' relates to the aim of searching for aggregated themes within data. Coding is the main concept and specific procedure in thematic analysis. To code is to create a category that is used to describe a general feature of data; a category that pertains to a range of data examples (Gibson and Brown, 2009). Coding procedure includes 'open coding', 'axial coding', and 'selective coding'. Open coding finds the substantive codes. Axial coding uses theoretical codes to interconnect the main substantive codes. Selective coding isolates and elaborates the higher-order core category (Punch, 2005).

In the present study, the researcher analyzed the qualitative data by following the coding procedures proposed by Flick (2006). To be more specific, the open coding was first used to manage the data obtained through the semi-structured interviews. The open coding aimed at expressing data and phenomena in the form of concepts. For this purpose, data are first disentangled (segmented). Units of meaning classify expressions (single words, short sequences of words) in order to attach annotations and “concepts” (codes) to them. The result of the open coding was a list of the codes or categories. In the ‘axial coding’ stage, the researcher refined and differentiated the categories resulting from the open coding. The relationships between these and other categories are elaborated. Most importantly, the relationships between categories and their subcategories are clarified or established. The third step was selective coding which involved seeking to identify the central code. The researcher continued the axial coding at a higher level of abstraction to establish the core categories around the central themes. In the end, these core categories emerged from the data were then used as the main reasons behind the participants’ strategy choices.

3.8 Summary

This chapter has discussed and presented the research methodology issues of the present investigation. It has related the theoretical framework and the rationales for selecting the variables of the present investigation. Based on the research

questions, the key issues of the methodology for the present study have been elaborated. It has introduced the techniques of sampling and the characteristics of the research participants. Further, it has presented the methods of data collection selected for the present study and how the instruments for data collection have been developed and constructed. The last part of this chapter has presented how the data obtained have been analyzed, interpreted and reported, including the quantitative data obtained from the 926 respondents and the qualitative data from the 48 interviewees. The results of the quantitative and qualitative data analysis will be presented in Chapters Four and Five



CHAPTER 4

RESULTS OF THE QUANTITATIVE DATA ANALYSIS

4.1 Introduction

The purpose of this chapter is to present the analysis of quantitative data and the results. Based on the research purposes of the present study, different statistical methods have been used to analyze the quantitative data. The results of data analysis will be reported in sequence according to the research questions.

Reading strategies for this investigation have been specifically defined as “the skills, techniques, methods and behaviors that the university Business English majors employ to enhance their reading comprehension or solve their reading problems and difficulties when reading Business English texts.” As evidenced in Chapter Two, many variables may affect the use of reading strategies by the language learners. These variables include the learners’ reading proficiency, gender, field of study, reading task, motivation, attitude, anxiety level, year of study and so on. Examples are Sheorey and Mokhtari (2001), Cantrell and Carter (2009), Cogmen and Saracaloglu (2009), Najar (1998), Sani, Chik, Nik and Raslee (2011), Tercanlioglu (2004), Miyanaga (2002) and Malcolm (2009). Of all the variables mentioned above, reading proficiency has tended to be the focal point of research when compared with other variables. As discussed earlier, it is impossible for the researcher to take all of

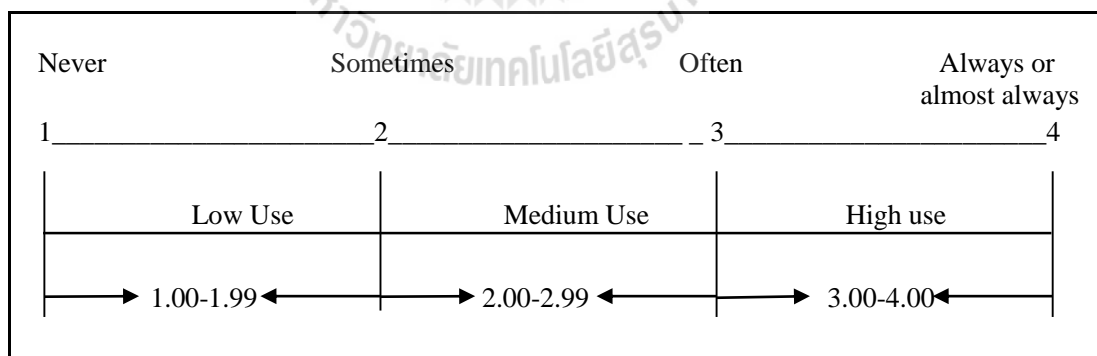
the variables into consideration. Therefore, the researcher has carefully selected 4 variables for this investigation based on the extensive review of the literature, i.e. gender, level of reading proficiency, level of exposure to specialized courses and level of reading anxiety.

Based on the research questions, the researcher used different statistical methods to analyze the data to answer each research question accordingly. Firstly, the researcher analyzed and reported the frequencies of reading strategy use by the Business English majors at different levels, i.e. overall, category and individual. Secondly, the variations in the use of reading strategies reported by the students in terms of the four variables were analyzed and reported. Finally, factor analysis was used to analyze the main underlying factors in the use of reading strategies by the Business English majors and the factors strongly related to the four investigated variables.

4.2 Frequency of Students' Reading Strategy Use at Different Levels

In order to answer the first research question, i.e. "*What is the frequency of the reading strategies employed by the university Business English majors at different levels, i.e. overall, category and individual?*", simple descriptive statistical methods have been used to find out the mean scores of the 926 students' use of reading strategies at different levels. The comparisons of the students' reported frequency of strategy use in different layers are the focal point of description and discussion in this section.

The frequency levels of the students' reading strategy use have been classified as 'high', 'medium', and 'low' according to the students' responses to the reading strategy questionnaire. The frequency of strategy use in the questionnaire is indicated on a four-point rating scale, ranging from 'never' valued as 1, 'sometimes' valued as 2, 'often' valued as 3, and 'always or almost always' valued as 4, which was adopted from Intaraprasert (2000). Consequently, the average value of the strategy use can be from 1.00 to 4.00, with 2.50 being the mid-point of the minimum and maximum values. The mean frequency score of strategy use of any category or item valued from 1.00 to 1.99 was classified as 'low use', from 2.00 to 2.99 as 'medium use' and from 3.00 to 4.00 as 'high use. This measure was used to analyze the students' frequency of strategy use at the overall, category and individual levels. Figure 4.1 demonstrates the applied measure.



(Source: Adapted from Intaraprasert 2000, p. 167)

Figure 4.1 Measure of High, Medium and Low Frequency of Strategy Use

4.2.1 Level of Frequency of Students' Overall Strategy Use

Table 4.1 presents the results of the students' reading strategy use at the level of overall strategy use. It shows that the holistic mean frequency score of the reading strategy use reported by 926 Chinese university Business English majors across the reading strategy questionnaire is 2.40, which indicates that as a whole, the frequency of reading strategies employed by these Chinese students is at the level of medium use.

Table 4.1 Frequency of Students' Overall Reading Strategy Use

Strategy Use	Mean Score	Std. Deviation	Frequency Category
Overall	2.40	.34	Medium Use

4.2.2 Frequency of Students' Strategy Use in Categories

As mentioned earlier in Section 3.6.1.1, the reading strategies for the present study have been grouped into three main categories. They are pre-reading strategies (PRS), while-reading strategies (WHS) and post-reading strategies (POS).

Table 4.2 demonstrates the frequency of the students' reading strategy use in the three categories, together with the standard deviation and frequency level.

Table 4.2 Frequency of Students' Reading Strategy Use in PRS, WHS and POS

Categories

Strategy Category	Mean Score	Std. Deviation	Frequency Category
PRS Category	2.49	.40	Medium Use
WHS Category	2.48	.34	Medium Use
POS Category	2.23	.45	Medium Use

Table 4.2 shows that the frequencies of strategy use in the PRS, WHS and POS categories reported by the Chinese university Business English majors are at the level of medium use, with the mean scores of 2.49, 2.48 and 2.23 respectively. The mean score in the PRS category is the highest and that in the POS category is the lowest. The mean score in the PRS category is slightly higher than that in the WHS category. The mean frequency scores of the three categories illustrate that the mean scores in the PRS and WHS categories are more or less the same, but they are much higher than the mean score in the POS category. This means that the students involved in this investigation employed reading strategies more frequently at the pre-reading and while-reading stages than at the post-reading stage.

As mentioned Section 3.6.1.1, the WHS category has been further divided into two sub-categories, i.e. SCT (strategies for comprehending the text) and SCD (strategies for coping with difficulties) categories, which provide a clearer picture for how the students dealt with the text in the actual while-reading stage. Table 4.3 demonstrates the frequency of the reading strategy use in the two sub-categories.

Table 4.3 Frequency of Students' Reading Strategy Use in SCT and SCD

Sub-Categories

Strategy Category	Mean Score	Std. Deviation	Frequency Category
SCT Category	2.53	.39	Medium Use
SCD Category	2.42	.35	Medium Use

As shown in Table 4.3, the students also reported medium frequency use of strategies in both of the two sub-categories, with the mean score of the SCT category

higher than that of the SCD category. This indicates that the students used strategies for comprehending the text more frequently than the strategies for coping with difficulties.

4.2.3 Frequency of Students' Individual Strategy Use

This section provides more detailed information about the frequency of the students' individual reading strategy use. To present a clearer picture, the reading strategies have been rearranged in order of the mean frequency score of each strategy from the highest to the lowest in the three main categories, i.e. the PRS, WHS and POS categories. The higher mean score implies the higher frequency of strategy use, and vice versa. The results are presented in Tables 4.4-4.6.

- **Frequency of Students' Individual Reading Strategy Use in PRS Category**

Table 4.4 demonstrates the frequency of the students' use of reading strategies in the PRS category. It contains 11 individual strategies that the students employed for the purpose of comprehending Business English texts in the pre-reading stage. The mean frequency score, the standard deviation along with the frequency category of each strategy are presented in the table.

Table 4.4 Frequency of Students' Individual Reading Strategy Use in PRS**Category**

PRS Category	Mean Score	Standard Deviation	Frequency Category
PRS1: Read the title of the text carefully.	3.04	.86	High Use
PRS6: Read the questions about the text.	2.81	.79	Medium Use
PRS3: Set goals/purposes of reading.	2.62	.76	Medium Use
PRS8: Skim the text.	2.62	.78	Medium Use
PRS4: Read/check the new word list.	2.61	.80	Medium Use
PRS5: Glance over the foot/ end notes, tables or graphics.	2.59	.85	Medium Use
PRS10: Make predictions/ inferences about the content of the text.	2.50	.75	Medium Use
PRS9: Read the first or the last sentence of each paragraph.	2.35	.84	Medium Use
PRS2: Construct one's related knowledge about the topic.	2.33	.75	Medium Use
PRS7: Read the first and the last paragraphs first.	2.10	.84	Medium Use
PRS11: Search for and read some related materials.	1.87	.72	Low Use

Table 4.4 shows that the students reported using *PRS1: Read the title of the text carefully* the most frequently, with the mean score of 3.04. This is followed by *PRS6: Read the questions about the text*, *PRS3: Set goals/purposes of reading* and *PRS8: Skim the text*. These strategies are mainly the ones for getting general ideas of the text. The least frequently employed strategy is *PRS11: Search for and read some related materials*, with the mean score of 1.87. Of the 11 strategies in the PRS category, *PRS1* was classified as the high use level, *PRS11* was classified as the low use level, and the other strategies all belong to the medium use level.

● **Frequency of Students' Individual Reading Strategy Use in WHS Category**

Table 4.5 presents the results of the frequency levels of the students' individual reading strategy use in the WHS category. It includes 24 strategies that the students employed for comprehending the reading texts or coping with reading difficulties in the while-reading stage.

Table 4.5 Frequency of Students' Individual Reading Strategy Use in WHS Category

WHS Category	Mean Score	Standard Deviation	Frequency Category
WHS15: Guess the meanings of the words or the sentences from the context.	2.78	.66	Medium Use
WHS1: Pay attention to the key words in the text.	2.77	.76	Medium Use
WHS10: Take notes or mark the important information in the text.	2.77	.81	Medium Use
WHS22: Reread the difficult parts.	2.74	.75	Medium Use
WHS17: Adjust the reading rate accordingly.	2.69	.71	Medium Use
WHS7: Make use of features of the text.	2.66	.77	Medium Use
WHS3: Search for the topic sentence of each paragraph.	2.64	.77	Medium Use
WHS12: Skip or neglect unneeded or unimportant content.	2.62	.74	Medium Use
WHS21: Consult the dictionary for important words.	2.62	.79	Medium Use
WHS9: Draw on the prior knowledge of the topic.	2.58	.77	Medium Use
WHS13: Do fast reading first and peruse later.	2.57	.81	Medium Use
WHS2: Use specialized terms as clues or indications.	2.56	.77	Medium Use

Table 4.5 Frequency of Students' Individual Reading Strategy Use in WHS Category (Cont.)

WHS Category	Mean Score	Standard Deviation	Frequency Category
WHS11: Pause and think about what is being read from time to time.	2.52	.73	Medium Use
WHS5: Confirm or verify one's predictions or inference.	2.46	.71	Medium Use
WHS20: Make use of word collocation.	2.46	.73	Medium Use
WHS23: Skip the new words or difficult sentences.	2.39	.69	Medium Use
WHS19: Translate the text into Chinese.	2.38	.80	Medium Use
WHS8: Consider the logic, coherence and consistency.	2.37	.74	Medium Use
WHS4: Read every word and sentence slowly and carefully.	2.34	.75	Medium Use
WHS16: Analyze the structures of difficult sentences.	2.32	.75	Medium Use
WHS18: Ask teachers, classmates or friends for help.	2.22	.71	Medium Use
WHS24: Consult references to solve reading problems or difficulties.	2.11	.70	Medium Use
WHS6: Raise questions about some information in the text.	2.03	.79	Medium Use
WHS14: Analyze the formation of unknown words.	1.93	.69	Low Use

As shown in Table 4.5, in the WHS category, all the strategies belong to the medium use level except one (*WHS14*). The three most frequently used strategies in this category are *WHS15: Guess the meanings of the words or the sentences from the context*, *WHS1: Pay attention to the key words in the text* and *WHS10: Take notes or mark the important information in the text*, with the mean frequency scores of 2.78,

2.77 and 2.77 respectively. *WHS14*, i.e. *Analyzing the formation of unknown words*, was reported the least frequently used.

- **Frequency of Students' Individual Reading Strategy Use in POS Category**

Table 4.6 presents the frequency levels of the students' strategy use in the POS category at the individual level. It comprises 10 reading strategies, which are those that the students used for enhancing their comprehension of the texts, understanding the reading materials deeper or solving their reading difficulties after they have done the actual reading.

Table 4.6 Frequency of Students' Individual Reading Strategy Use in POS

POS Category	Mean Score	Standard Deviation	Frequency Category
POS2: Look up the new words in the dictionary	2.65	.77	Medium Use
POS5: Review the content of the text for better understanding	2.34	.75	Medium Use
POS7: Review the notes and marks one made to understand better	2.31	.75	Medium Use
POS9: Summarize the mistakes one made.	2.30	.81	Medium Use
POS4: Summarize what one read.	2.27	.75	Medium Use
POS3: Reflect/evaluate one's reading performance and results.	2.20	.76	Medium Use
POS8: Conclude one's reading problems or difficulties.	2.14	.76	Medium Use
POS10: Discuss the problems and difficulties one met in reading with teachers or friends.	2.13	.74	Medium Use
POS6: Read other resources about the same topic.	1.91	.72	Low Use
POS1: Make critical comments and evaluations on the content of the text.	1.89	.68	Low Use

Table 4.6 shows that of all the 10 reading strategies in the POS category, 2 strategies, i.e. *POS6: Read other resources about the same topic* and *POS1: Make critical comments and evaluations on the content of the text*, are at the level of low use. The rest strategies fall into the medium use level. The top three strategies in this category are *POS2: Look up the new words in the dictionary*, *POS5: Review the content of the text for better understanding*, and *POS7: Review the notes and marks one made to understand better*. *POS2* was reported most frequently used and *POS1* was the most infrequently used strategy.

In summary, this section has presented an overall picture of the strategy use of 926 Chinese university Business English majors. As a whole, the students reported medium use of the reading strategies at the overall and category levels. In terms of the students' strategy use at the individual level, most of the strategies (40 out of 45) were also reported at the medium use level. Only 1 strategy was reported being used at the high use level and 4 strategies being used at the low use level. The results reported in this part were just presented from the descriptive perspective, without taking the investigated variables into consideration. Section 4.3 will present the results of the variations in the students' reading strategy use in terms of the four investigated variables.

4.3 Variations in Frequency of Students' Strategy Use

Section 4.2 has presented the students' strategy use at the overall, category and individual levels. This section is intended to analyze the data to answer the second research question: *“Do the reading strategies employed by the university Business English majors vary significantly in terms of gender, level of reading proficiency, level of exposure to specialized courses and level of reading anxiety? If they do, what are the main patterns of variation?”*. The mean score, standard deviation, significant level and variation pattern in terms of each variable will be presented. To analyze the data, the statistical methods of the Analysis of Variance (ANOVA) and the Post hoc Scheffé tests have been used to analyze the data at the overall and category levels. The Chi-square tests have been conducted to analyze the variations of the students' strategy use at the individual strategy level. In presenting the results of data analysis, a top-down manner has been adopted. That is, variations in the frequency of the students' strategy use according to the four variables at overall, category and individual levels are presented in sequence. Figure 4.2 illustrates the levels of data analysis for this section.

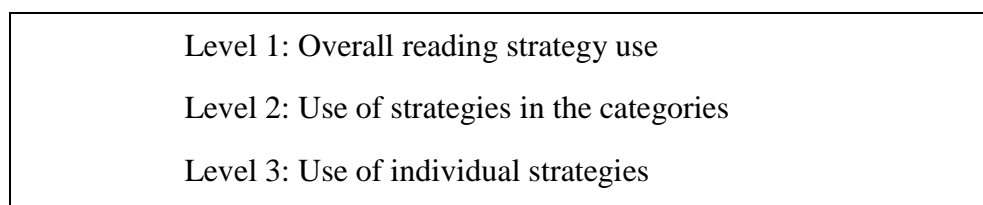


Figure 4.2 Analysis of Variations of Students' Strategy use at Different levels

4.3.1 Variations in Frequency of Students' Overall Reading Strategy Use

This section reports the first level of the variations of the students' strategy use, i.e. the variations in the frequency of the students' overall strategy use according to the four investigated variables. Table 4.7 demonstrates the results of the ANOVA and the Post hoc Scheffé tests, including the mean frequency score (mean), standard deviation (S.D.), significant level and variation patterns in terms of each variable. It shows that the students' overall reported strategy use varied significantly according to their levels of reading proficiency and levels of reading anxiety, but did not vary significantly according to their gender and levels of exposure to specialized courses.

As shown in the table, the students' overall strategy use did not vary by the students' gender and level of exposure to specialized courses. That is to say, the male students and the female students were not significantly different in the overall strategy use, and no significant variations existed in the frequency of overall strategy use between the students with different levels of exposure to specialized courses.

As mentioned in Chapter Three, the students' reading proficiency was classified into three levels according to their reading proficiency scores obtained through the Business English Reading Comprehension Test (BERCT). The results of the ANOVA showed that the students' overall strategy use varied significantly according to their levels of reading proficiency ($p < .01$). By the multiple comparisons of the Post hoc Scheffé tests, the significant variations were found between the students with high reading proficiency and moderate reading proficiency levels. The

mean frequency scores were 2.45 and 2.37 respectively. The significant variations were also found between the students with high and low reading proficiency levels. The mean frequency scores were 2.45 and 2.38 respectively. This indicates that the students with high-proficiency level reported employing reading strategies significantly more frequently than those either with moderate-proficiency level or low-proficiency level. No significant differences in the students' overall strategy use were found between the students with moderate and low reading proficiency levels.

Regarding the students' strategy use in terms of their levels of reading anxiety, the results of the ANOVA and the Post hoc Scheffé tests showed that significant differences in the overall reading strategy use existed between the students with high and low reading anxiety levels, with the mean scores of 2.34 and 2.45 respectively ($p < .01$). This means that the students with high reading anxiety reported employing reading strategies significantly less frequently than those with low reading anxiety. Significant variations did not exist between the students with high and moderate reading anxiety, and also did not exist between the students with moderate and low reading anxiety.

Table 4.7 Variations in Frequency of Students' Overall Reading Strategy Use**According to the Four Variables**

Variable		Mean	S.D.	Sig. Level	Variation Pattern
Students' Gender	Male	2.38	.34	N.S.	-----
	Female	2.40	.34		
Level of Exposure to Specialized Courses	More	2.39	.33	N.S.	-----
	Less	2.40	.34		
Level of Reading Proficiency	High	2.45	.34	P<.01	High>Moderate High>Low
	Moderate	2.37	.35		
	Low	2.38	.32		
Level of Reading Anxiety	High	2.34	.36	P<.01	Low>High
	Moderate	2.40	.33		
	Low	2.45	.31		

* Notes: 'N.S' means 'No Significance'

In this section, the correlations between the students' overall strategy use and their gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety have been illustrated. What follow are the results of the ANOVA about the students' strategy use in the categories.

4.3.2 Variations in Frequency of Students' Strategy Use in Categories

This section presents the variations in the frequency of the students' strategy use at the categorical level. As mentioned earlier, the reading strategies have been categorized into three main categories, i.e. the PRS, WHS and POS categories. The WHS category has been further divided into two sub-categories, i.e. the SCT and SCD sub-categories. The variations of the students' strategy use in the three main categories and the two sub-categories are presented in Tables 4.8-4.17.

4.3.2.1 Variations in Frequency of Students' Strategy Use in Categories According to Students' Gender

Table 4.8 shows the variations in the frequency of the students' strategy use in the PRS, WHS and POS categories according to their gender. The results of the ANOVA revealed that the frequency of the students' strategy use in the PRS and WHS categories did not vary significantly by gender, i.e. the males and females were not significantly different in terms of reading strategy use in the PRS and WHS categories. However, the students' use of reading strategies in the POS category was found to vary significantly according to this variable, with the females reporting employing reading strategies significantly more frequently than their male counterparts. The frequency mean scores of the males and the females were 2.17 and 2.25 respectively.

Table 4.8 Variations in Frequency of Students' Reading Strategy Use in PRS, WHS and POS Categories According to Students' Gender

Strategy Category	Male (n=252)		Female (n=674)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.		
PRS Category	2.50	.40	2.49	.40	N.S.	-----
WHS Category	2.46	.35	2.49	.34	N.S.	-----
POS Category	2.17	.47	2.25	.45	P<.05	Female>Male

When we look further at the sub-categories of the WHS category, male and female students did not report employing reading strategies in either of the SCT or the SCD sub-category significantly differently. The results of the sub-categories were in

accordance with the results in the main category of WHS. The results of the variations of students' strategy use in the sub-categories are presented in Table 4.9.

Table 4.9 Variations in Frequency of Students' Reading Strategy Use in SCT and SCD Sub-Categories According to Students' Gender

Strategy Category	Male (n=252)		Female (n=674)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.		
SCT Category	2.52	.40	2.54	.39	N.S.	-----
SCD Category	2.40	.35	2.42	.36	N.S.	-----

4.3.2.2 Variations in Frequency of Students' Strategy Use in Categories According to Levels of Exposure to Specialized Courses

The results of the ANOVA in Table 4.10 show that the students' reading strategy use varied significantly in the POS category according to their levels of exposure to specialized courses, with the students with less exposure to specialized courses reporting employing reading strategies significantly more frequently than those with more exposure to specialized courses. The mean frequency scores of their reading strategy use were 2.26 and 2.19 respectively. No significant variations in the students' reading strategy use in terms of this variable were found in the PRS category or the WHS category.

Table 4.10 Variations in Frequency of Students' Reading Strategy Use in PRS, WHS and POS Categories According to Levels of Exposure to Specialized Courses

Strategy Category	More (n=462)		Less (n=464)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.		
PRS Category	2.47	.38	2.51	.42	N.S.	-----
WHS Category	2.50	.34	2.47	.34	N.S.	-----
POS Category	2.19	.47	2.26	.43	P<.05	Less>More

When taking a closer look at the sub-categories of the WHS category, we found that although no significant differences have been found in the WHS category according to this variable, significant differences of the students' strategy use were found in the SCT sub-category. The students with more exposure to specialized courses reported employing reading strategies significantly more frequently than those with less exposure to specialized courses. The students of the two groups did not differ significantly in terms of the use of reading strategies in the SCD sub-category. The results are shown in Table 4.11 below.

Table 4. 11 Variations in Frequency of Students' Reading Strategy Use in SCT and SCD Sub-Categories According to Levels of Exposure to Specialized Courses

Strategy Category	More (n=462)		Less (n=464)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.		
SCT Category	2.56	.39	2.51	.39	P<.05	More>Less
SCD Category	2.42	.36	2.43	.35	N.S.	-----

4.3.2.3 Variations in Frequency of Students' Strategy Use in Categories According to Levels of Reading Proficiency

As shown in Table 4.12, significant variations in the students' use of reading strategies in the WHS category have been found according to their levels of reading proficiency. The students with high reading proficiency level reported significantly more frequent use of reading strategies than those with low reading proficiency level ($p < .05$). However, the strategy use of the students with moderate reading proficiency level was not significantly different from that of the students with high or low reading proficiency level in this category. No significant variations in the students' reading strategy use in the PRS and POS categories were found according to this variable. This indicates that the differences of the reading strategy use among the students with different levels of reading proficiency mainly existed in the while-reading stage, not in the pre-reading or the post-reading stage.

Table 4.12 Variations in Frequency of Students' Reading Strategy Use in PRS,

WHS and POS Categories According to *Levels of Reading Proficiency*

Strategy Category	High (n=294)		Moderate (n=325)		Low (n=307)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
PRS Category	2.50	.41	2.46	.41	2.51	.38	N.S.	-----
WHS Category	2.54	.35	2.47	.33	2.45	.33	P<.05	High>Low
POS Category	2.26	.43	2.20	.46	2.22	.45	N.S.	-----

As mentioned above, significant variations in the students' use of reading strategies were found in the WHS category according to their reading proficiency levels. Further examination was conducted to check whether variations existed in the sub-categories of the WHS category. Table 4.13 demonstrates the results of the comparisons. The results showed that the students' use of reading strategies varied significantly in the SCT sub-category according to their levels of reading proficiency. The high-proficiency students reported employing reading strategies significantly more frequently than the moderate-proficiency students, and the moderate-proficiency students reported employing reading strategies significantly more frequently than the low-proficiency students. It shows a positive correlation, i.e. the students with a higher reading proficiency level reported significantly more frequent use of reading strategies than the students with a lower reading proficiency level. No significant differences were found in the SCD sub-category. This implies that although there were significant differences in the students' use of reading strategies in the WHS category according to the students' levels of reading proficiency, the differences were found only in the SCT sub-category.

Table 4.13 Variations in Frequency of Students' Reading Strategy Use in SCT and SCD Sub-Categories According to *Levels of Reading Proficiency*

Strategy Category	High (n=294)		Moderate(n=325)		Low (n=307)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
SCT Category	2.61	.39	2.52	.38	2.46	.38	P<.001	High>Moderate >Low
SCD Category	2.45	.37	2.40	.36	2.41	.34	N.S.	-----

4.3.2.4 Variations in Frequency of Students' Strategy Use in Categories According to Levels of Reading Anxiety

The variations of the students' reading strategy use in the categories of PRS, WHS and POS according to their levels of reading anxiety are shown in Table 4.14. The results of ANOVA showed that the reading strategy use of the students with different anxiety levels were significantly different in the PRS and WHS categories, but not significantly different in the POS category. In the PRS category, the students with low and moderate reading anxiety levels reported employing reading strategies significantly more frequently than those with high reading anxiety level ($p < .001$). No significant differences of strategy use were found in the PRS category between the students with low and moderate anxiety levels. Regarding the students' strategy use in the WHS category, the students with low anxiety level reported employing reading strategies significantly more frequently than those with high anxiety level. From the results of the ANOVA, we can see that the students with different levels of reading anxiety were significantly different in the pre- and while-reading stages in terms of reading strategy use. They were not significantly different in the post-reading stage.

Table 4.14 Variations in Frequency of Students' Reading Strategy Use in PRS, WHS and POS Categories According to Levels of Reading Anxiety

Strategy Category	High (n=277)		Moderate(n=361)		Low (n=288)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
PRS Category	2.39	.414	2.50	.40	2.55	.35	P<.001	Low>High Mod>High
WHS Category	2.44	.35	2.47	.34	2.53	.31	P<.01	Low>High
POS Category	2.22	.47	2.23	.43	2.21	.45	N.S.	-----

Table 4.15 shows the results of the students' use of reading strategies in the SCT and SCD sub-categories in relation to their levels of reading anxiety. Similar to the results in Table 4.11 and Table 4.13, significant differences in the sub-categories of the WHS category were found in the SCT sub-category. The variation pattern was that the students with a lower reading anxiety level reported employing reading strategies significantly more frequently than the students with a higher reading anxiety level. No significant differences were found in terms of the students' strategy use in the SCD category.

Table 4.15 Variations in Frequency of Students' Reading Strategy Use in SCT and SCD Sub-Categories According to *Levels of Reading Anxiety*

Strategy Category	High (n=277)		Moderate(n=361)		Low (n=288)		Sig. Level	Variation Pattern
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
SCT Category	2.46	.38	2.53	.39	2.62	.36	P<.001	Low>Moderate >High
SCD Category	2.42	.37	2.42	.35	2.43	.35	N.S.	-----

Table 4.16 demonstrates the summary of the variations in frequency of the students' reading strategy use in the PRS, WHS and POS categories according to the four variables. It shows that the students' use of reading strategies in the POS category varied significantly according to their gender and levels of exposure to specialized courses. The students' use of reading strategies in the WHS category varied significantly according to their levels of reading proficiency. The students' use of reading strategies in the PRS and WHS varied significantly according to their levels of reading anxiety.

Table 4.16 Summary of Variations in Frequency of Reading Strategy Use in PRS, WHS and POS Categories according to the Four Variables

Strategy Category	Students' Gender	Exposure to Specialized Courses	Reading Proficiency	Reading Anxiety
PRS Category	N.S.	N.S.	N.S.	YES
WHS Category	N.S.	N.S.	YES	YES
POS Category	YES	YES	N.S.	N.S.

Regarding the variations of the students' reading strategy use in the SCT and SCD sub-categories of the WHS category, significant differences were found in the SCT sub-category. As shown in Table 4.17, the frequency of the students' reading strategy use in the SCT sub-category varied significantly according to three variables, i.e. level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. The students' use of reading strategies in the SCD sub-category did not vary significantly according to the four investigated variables.

Table 4.17 Summary of Variations in Frequency of Reading Strategy Use in SCT and SCD sub-categories according to the Four Variables

Strategy Category	Students' Gender	Exposure to Specialized Courses	Reading Proficiency	Reading Anxiety
SCT Category	N.S.	YES	YES	YES
SCD Category	N.S.	N.S.	N.S.	N.S.

4.3.3 Variations in Frequency of Students' Individual Strategy Use

Sections 4.3.1-4.3.2 have presented the variations in frequency of the students' overall reading strategy use and use of reading strategies in the categories according to the four variables. This section is to present the variations of the students' reading strategy use at the individual strategy level. The Chi-square tests were used to determine the significant differences and variation patterns of the students' reading strategy use according to the four independent variables. To demonstrate the significant variations, the percentage of each individual strategy reported high strategy use by the students (3 and 4 in the questionnaire) in terms of each variable and the observed chi-square value (χ^2) were used for the purpose of showing the strength of the variations in terms of the students' individual reading strategy use. The percentage of 'high use' (3 and 4) reported by the students were presented in a descending order.

4.3.3.1 Variations in Frequency of Students' Individual Strategy Use According to Students' Gender

As reported in Section 4.3.2, the results of the ANOVA showed that the students' reading strategy use did not vary significantly in the PRS and the WHS categories according to their gender. Significant differences of the students' reading strategy use were found in the POS category, with female students reporting employing reading strategies significantly more frequently than their male counterparts. However, when examining further the students' strategy use at the individual strategy level by the

Chi-square tests, we found that the students' use of 15 individual strategies in the PRS, WHS and POS categories varied significantly according to the students' gender. There are two variation patterns in the students' reading strategy use: ' $F > M$ ' and ' $M > F$ '. The results of the Chi-square tests are shown in Table 4.18.

In the ' $F > M$ ' variation pattern, a significantly greater percentage of the female students than the male students reported high use of 12 reading strategies, which include 3 pre-reading strategies, 5 while-reading strategies and 4 post-reading strategies. More than half of the female students reported high use of 8 strategies, while more than half of the male students reported high use of 5 strategies. In this variation pattern, the top three strategies are: *PRS1: Read the title of the text carefully*, *WHS15: Guess the meaning of the words or the sentences from the context* and *PRS6: Read the questions about the text*. This indicates that the female students tended to comprehend the text from the holistic perspective and they focused more on the context of the reading texts.

In the ' $M > F$ ' variation pattern, a significantly higher percentage of the male students than the female students reported high use of 3 reading strategies, which are: *WHS16: Analyze the structures of difficult sentences*, *WHS4: Read every word and sentence slowly and carefully* and *PRS2: Construct one's related knowledge about the topic*. This implies that the male students tended to focus on words and sentences and rely more on their background knowledge while reading. Overall, a significantly greater percentage of the female students reported high use of more strategies than the male students.

Table 4.18 Individual Strategies Showing Significant Variations According to Students' Gender

Individual Learning Strategy	% of high use (3 and 4)		Observed χ^2	Variation pattern
	Female	Male	P<.05	
Female > Male: 12 strategies				
PRS1: Read the title of the text carefully	71.4	63.5	$\chi^2=5.34$	F>M
WHS15: Guess the meanings of the words or the sentences from the context	69.0	57.5	$\chi^2=10.70$	F>M
PRS6: Read the questions about the text	66.8	57.1	$\chi^2=7.39$	F>M
WHS10: Take notes or mark the important information in the text	65.9	55.6	$\chi^2=8.39$	F>M
WHS22: Reread the difficult parts	64.5	51.6	$\chi^2=12.94$	F>M
WHS7: Make use of features of the text	58.8	49.6	$\chi^2=6.24$	F>M
WHS13: Do fast reading first and peruse later	53.4	45.2	$\chi^2=4.91$	F>M
PRS3: Set goals/purposes	52.1	39.3	$\chi^2=12.01$	F>M
POS5: Review the content of the text for better understanding	45.8	36.1	$\chi^2=5.47$	F>M
POS9: Summarize the mistakes one made	40.4	29.8	$\chi^2=8.79$	F>M
POS7: Review the notes and marks I made to understand better	40.5	27.8	$\chi^2=12.74$	F>M
POS8: Conclude my reading problems/difficulties	30.9	20.6	$\chi^2=9.50$	F>M
Male > Female: 3 strategies				
WHS16: Analyze the structures of difficult sentences	40.9	33.5	$\chi^2=4.32$	M>F
WHS4: Read every word and sentence slowly and carefully	41.7	32.5	$\chi^2=6.79$	M>F
PRS2: Construct one's related knowledge about the topic	38.5	31.5	$\chi^2=4.09$	M>F

4.3.3.2 Variations in Frequency of Students' Individual Strategy

Use According to Levels of Exposure to Specialized Courses

The results of the ANOVA reported in the previous sections showed no significant variations in frequency of the students' overall strategy use, use of strategies in PRS and WHS categories according to the students' levels of exposure to specialized courses. However, the results of the Chi-square tests showed that 18 individual strategies varied significantly according to this variable, which include 4 pre-reading strategies, 9 while-reading strategies and 5 post-reading strategies. The results of the Chi-square tests are demonstrated in Table 4.19.

The results of the Chi-square tests showed two variation patterns in the students' use of reading strategies, i.e. ' $L > M$ ' and ' $M > L$ '. In the ' $L > M$ ' variation pattern, a significantly greater percentage of the students with less exposure to specialized courses than those with more exposure to specialized courses reported high use of 12 reading strategies, which include 3 pre-reading strategies, 5 while-reading strategies and 4 post-reading strategies. More than half of the students with less exposure to specialized courses reported high use of 5 strategies, while more than half of the students with more exposure to specialized courses reported high use of 2 strategies in this variation pattern. The top three strategies of this variation pattern are: *WHS10: Take notes or mark important information in the text*, *WHS7: Make use of features of the text* and *PRS4: Read or check the new word list*. In addition, a significantly greater percentage of the students with less exposure to specialized courses than those with

more exposure to specialized courses reported high use of some strategies such as *WHS4: Read every word and sentence slowly and carefully*, *WHS19: Translate the text into Chinese*, and *WHS18: Ask the teachers or friends for help*. This indicates that the students with less exposure to specialized courses paid more attention to the meanings of the words and sentences and tended to rely more on their mother language and the help from others while reading Business English texts.

In the '*M>L*' variation pattern, a significantly higher percentage of the students with more exposure to specialized courses than those with less exposure to specialized courses reported high use of 6 strategies, which include 1 pre-reading strategy, 4 while-reading strategies and 1 post-reading strategy. It is worth noting that more than 80 percent of the students with more exposure to specialized courses reported high use of the strategy "*WHS2: Use specialized terms as clues or indications*". This indicates that most of the students with more exposure to specialized courses preferred to employ their specialized background knowledge in reading Business English. While only 31.9 percent of the students with less exposure to specialized courses reported high use of this strategy. In addition, a significantly greater percentage of the students with more exposure to specialized courses than those with less exposure to specialized courses reported high use of some strategies, such as *WHS13: Do fast reading first and peruse later*, *WHS17: Adjust the reading rate accordingly*, *PRS3: Set goals/purposes of reading* and *POS1: Make critical comments and evaluation on the content of the text*. This indicates that the students

with more exposure to specialized courses were more purposive, more aware of how to adjust their reading process, and more critical when reading Business English texts.

Table 4.19 Individual Strategies Showing Significant Variations According to Levels of Exposure to Specialized Courses

Individual Learning Strategy	% of high use (3 and 4)		Observed χ^2 P<.05	Variation pattern
	Less	More		
Less > More: 12 strategies				
WHS10: Take notes or mark the important information in the text	66.4	59.7	$\chi^2=4.38$	L>M
WHS7: Make use of features of the text	59.7	52.8	$\chi^2=4.46$	L>M
PRS4: Read/check the new word list	57.3	48.3	$\chi^2=7.62$	L>M
PRS5: Glance over the foot/end notes, tables and graphics	55.0	46.8	$\chi^2=6.23$	L>M
PRS10: Make predictions/inference about the content of the text	50.9	43.7	$\chi^2=4.73$	L>M
WHS19: Translate the text into Chinese	45.9	37.7	$\chi^2=6.47$	L>M
POS7: Review the notes and marks I made to understand better	40.5	33.5	$\chi^2=4.82$	L>M
POS4: Summarize what I read	40.5	31.4	$\chi^2=8.38$	L>M
WHS4: Read every word and sentence slowly and carefully	38.8	31.3	$\chi^2=5.91$	L>M
WHS18: Ask the teachers, classmates or friends for help	34.3	26.0	$\chi^2=7.57$	L>M
POS10: Discuss the problems and difficulties I met with teachers/friends	32.5	22.1	$\chi^2=12.77$	L>M
POS6: Read other resources about the same topic	27.6	20.8	$\chi^2=5.85$	L>M
More > Less: 6 strategies				
WHS2: Use specialized terms as clues or indications	81.4	31.9	$\chi^2=23.08$	M>L
WHS13: Do fast reading first and peruse later	64.3	55.4	$\chi^2=7.63$	M>L
WHS17: Adjust the reading rate accordingly	54.5	47.8	$\chi^2=4.15$	M>L
PRS3: Set goals/purposes of reading	52.8	44.4	$\chi^2=6.57$	M>L
WHS16: Analyze the structures of difficult sentences	40.5	30.6	$\chi^2=9.85$	M>L
POS1: Make critical comments and evaluation on the content of the text	21.0	12.1	$\chi^2=13.38$	M>L

4.3.3.3 Variations in Frequency of Students' Individual Strategy

Use According to Levels of Reading Proficiency

As mentioned before in Sections 4.3.1 and 4.3.2.3, the frequency of the students' overall strategy use, use of strategies in the WHS category and SCT sub-category varied significantly according to the variable of the students' levels of reading proficiency. This section further explored the variations of the students' reading strategy use at the individual strategy level according to this variable. The results of the Chi-square tests are presented in Table 4.20.

Table 4.20 Individual Strategies Showing Significant Variations According to Levels of Reading Proficiency

Individual Learning Strategy	% of high use (3 and 4)			Observed χ^2 P<.05	Variation pattern
	High	Moderate	Low		
Positive: 17 strategies (H>M>L)					
WHS15: Guess the meanings of the words or the sentences from the context	71.1	66.8	59.9	$\chi^2=8.49$	H>M>L
WHS17: Adjust the reading rate accordingly	69.0	59.4	51.5	$\chi^2=19.35$	H>M>L
WHS1: Pay attention to the key words in the text	66.0	63.5	56.0	$\chi^2=8.30$	H>M>L
PRS6: Read the questions about the text	65.1	53.2	41.3	$\chi^2=13.65$	H>M>L
WHS13: Do fast reading first and peruse later	63.7	51.3	42.5	$\chi^2=8.83$	H>M>L
WHS10: Take notes or mark the important information in the text	61.2	56.3	51.3	$\chi^2=7.65$	H>M>L
WHS7: Make use of the features of the text	60.6	58.5	49.5	$\chi^2=8.79$	H>M>L
PRS8: Skim the text	59.0	55.8	47.7	$\chi^2=8.62$	H>M>L
WHS2: Use specialized terms as clues or indications	57.5	49.5	46.5	$\chi^2=7.27$	H>M>L
WHS12: Skip or neglect unneeded /unimportant content	55.4	51.4	45.9	$\chi^2=7.51$	H>M>L

Table 4.20 Individual Strategies Showing Significant Variations According to Levels of Reading Proficiency (cont.)

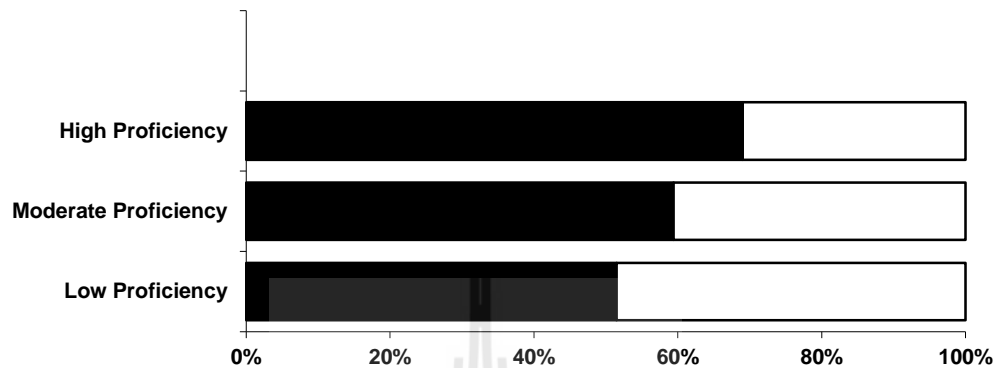
Individual Learning Strategy	% of high use (3 and 4)			Observed χ^2	Variation pattern
	High	Moderate	Low	P<.05	
Positive: 17 strategies (H>M>L)					
PRS3: Set goals/purposes of reading	54.4	47.1	44.6	$\chi^2=6.23$	H>M>L
WHS20: Make use of word collocations	52.0	44.0	40.0	$\chi^2=9.29$	H>M>L
WHS16: Analyze the structures of difficult sentences	47.3	33.8	26.1	$\chi^2=30.14$	H>M>L
WHS8: Consider the logic, coherence and consistency	43.5	40.6	33.6	$\chi^2=6.71$	H>M>L
POS9: Summarize the mistakes I made	39.8	26.0	17.5	$\chi^2=15.80$	H>M>L
POS1: Make critical comments and evaluation on the content of the text	31.6	13.8	4.9	$\chi^2=36.82$	H>M>L
WHS14: Analyze the formation of unknown words	24.1	17.5	13.7	$\chi^2=11.21$	H>M>L
Negative: 6 strategies (L>M>H)	Low	Moderate	High	Observed χ^2	Variation pattern
PRS4: Read/check the new word list	56.0	55.4	46.6	$\chi^2=6.69$	L>M>H
WHS21: Consult the dictionary for new words	54.2	46.3	35.7	$\chi^2=13.78$	L>M>H
WHS19: Translate the text into Chinese	47.9	44.0	33.0	$\chi^2=14.69$	L>M>H
WHS18: Ask the teachers, classmates or friends for help	40.7	27.4	22.1	$\chi^2=26.49$	L>M>H
POS10: Discuss the problems and difficulties with teachers/ friends	33.2	26.8	21.8	$\chi^2=10.00$	L>M>H
WHS24: Consult references to solve reading problems/ difficulties	29.8	28.3	20.7	$\chi^2=7.40$	L>M>H
Mixed: 2 strategies (M>H>L)	Moderate	High	Low	Observed χ^2	Variation pattern
WHS22: Reread the difficult parts	66.8	61.6	54.4	$\chi^2=10.21$	M>H>L
WHS9: Draw on one's prior knowledge about the topic	64.3	45.2	36.8	$\chi^2=32.33$	M>H>L

The results of the Chi-square Tests in Table 4.20 showed that more than half of the reading strategies across the questionnaire (25 out of 45) varied significantly according to the students' levels of reading proficiency. When compared with the other 3 variables, this variable has been found to have the strongest correlation with the variations of the students' reading strategy use. Of the 25 strategies showing significant differences according to this variable, 18 are while-reading strategies, 4 are pre-reading and 3 are post-reading strategies. This indicates that the use of reading strategies by the students with different levels of reading proficiency varied mainly in the while-reading reading stage. In other words, it was the use of the reading strategies in the actual reading stage that distinguished the good and poor readers. This may confirm the results of the ANOVA at the category level, in which variations in the students' strategy use existed in the WHS category according to the students' levels of reading proficiency.

Regarding the variation patterns of the students' reading strategy use, as Green and Oxford (1995) suggested, it may be positive, i.e. used more by higher-proficiency students, negative, i.e. used more by lower-proficiency students, or mixed. In the present investigation, of the 25 individual strategies showing significant variations, 17 strategies were classified as positive ($H > M > L$), in which a significantly greater percentage of the students with a higher proficiency level than the students with a lower proficiency level reported high use of these strategies. The top three strategies of this pattern are: *WHS15: Guess the meanings of the words or the*

sentences from the context, WHS17: Adjust the reading rate accordingly and WHS1: Pay attention to the key words in the text. Six strategies were classified as negative ($L > M > H$), in which a significantly greater percentage of the students with a lower proficiency level than those with a higher proficiency level reported high use of these strategies. Examples are: PRS4: Read/check the new word list, WHS21: Consult the dictionary for new words and WHS19: Translate the text into Chinese. Two strategies were classified as mixed ($M > H > L$), in which a significantly greater percentage of the students with moderate proficiency level than the students with high proficiency level reported high use of the two strategies, and a significantly greater percentage of the students with high proficiency level than the students with low proficiency level reported high use of the two strategies. The two strategies showing the mixed variation pattern are: WHS22: Reread the difficult parts and WHS9: Draw on the prior knowledge about the topic.

To give a clearer picture of the patterns of variations according to this variable, one strategy from each variation pattern was selected to demonstrate in the stacked-bar graphs. Figures 4.3-4.5 are the examples of stacked-bar graphs illustrating the positive, negative and mixed variation patterns. In the graphs, the dark area represents the percentage of frequency of high use and the white area represents the percentage of frequency of low use.

WHS17: Adjust the reading rate accordingly**(High>Moderate>Low)**

	<i>(Dark areas)</i>			<i>(White areas)</i>	
	<u>N</u>	<u>Response</u>	<u>(%)</u>	<u>Response</u>	<u>(%)</u>
High Proficiency	294	203	69.0	91	31
Moderate Proficiency	325	193	59.5	132	40.5
Low Proficiency	307	158	51.5	149	48.5

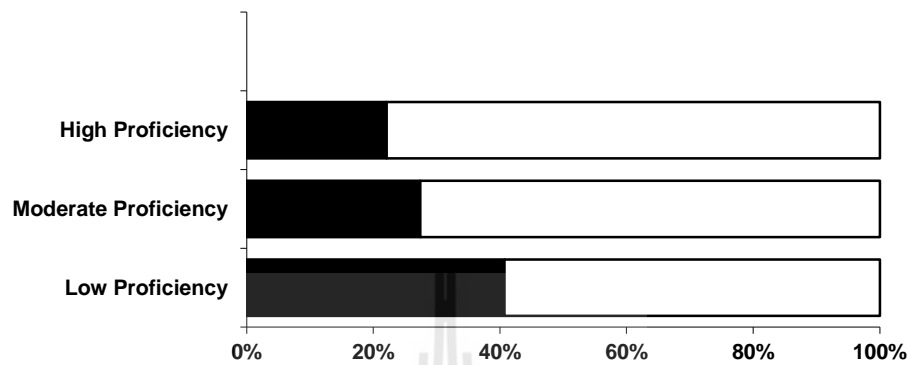
* **Notes:** $\chi^2 = 19.35$ (df = 2), $P < .001$

Figure 4.3 Example of Variation Pattern Classified as Positive

In Figure 4.3 above, 69.0 percent of the high-proficiency students reported high frequency of use of “*WHS17: Adjust the reading rate according to needs*”; whereas, 59.5 percent of the moderate-proficiency students and 51.5 percent of the low-proficiency students reported high frequency of use of this reading strategy.

WHS18: Ask the teachers, classmates or friends for help

(Low>Moderate>High)



	<i>(Dark areas)</i>			<i>(White areas)</i>	
	<u>N</u>	<u>Response</u>	<u>(%)</u>	<u>Response</u>	<u>(%)</u>
High Proficiency	294	65	22.1	229	77.9
Moderate Proficiency	325	89	27.4	236	72.6
Low Proficiency	307	125	40.7	182	59.3

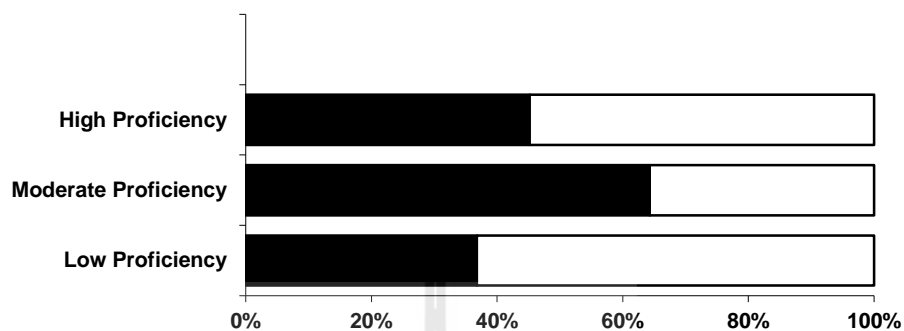
* **Notes:** $\chi^2 = 26.49$ (df = 2), $P < .001$

Figure 4.4 Example of Variation Pattern Classified as Negative

Figure 4.4 above shows that 22.1 percent of the high-proficiency students reported high frequency of use of “*WHS18: Ask the teacher, classmates or friends for help*”; whereas, 27.4 percent of the moderate-proficiency students and 40.7 percent of the low-proficiency students reported high frequency of use of this reading strategy.

WHS9: Draw on one's prior knowledge about the topic

(Moderate>High>Low)



	<i>(Dark areas)</i>			<i>(White areas)</i>	
	<u>N</u>	<u>Response</u>	<u>(%)</u>	<u>Response</u>	<u>(%)</u>
High Proficiency	294	133	45.2	161	54.8
Moderate Proficiency	325	209	64.3	116	35.7
Low Proficiency	307	113	36.8	194	63.2

* **Notes:** $\chi^2 = 32.33$ (df = 2), $P < .001$

Figure 4.5 Example of Variation Pattern Classified as Mixed

Figure 4.5 above demonstrates the stacked-bar graph of “*WHS9: Draw on one's prior knowledge about the topic*”, it shows that 45.2 percent of the high-proficiency students reported high frequency of use of this strategy; whereas, 64.3 percent of the moderate-proficiency students and 36.8 percent of the low-proficiency students reported high frequency of use of it.

In summary, the results of the Chi-square tests revealed that more than half of the individual reading strategies across the questionnaire varied significantly according to the students' levels of reading proficiency. Most of these strategies

showing significant differences were classified as the positive variation pattern. Overall, a significantly greater percentage of the students with a higher reading proficiency level than the students with a lower proficiency level reported high use of the reading strategies. It was also found that the students with different proficiency levels tended to employ different reading strategies. For example, the students with high reading proficiency level tended to use a variety of the strategies relating to guessing, e.g. *WHS15: Guess the meaning of the words or sentences from the text*; comprehending the text holistically, e.g. *PRS8: Skim the text*; seeking key information, e.g. *WHS12: Skip or neglect unneeded or unimportant content*; monitoring the reading process, e.g. *WHS17: Adjust the reading rate accordingly*; and using linguistic knowledge, e.g. *WHS20: Make use of word collocations*. Whereas, the students with low reading proficiency level tended to employ the strategies relating to coping with the new words, e.g. *WHS21: Consult the dictionary for the new words*; seeking help from others, e.g. *WHS18: Ask the teachers, classmates or friends for help*, and the strategy relating to relying on their mother language, e.g. *WHS19: Translate the text into Chinese*.

4.3.3.4 Variations in Frequency of Students' Individual Strategy Use According to Levels of Reading Anxiety

The results of ANOVA in the previous sections showed that variations of the students' strategy use existed at the overall, category and sub-category levels according to the students' levels of reading anxiety. This section examines further the

variations and the variation patterns of the students' reading strategy use at the individual level according to the students' levels of reading anxiety.

Table 4.21 demonstrates the results of the Chi-square tests. It shows that almost half of the reading strategies across the inventory (22 out of 45) varied significantly according to the students' levels of reading anxiety. Of the 22 strategies showing significant variations, 5 are pre-reading strategies, 15 are while-reading strategies, and only 2 are post-reading strategies. This indicates that the variations of the students' reading strategy use mainly existed in the pre-reading and while-reading stages. The students' use of reading strategies did not vary significantly in the post-reading stage.

Five variation patterns were found in the students' reading strategies use according to the students' reading anxiety. They are: ' $H>M>L$ ', ' $L>M>H$ ', ' $H>L>M$ ', ' $M>L>H$ ' and ' $L>H>M$ '. The variation pattern of ' $H>M>L$ ' includes 5 strategies. It is a kind of positive correlation. In this variation pattern, a significantly greater percentage of the students with a higher reading anxiety level than the students with a lower reading anxiety level reported high use of these strategies. Examples are: *WHS21: Consult the dictionary for new words*, *WHS19: Translate the text into Chinese* and *POS10: Discuss the problems and difficulties with teachers or friends*. This indicates that the students with higher anxiety level focused more on new words; relied more on their mother language and help from others.

The second variation pattern is ' $L>M>H$ ', containing 12 reading strategies. It is a kind of negative correlation. In this variation pattern, a significantly greater percentage of the students with a lower reading anxiety level than the students with a higher reading anxiety level reported high use of these strategies. Examples are: *WHS17: Adjust the reading rate accordingly*, *WHS12: Skip or neglect unneeded or unimportant content* and *WHS13: Do fast reading first and peruse latter*. This indicates that the students with lower anxiety level were more aware of their reading needs, paid more attention to key information and tended to understand the text from the holistic perspective.

The variation pattern of ' $H>L>M$ ' comprises 3 strategies, which are: *WHS4: Read every word and sentence slowly and carefully*, *WHS18: Ask the teachers, classmates or friends for help* and *PRS7: Read the first and the last paragraph first*. In this variation pattern, we can see that a significantly higher percentage of the students with high anxiety level than the students with low or moderate anxiety level reported high use of the 3 strategies. The variation patterns of ' $M>L>H$ ' and ' $L>H>M$ ' include 1 strategy respectively, which are: *PRS8: Skim the text* and *WHS8: Consider the logic, coherence and consistency*.

Table 4.21 Individual Strategies Showing Significant Variations According to**Levels of Reading Anxiety**

Individual Learning Strategy	% of high use (3 and 4)			Observed χ^2	Variation pattern
	High	Moderate	Low	P < .05	
H> M> L: 5 strategies					
POS2: Look up the new words in the dictionary.	58.1	57.6	49.0	$\chi^2=6.34$	H>M>L
WHS21: Consult the dictionary for new words.	58.1	56.8	45.8	$\chi^2=12.73$	H>M>L
WHS19: Translate the text into Chinese.	52.7	41.8	31.3	$\chi^2=26.73$	H>M>L
WHS11: Pause and think about what is being read from time to time.	51.3	49.2	40.6	$\chi^2=7.31$	H>M>L
POS10: Discuss the problems / difficulties with teachers/friends.	36.1	25.8	20.8	$\chi^2=17.30$	H>M>L
WHS17: Adjust the reading rate accordingly	85.6	59.8	53.8	$\chi^2=8.23$	L>M>H
WHS1: Pay attention to the key words in the text	77.8	60.9	48.7	$\chi^2=51.46$	L>M>H
PRS1: Read the title of the text carefully	74.0	72.6	59.9	$\chi^2=16.17$	L>M>H
WHS7: Make use of features of the text	71.2	54.3	43.3	$\chi^2=45.47$	L>M>H
WHS10: Take notes or mark the important information in the text	69.4	61.5	58.5	$\chi^2=7.91$	L>M>H
WHS2: Use specialized terms as clues or indications	61.8	57.9	49.5	$\chi^2=9.17$	L>M>H
WHS12: Skip/neglect unneeded or unimportant content	57.6	45.2	52.0	$\chi^2=10.13$	L>H>M
WHS13: Do fast reading first and peruse later.	57.3	50.4	45.8	$\chi^2=7.54$	L>M>H
PRS3: Set goals/purposes	56.9	50.1	37.9	$\chi^2=21.05$	L>M>H
PRS5: Glance over the foot/end notes, tables and graphics	56.9	52.1	40.4	$\chi^2=20.62$	L>M>H
WHS9: Draw on one's prior knowledge of the topic	56.9	51.2	46.6	$\chi^2=6.12$	L>M>H
WHS16: Analyze the structures of difficult sentences	39.9	38.5	27.1	$\chi^2=12.47$	L>M>H

Table 4.21 Individual Strategies Showing Significant Variations According to**Levels of Reading Anxiety (Cont.)**

H>L>M: 3 strategies	High	Low	Moderate	Observed χ^2	Variation pattern
WHS4: Read every word and sentence slowly and carefully	42.6	34.7	29.4	$\chi^2=12.09$	H>L>M
WHS18: Ask the teachers, classmates or friends for help	41.5	27.1	23.8	$\chi^2=25.15$	H>L>M
PRS7: Read the first and the last paragraphs first	35.4	25.7	22.7	$\chi^2=13.26$	H>L>M
M>L>H: 1 strategy	Moderate	Low	High	Observed χ^2	Variation pattern
PRS8: Skim the text	58.7	53.8	48.0	$\chi^2=7.24$	M>L>H
L>H>M: 1 strategy	Low	High	Moderate	Observed χ^2	Variation pattern
WHS8: Consider the logic, coherence and consistency	44.4	40.4	34.1	$\chi^2=7.48$	L>H>M

4.4 Results of Factor Analysis

As discussed earlier in Section 3.7.1, factor analysis is a technique to identify factors that statistically explain the variation and covariation among measures. It can be viewed as technique that reduces a large number of overlapping measured variables to a much smaller set of factors (Green, Salkind and Akey, 2000). This approach may help the researcher to make sense of a large number of correlations among variables, or a complex set of variables. It helps the researcher make large sets of data more manageable by identifying a factor or factors that underlie the data (Seliger and Shohamy, 1990). However, according to Howitt and Cramer (1997), factor analysis is more subjective and judgmental when compared with other

statistical techniques. They explain that this is not only because of the subjectivity of interpreting the meaning of factors, but also because there are many variants of factor analysis. Therefore, to conduct a factor analysis is more challenging than many other statistical procedures.

In order to answer the third research question, i.e. “*What are the main underlying factors in the reading strategies used by the university Business English majors? Are there any factors strongly related to the four variables? If so, what are they?*”, the factor analysis was used to analyze the data. For conducting the factor analysis, 7 strategy items which did not show significant differences on any of the four independent variables were not taken into account. The deletion of these items led to an increase in the total amount of the explained variance, which made the correlations between the factors and the independent variables more prominent (Kyndt, Dochy, and Nijs, 2009). To measure whether the data was adequate for conducting a factor analysis, the KMO test (the Kaiser-Meyer-Olkin Measure of Sampling Adequacy) and the Bartlett’s test of sphericity were used (George and Mallery, 2009). The results showed that the value of the KMO was .892, which was greater than the acceptable value of .50; and the significance value of the Bartlett’s test of sphericity was smaller than .05 ($p=.001$). These measures indicated that the data was suitable for conducting a factor analysis.

In seeking the underlying constructs of the students’ reading strategy use, a principal component factor analysis (default), and then varimax rotation was

conducted on the correlations of the 38 reading strategies, which varied significantly according to the four independent variables. Initially, 10 factors with eigenvalues equal to or greater than 1.00 were extracted. The extraction sums of squared loadings which gave the information for the 10 factors are presented in Table 4.22.

Table 4.22 The Sums of Squared Factor Loadings of the Initial Ten Factors

Factor	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Factor 1	8.34	21.94	21.94
Factor 2	2.46	8.48	30.42
Factor 3	2.11	7.54	37.96
Factor 4	1.60	5.20	43.16
Factor 5	1.34	4.52	47.68
Factor 6	1.24	3.28	50.96
Factor 7	1.20	3.17	54.13
Factor 8	1.19	3.13	57.26
Factor 9	1.13	2.97	60.23
Factor 10	1.01	2.65	62.88

When taken together, the 10 extracted factors accounted for 62.88 % of the variance among the 38 reading strategies. However, when taking the 10 initial extracted factors into consideration, the researcher found that it was too difficult to interpret. Therefore, the researcher explored further by reducing the number of factors to 7, 6, 5 and 4. The results of the varimax rotation showed different groupings according to different numbers of factors. After comparing the results, the researcher found it would be more straightforward to interpret the four extracted factors rather than the five, six or seven extracted factors.

In addition, the scree plot was also used to help the researcher to justify the number of factors, As Green, Salkind and Akey (2000) state, eigenvalues are helpful in deciding how many factors should be used in the analysis. Many criteria have been proposed in the literature for deciding how many factors to extract based on the magnitudes of eigenvalues. One criterion is to retain the factors with eigenvalues greater than 1. Another criterion is to examine the plot of the eigenvalues, also known as the scree testing, and to retain all factors with eigenvalues in the sharp decent part of the plot before the eigenvalues start to level off. This criterion more frequently yields more accurate results than the eigenvalue-greater-than-1 criterion. The result of the scree testing is shown in Figure 4.6.

For the present investigation, four factors were selected based on the scree plot, combined with the rule that every factor has to contribute at least 5 per cent of explained variance (Kyndt, Dochy and Nijs, 2009). The results of the scree plot analysis confirmed the justification of 4 factors by exploring different numbers of factors mentioned above. The percentage of variance in Table 4.22 suggests that 43.16 per cent of the total variation of the students' strategy use could be explained by the four principal components. Other influences may also account for the variation in the students' reading strategy use, as still around 57 per cent variability could not be explained by the four factors.

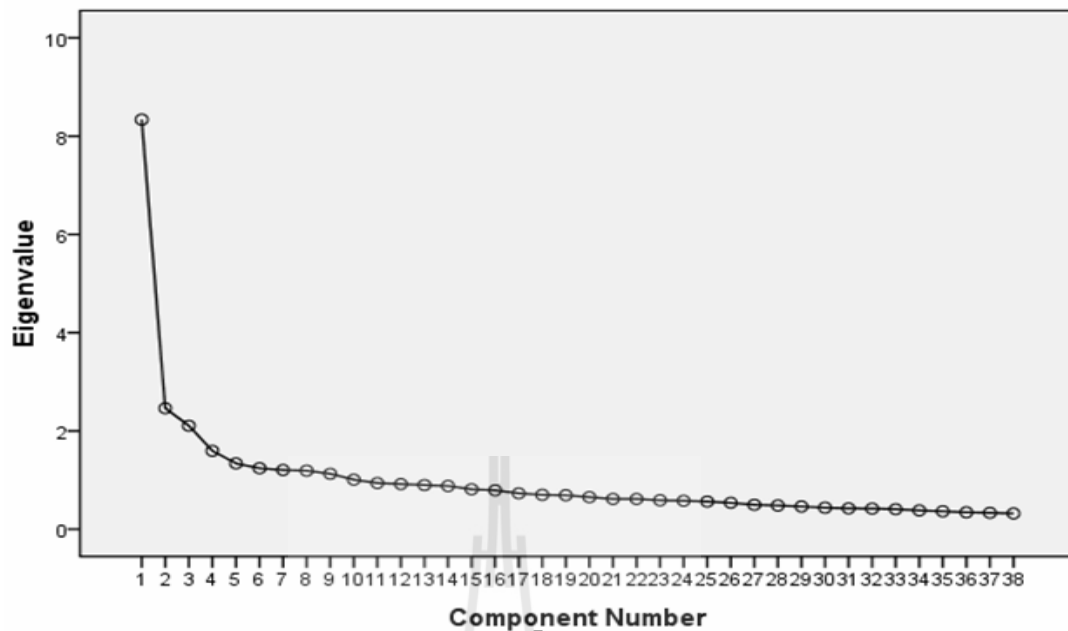


Figure 4.6 Scree Plot of Factor Analysis

Apart from the scree plot testing, factor loadings indicate the level of correlation between the factors and different variables used in the analysis (Seliger and Shohamy, 1990). They vary from -1.00 through 0.00 to +1.00 (Howitt and Cramer, 2000). Factor loadings are similar to the correlation coefficients between the factors and the variables. Thus, the higher the factor loading is, the more likely it is that the factor underlies that variable. Factor loadings help in identifying which variables are associated with the particular factors (Gaur and Gaur, 2006). In the factor analysis, the individual reading strategies were ordered or sorted according to their loadings on the first factor from the highest to the lowest. This grouping helps the interpretation of the factor since the high loading items are the ones which primarily help a researcher decide what the factor might be (Howitt and Cramer, 1997). It means that different researcher may explain the factors emerging from the data differently. The reading

strategies as identified in the strategy inventory and the four factors resulting from the factor analysis were not expected to be identical, but they were expected to be mutually supportive.

In the present study, the factors were described in terms of the content or the relationships of the majority of the reading strategy items which appeared under the same factors. Table 4.23 presents the results of the factor analysis of the varimax rotation method. It presents the details of the four extracted factors, including the individual strategy items under each factor, factor loadings of each item and the percentage of variance accounted for each factor. The names of the factors were given based on the abstraction of the similarities and the relationships of the strategy items under each factor.

Table 4.23 List of the Four Extracted Factors

Factor 1: Strategies for Seeking Key Information	Factor loading	% of variance
WHS7: Make use of features of the text	.648	21.94
WHS9: Draw on one's prior knowledge of the topic	.620	
WHS22: Reread the difficult parts	.569	
WHS1: Pay attention to the key words in the text	.541	
PRS5: Glance over the foot/end notes, tables and graphics	.534	
WHS8: Consider the logic, coherence and consistency	.496	
WHS2: Use specialized terms as clues or indications	.480	
WHS15: Guess the meanings of the words or the sentences from the context	.475	
WHS10: Take notes or mark the important information in the text	.420	
WHS12: Skip or neglect the unneeded or unimportant content	.393	
PRS2: Construct one's related knowledge about the topic	.377	

Table 4.23 List of the Four Extracted Factors (Cont.)

Factor 2: Strategies for Enhancing Comprehension	Factor loading	% of variance
POS10: Discuss the problems and difficulties with teachers or friends	.647	8.48
POS6: Read other resources about the same topic	.641	
WHS24: Consult references to solve the reading problems or difficulties	.581	
POS8: Conclude one's reading problems/difficulties	.578	
POS1: Make critical comments and evaluation on the content of the text	.532	
POS4: Summarize what one read	.520	
POS5: Review the content of the text for better understanding.	.514	
POS7: Review the notes and marks one made to understand better.	.440	
WHS18: Ask the teachers, classmates or friends for help.	.422	
WHS19: Translate the text into Chinese	.411	
POS9: Summarize the mistakes one made	.401	
WHS11: Pause and think about what is being read from time to time	.287	
Factor 3: Strategies for Understanding Reading Texts Holistically	Factor loading	% of variance
WHS13: Do fast reading and peruse later	.624	7.54
PRS8: Skim the text	.617	
PRS1: Read the title of the text carefully	.519	
PRS6: Read the questions about the text	.501	
PRS10: Make predictions/inference about the content of the text	.464	
PRS3: Set goals/purposes of reading	.463	
WHS17: Adjust the reading rate accordingly	.461	
PRS7: Read the first and the last paragraphs first	.433	

Table 4.23 List of the Four Extracted Factors (Cont.)

Factor 4: Strategies for Coping with Discrete Difficult Language Points	Factor loading	% of variance
WHS21: Consult the dictionary for important words	.762	5.20
POS2: Look up the new words in the dictionary	.730	
PRS4: Read/check the new word list	.716	
WHS4: Read every word and sentence slowly and carefully	.569	
WHS16: Analyze the structures of difficult sentences	.496	
WHS14: Analyze the formations of unknown words	.464	
WHS20: Make use of word collocations	.404	

- Factor 1, which is termed as '*Strategies for Seeking Key Information*', accounted for 21.94 per cent of the variance of the students' reading strategy use among the 38 reading strategy items. It comprises 11 strategy items, among which 9 are the while-reading strategies and 2 are the pre-reading strategies. The strategies in this factor are concerned with how the students dealt with the informative parts of the text and how they sought and comprehended the key information, such as making use of the features of the text, paying attention to the key words in the text, drawing on one's prior knowledge and glancing over the foot notes, tables and graphs.

- Factor 2, which is named as '*Strategies for Enhancing Comprehension*', accounted for 8.48 per cent of the whole variance of the students' reading strategy use. There are 12 strategies under this factor, which include 8 strategies in the post-reading category and 4 strategies in the while-reading category. This factor involves the strategies that the students used to help them understand the text deeper or better, including discussing the problems and difficulties with teachers or friends, reading

other resources about the same topic, or summarizing the reading problems, difficulties or mistakes one made.

- Factor 3 is termed as '*Strategies for Understanding Reading Texts Holistically*'. This factor accounted for 7.54 percent of the total variance of the 38 strategy items. There are 8 strategies in this factor, including 6 pre-reading strategies and 2 while-reading strategies. The strategies in this factor are generally the ones employed by the students for understanding and grasping the general ideas and overall meaning of the text, such as skimming the text, reading the questions about the text and reading the first and the last paragraph first.

- Factor 4, which is termed as '*Strategies for Coping with Discrete Difficult Language Points*' accounted for 5.20 percent of the variance of the strategy items. It comprises 7 strategies, including 5 while-reading strategies, 1 pre-reading strategy and 1 post-reading strategy. The strategies under this factor are mainly those used for coping with the discrete difficult language points in the reading, such as consulting the dictionary for important words, analyzing the formation of unknown words and analyzing the structures of difficult sentences.

This section has described the underlying factors of the reading strategies employed by the 926 Business English majors. The name for each factor has been defined. The percentage of variance of each factor and the factor loading for each strategy item has been identified. The subsequent section will present the factors strongly related to each of the four investigated variables in the present study.

To determine such a relationship, the focus is on the factors which are strongly related to a particular variable. The criteria for the strong relationship between the factors and each of the variables suggested by Seliger and Shohamy (1990) were adopted. That is, a factor can be accepted to be strongly related to a variable when half or more of the strategy items in that particular factor have a loading of .50 or more, showing a significant variation in relation to that variable. For the present investigation, the results of the varimax rotation revealed that one extracted factor was found to have a strong relationship with the gender of the students; two factors were found to be strongly related to the students' levels of exposure to specialized courses; two factors were found to be strongly related to the students' levels of reading proficiency; and two factors were strongly related to the students' levels of reading anxiety. What follow are the full details of the factors which were found to be strongly related to each of the independent variables.

4.4.1 Factors Strongly Related to 'Gender of Students'

Table 4.24 shows that Factor 3 was strongly related to the variable of the students' gender. This factor includes 6 strategies in the PRS category and 2 strategies in the WHS category. As reported in the previous sections, at the category level, the AVOVA results showed that the significant variations of the students' strategy use only existed in the POS category according to the students' gender. The students' reading strategy use in the PRS and WHS categories did not vary significantly by this variable; however, some individual strategies in the two categories were found to vary

significantly according to this variable through the Chi-square tests, which could explain to some extent why Factor 3 has a strong relationship with the students' gender. Of the 8 strategies in this factor, 6 strategies were found to vary significantly according to the students' gender.

Table 4.24 Factors Strongly Related to 'Gender of Students'

Factor 3: Strategies for Understanding Reading Texts Holistically	Factor loading	Comment
WHS13: Do fast reading and peruse later	.624	F>M
PRS8: Skim the text	.617	N.S.
PRS1: Read the title of the text carefully	.519	F>M
PRS6: Read the questions about the text	.501	F>M
PRS10: Make predictions/inference about the content of the text	.464	N.S.
PRS3: Set goals/purposes of reading	.463	F>M
WHS17: Adjust the reading rate accordingly	.461	F>M
PRS7: Read the first and the last paragraphs first.	.433	F>M

*Notes: 'F>M' refers to a significantly higher percentage of the females than the males reported high use of that particular strategy.

4.4.2 Factors Strongly Related to 'Level of Exposure to Specialized Courses'

Two factors (Factors 2 and 4) were found to be strongly related to the students' levels of exposure to specialized courses as shown in Table 4.25. Most of the strategy items in Factor 2 are the ones in the POS category. The results of the factor analysis may confirm the ANOVA results, which revealed that the significant differences in the students' use of reading strategies existed in the POS category according to the students' levels of exposure to specialized courses. Of the 7 reading strategies in Factor 4, five are while-reading strategies. The results of the factor

analysis were in accordance with the results of the Chi-square tests, which showed that many while-reading strategies reported by the students varied significantly according to this variable.

Table 4.25 Factors Strongly Related to ‘Level of Exposure to Specialized Courses’

Factor 2: Strategies for Enhancing Comprehension	Factor loading	Comment
POS10: Discuss the problems and difficulties with teachers or friends	.647	L>M
POS6: Read other resources about the same topic	.641	L>M
WHS24: Consult references to solve the reading problems or difficulties	.581	N.S.
POS8: Conclude one’s reading problems/difficulties	.578	N.S.
POS1: Make critical comments and evaluation on the content of the text	.532	M>L
POS4: Summarize what one read	.520	L>M
POS5: Review the content of the text for better understanding.	.514	N.S.
POS7: Review the notes and marks one made to understand better.	.440	L>M
WHS18: Ask the teachers, classmates or friends for help.	.422	L>M
WHS19: Translate the text into Chinese	.411	L>M
POS9: Summarize the mistakes one made	.401	N.S.
WHS11: Pause and think about what is being read from time to time	.287	N.S.
Factor 4: Strategies for Coping with Discrete Difficult Language Points	Factor loading	Comment
WHS21: Consult the dictionary for important words	.762	N.S.
POS2: Look up the new words in the dictionary	.730	N.S.
PRS4: Read/check the new word list	.716	L>M
WHS4: Read every word and sentence slowly and carefully	.569	L>M
WHS16: Analyze the structures of difficult sentences	.496	M>L
WHS14: Analyze the formations of unknown words	.464	N.S.
WHS20: Make use of word collocations	.404	N.S.

4.4.3 Factors Strongly Related to ‘Level of Reading Proficiency’

As presented in the previous sections, the results of the ANOVA revealed significant variations in the mean frequency scores of the students’ strategy use in the WHS category according to the students’ levels of reading proficiency. No significant variations were found in the PRS and POS categories. However, The Chi-square results showed that significant variations existed in many individual strategies in the PRS, WHS and POS categories according to this variable. In the factor analysis, Factor 3 and Factor 4 were found to be strongly related to the students’ levels of reading proficiency. Factor 3 comprises 6 strategies in the PRS category and 2 strategies in the WHS category. Factor 4 includes 7 strategies, which are 5 strategies in the WHS category, 1 strategy in the PRS category and 1 strategy in the POS category. We can see that most of the strategies in Factor 3 are pre-reading strategies and most of the strategies in Factor 4 are while-reading strategies. Most of the strategies under the 2 factors showed the positive variation pattern. The details of the relationship between the two factors and the students’ levels of reading proficiency are presented in Table 4.26.

Table 4.26 Factors Strongly Related to ‘Level of Reading Proficiency’

Factor 3: Strategies for Understanding Reading Texts Holistically	Factor loading	Comment
WHS13: Do fast reading and peruse later	.624	Positive
PRS8: Skim the text	.617	Positive
PRS1: Read the title of the text carefully	.519	N.S.
PRS6: Read the questions about the text	.501	Positive
PRS10: Make predictions/inference about the content of the text	.464	N.S.
PRS3: Set goals/purposes of reading	.463	Positive
WHS17: Adjust the reading rate accordingly	.461	Positive
PRS7: Read the first and the last paragraphs first	.433	Positive
Factor 4: Strategies for Coping with Discrete Difficult Language Points	Factor loading	Comment
WHS21: Consult the dictionary for important words	.762	Negative
POS2: Look up the new words in the dictionary	.730	N.S.
PRS4: Read/check the new word list	.716	Negative
WHS4: Read every word and sentence slowly and carefully	.569	N.S.
WHS16: Analyze the structures of difficult sentences	.496	Positive
WHS14: Analyze the formations of unknown words.	.464	Positive
WHS20: Make use of word collocations.	.404	Positive

4.4.4 Factors Strongly Related to ‘Level of Reading Anxiety’

The results of the ANOVA as presented in the previous sections demonstrated that significant variations in the frequency of the students’ strategy use existed in the PRS and WHS categories according to their levels of reading anxiety. In the factor analysis, Factors 3 and 4 have been found to be strongly related to the students’ levels of reading anxiety. The two factors mainly involve the reading strategies used by the students to comprehend the text holistically and cope with their difficult language points in reading. All the strategies in the two factors are pre-reading and while-reading strategies except 1 post-reading strategy, which may

confirm the ANOVA results showing significant variations in the PRS and WHS categories. Of the 15 strategies in the two factors, 10 strategies existed significant variations. 5 strategies belong to the variation pattern of 'L>M>H'; 2 strategies belong to the variation pattern of 'H>M>L'; 2 strategies belong to the variation pattern of 'H>L>M'; 1 strategy belongs to the variation pattern of 'M>L>H' and 5 strategies did not have significant variations. The results are presented in Table 4.27.

Table 4.27 Factors Strongly Related to 'Level of Reading Anxiety'

Factor 3: Strategies for Understanding Reading Texts Holistically	Factor loading	Comment
WHS13: Do fast reading and peruse later	.624	L>M>H
PRS8: Skim the text	.617	M>L>H
PRS1: Read the title of the text carefully	.519	L>M>H
PRS6: Read the questions about the text	.501	N.S.
PRS10: Make predictions/inference about the content of the text	.464	N.S.
PRS3: Set goals/purposes of reading	.463	L>M>H
WHS17: Adjust the reading rate accordingly	.461	L>M>H
PRS7: Read the first and the last paragraphs first.	.433	H>L>M
Factor 4: Strategies for Coping with Discrete Difficult Language Points	Factor loading	Comment
WHS21: Consult the dictionary for important words	.762	H>M>L
POS2: Look up the new words in the dictionary	.730	H>M>L
PRS4: Read/check the new word list	.716	N.S.
WHS4: Read every word and sentence slowly and carefully	.569	H>L>M
WHS16: Analyze the structures of difficult sentences	.496	L>M>H
WHS14: Analyze the formations of unknown words.	.464	N.S.
WHS20: Make use of word collocations.	.404	N.S.

In conclusion, four factors have been extracted as the results of the factor analysis. Factor 1 had no strong relationship with any of the four investigated

variables. Factor 2 was found to be strongly related to the students' levels of exposure to specialized courses. Factor 3 was found to be strongly related to the students' gender, levels of reading proficiency and levels of reading anxiety. Factor 4 was found to be strongly related to students' levels of exposure to specialized courses, levels of reading proficiency and levels of reading anxiety. These relationships are summarized in Table 4.28.

Table 4.28 Summary of Factors Strongly Related to Different Variables

Extracted Factor	Gender	Exposure to specialized courses	Level of reading proficiency	Level of reading anxiety
Factor 1	NO	NO	NO	NO
Factor 2	NO	YES	NO	NO
Factor 3	YES	NO	YES	YES
Factor 4	NO	YES	YES	YES

4.5 Summary

In this chapter, the use of reading strategies by 926 Business English majors has been analyzed and described from two aspects. One was concerning the frequency of the students' reading strategy use at three different levels; the other was about the variations of the students' reading strategy use in terms of the four variables. In addition, a factor analysis was conducted to explore the underlying factors in the students' use of reading strategies. The results showed that the frequencies of the students' reading strategy use at the overall and category levels were at the medium

use level. At the individual level, most of the strategy items were also at the medium use level. The ANOVA results showed that, at the overall level, the frequency of the students' reading strategy use varied significantly according to the students' levels of reading proficiency and levels of reading anxiety; at the category level, the students' strategy use in the PRS, WHS and POS categories was found to vary significantly according to the four investigated variables. The Chi-square tests also revealed that many individual strategy items varied significantly according to the four investigated variables. Through the factor analysis, four factors have been extracted, of which three factors were found to be strongly related to different investigated variables.

The findings in this chapter have presented an overall picture of the students' reading strategy use, which has provided the researcher with useful information for another perspective of research into the field of reading strategy. The next chapter will deal with the interview data. The results will be presented from the qualitative perspective.

CHAPTER 5

ANALYSIS OF QUALITATIVE DATA AND RESULTS

5.1 Introduction

The purpose of this chapter is to report the analysis and the findings of the qualitative data obtained through the semi-structured interviews. As presented in Chapter 4, the quantitative data showed that some reading strategies were reported being used frequently and some were used infrequently by the students. In order to triangulate the quantitative data, as well as to explore the answers to the fourth research question: “*Why do the university Business English majors employ certain strategies frequently and certain strategies infrequently?*”, the semi-structured interviews were conducted to reveal the underlying reasons.

The semi-structured interviews were conducted shortly after the reading strategy questionnaires and the reading proficiency test were administered to the students in each of the participating universities. The interviewees were interviewed one on one. The selection of the participants was based on the students’ availability and convenience, as well as the research purpose. In total, 48 students from 6 universities were selected for the interviews. The interview length for each student was 20-25 minutes. The interviews were carried out in Chinese. The data were recorded, transcribed and then translated into English for the content analysis. Coding

techniques were used to analyze the data. The results of the semi-structured interviews are presented in detail in the subsequent sections.

When the students were asked what reading strategies they often used and seldom used before, while or after reading, the students listed the strategy items which they preferred or did not prefer to use according to the SQBER (the Strategy Questionnaire for Business English Reading). Then the students were asked to give the reasons for their choices of these strategies. The students provided a variety of reasons. What follow are the results of the analysis of qualitative data.

5.2 The Frequently and Infrequently Used Strategies

As presented in Section 4.2.3, the mean frequency scores of the individual reading strategies in the PRS, WHS and POS categories were ranked from the highest to the lowest. To compare the frequently used strategies and the infrequently used strategies, the researcher focused on the top and the bottom ones in each category. After discussing with the supervisor, the researcher decided to select the top three and bottom three strategies in the PRS and POS categories, as the numbers of the strategy items in the two categories are more or less the same (11 and 10 items respectively). As there are more strategy items in the WHS category (24 items), the top five and the bottom five strategies in this category were selected.

According to the mean frequency score of each strategy reported by the students in each category, the top three reading strategies in the PRS category are:

PRS1: Read the title of the text carefully, PRS6: Read the questions about the text, PRS3: Set goals/purposes of reading and PRS8: Skim the text; the bottom three in this stage are: PRS11: Search for and read some related materials, PRS7: Read the first and the last paragraphs first and PRS2: Construct one's related knowledge about the topic. In the WHS category, the top five strategies are: WHS15: Guess the meanings of the words or the sentences from the context, WHS1: Pay attention to the key words in the text, WHS 10: Take notes or mark the important information in the text, WHS22: Reread the difficult parts and WHS17: Adjust the reading rate accordingly. The bottom five strategies are: WHS14: Analyze the formations of unknown words, WHS6: Raise questions about some information in the text, WHS24: Consult references to solve reading problems or difficulties, WHS18: Ask the teachers, classmates or friends for help and WHS16: Analyze the structures of difficult sentences. In the POS category, the top three strategies are: POS2: Look up the new words in the dictionary, POS5: Review the content of the text for better understanding and POS9: Summarize the mistakes one made. The bottom three are: POS1: Make critical comments and evaluations on the content of the text, POS6: Read other sources about the same topic and POS10: Discuss the problems and difficulties with teachers or friends.

When comparing the most frequently and the least frequently used strategies resulted from the questionnaires with those from the interviews, we found that the results from the two different instruments were almost consistent because those strategies in the questionnaire mentioned above were frequently reported and

mentioned by the students in the interviews. This indicates that the students' choices of reading strategies reported in the questionnaires were consistent with those reported in the interviews. In other words, the results from the quantitative perspective were confirmed by the results from the qualitative perspective.

5.3 Reasons for Using Certain Strategies Frequently and Infrequently

The students reported different reasons for using certain strategies frequently and infrequently. We found that the students provided the reasons in different ways, which made them difficult to interpret and report. In order to synthesize these reasons and make them easy to interpret, the researcher decided to focus on the reasons for the top and bottom strategy items presented in Section 5.2. Coding procedures were used to analyze the data. All the statements given by the students were coded, listed, and then grouped according to their similarities. Finally, after the careful examination and consideration, 11 reasons for using certain strategies frequently and 9 reasons for using certain strategies infrequently emerged from the data. The results are presented as follows.

5.3.1 Reasons for Using Certain Strategies Frequently

As mentioned above, the reasons for students' using certain strategies were eventually classified into 11 categories. These reasons include:

- 1) Gaining a General Idea about the Text
- 2) Preparing for an Efficient Reading

- 3) Determining Reading Focuses
- 4) Promoting Attention
- 5) Identifying Key Information
- 6) Overcoming Comprehension Difficulties
- 7) Enhancing Comprehension
- 8) Increasing Reading Efficiency
- 9) Finding Answers Easily and Quickly
- 10) Deepening Understanding
- 11) Building up Language Knowledge

5.3.1.1 Gaining a General Idea about the Text

When asked why they used certain strategies frequently, the students responded that they preferred these strategies because these strategies could help them predict the content of the text, get a general idea about the text or enable them to understand the text holistically. These strategies are mainly those in the PRS category. Examples are given as follows:

- **PRS1: Read the title of the text carefully**

S1: I think the title is the core of a text. Reading the title may help me know what the text is about. Then I can have a rough idea about the content of the text.

S21: Before doing the actual reading, I need to read the title of the text carefully as this may help me know about the general idea of the text efficiently. Bearing this in mind, I will have a main clue of thoughts while reading.

S30: Reading the title of the text is critical as the content of the text is developed around it. I can predict the content of the text and generally understand what the text talks about through reading the title of the text.

- **PRS6: Read the questions about the text**

S11: I like to read the questions after the text first because they provide me with the key information about the text and then I can get a general picture about the content of the text based on the information contained in the questions.

S27: Looking at the questions before reading the text may aid my understanding of the general idea of the text, which may help me to know what information I should obtain from the text while reading.

- **PRS8: Skim the text**

S23: I usually skim the text before careful reading, because it will give me an overall understanding of the content of the text in the beginning.

S45: Skimming the text before reading is a very useful reading strategy as it can help us to gain a general knowledge of the text quickly in the first stage.

5.3.1.2 Preparing for an Efficient Reading

The students frequently reported that in the pre-reading stage, they preferred to employ certain strategies to prepare themselves to read efficiently, such as reading the questions about the text and set goals or purposes of reading. These strategies could help them to be more purposive in the while-reading stage. They believed that these pre-reading activities were good preparation for efficient reading later.

- **PRS6: Read the questions about the text**

S2: By reading the questions about the text first, I know what information I should obtain from the text. Then I can do some mental preparation on how to gain the needed information efficiently while reading.

S29: This strategy is a good way of preparation for an efficient reading. With reading questions, we can prepare ourselves how to find the answers for the questions in the text quickly before reading.

- **PRS3: Set goals or purposes of reading**

S19: Setting reading goals or purposes before reading is a good way of preparing for efficient reading because, with clear reading goals, you know what to read and how to read.

S37: Setting reading purposes is just like the planning or preparing for doing something better in our real life. It's a very good technique to achieve effective and desired reading results.

5.3.1.3 Determining Reading Focuses

Many students reported that they use certain strategies frequently because these strategies may help them determine what important information they need to obtain from the text. Using these strategies may help them to determine the reading focuses. This could make their reading more efficient and effective. Examples are:

- **PRS3: Set goals or purposes of reading**

S15: If we have clear goals of reading in our mind before reading, we know what information we must focus on and what information we can ignore. We can efficiently extract the information we hope to get.

S33: This strategy is very critical in Business English reading. Bearing the reading goals or purposes in mind, we can determine our reading focuses. Then we can choose different ways of reading to achieve our reading goals.

- **PRS6: Read the questions about the text**

S36: Questions are usually designed based on the important information in the text. With reading questions, I know what content I should pay more attention to, and which will make the reading effect more desirable.

S47: Regarding reading the questions about the text before reading the text, I think it is very useful and practical as we can determine our reading focuses according to the provided questions.

- **PRS8: Skim the text**

S6: Through skimming the text, I can get a rough idea about the content of the text. Then I can initially judge the level of difficulty of the text and where the key information is. Based on these judgments, I can determine my reading focuses.

S25: When skimming the text, I can obtain a rough overall picture about the content of the text. Then I can decide the reading focuses according to my needs. I will be more selective while reading later.

5.3.1.4 Promoting Attention

Many students reported that certain strategies could keep their mind active, increase their concentration or arouse their reading attention. Using these strategies could help them concentrate and avoid distraction or absent-mindedness while reading. Examples are:

- **PRS6: Read the questions about the text**

S27: ...Because with questions, I have reading focuses in mind, and then I will be more concentrated while reading.

S28: Reading the questions about the text help me understand what information I should pay more attention to. While reading, I will be more focused and concentrated. In addition, this is also a good way of keeping attention and avoiding distractions in the process of reading.

- **WHS1: Pay attention to the key words in the text**

S10: Using this strategy can help me concentrate and avoid absentmindedness because I must continuously look for the key words while reading.

S11: Paying attention to the key words is a good way of avoiding distraction. In the process of reading, I keep trying to identify the key words and make sense of their meaning, which can greatly increase my reading attention.

- **WHS10: Take notes or mark the important information in the text**

S17: When I take notes or mark the important information, I use my mind as well as my hands. In doing so, I will be more attentive and focused.

S20: When taking notes or marking the texts, I must consider what information is worth taking or marking, which can keep my mind active and my attention will be promoted.

5.3.1.5 Identifying Key Information

The students reported that key information is very important and useful for them to comprehend the reading texts. They like using certain strategies because these strategies may help them pick up the key information of the reading texts and find the information they need efficiently. The following strategies are some examples:

- **WHS1: Pay attention to the key words in the text**

S3: Key words are very important. They usually contain important information. Paying attention to the key words is very helpful for us to obtain the key information of the text.

S29: I often use this strategy as key words are very informative and they are usually conducive to finding the key information in the text.

- **WHS10: Take notes or mark the important information in the text**

S24: I like using this strategy. The purpose of taking notes or marking important information is to pick the key information from the text.

S48: When I read, I usually mark the information or take notes of the information that I think is important. The marked information or the notes can help me identify the key information of the text.

- **WHS17: Adjust the reading rate accordingly**

S10: I will change my reading speed according to different content. When I find the content is important, I will slow down my reading speed in order to obtain the key information. If I think the content is not important, I'll read faster.

S28: Adjusting reading rate while reading is necessary, as not every part (of the text) is equally important. The purpose of reading is to find the key information or the information we need, therefore, some parts we can skim and some parts we need to read carefully.

5.3.1.6 Overcoming Comprehension Difficulties

Different students may have different ways of dealing with their reading difficulties or problems. Many students reported that certain strategies were useful and helpful for them to cope with difficult words, sentences or the content of the text. They preferred to use certain strategies because these strategies could help them to overcome the difficulties or problems they encountered in the reading. Examples are:

- **WHS1: Pay attention to the key words in the text**

S7: I often use this strategy to solve my comprehension difficulties while reading as key words can usually provide me useful information to comprehend the parts I feel difficult to understand.

S13: ...making use of key words can help obtain some critical information to help me comprehend some difficult content or difficult language points.

- **WHS15: Guess the meanings of the words or the sentences from the context**

S32: When I meet new words while reading, I seldom stop to use the dictionary because it will break my reading thoughts. I usually guess the meaning of the new words from the context. When I meet difficult sentences that I don't understand, I also use this strategy to assist my comprehension.

S41: I think the biggest problem I meet in reading is the new words, but I seldom stop to use the dictionary while reading. I usually guess the meanings of the new words and the difficult sentences and highlight them. After I finished reading, I will consult dictionaries or ask friends to help solve these problems.

- **WHS22: Reread the difficult parts**

S36: I often reread the difficult parts because I may not understand when I read them for the first time, however, if I reread them, I may figure them out.

S40: Rereading the difficult parts may be helpful for me to deepen my understanding of the sentences or the parts that I don't understand or cannot understand well. I frequently use this strategy in reading.

5.3.1.7 Enhancing Comprehension

One of the main reasons provided by the students why they employed certain strategies frequently was that these strategies could enhance their reading comprehension when they read Business English texts. They reported that some strategies were very useful for them to identify important information, assist them in understanding the text and increase their reading comprehension. Examples are:

- **WHS1: Pay attention to the key words of the text**

S1: I like using this strategy because the key words often contain useful information. They usually play a critical role for comprehending the text.

S27: I often use this strategy because key words usually provide me critical information to comprehend the text. Paying attention to the key words of the text can assist me in understanding the text.

- **WHS17: Adjust one's reading rate accordingly**

S23: Adjusting reading rate can enhance understanding. While reading, I don't read the whole text at the same rate. For some difficult or informative parts, I will read them slowly, which can increase my understanding of the text.

S29: I often adjust my reading rate according to the importance or difficulty of different parts of the text. Reading some parts slowly and carefully can help me comprehend the text.

- **WHS22: Reread the difficult parts**

S19: I would like to reread the difficult parts of the text. I think the critical information is usually contained in the difficult parts. Rereading the difficult parts may help me understand some critical information, and thus enhance my understanding of the whole text.

S28: I often reread the difficult parts of the text while reading because rereading can usually help me make sense of the difficult parts of the text.

5.3.1.8 Increasing Reading Efficiency

The majority of the students reported that certain strategies could increase their reading efficiency. They said that using these strategies properly could help them read the text more efficiently. They can increase their reading speed, save reading time as well as achieve effective reading results. Examples are:

- **WHS1: Pay attention to the key words of the text**

S9: *Key words are the core of the text. Using key words as clue I can read more fluently and efficiently...*

S16: *Focusing on the key words can help me pick up important information as well as increase my reading speed and improve my reading efficiency. The reading effects are often satisfactory.*

- **WHS15: Guess the meanings of the words or the sentences from the context**

S31: *...because while reading, guessing the meanings of the new words from the context can save the time spent looking them up in the dictionary, I can read more quickly.*

S36: *I think guessing is a good technique to increase the efficiency of reading, if you stop to look up the new words in the dictionary or consult references, your train of thought will be interrupted, which will influence your reading speed and reading results.*

- **WHS17: Adjust one's reading rate accordingly**

S3: *I believe that using the same reading rate while reading a text is not a good way of reading, I often change my reading speed according to the importance of different parts based on my own judgment. This can improve my reading efficiency.*

S29: *Employing different reading rates for different parts can help me read a text efficiently and effectively. I think we needn't read every word and sentence slowly and carefully. For some unimportant parts, we can skim or ignore.*

5.3.1.9 Finding Answers Easily and Quickly

Many students who were interviewed frequently mentioned that they preferred to use certain strategies when they read Business English texts because these strategies could help them find the needed information or the answers for the questions easily and quickly. Many students emphasized that reading exams were very important for them. Certain strategies were very useful and practical in searching for the answers for the questions efficiently, especially in the exams. Examples are:

- **WHS1: Pay attention to the key words of the text**

S8: *I frequently use this strategy when I read Business English. It often helps me find the answers for the questions quickly. This strategy is very useful and practical especially in the exams.*

S15: *Paying attention to the key words may help me find the answers for the questions efficiently, because the key words often contain useful and important information for the questions.*

- **WHS10: Take notes or mark the important information in the text**

S27: *...I like to take notes on key information while reading. For most of the time, I can find the answers for the questions easily and quickly from the notes.*

S31: *I always like to highlight or mark the important information or difficult vocabulary items. When I go back to search for the answers for the questions, I can find the needed information easily and quickly through reviewing these marks.*

- **WHS17: Adjust one's reading rate accordingly**

S22: *My main purpose of reading is to cope with the exam. Time is often limited in the exam. In order to find the answers in a short time, I usually read the text very fast. However, for the parts that probably contain the information for answering the questions, I will slow down my reading speed and read more carefully.*

S45: *Whenever I read, I do it just like in the exam. The purpose is to find the answers for the questions as soon as possible. Therefore, I can not read every part at the same speed. I will adjust my reading speed according to my needs.*

5.3.1.10 Deepening Understanding

One of the important reasons why the students employed certain strategies frequently was to deepen understanding of the content of the text. According to their opinions, using these strategies may help them understand the text deeper and better. These strategies reported for this reason are mainly the ones in the post-reading stage. The following are some given examples:

- **POS2: Look up the new words in the dictionary**

S4: I don't like using the dictionary in the process of reading. However, when I finish reading, I will look up the new words I encountered while reading, which can help me understand the text deeper and better.

47: I never stop to look up the dictionary when I meet new words while reading. I'll try to guess the meanings of the new words by making use of the context. Although I don't like using dictionary while reading, I will rely on the dictionary to help me make certain of the meanings of the new words after reading, which can help give me a thorough comprehension of the text.

- **POS5: Review the content of the text for better understanding**

S13: I think this strategy is very helpful for deepening understanding of the text. When I review the content after I finish reading, I rethink and synthesize the information in the text, which can help me understand the text further.

S25: After I finish reading a text, I will recall and rethink the content of the text, and then I can have a clearer picture about the text and have a deeper understanding about the content that I have read.

- **POS7: Review the notes and marks one made to understand better**

S23: The notes and the marks are the important information that I extracted from the text. However, the information is usually scattered in different parts of the text. Through reviewing these notes and marks, I can organize the scattered information together and form a clear clue. Reviewing these notes and marks may contribute to my deeper understanding of the text.

S27: Reviewing the notes and marks I made may help give me a better understanding of the text as the notes and the marked parts contain key information about the text. I like using this strategy as it is not time-consuming, but it can help me understand the content of the text deeper and better efficiently.

5.3.1.11 Building up Language Knowledge

Some students reported that the purpose of employing certain strategies was to build up their language knowledge. They used these strategies to expand their vocabulary, accumulate good expressions, and learn specialized terms and language points. Examples are:

- **POS2: Look up the new words in the dictionary**

S8: I usually look up the new words in the dictionary after reading. This can help me make clear of the meanings of the words that I don't know. I can enlarge my vocabulary and accumulate language points in this way.

S10: When I come across new words while reading, I usually try to guess the meanings by making use of the context without looking them up in the dictionary. However, I will look up these new words in the dictionary after reading to confirm my guess and make certain of the meanings of these new words and learn their usage.

- **POS7: Review the notes and marks one made to understand better**

S18: I often review the notes or the marks I made after reading the text. On one hand, it can help me have a clearer understanding of the text. Most importantly, the notes and marks are usually the important language points. I can increase my language knowledge through reviewing them.

S39: The notes and marks I made while reading are usually the key information, key words or important grammar points. I often review them after I finish reading the text in order to accumulate my language knowledge as well as understand the text better. In addition, reviewing can deepen my impression on these key words, language points, especially the specialized terms.

5.3.2 Reasons for Using Certain Strategies Infrequently

The students who were interviewed provided a variety of reasons for using certain strategies infrequently. These reasons were closely examined, compared and synthesized. Eventually, 9 reasons for the students' using certain strategies infrequently emerged from the data. These reasons include:

- 1) Wasting Time
- 2) Being Unnecessary
- 3) Having Little Help for Comprehension
- 4) Influencing Reading Efficiency and Effect
- 5) Lacking Sufficient Linguistic Knowledge
- 6) Being Unaware of Certain Strategies
- 7) Having no Idea How to Use
- 8) Being Unwilling to be Dependent
- 9) Having no Interest or Patience

5.3.2.1 Wasting Time

Many students frequently reported that they used certain strategies infrequently, seldom, or even never used certain strategies because they thought that using those strategies was a waste of time. In their opinions, using some strategies was very time-consuming, and the results were usually undesirable. The following are some examples:

- ***PRS11: Search for and read some related materials***

S23: I seldom use this strategy because I think it wastes a lot of time and it cannot do much help for comprehending the text. I like to read the text directly. If I really cannot make sense of some parts, I will search for some related materials from the internet to help me understand those parts specifically.

S29: Our time is very limited and precious because we have many subjects to study. When I read, I always consider the efficiency. I think it is unworthy if we spend a lot of time to do the things that have little help for our present reading. I don't

want to waste too much time to do warming-up exercises, I like to read the text immediately in order to save time.

- **WHS24: Consult references to solve reading problems or difficulties**

S11: I seldom use this strategy because it will waste a lot of time and influence my reading process. I never use it unless I found it is impossible to move on. If I am really stuck by some comprehension difficulties that I find it is really hard to move on, I will stop to consult references.

S23: I think we should focus on the content we read in the process of reading. If we stop to consult references to solve every problem or difficulty from time to time, it will waste a lot of time and it will also influence our whole understanding of the text.

- **POS6: Read other resources about the same topic**

S5: I seldom read other materials after reading the text because I think it wastes too much time to do so. If I still do not understand some points after reading, I will look them up in the dictionary or ask my friends directly.

S40: I think reading other resources about the same topic is a waste of time especially when I have understood the content of the text. I read other related resources only when I am very interested in the topic. But this kind of things seldom happens in my reading experience.

5.3.2.2 Being Unnecessary

Some students reported that they seldom or never employed certain strategies because they did not think it was necessary to do so. They said that it is often unnecessary to spend the time and energy in doing those activities because using those strategies are usually time-consuming and cannot do much help in reading comprehension. They can use some other effective reading techniques instead.

- **PRS2: Construct one's related knowledge about the topic**

S9: I think it is unnecessary to spend additional time constructing my related knowledge about the topic of the text before reading because I will automatically make use of my prior knowledge when I read the text.

S27: *I don't like this strategy before reading because I think it is unnecessary to do so. Before reading, we actually know little about the content of the text. If we intentionally recall or construct our prior knowledge about the topic just according to the title, the results may not be desirable and effective because what we recall or construct may not be really needed in the reading of the text.*

- **PRS11: Search for and read some related materials**

S12: *I have never used this strategy because I think it is unnecessary to do so. When I read, I give all my attention to the text that I am reading and don't want to be distracted by other things. I want to know what the text is about. Anyway, the crucial point is that searching for and reading some related materials may not do much help for comprehending the text. For the consideration of efficiency, I think it is really unnecessary to spend time doing that.*

S43: *For me, I think searching for and reading some related materials is really unnecessary. Before reading, we actually don't know what the text really concerns. What we search for and read may not be really related to the text we read.*

- **WHS24: Consult references to solve reading problems or difficulties**

S37: *I don't think it is necessary to stop to consult references every time we encounter problems or difficulties in the process of reading. We can use some other techniques, such as guessing, reasoning and skipping, etc. to help solve the problems and difficulties we meet while reading.*

S41: *I seldom use this strategy because I think it is unnecessary to stop from time to time to consult references as not every difficulty will influence my comprehension. Some problems or difficulties, such as some unimportant new words, may not really influence our reading comprehension. The main purpose of Business English reading is to gain the knowledge about business. We needn't stop to consult references such as the dictionary for every difficulty we meet.*

5.3.2.3 Having Little Help for Comprehension

Some students frequently reported that certain strategies gave little help to comprehend the text. Based on the students' opinions, certain strategies are not useful and effective. They usually make little or no contribution to their comprehending the text. Employing those strategies would waste their time and had little effect on their reading comprehension. Examples are:

- **PRS7: Read the first and last paragraphs first**

S11: *I don't like using this strategy because I think the first and last paragraphs usually don't contain the important information of the text and very often we cannot find the needed information, for example, answers for the questions. I think reading the first and last paragraphs has little help for me to comprehend the text.*

S26: *My teacher used to suggest us to use this strategy to help us understand the text. However, I found it ineffective after I had tried for some time. Some other students also had the same experience. So I gave up doing so.*

- **PRS11: Search for and read some related materials**

S9: *I don't use this strategy. In my opinion, searching for and reading some related materials is helpless or useless for comprehending the text. The materials that we searched and read may not be really related to the content of the text we are going to read. In addition, some materials may hold different opinions from those in the text we intend to read, which will influence our comprehension of the text we read.*

S13: *I don't think this strategy can do me any favors in comprehending the text. Every text is independent and different, I think, using the knowledge gained from one text to infer the ideas in another text is inadvisable, sometimes it may even be misleading.*

5.3.2.4 Influencing Reading Efficiency and Effect

Some students reported that they seldom or never employed certain strategies because using certain strategies would influence their reading efficiency or reading effect. Further, using certain strategies while reading may interrupt their thinking clues, affect their reading speed and comprehension of the text. Examples are:

- **WHS14: Analyzing the formation of unknown words**

S15: *I seldom use this strategy. I think paying too much attention to the details will influence the integral understanding of the text. I stop to analyze the formation of the unknown words while reading only when I feel the word is really important or it is really a big obstacle for my reading comprehension.*

S30: *I just use this strategy for the key words in the text. For many unimportant new words, I just pass them. I think the focus of Business English reading is on the content, not on the language points. If we entangle in the words, especially the unimportant new words, the reading efficiency and results will definitely be influenced.*

- **WHS18: Ask the teachers, classmates or friends for help**

S3: *I don't like using this strategy in the while-reading stage because it will influence my reading speed and rate of reading progress. The results of reading comprehension will be greatly influenced if I stop to ask for help from time to time. However, if I really cannot solve my reading difficulties by myself, I will ask the teachers or classmates for help after I finish reading the whole text.*

S48: *I object to employing this strategy because the reading speed and reading effect will be greatly influenced. If I stop to ask for help from others as soon as I meet difficulties while reading, my reading thoughts will be interrupted from time to time, and I will not have a good overall understanding about the text.*

- **WHS24: Consult references to solve reading problems or difficulties**

S27: *I seldom use this strategy in the process of reading unless the problems or the difficulties hinder my reading comprehension so greatly that I find it difficult to move on. I think consulting references while reading will influence my reading thoughts and reading speed, which will eventually influence the reading results.*

S31: *I use this strategy frequently in the post-reading stage, but I seldom use it in the while-reading stage. In my opinion, if we stop to consult references, our reading will be interrupted. When we go back to continue reading the text, we have to recall or review what we have read in order to keep our reading consistent, which will waste too much time and even greatly influence the reading efficiency and reading outcomes.*

5.3.2.5 Lacking Sufficient Linguistic Knowledge

Many students reported that they employed certain strategies infrequently because of their insufficient linguistic knowledge. They explained that some strategies are very helpful to enhance reading comprehension or solve reading difficulties. However, they felt it difficult for them to use these strategies because their

knowledge of grammar or lexis was very poor. The following are some examples:

- **WHS14: Analyze the formations of unknown words**

S23: I seldom use this strategy because I don't have much knowledge of word formation. I think this strategy is useful and practical; therefore I study the course of lexicology very hard this term in order to build up my lexical knowledge.

S34: I know this is a good way to solve the problems of new words. It is very useful to infer the meanings of new words while reading without a dictionary, especially in the exam. However, I use it infrequently because my knowledge of lexis is very poor.

- **WHS16: Analyze the structures of difficult sentences**

S11: I use this strategy infrequently because my grammar is very poor. I often find it difficult for me to analyze the structures of difficult sentences according to my current level of grammar knowledge.

S22: I believe analyzing the structures of difficult sentences can help a great deal in comprehending difficult sentences, but I seldom use this strategy. I have found that it is often difficult for me to apply this strategy because my poor grammar knowledge doesn't allow me to do so.

5.3.2.6 Being Unaware of Certain Strategies

Some students explained that they did not use certain strategies because they did not have these strategies in mind. They were not aware of or did not know these strategies. Here are some examples.

- **WHS6: Raise questions about some information in the text**

S2: I have never used this strategy because I have never thought of it. I think this strategy is interesting and may be helpful for comprehending the text. But no one, including my English teachers, has ever told me this reading strategy.

S10: I don't use this strategy because I am unaware of this strategy. My English teachers have taught us many reading strategies, but this one, they didn't mention.

- **POS1: Make critical comments and evaluation on the content of the text**

S8: I have never heard of this reading strategy before, let alone use it. Our English teachers have never taught us this strategy and I have never heard my classmates use it. So I don't have any idea about it.

S23: I am unaware of this strategy and I don't know how to use it. I don't know whether or not this strategy is useful for reading comprehension...

- **POS6: Read other resources about the same topic**

S21: I think this strategy will be helpful for expanding our knowledge and deepening the understanding of the text. In addition, this strategy is useful and easy to use. However I have never thought to use it before, so I have never used it.

S29: I have never thought of reading something else that was related to the same topic after I finished reading the text. But I think reading some other resources about same topic may be helpful for us to understand the text better.

5.3.2.7 Having no Idea How to Use

Some students reported that they had never or seldom used certain strategies because they did not know how to use them. They said that they knew those strategies or heard of those strategies, but some of them said that they had never tried these strategies because they did not know how to use them; some of them said that they seldom employed these strategies because did not know how to use them properly.

- **WHS6: Raise questions about some information in the text**

S5: I know this strategy, I learned about it from my classmates, but I have never tried it because I don't know how.

S30: I tried this strategy for some time, but it didn't seem to work well. Now I don't use it anymore because I don't think I can use it properly and it seems that it does not help for my reading comprehension. I think the main problem is that I don't know where to ask questions and how to raise questions.

- **POS1: Make critical comments and evaluations on the content of the text**

S11: *I know this is a kind of critical reading. I learned about it from the reading books. Actually I have never used it because I have no idea how to make critical comments and evaluations. However, if someone can help me, I would be very happy to learn.*

S43: *Our reading teacher used to tell us that we should be critical when we read Business English texts. She also gave us some examples. However, up to now, I don't think I can use it well. I still don't have much idea about how to give critical comments to a text and how to evaluate the content of the text. I know this strategy is very useful, but I use it very infrequently as I still don't have much knowledge about how to use this strategy properly.*

5.3.2.8 Being Unwilling to be Dependent

Some students reported that they used certain strategies infrequently because they wanted to develop their independent learning abilities or habits. They explained that they hoped to solve their problems or difficulties in reading independently. They did not want to ask for help from others once they had problems or difficulties unless they were really unable to solve them by themselves. The following are some examples.

- **WHS18: Ask the teachers, classmates or friends for help**

S17: *I seldom ask others when I meet difficulties or problems in my reading unless I really cannot solve them by myself. I think it is not good for us to develop our abilities of analyzing and solving problems and difficulties.*

S35: *I don't use this strategy frequently because I don't hope to be always dependent on others. I also hoped to cultivate my habit of independent study.*

- **POS10: Discuss the problems and difficulties with teachers or friends**

S9: *I don't really like using this strategy. I ask other people for help only when I have tried my best and still cannot solve the problem. In doing so, I think I can not only cultivate good habit of independent study, but also have a deep memory of those difficulties or problem I have solved by myself.*

S37: I do not like to discuss the difficulties and problems I meet in reading with others. I like solving problems and difficulties independently. It is very helpful for me to develop my ability and habit of independent study.

5.3.2.9 Having no Interest or Patience

Some students explained that they used certain strategies infrequently because they had no interest or patience to do so. According to opinions, some strategies were not very effective and they were not interested in employing them. Some strategies were very time-consuming, so they did not have the patience to employ them. Examples are:

- ***PRS11: Search for and read some related materials***

S11: I can't give any good reasons for why I use this strategy infrequently. It is just because of personal interest. I am not willing to spend much time to do some preparation activities. I like to read the text directly and I have no interest or patience to do otherwise.

S20: I don't have interest in searching and reading related materials. I think it's boring and ineffective for comprehending the text.

- ***POS1: Make critical comments and evaluation on the content of the text***

S4: I make comments on the text only when I do really appreciate the content of the text or really disagree with the ideas of the text. In most cases, I don't have the interest or patience to make comments or evaluations about the text I read.

S26: I seldom use this strategy. My focus of reading Business English is to gain the knowledge of the English language in the business area and to improve my Business English reading proficiency. I don't have interest to make comments or evaluations on the content of the text.

- ***POS6: Read other resources about the same topic***

S25: I seldom read other related materials about the same topic because I have no patience to do so. After I finish reading a text, I think I'm done with it. I don't have any interest to do any reading activities for the same text.

S27: Reading other resources about the same topic after reading is very time consuming, which requires great patience. For me, I don't have any patience to do so after I finish reading the text. I would rather go on to read other texts of different topics, which can maintain my reading interest and motivation.

● **POS10: Discuss the problems and difficulties with teachers or friends**

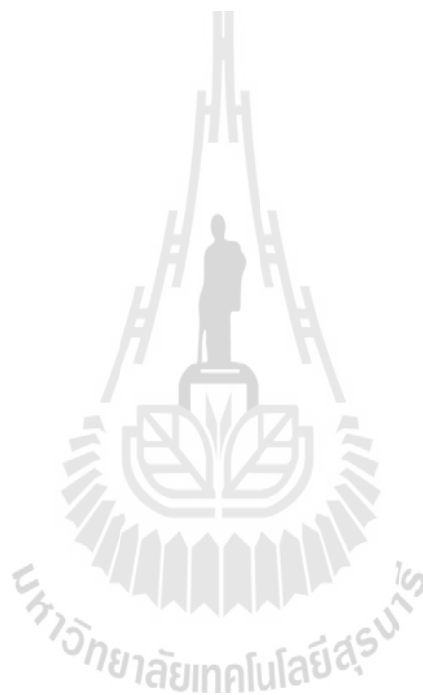
S12: I seldom employ this strategy because I am not interested in discussing with others. I don't like share my feelings or ideas about what I have read with others. I often use dictionaries or the internet to solve my problems or difficulties in reading.

S13: I seldom use this strategy because I don't have the habit to discuss problems with others. I prefer to solve my difficulties or problems independently. What's more, other people may not have interest or patience to discuss with me.

5.4 Summary

The main purpose of this chapter was to analyze the qualitative data to answer the fourth research question, i.e. “*Why do the university Business English majors adopt certain strategies frequently and certain strategies infrequently?*”. Firstly, the researcher analyzed the interview data, and compared the results with those of the quantitative data. It was found that the frequently and infrequently used reading strategies reported by the students in the questionnaires were also frequently mentioned and explained by the students in the interviews. The results from qualitative analysis have confirmed the results from the quantitative analysis. Secondly, based on the frequently and infrequently used reading strategies, the reasons for the students' using these strategies frequently and infrequently were analyzed. Eleven reasons for using certain strategies frequently and nine reasons for using certain strategies infrequently emerged from the qualitative data.

The results of semi-structured interviews have provided the researcher useful information about the students' reading strategy use. The next chapter, which is also the last chapter of the thesis, will summarize and discuss the research findings of the present investigation. In the end, the implications, as well as limitations of the present investigation will be presented.



CHAPTER 6

SUMMARY OF RESEARCH FINDINGS, DISCUSSION AND CONCLUSION

6.1 Introduction

The purpose of the last chapter is to summarize the principal research findings of the present investigation in response to the four research questions proposed in Chapter Three, and the discussions on these findings follow. Then, the implications arising from the research for teaching and learning of Business English reading in China and the contributions of the present study to related research areas are discussed. Finally, the limitations of the present study and proposals for future research are presented.

In Chapter Four, the use of reading strategies by 926 Business English majors from Southwest China has been systematically analyzed and described. Firstly, the frequencies and types of use of reading strategies by the students were identified from the three levels, i.e. overall, categories and individuals. Secondly, the significant variations in the students' strategy use in relation to the four investigated variables, i.e. gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety, were presented based on the three levels mentioned above. In Chapter Five, the researcher has analyzed the main reasons why the students

employed certain strategies frequently and certain strategies infrequently from the qualitative perspective. In order to shed some light on patterns of the significant variations in strategy use, as well as other apparent significant differences in relation to each investigated variable, the researcher will explore, analyze and suggest reasons for a better understanding of these significant variations in Section 6.3.

6.2 Summary of the Research Findings

The present investigation has reported the research findings through analyzing the data provided by 926 Business English majors. The findings have formed the responses to the research questions. In order to be more conclusive, the main findings corresponding to each research question are discussed further below.

6.2.1 Research Question One

In response to the first research question: *“What is the frequency of the reading strategies employed by the university Business English majors at different levels, i.e. overall, category and individual?”*, the research findings revealed that the holistic frequency mean score of the 45 reading strategies reported by the 926 students was 2.40. This indicates that the frequency of the students’ overall strategy use was at the medium use level according to the measure explained in Chapter Four. The mean frequency scores of the students’ strategy use in the PRS, WHS and POS categories, which were 2.49, 2.48 and 2.23, were also of the medium use. We can see that the mean scores of the strategies in the PRS and WHS categories were more or

less the same, while the mean score of the strategies in the POS category was lower when compared with the other two. Similarly, the frequency of the students' reading strategy use in the SCT and SCD sub-categories of WHS category were also of the medium use, with the mean scores of 2.53 and 2.42 respectively.

At the individual strategy level, the students reported 39 out of the 45 reading strategies being employed at the medium frequency level. One strategy was reported as the high frequency of use, which is *PRS1: Read the title of the text carefully*, with the mean score of 3.04. Four strategies fell into the frequency of low use. They are: *PRS11: Search for and read some related materials*, *WHS6: Raise questions about some information in the text*, *POS6: Read other sources about the same topic* and *POS1: Make critical comments and evaluation on the content of the text*. The mean frequency scores of these strategies range from 1.87 to 1.93. Of all the 45 strategies, PRS1 is the one with the highest mean score, whereas the lowest is PRS11.

6.2.2 Research Question Two

The second research question is: “*Do the reading strategies employed by the university Business English majors vary significantly in terms of gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety? If they do, what are the main patterns of variation?*”. In response to this research question, the variations in the students' use of reading strategies as well as the patterns of variations have been examined and determined in Chapter Four. The

significant variations in relation to the four independent variables at the three levels of data analysis can be summarized as follows:

- **Gender**

At the overall level, the results of ANOVA showed that the students' strategy use did not vary significantly according to their gender. At the category level, the significant variations of the students' reported strategy use was found in the POS category, with the female students reporting employing reading strategies significantly more frequently than the male students. No significant variations existed in the SCT and SCD subcategories.

At the individual level, the Chi-square tests showed that 15 out of the 45 individual reading strategies varied significantly in terms of the students' gender. Among the 15 strategies showing significant variations, a significantly higher percentage of the female students than the male students reported high use of 12 strategies. The top three strategies of this variation pattern are: *PRS1: Read the title carefully*, *WHS15: Guess the meaning of the words or sentences from the context* and *PRS6: Read the questions about the text*. In contrast, a significantly higher percentage of the male students than the female students reported high use of 3 strategies, which are: *WHS16: Analyze the structures of the difficult sentences*, *WHS4: Read every word and sentence slowly and carefully* and *PRS2: Construct one's related knowledge about the topic*.

● Level of Exposure to Specialized Courses

In terms of the independent variable of level of exposure to specialized courses, similar to gender, no significant variations were found in the students' use of reading strategies at the overall level. The variations of the students' strategy use at the category level existed in the POS category, with the mean score of the students with less exposure to specialized courses higher than that of the students with more exposure to specialized courses. However, in the subcategories of the WHS category, the students with more exposure to specialized courses reported significantly more frequent use of the strategies in the SCT sub-category and no significant variations were found in the SCD sub-category.

The Chi-square tests showed that 18 out of the 45 individual reading strategies varied significantly according to the students' levels of exposure to specialized courses. A significantly greater percentage of the students with less exposure to specialized courses than the students with more exposure to specialized courses reported high use of 12 strategies. Examples are: *WHS10: Take notes or mark the important information in the text*, *WHS7: Make use of the features of the text* and *PRS4: Read or check the new word list*. Whereas, a significantly greater percentage of the students with more exposure to specialized courses than the students with less exposure to specialized courses reported high use of 6 strategies. Examples are: *WHS12: Use specialized terms as clues or indications*, *WHS13: Do fast reading first and peruse later* and *WHS17: Adjust one's reading rate accordingly*.

- **Level of Reading Proficiency**

Regarding the variations of the students' overall strategy use, the ANOVA results revealed significant variations among the mean frequency scores of the students' overall strategy use in relation to their reading proficiency levels. The results of the Post hoc Scheffé tests showed that the students with high reading proficiency level reported employing reading strategies significantly more frequently than those with moderate or low reading proficiency level. No significant variations were found between the students with moderate and low reading proficiency levels. At the category level, significant variations in the use of the strategies in the WHS category were found in relation to this variable. The students with high reading proficiency level reported significantly more frequent use of the strategies in the WHS category than the students with low reading proficiency level. No significant variations were found in the use of reading strategies in the PRS and POS categories in terms of this variable. The variations in the subcategories of the WHS category only existed in the SCT sub-category, with the students with a higher reading proficiency level employing reading strategies significantly more frequently than the students with a lower reading proficiency level.

At the individual level, the Chi-square tests revealed that more than half of the reading strategies (25 out of 45) showed significant variations according to the students' levels of reading proficiency. Most of them are the while-reading strategies (18 items). The existing dominant variation pattern was considered as positive. Of the

25 reading strategies showing significant variations, a significantly greater percentage of the students with a higher reading proficiency level than the students with a lower reading proficiency level reported high use of 17 strategies. The top three are: *WHS15: Guess the meanings of the words or the sentences from the context*, *WHS17: Adjust one's reading rate accordingly*, and *WHS1: Read the questions about the text*. On contrast, a significantly greater percentage of the students with a lower reading proficiency level than the students with a higher reading proficiency level reported high use of 6 strategies. The variation pattern of the 6 strategies was classified as negative. Examples are: *PRS4: Read or check the new word list*, *WHS21: Consult the dictionary for new words* and *WHS19: Translate the text into Chinese*. The variation pattern of another 2 strategies was mixed.

- **Level of Reading Anxiety**

In respect to the students' levels of reading anxiety, the results from the ANOVA demonstrated that the students' overall strategy use varied significantly according to this variable. The Post hoc Scheffé tests showed that the students with low anxiety level reported significantly more frequent use of reading strategies than the students with high anxiety level. No significant variations in the overall use of reading strategies was found between the students with moderate and low anxiety levels, as well as the students with moderate and high anxiety levels. In terms of the category level, significant variations of the students' use of reading strategies existed in the PRS and WHS categories. In the PRS category, the students with low and

moderate reading anxiety levels reported employing reading strategies significantly more frequently than those with high anxiety level. In the WHS category, the students with low anxiety level reported significantly more frequent use of reading strategies than those with high anxiety level. In the subcategories, Variations existed in the SCT subcategory, showing that the students with a lower reading anxiety level reported employing reading strategies significantly more frequently than the students with a higher anxiety level.

At the individual strategy level, according to the results of the Chi-square tests, 22 strategies varied significantly in terms of this variable. Five variation patterns were discovered, but two are dominant, which are: ' $L>M>H$ ' and ' $H>M>L$ '. The former pattern indicates that a significantly greater percentage of the students with a lower anxiety level than those with a higher anxiety level reported high use of those strategies; while the latter pattern indicates that a significantly greater percentage of the students with a higher anxiety level than those with a lower anxiety level reported high use of those strategies. The ' $L>M>H$ ' pattern includes 12 strategies, examples are: *WHS17: Adjust one's reading rate accordingly*, *WHS1: Pay attention to the key words in the text* and *PRS1: Read the title of the text*. The ' $H>M>L$ ' pattern includes 5 individual strategies, examples are: *POS2: Look up the new words in the dictionary*, *WHS21: Consult the dictionary for new words* and *WHS19: Translate the text into Chinese*. The third variation pattern is ' $H>L>M$ ', indicating that a significantly greater percentage of the students with high anxiety level than the students with low

anxiety level reported high use of those strategies, and a significantly greater percentage of the students with low anxiety level than the students with moderate anxiety level reported high use of those strategies. This variation pattern includes 3 strategies, which are: *WHS4: Read every word and sentence slowly and carefully*, *WHS18: Ask the teachers, classmates or friends for help*, and *WHS7: Read the first and the last paragraph first*. The other two variation patterns are '*M>L>H*' and '*L>H>M*', which include 1 strategy respectively.

6.2.3 Research Question Three

The third research question of the present investigation is: "*What are the main underlying factors in the reading strategies used by the university Business English majors? Are there any factors strongly related to the four variables of gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety? If so, what are they?*" In order to answer this question, the factor analysis has been used to analyze the data. Four factors have been extracted through the factor analysis, which have been termed as: *Factor 1: Strategies for Seeking Key Information*, *Factor 2: Strategies for Enhancing Comprehension*, *Factor 3: Strategies for Understanding reading Texts Holistically* and *Factor 4: Strategies for coping with discrete Difficult Language Points*.

Three factors were found to be strongly related to the four investigated variables. Factor 3 was found to be strongly related to the gender of the students; Factor 2 and Factor 4 were found to be strongly related to the students' levels of

exposure to specialized courses; Factor 3 and Factor 4 were found to be strongly related to the students' levels of reading proficiency; similarly, Factor 3 and Factor 4 were also found to be strongly related to the students' levels of reading anxiety.

6.2.4 Research Question Four

The fourth research question for the present study is: "*Why do the university Business English majors employ certain strategies frequently and certain strategies infrequently?*". In order to answer this research question, the semi-structured interviews were conducted with 48 participants to elicit the underlying reasons for the students' choices of the reading strategies. Eleven reasons for the students' using certain strategies frequently and nine reasons for using certain strategies infrequently emerged from the interview data. These reasons are summarized in the following:

- **Reasons for using certain strategies frequently**
 - 1) Gaining a General Idea about the Text
 - 2) Preparing for an Efficient Reading
 - 3) Determining Reading Focuses
 - 4) Promoting Attention
 - 5) Identifying Key Information
 - 6) Overcoming Comprehension Difficulties
 - 7) Enhancing Comprehension
 - 8) Increasing Reading Efficiency
 - 9) Finding Answers Easily and Quickly
 - 10) Deepening Understanding
 - 11) Building up Language Knowledge
- **Reasons for using certain strategies infrequently**
 - 1) Wasting Time
 - 2) Being Unnecessary
 - 3) Having Little Help for Comprehension
 - 4) Influencing Reading Efficiency and Effect
 - 5) Lacking Sufficient Linguistic Knowledge

- 6) Being Unaware of Certain Strategies
- 7) Having no Idea How to Use
- 8) Being Unwilling to be Dependent
- 9) Having no Interest or Patience

6.3 Discussion of the Research Findings

Section 6.2 has summarized the research findings for the four research questions. This section will deal with the discussion on these research findings. It will focus on the possible explanations for the significant differences in the students' reading strategy use in relation to the four investigated variables. It must be noted that it may not be easy to relate the findings of the present study to the previous studies because as Intaraprasert (2000) points out, the ways of classification of reading strategies in different studies make it difficult to make comparisons of strategies reported in one study with those reported in another.

6.3.1 Frequency of Students' Reading Strategy Use

The results of the present study revealed that the overall strategy use of the Chinese university English majors were at medium frequency level. The results of the present study were consistent with some of the previous studies in Chinese context, such as Liu (2004), Li and Wang (2010) and Luo (2010). Liu (2004) carried out a study with 64 Chinese English-major students. The results revealed that the students reported overall strategy use was at the moderate level. In their study, Li and Wang (2010) investigated the reading strategy use by 182 Chinese university English majors. The findings showed that overall the students used strategies at the medium level of

frequency. Luo (2010) conducted a research with 1368 Chinese university students. Similarly, the findings revealed that the students' overall strategy use was at the medium use level.

The findings of the present study indicate that the subjects of the present study employed reading strategies more or less when they read Business English texts, but they did not have high strategic awareness. They were not skillful in employing reading strategies to facilitate reading comprehension and overcome reading difficulties. Two factors might be hypothesized to help explain this kind of phenomenon: the lack of reading strategy use training and the level of reading proficiency.

The first factor might be the students' lack of strategy use training. Reading instruction in the Chinese EFL context is still dominated by the traditional reading instructional model. It emphasizes the impartment of isolated knowledge such as vocabulary, grammars, and sentence patterns and ignores the nature of reading comprehension, the importance of reading strategies, and the cultivation of learners' reading autonomy (Wan and Li, 2005). Although some researchers have conducted research on reading strategies and informed teachers of the importance of reading strategies, Chinese teachers seldom put the research findings into practice (Li and Qin, 2005). This may be because the teachers themselves do not have much knowledge about strategic reading and they do not have confidence to train the students how to employ strategies in English reading comprehension. Regarding the Business English

reading, this kind of situation may be more serious. As mentioned in Chapter One, many teachers of Business English are inexperienced in teaching Business English reading as most of them graduated from the linguistic or literature areas. They seldom talk about reading strategies concerning content-based reading in class (Tang, 2010 and Chen, 2012). As a result, the students have got little training in reading strategy use. Therefore, the students have not yet realized the important role of reading strategies and their strategic awareness is still low when reading Business English texts.

The other factor might be the students' reading proficiency level. According to Ellis (1994), the students' language proficiency level might be a factor that may influence their use of reading strategies. The findings of previous studies (Sheorey and Mokhtari, 2001, Mokhtari and Reichard, 2004; Liu and Zhang, 2008; Zhang and Wu, 2009; and Luo, 2010) revealed that the students' reading strategy use is strongly related to their levels of reading proficiency. Students with a higher reading proficiency level usually have higher strategic awareness. In the present study, the total score of the Business English Reading Proficiency Test was 56. The mean score of the students obtained in the test was 28.53. This indicates that the students' overall reading proficiency level was low, which may have affected their employment of reading strategies. This might help explain why the frequency level of the students' strategy use was not high.

6.3.2 Reading Strategy Use in Relation to Students' Gender

As reported in Chapter Four, the findings of the present study demonstrated that there were no significant differences in the overall strategy use between the male and female students. At the category level, significant differences of the students' strategy use existed in the POS category. At the individual strategy level, 15 reading strategies varied significantly according to the students' gender. This is similar to the results of the study by Young and Oxford (1997), which revealed that males and females were not significantly different in strategy use at the overall and category levels. However, significant differences existed in their use of many individual strategies. Young and Oxford (1997) concluded that gender-based differences in strategic behavior might not reside in general categories, but rather at the level of specific strategies.

The findings of the present study indicate that, in general, the females employed reading strategies significantly more frequently than the males while reading. The finding of the present study were consistent with some previous studies on reading strategies of EFL/L2 learners, with females reporting using reading strategies significantly more frequently than males, e.g. Sheorey and Mokhtari, 2001; Ozek, 2006; Martinez, 2008; Cantrell and Carter, 2009; Saengpakdeejit, 2009; and Poole, 2010. In the Chinese context, Goh and Foong (1997) investigated the reading strategies employed by Chinese learners of English. In their study, significant differences were found between males and females, with the females employing

reading strategies significantly more frequently than the males. Luo (2010) has also conducted research on the employment of reading strategies by Chinese university students. The results showed that the female students reported using reading strategies significantly more frequently than their male counterparts.

The findings of the present study and some previous study indicate that the students' use of reading strategies has certain relationship with students' gender. That is to say, gender may be the factor that influences language learners' choices of reading strategies. As mentioned in Chapter 3, some researchers have considered gender as a social factor affecting language learners' use of learning strategies. Oxford and Nyikos (1989) conclude that gender difference had 'a profound influence' on strategy use. Green and Oxford (1995) point out that it is clear that gender difference trends in strategy use are quite pronounced within and across cultures, and this means that females and males are using different approaches to language learning. However, it is not easy to interpret the differences of reading strategy use between males and females, as Green and Oxford (1995) point out, this kind of difference could be related to underlying learning styles, motivation, and attitudes. Different researchers may have different interpretations about this kind of difference.

For the present study, a few possible explanations for the differences of the strategy use between the male and female students have been hypothesized by the researcher. The first possible explanation could be the differences of language learning styles and the preferences of strategy use between males and females.

According to Zaidi (2010), females and males are of equal intelligence; however, they are likely to operate differently as they seem to use different parts of their brain to encode memories, sense emotions, solve problems and make decisions. Certain characteristics in the brain play important roles in female and male learning processes and language development. Male and female brains are wired differently and that is why they learn, feel and react so differently. Studies have shown that female students tend to use the areas of the brain devoted to verbal and emotional functioning, while male students generally use the areas of the brain geared toward spatial and mechanical tasks (Moir and Jessel, 1989). The density of synapses in the temporal neocortex was greater in men than in women. Fewer synapses to other regions may represent increasing specialization of the temporal cortex for language processing in females, and this may be related to their overall better performance on language tasks (Alonso-Nanclares, Gonzalez-Soriano, Rodriguez and DeFelipe, 2008). Intaraprasert (2000) points out that males and females have their own ways of using strategies to learn a foreign or second language. Young and Oxford (1997) also suggest that some strategies might be gender-related.

Many research findings showed that males and females tended to employ different strategies in language learning, particularly in reading comprehension (Green, and Oxford, 1995; Mayer, 1996; Abu-Rabia, 1999; Sheorey, 1999; Chavez, 2001, and Lee, 2012). In addition, males and females may use the same number of strategies in language learning but females are more skillful at applying these

strategies qualitatively (Young and Oxford, 1997; and Clark, Osborne and Akerman, 2008). In the present study, it is obvious that the females and males had different orientations in reading strategy use. For example, the females tended to use some strategies such as *guessing the meaning of the words or the sentences from the context (WHS15)* and *doing fast reading first and peruse later (WHS13)*; while the males tended to use some strategies such as *analyzing the structures of difficult sentences (WHS16)*, and *reading every word and sentence slowly and carefully (WHS4)*. In addition, the female students employed some post-reading strategies, such as *reviewing the content of the text for better understanding (POS5)*, *reviewing the notes and marks one made to understand better (POS7)*, and *concluding one's reading or difficulties (POS8)*, significantly more frequently than the male students; however, the male students did not employ any of the post-reading strategies significantly more frequently than their female counterparts.

The second possible explanation may be the differences of the perceptions and attitudes toward English language learning between males and females. In the present study, the female students reported employing reading strategies significantly more frequently than their male counterparts. This may be influenced by their perceptions and attitudes towards English language learning. As Mori and Gobel (2006) point out, female students show higher self-perception in English language learning than male students. Swalander and Taube (2007) have also found that females showed a more positive attitude to English reading. Due to females' higher

perception and more positive attitude toward language learning and reading, they will be more active and motivated in reading and will actually attempt to employ more reading strategies to enhance their reading comprehension or cope with their reading problems and difficulties.

Another possible explanation could be the differences of the students' reading proficiency levels between the males and females. In the present study, the mean score of the female students in the reading comprehension test was apparently higher than that of the male students. The female students also reported significantly greater use of the reading strategies at the category and individual levels. In the gender-based literature, females are seen as better language learners than males in L2 learning (Chavez, 2001); they have been claimed as better academic achievers due to a desire for good grades and social approval of their academic success (Oxford and Nyikos, 1989). As females are better at language learning than males, they will be more motivated to look for more opportunities to engage in the analysis and practice of second language input (Salahshour, Sharifi and NedaSalahshour, 2013). The findings of some studies indicate that good language learners are more active in strategy use than poor language learners (Oxford and Nyikos, 1989, Green and Oxford, 1995; and Intaraprasert, 2000). In reading strategy research, a number of previous studies (e.g. Sheorey and Mokhtari, 2001; Martinez, 2008; Cogmen and Saracaloglu, 2009; and Luo, 2010) have also revealed that students with a higher level of reading proficiency tended to employ reading strategies significantly more

frequently than did the students with a lower level of reading proficiency. Lee's (2012) study revealed that females tended to be better language learners in L2 learning environments. They employed more top-down strategies and were better in practicing from top to bottom and from bottom to top in their interactions with the reading passages, which was very similar to the present study.

Based on the findings of the present study together with the previous studies, we may conclude that gender could be a factor that may influence the strategy employment of the readers. Therefore, the potential for gender to affect learners' use of reading strategies cannot be ignored. However, the findings about the reading strategy use in relation to gender are not consistent and conclusive. Further research in this area is still definitely necessary.

6.3.3 Reading Strategy Use in Relation to Levels of Exposure to Specialized Courses

The students' levels of exposure to specialized courses were classified as more exposure and less exposure. The findings of the present investigation revealed that no significant variations in the overall strategy use existed between the students with more exposure and less exposure to specialized courses. However, significant variations in strategy use between the two groups were found at the category level and the individual strategy level.

At the category level, the students with less exposure to specialized courses reported employing strategies in the POS category significantly more frequently than

the students with more exposure to specialized courses. At the individual level, a significantly greater percentage of the students with less exposure to specialized courses than the students with more exposure to specialized courses reported high use of 12 reading strategies; whereas a significantly greater percentage of the students with more exposure to specialized courses than the students with less exposure to specialized courses reported high use of 6 reading strategies. This indicates that, as a whole, the students with less exposure to specialized courses employed reading strategies significantly more frequently than the students with more exposure to specialized courses.

No previous research has been carried out to investigate the relationship between the Business English majors' use of reading strategies and their levels of exposure to specialized courses. However, two possible explanations have been hypothesized to help interpret the significant variations in the use of reading strategies between the students with more and less exposure to specialized courses: 1) the difficulty and challenge of Business English reading for the students, and 2) the schemata of the students about business knowledge. The first possible explanation could be the difficulty and challenge the students confronted in reading Business English. It could be assumed that the degrees of difficulty and challenge that the students with different levels of exposure to specialized courses were faced with were different when reading Business English texts. As mentioned in Chapter Three, the students with less exposure to specialized courses were the students in the first and

second years. Most of the courses for them dealt with the language skills. The students' focus of study in this phase was on the language knowledge rather than on the business content matter. On the other hand, the courses for the students with more exposure to specialized courses mainly concern the business knowledge. The predominant learning task for them was studying the business courses by using English as the medium. Therefore, the students with more exposure to specialized courses would actually involve more English reading relating to business content and they would be more experienced in reading Business English texts than the students with less exposure to specialized courses. Thus, it could be assumed that reading Business English texts would be more difficult and challenging for the students with less exposure to specialized courses than the students with more exposure to specialized courses.

According to Phakiti (2003), learners are likely to be more aware of their performance or behaviors in the learning process when they are faced with difficulty. In the present study, it could be inferred that the students with less exposure to specialized courses would confront them with more difficulties and challenges when reading Business English, and they had to attempt to employ more different strategies to cope with these difficulties and challenges. This could be evidenced by the differences in reading strategy use between the two groups of students. At the category level, the students with less exposure to specialized courses reported employing the post-reading strategies (POS) significantly more frequently than the

students with more exposure to specialized courses. This indicates that the students with less exposure to specialized courses confronted more difficulties in the while-reading stage that they needed to do more compensating activities to enhance their comprehension or solve their difficulties after they finished the actual reading. On the other hand, the students with more exposure to specialized courses reported employing strategies in the SCT sub-category of the WHS category significantly more frequently than the students with less exposure to specialized courses, indicating that the students with more exposure to specialized courses were more active in reading strategy use in the while-reading stage. In terms of the individual strategy use, we can see that the students with less exposure to specialized courses tended to employ some simple or less complicated cognitive strategies, such as *reading the new word list (PRS4)* and *reading every word and sentence slowly and carefully (WHS4)*. They relied more on their native language and the help from others, as they tended to use the strategies such as *translating the text into Chinese (WHS19)* and *asking teachers, classmates and friends for help (WHS18)*. Whereas, the students with more exposure to specialized courses were more purposive while reading and they employed the more complicated cognitive strategies or metacognitive strategies significantly more frequently than the students with less exposure to specialized courses, such as *setting goals or purposes of reading (PRS3)*, *doing fast reading first and peruse later (WHS13)*, and *adjusting the reading rate accordingly (WHS17)*.

The second explanation could be the students' schemata about business knowledge. As stated earlier in the introduction part, schema theory emphasizes the importance of the readers' background knowledge. When reading, the readers make use of their schemata to interpret the information in the reading texts. A schema serves as a bridge to connect the new information with the old information (Perkins and Salomon, 1989). Some researchers (Carrell, 1983; Barnett, 1989; Bruning, 1995; and Brantmeier, 2004) point out that what students already know (their background knowledge) significantly influences their understanding of L2 reading materials. While reading, the readers' schemata on the topic of the reading text will affect their reading process and hence influence their use of reading strategies. The readers' schema for the topic helps them to anticipate, to infer, to decide what is or is not important, to build relationships between ideas, or to decide what information merits close attention (Alvermann and Pheps, 2002). After reading, they use the schema as a topic to help them recall what they have read and put it into their own words in order to make them understand what they have read better (Alvermann and Pheps, 2002). In the present study, the students with more exposure to specialized courses reported using the strategies relating to the content schema significantly more frequently than the students with less exposure to specialized courses, as they have more background knowledge about business that enable them to do so. Examples are: *using specialized terms as clues or indications (WHS2)* and *making critical comments and evaluations on the content of the text (POS1)*. On the other hand, the students with less exposure

to specialized courses seemed to put more effort into decoding the meanings of the words and sentences. They tended to use the strategies in relation to the formal and linguistic schema, such as *reading or checking the new word list (PRS4)*, *making use of the features of the text (WHS7)*, and *reading every word and sentence slowly and carefully (WHS4)*, as they did not have that much business background knowledge as the students with more exposure to specialized courses had.

6.3.4 Reading Strategy Use in Relation to Levels of Reading Proficiency

As reported in Chapter Four, the findings of the present investigation revealed that the high-proficiency students reported significantly greater overall strategy use than either the moderate- or low-proficiency students. When it comes to the use of reading strategies in the three main categories (PRS, WHS and POS), the results showed that the significant differences of the students' strategy use were found in the WHS category according to the students' levels of reading proficiency, but no significant differences were found in the PRS and POS categories. At the individual strategy level, 18 out of the 25 strategies showing significant differences fell into the WHS category. This means that the variations of strategy use among the three groups of students mainly existed in the use of reading strategies in the while-reading stage. Overall, the students with higher reading proficiency levels reported significantly greater use of reading strategies than the students with lower reading proficiency levels. In addition, the students with different proficiency levels tended to employ different strategies.

The findings of the present study were consistent with many of the previous studies outside China, e.g. Sheorey and Mokhtari, 2001; Mokhtari and Reichard, 2004; Martinez, 2008; Cogmen and Saracaloglu, 2009; Anastasiou and Griva, 2009; and Maarof and Yaacob, 2011, and also in line with a few studies in the Chinese context, e.g. Liu, 2002; Liu and Zhang, 2008; Zhang and Wu, 2009; and Luo, 2010. The results of these studies revealed that the higher proficiency readers employed reading strategies significantly more frequently than the lower proficiency readers. The higher proficiency readers and the lower proficiency readers had different tendencies in strategy use.

Regarding the differences in the students' reading strategy use in relation to their levels of reading proficiency in the present study, a few possible explanations could be hypothesized. They are the students' reading motivation, strategic awareness, out-of-classroom reading and language ability. The first explanation could be the students' reading motivation. Motivation is defined by Ellis (1994, p. 715) as "the effort which the learners put into learning an L2 as a result of their need or desire to learn it". According to Ellis (1994, p. 542), motivation is a learner factor that affects learners' use of learning strategies. "The strength of learners' motivation can be expected to have a causal effect on the quantity of learning strategies they employ". In their study, Oxford and Nyikos (1989: 294) found that "the degree of expressed motivation was the single most powerful influence on the choice of language learning strategies". Good language learners are motivated (Ushioda, 2008). Yule (1996)

comments that students who experience success in language learning are among the highest motivated to learn. Higher-proficiency students are more motivated in language study, “the effort they put into their language learning may enable them to employ a wider range of strategies” (Intaraprasert, 2000, p. 257). In the present study, the students with a higher proficiency level actually reported greater use of reading strategies than the students with a lower proficiency level. This could possibly be explained by their differences of motivation in reading.

The second explanation could be the students’ strategic awareness. This could be evidenced by the semi-structured interviews in the present study, in which many students with low reading proficiency level explained that they employed certain strategies infrequently or even did not use them because they were unaware of them or they did not know how to use them. Strategic awareness is critically important in skilled reading. According to Sheorey and Mokhtari (2001, p. 433), “It is the combination of conscious awareness of the strategic reading process and the actual utilization of reading strategies that distinguishes the skilled from unskilled readers”. As Paris and Jacobs (1984) point out, skilled readers often engage in deliberate activities that require calculated thinking, flexible strategies, and periodic self-monitoring, while novice readers often seem oblivious to these strategies and the need to use them. In accordance, Pressley (2000) suggests that awareness and use of reading strategies is a characteristic of superior reading comprehension and successful reading. Many previous studies have also revealed that higher-proficiency readers

usually have higher awareness of strategy use (Block, 1986; Najjar, 1998; Liu, 2004; Anastasiou and Griva, 2009; and Luo, 2010).

Anastasiou and Griva (2009) found that poor readers were less aware of the more sophisticated cognitive strategies, and they reported using a limited number of meta-cognitive strategies in comparison with good readers. This was similar to the present study, which showed that the students with a higher proficiency level reported employing a wider range of reading strategies significantly more frequently than the students with a lower proficiency level, including the strategies concerning *guessing (WHS15)*, *holistically comprehending the text (WHS13)*, *seeking key information (WHS1)*, *adjusting or monitoring the reading process (WHS17)*. Most of these strategies are metacognition awareness related or sophisticated cognition competence related, which means that higher-proficiency students had higher strategic awareness, and thus employed more strategies than the lower-proficiency students.

The third explanation could be the frequency of the out-of-classroom reading. In the present study, it was found from the questionnaires and the interviews that the students who reported a higher frequency of reading strategy use also reported a higher frequency of out-of-classroom reading. It could be inferred that the more the students read Business English texts, the more strategies they could employ. The students who read Business English more outside the classroom setting would be more experienced in reading Business English and more skillful in employing reading strategies to enhance their reading comprehension and overcome their reading

difficulties. The students who read more frequently outside the classroom setting were actually those students with higher reading proficiency. The study by Intaraprasert (2000) revealed that higher-proficiency students were highly motivated to seek opportunities to expose themselves to English outside the classroom and they were able to employ a wider range of strategies. Similarly, the study of Luo (2010) also revealed that the students who read English texts frequently outside the classroom setting reported employing reading strategies significantly more frequently than the students who read English texts infrequently outside the classroom setting.

Another possible explanation may be the students' English language abilities. According to Ellis (1994), the relationship between students' use of strategies and their levels of language proficiency is bi-directional. Students' use of learning strategies will influence their language proficiency, and in turn their language proficiency will also affect their choices of learning strategies. In the present study, from the overall perspective, the students with higher reading proficiency reported employing reading strategies significantly more frequently than the students with lower reading proficiency. This may be caused by their difference in reading proficiency. The students with higher reading proficiency may be able to employ a greater range of reading strategies to enhance their reading comprehension. In addition, the high- and the low-proficiency students had different tendencies in strategy use due to their different language abilities. For example, the high-proficiency students reported employing more strategies relating to language

abilities, such as *making use of word collocations (WHS20)*, *analyzing the structures of difficult sentences (WHS16)* and *analyzing the formations of unknown words (WHS14)*, whereas the low-proficiency students tended to employ the reading strategies relating to the dictionaries, references or the help from others to cope with their reading difficulties, such as *reading the new word list (PRS4)*, *looking up the new words in the dictionary (WHS21)*, *consulting the references to solve reading difficulties (WHS24)* and *asking the teachers or friends for help (WHS18)*.

6.3.5 Reading Strategy Use in Relation to Levels of Reading Anxiety

Reading anxiety was hypothesized as an independent variable affecting the students' choices of reading strategies in the present study. The results of the ANOVA showed that the students' use of reading strategies varied significantly at the overall and category levels according to their levels of reading anxiety. The frequencies of the students' reading strategy use were negatively correlated with the students' levels of reading anxiety, with the students with higher anxiety reporting employing reading strategies significantly less frequently than the students with lower anxiety. The Chi-square tests showed that, at the individual level, 22 strategies varied significantly according to this variable. The main variation pattern was ' $L > M > H$ ', indicating that a significantly greater percentage of the students with a lower anxiety level than the students with a higher anxiety level reported high use of those reading strategies. It was also found that the students with different anxiety levels had different tendencies to use different strategies. From the results above, we may infer that there are possible

correlations between the students' levels of reading anxiety and their use of reading strategies.

The results of present study were consistent with the study of Lien (2011), which revealed that foreign language reading anxiety was negatively correlated with reading strategy use. The students with higher anxiety employed reading strategies less frequently. In addition, the reading strategies employed by EFL learners with a higher anxiety level were different from those with a low anxiety level. EFL learners with lower anxiety tended to use general reading strategies such as guessing, while EFL learners with higher anxiety tended to employ basic support mechanisms such as translation to help them understand the text. Miyanaga (2002) also found that more anxious students tended to rely on word-level local reading strategies. Similarly, the results of the present study revealed that the students with higher reading anxiety tended to focus more on discrete words and employ some support strategies such as *looking up the new words in the dictionary (POS2)*, *translating the text into Chinese (WHS19)*, and *discussing the problems or difficulties with the teachers or friends (POS10)*. While students with lower anxiety tended to employ more general or top-down strategies, such as *adjusting the reading rate accordingly (WHS17)*, *paying attention to the key words (WHS1)*, *setting goals/purposes of reading (PRS3)*, and *skipping unimportant content (WHS12)* to monitor or manage their reading process. This indicates that the students with lower reading anxiety had higher metacognitive awareness than the students with higher reading anxiety.

Two factors may be hypothesized to help explain the differences of the students' reading strategy use in relation to their levels of reading anxiety for the present study. The first factor may be the students' reading proficiency. In the present study, the mean reading-proficiency scores of the students with a higher anxiety level were lower than those of the students with a lower anxiety level. This indicates that the students' reading proficiency and reading anxiety negatively correlated. As reported and discussed earlier, the students with a higher proficiency level reported employing reading strategies significantly more frequently than the students with a lower proficiency level. Therefore, it is not difficult to explain why the students with lower reading anxiety reported more frequent use of reading strategies. From another perspective, reading proficiency was the reflection of the students' English language abilities, the students with different levels of language abilities would tend to use different reading strategies. This can help explain why the students with different anxiety levels tended to employ different reading strategies.

The other factor may be the students' familiarity of the content knowledge about Business English. In their study, Rajab et al (2012) pointed out that there were several factors that were identified to elicit reading anxiety among L2 learners. These factors include unfamiliar linguistic components, culture materials and curricular content. Rajab et al (2012) found that low proficient ESL learners at tertiary level might find problems in comprehending the academic texts as they did not have enough vocabulary and were also unfamiliar with the content of the topics they were

learning. When they were not familiar with the content, they might feel anxious and stressed to continue reading the text and if this was not addressed, it might impede learners' reading process. Saito, Horwitz and Garza (1999) also found that students' reading anxiety increased with their perceptions of the difficulty of reading in their FL, and their grades decreased in conjunction with their levels of reading anxiety. In the present study, the participants were Business English majors under the content-based instruction (CBI). Their content knowledge would play an important role for them to comprehend Business English texts. The students who were not familiar with the specialized vocabulary and the business content would definitely perceive reading Business English difficult. This would increase their reading anxiety, and thus would affect their use of reading strategies and reading proficiency.

In sum, the results of the present study revealed that the use of reading strategies by university Business English majors was strongly related to the four investigated variables, i.e. the students' gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. In general, the female students reported employing reading strategies significantly more frequently than the male students; the students with a higher reading proficiency level reported employing reading strategies significantly more frequently than the students with a lower reading proficiency level. The results of the present study relating to the two variables were consistent with many previous studies.

The variable of the students' level of exposure to specialized courses has never been taken into consideration in the previous studies. However, the results of the present study revealed that the students' use of reading strategies had strong relationship with the students' levels of exposure to specialized courses. The students with less exposure to specialized courses reported employing strategies significantly more frequently than the students with more exposure to specialized courses. Regarding the variable of the students' levels of reading anxiety, only one or two studies have been found in the literature to investigate the relationship between the students' use of reading strategies and their levels of reading anxiety. In the present study, the students with lower reading anxiety reported employing reading strategies significantly more frequently than the students with higher reading anxiety. The results of the present study were similar to those of the previous studies.

6.4 Implications of the Research Findings for Teaching and Learning Business English Reading

From the results of the present study responding to the research questions, it has been found that, as a whole, the frequency of reading strategy use by Chinese university Business English majors was at the medium use level; there was relationship between the students' use of reading strategies and the students' gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. Some implications for teaching and learning Business English reading for Chinese university Business English majors may be concluded as follows:

1. The medium frequency of the students' reading strategy use indicates that the frequency of reading strategy use by Chinese university Business English majors is not high. The students are not skillful at employing different reading strategies to enhance their reading comprehension or overcome their difficulties when reading Business English texts. Their awareness of reading strategy use still needs to be improved. Therefore, teachers of Business English reading should consciously arouse the students' strategic awareness, purposively introduce effective reading strategies for content-based reading to their students, or even do some training of reading strategy use for the students. Meanwhile, the students of the Business English major should understand the important role of reading strategies in reading comprehension. They should pay more attention to strategy use while reading Business English texts. This may greatly improve their reading efficiency and proficiency in Business English reading.

2. Arising from the research findings, the female students reported employing reading strategies significantly more frequently than the male students. This implies that female students have a higher degree of strategic awareness. They are better at using reading strategies than the male students in Business English reading. It offers valuable insights for teachers of Business English reading if female students are more aware of the importance of reading strategies and more prepared to use reading strategies in Business English reading, then male students may need more help and attention than female students in developing such capacities in strategy use.

In addition, as males and females have different tendencies in strategy use, understanding gender differences in reading strategy use may enable teachers of Business English reading to use this awareness to help their students of either gender to improve their Business English reading comprehension.

3. In terms of the relationship between the students' reading strategy use and their levels of exposure to specialized courses, it was found that the students with less exposure to specialized courses reported employing the post-reading strategies significantly more frequently than the students with more exposure to specialized courses, whereas the students with more exposure to specialized courses reported employing while-reading strategies significantly more frequently than the students with less exposure to specialized courses. This indicates that the students with less exposure to specialized courses encounter more difficulties while reading and they need to do more activities to help them comprehend the texts after reading the texts. On the other hand, the students with less exposure to specialized courses were also not good at using the metacognitive strategies or sophisticated cognitive strategies as the students with more exposure to specialized courses did. This means that the students with less exposure to specialized courses need more help in Business English reading. Teachers of Business English reading should teach the two groups of students in different ways, which may make the teaching of Business English reading more effective and efficient. More important, teachers should pay more effort to cultivate the strategic awareness, especially the metacognitive awareness of the students with

less exposure to specialized courses, and train them how to read content-based materials effectively and efficiently by using different reading strategies.

4. One of the important findings in the present study is that the students with a higher reading proficiency level reported significantly greater use of reading strategies and they had higher strategic awareness than the students with a lower reading proficiency level. The students with higher proficiency were more skillful at employing the metacognitive strategies or sophisticated cognitive strategies when reading Business English texts. While the students with lower reading proficiency tended to employ the simple or basic cognitive strategies and relied more on the dictionary and help from others. This indicates that the students with lower reading proficiency are not so good at employing reading strategies as the students with higher reading proficiency. Therefore, teachers of Business English should help the students with the lower reading proficiency levels increase their strategic awareness, encourage them to employ more strategies, especially the sophisticated cognitive strategies and the metacognitive strategies. Teachers also need to train the students, especially the students with low reading proficiency level, to know when, where and how to use different reading strategies appropriately and effectively to enhance their reading comprehension.

5. Another important finding in the present investigation is that the students with higher reading anxiety reported employing reading strategies significantly less frequently, and they also got lower reading proficiency scores than the students with

lower reading anxiety. The students with higher reading anxiety focused more on the word meanings and tended to employ the strategies coping with word difficulties, such as checking the new word list and consulting the dictionary for new words. They relied more on their mother language, e.g. translating the text into Chinese. On the contrary, the students with lower reading anxiety focused more on the textual meaning and tended to employ more metacognitive or top-down reading strategies to monitor or manage their reading process. Therefore, teachers of Business English should put more effort to help the students reduce their reading anxiety by training them how to employ different reading strategies more effectively to enhance their reading comprehension and solve their reading difficulties. On the other hand, the higher anxiety students should try to relax themselves and decrease their reading anxiety by practicing reading more Business English texts and try more different reading strategies to improve reading comprehension while reading Business English texts.

6. The results of the qualitative data revealed that the strategic awareness of many students needs to be improved. For example, many students reported in the semi-structured interviews that they did not employ certain strategies or employ them infrequently because they did not know or were not aware of these strategies. Some students reported that they knew some reading strategies were useful and important, but they didn't know how to use them or felt it difficult to apply them. In addition, some students held some wrong beliefs about certain strategies. For example, some students perceived employing certain effective strategies as time wasting or

unnecessary. Some even reported that they had no interests or patience to apply certain strategies. Therefore, increasing the students' awareness of strategy use is important and necessary. Teachers of Business English reading have the responsibility to help the students set up correct opinions and perceptions about the use of reading strategies. Teachers should introduce different effective reading strategies to the students. They should also train the students how to use these reading strategies appropriately and effectively.

6.5 Limitations of the Present Investigation and Suggestions for Future Research

The present study has been designed to investigate the employment of reading strategies by university Business English majors. It has been systematically conducted with reference to the research questions, which were to describe the students' reading strategy use at the overall, category and individual levels as well as to examine whether there were correlations between the students' reading strategy use and their gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. In addition, the present investigation has explored the possible reasons behind the students' choices of reading strategies. The present study has been valid and valuable in addressing the primary research questions. However, in carrying out this research, certain limitations have been apparent. The limitations of the present study and some suggestions for future research are concluded in the following:

1. The present study used a written questionnaire as the main instrument to collect the data concerning the reading strategy employment of the university Business English majors. The semi-structured interview was used as a support instrument to elicit the reasons for the students' choices of reading strategies. However, no instrument is perfect. In the future research, other instruments such as think-aloud protocols and diaries can be adopted to collect the data to validate the research findings.

2. The present study employed only one set of Business English proficiency test to examine the reading proficiency levels of all the students in different years of study. Although many lower-year students (the first and second years) outperformed many higher-year students (the third and fourth years) in the reading test, it still seems to be unfair to some lower-year students who didn't gain high scores in the test, for they were actually good readers according to their years of study. Therefore, it is advisable to use different levels of reading proficiency tests for lower- and higher-year students.

3. In the present study, the numbers of the male and female students were not well balanced. The female students were almost three times as many as male students. More male students should be included in the future research to keep the balance of the genders, which would gain more reliable data and achieve more accurate results.

4. This research only investigated four independent variables, i.e. gender, level of exposure to specialized courses, level of reading proficiency and level of reading anxiety. Future research should take more variables, such as reading motivation, reading attitude, reading task, purpose of reading and extensive reading, into consideration to elicit more valuable and interesting information.

5. This research only used the Business English majors as participants. It would be more interesting if we could compare the use of reading strategies between the ESP and Non-ESP English majors. Future research may look into this kind of comparative study.

6. The semi-structure interview only focused on the reasons behind the students' choices of reading strategies from the general perspective and no independent variables were taken into consideration. It might elicit more interesting and useful information about the reading strategy use by Business English majors if the interviews were conducted in relation to the four investigated variables.

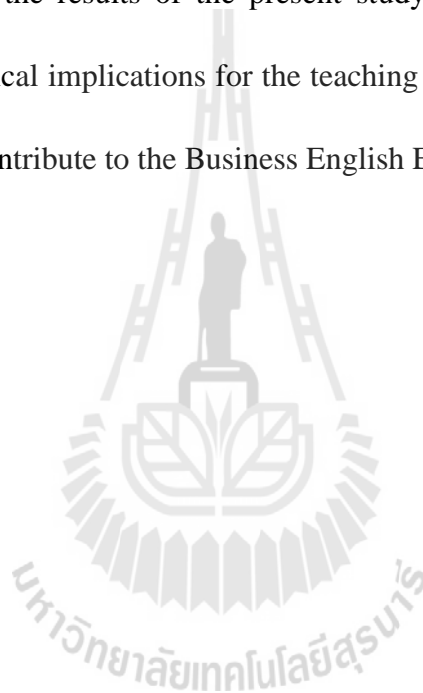
7. The participants of the present study were only selected from a few universities in Southwest China. Future research may involve more universities from different parts of China to make the participants more representative and the research findings will be more reliable and valuable.

6.6 Conclusion

The present study has investigated the use of reading strategies by Chinese university Business English majors. The results showed that the frequency of reading strategy use by Chinese university Business English majors was at the level of medium use. The students' use of reading strategies varied significantly according to the four investigated variables. In general, the female students reported significantly greater use of reading strategies than the male students; the students with less exposure to specialized courses reported employing reading strategies significantly more frequently than the students with more exposure to specialized courses; the students with a higher reading proficiency level reported employing reading strategies significantly more frequently than those with a lower reading proficiency level; the students with a lower reading anxiety level reported significantly more frequent use of reading strategies than the students with a higher reading anxiety level. Eleven reasons for the students' employing certain strategies frequently and nine reasons for employing certain strategies infrequently were concluded based on the data of the semi-structure interviews.

Conducted in a data-based, systematic and non-judgmental descriptive manner, the present study investigated the reading strategy use by Chinese university Business English majors. It has contributed a lot to the research on reading strategies in China as no previous study has specifically investigated the reading strategy use of Chinese university Business English majors. One of the main contributions is that the

students' level of exposure to specialized courses was found to be a factor that may affect students' use of reading strategies, which has never been investigated before. In addition, the present study has also provided some evidence for the relationship between the students' reading strategy use and their levels of reading anxiety, which has seldom been investigated in the previous studies in China and abroad. More importantly, based on the results of the present study, the researcher has proposed some crucial pedagogical implications for the teaching and learning Business English reading, which will contribute to the Business English Education in China.





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APPENDIX A

Business English Reading Comprehension Test

Directions:

1. There are seven parts in this test. Please read the instructions of each part before doing the test.
2. Please write your answers on the answer sheet.
3. Please try to finish the test within 90 minutes
4. When you finish the test, please proceed to the questionnaires.
5. You may use dictionaries or other reference materials if you need to.

PART ONE**Questions 1-6**

- Look at question 1-6.
- In each question, which sentence is correct?
- For each question, mark one letter (A, B or C) on your Answer Sheet.

1.

To: All staff
Subject: Holiday leave
Staff must book annual leave six week in advance by getting the relevant form signed by Human Resources.

- A. Staff are allowed six weeks' holiday a year.
- B. Staff must book holidays before the end of the year.
- C. Staff must have their holiday requests approved.

2.

The safety team is carrying out checks in this area.
Access without a permit is denied until further notice.

- A. A permit is currently required for entry to this area.
- B. Special care should be taken when entering this area.
- C. Permission to enter this area can be obtained from safety staff.

3.

Goods will be dispatched to you on receipt of payment in full.

- A. You must pay the whole amount before goods are sent.
- B. You needn't pay in full until your goods arrived.
- C. Your goods will be sent when you have paid a deposit.

4.

Maria,
 Enclosed is the schedule for this year's training days.
 If you can't manage any of them, contact John.

What should Maria do?

- A. Notify John of the training days she might miss.
- B. Inform John about the schedule for his training days.
- C. Ask John how to arrange her training schedule.

5.

- The seminar is from 4.30 to 6.00, with time allowed for questions from the audience.
 Refreshments are served at 6.00

- A. The speaker will respond to questions if time allows.
- B. There will be time to ask questions during the seminar.
- C. It will save time if questions are left until refreshments are served.

6.

MEMO

To: Factory staff
From: Factory Manager
Date: 19 November 2008
Subject: Quality control

The new system starts Monday week. Please read attached leaflet and contact me if there are any queries.

What does the Factory Manager want the staff to do?

- A. suggest additions to quality-control instructions
- B. ask if they don't understand something
- C. contact him when the new system starts

PART TWO

Questions 7-13

- Read the job advertisement below.
- Are sentences 7-13 'Right' or 'Wrong'? If there is not enough information to answer 'Right' or 'Wrong', choose 'Doesn't say'.
- For each sentence (7-13), mark one letter (A, B or C) on your answer Sheet.

Vacancies for Store Managers

Scene Video has been quietly successful in recent years, and we now have 23 stores worldwide – including 15 in Canada – with a further ten on the way. We are now offering exciting management opportunities.

As store manager, you will have unusual independence – which will make most retail management posts seem easy compared with ours! You will be in charge of a store with over 40 staff, and you will have a salary to match.

Whether you've worked in retail management or in another field involving customer relations, we want to hear from you. You'll be a strong leader, full of ideas and ambition, and commercially aware, preferably with knowledge of the retail industry in one of the countries where we have stores. If you are willing to relocate, you could be on track for fast promotion.

To find out what part you can play in our continuing success, you are invited to an informal Introductory Evening at any of our stores (details below). Or visit our website for more information and to download an application form. Please post this, together with a handwritten letter explaining why you are suited to the job.

(196 words)

7. Scene Video is planning to open more stores.
A. Right B. Wrong C. Doesn't say
8. Scene Video's salaries are higher than for similar positions in other retail businesses.
A. Right B. Wrong C. Doesn't say
9. It is essential for applicants to have experience as store managers.
A. Right B. Wrong C. Doesn't say
10. Most successful applicants will have to spend time working in different countries.
A. Right B. Wrong C. Doesn't say
11. The Introductory Evenings are targeted at successful candidates.
A. Right B. Wrong C. Doesn't say
12. Application forms should be completed online.
A. Right B. Wrong C. Doesn't say
13. Scene Video is going to have 33 stores worldwide.
A. Right B. Wrong C. Doesn't say

PART THREE

Questions 14-20

- Look at the statements below and the advice to businesses about using other companies to run their IT services.
- Which section (A, B, C or D) does each statement (14-20) refer to?

- For each statement (14-20), mark one letter (A, B, C or D) on your Answer sheet.
- You will need to use some of these letters more than once.

14. the need to teach skills to employees working on the outsourced process
15. the need to draw up agreements that set out how integration is to be achieved
16. addressing the issue of staff who work on the outsourced process being at a distant site
17. the importance of making someone responsible for the integration process
18. staff on the outsourced project familiarizing themselves with various details of the business
19. problems being associated with an alternative to outsourcing
20. out sourced processes not being entirely separate from the rest of the business



When a business decides to outsource its IT services, it needs to consider the question of integration. Four experts give their views.

A. Gianluca Tramcere, Silica Systems

An outsourced IT service is never a fully independent entity. It is tied to the home company's previous and continuing systems of working. But despite the added responsibility of managing new ways of working, many businesses ignore the integration process. They fail to establish contracts that define the ways in which the two companies will work alongside one another, and focus solely on the technological aspects of service delivery.

B. Kevin Rayner, Domola

Businesses need to build integration competency centres dedicated to managing the integration effort. It is critical to have an individual in charge to check that the external and internal business operations work together. Although companies often think of outsourcing as a way of getting rid of people and assets, they need to remember that, at the same time, outsourcing involves gaining people. Because there is a new operation being carried out in a different way outside of the home business, this creates a training element.

C. Clayton Locke, Digital Solutions

Communication is the key to success, and outsourcing to other regions or countries can lead to a range of problems. For any such initiative, it is necessary to create a team where there is good, open communication and a clear understanding of objectives and incentives. Bringing people to the home location from the outsourced centre is necessary, since it can aid understanding of the complexities of the existing system. To integrate efficiently, outsourcing personnel have to talk to the home company's executives and users to understand their experiences.

D. Kim Noon, J G Tech

One way to avoid the difficulties of integration is to create a joint-venture company with the outsourcer. Thus, a company can swap its assets for a share of the profits. Yet joint ventures bring potential troubles, and companies should be careful not to lose sight of the original rationale for outsourcing: to gain cost efficiencies and quality of service in an area that for some reason could not be carried out entirely in-house. The complexities and costs of a joint-venture initiative should not be underestimated.

(369 words)

PART FOUR

Questions 21-25

- Read the article below about possible reasons for acquiring a company.
- Choose the best sentence from A-F to fill each of the gaps.
- For each gap (21-25), mark one letter (A-F) on your Answer Sheet.
- Do not use any letter more than once.

ACQUISITION

When should a company consider acquisition as a way forward

There are many circumstances in which a company may wish to take over another organization through acquisition.

The need to keep up with a changing environment often dominates thinking about acquisitions. One compelling reason to develop by acquisition is the speed with which it allows the company to enter new product or market areas. In some cases, a market is changing so fast that acquisition becomes the only way of successfully break into it.

The strength of competitors may influence a company to choose acquisition as a way forward. In markets that are static and where market shares of companies are reasonably steady, it can be difficult for a company to break into the market, since its presence may excess capacity. (21)_____.

The same arguments also apply when an established supplier in an industry acquires a competitor. This may either be to gain the competitor's market share or, in some cases, to shut down its capacity in order to restore a situation where supply and demands are more balanced.

There may be financial motives for acquisition. If the share value of a company is high, the motive may be to spot and acquire a firm with a low share value. (22)_____. An extreme example is asset stripping, where the main motive for the acquisition is short-term gain by buying up undervalued assets and selling them on bit by bit.

There may also be resource considerations. There may be a lack of resource or skills to compete successfully, so they must be acquired. (23)_____. It may also be that it has knowledge of a particular type of production system, business process or market need. In an international context, acquisition is often a means of gaining market knowledge.

Sometimes there are reasons of cost efficiency which make acquisition look attractive. A cost efficiency could arise from the fact that an established company may already be very experienced and have achieved efficiencies which another company would find difficult to achieve quickly by internal means. (24)_____. In consumer goods industries, cost efficiency is usually the main reason for an acquisition.

Acquisition can also be driven by the expectations of key shareholders. Shareholders usually expect to see continuing growth, and acquisition may be a quick way to deliver this growth. But there are considerable dangers that an acquisition can lower share price rather than increase it. (25)_____. This is more likely when the decision to acquire is speculative as opposed to strategic. There are some shareholders who favour acquisition simply to bring a short-term boost to share value.

(434 words)

- A. The necessary development and organizational learning would be too slow.
- B. In the same way, an organization can increase manufacturing opportunities.
- C. Indeed, this is one of the major reasons for the more speculative acquisitions that take place.

- D.** It may be that the parent company may not have sufficient understanding of the acquired business, and this could remove value.
- E.** For example, a company may be taken over for its research and development expertise.
- F.** If, however, the company enters by acquisition, the risk of reaction from industry rivals is reduced.

PART FIVE

Questions 26-39

- Read the advice below about meetings with clients.
- In most of the lines (26-39), there is one extra word. It either is grammatically incorrect or does not fit in with the meaning of the text. Some lines, however, are correct.
- If a line is correct, tick “✓” on your Answer Sheet.
- If there is an extra word in the line, write the extra word on your Answer Sheet.

Client Meetings

26 Regular meetings with clients are important to a healthy collaboration. They
27 may be set up by the clients, for example to review with the progress of current
28 projects, to give new instructions that may have lead to a contract variation
29 or to discuss any concerns. The client meeting which can also be arranged
30 by you or another member of your company to attract from new business, to
31 address a problem unless that needs to be solved or to give an update or status
32 report on current business ventures. Your part is in these meetings will dictate
33 the kind of information you need and how you should prepare for them. If you
34 will be responding to questions put by your client, the material you present
35 should deal in specifically with the request that was made. The meeting should not
36 only move off the agenda without the permission of the person you are meeting.
37 If you have prepared properly, you should be able to anticipate both questions and
38 to respond properly. If you are put on the spot and asked for details you do not
39 have, respond honestly - do not speak about matters as you are not familiar with.

(214 words)

PART SIX

Questions 40-49

- Read the article below about customer relationship management.
- Choose the correct word or phrase to fill each gap from A, B, C or D.
- For each question (40-49), mark one letter (A, B, C or D) on your Answer Sheet.

Customer Relationship Management

In today's fast-moving market, it is a simple (40) ____ that products are constantly being replaced by something new. For companies large and small, the most important real asset with measurable, long-term value is loyal, one-to-one customer relationships. However, despite their importance, they do not (41) ____ on any company's balance sheet. If a company lost 10% of its inventory to theft, it would react swiftly, but if the company loses 10% of its customers, this may not be (42) ____.

In this age of product (43) ____, in which the market fails to perceive any profound difference between products or companies, effective management of customer relationships is critical in achieving a competitive (44) _____. Delivering quality service and achieving high customer satisfaction have been closely (45) ____ to profits, and consequently the (46) ____ all companies are trying to make is to provide more internal and external customer relationship focus. By (47) ____ available information technology, leading companies have already shortened process and response times, increasing customer satisfaction.

But companies must make a profit to survive, so telling a chief executive to focus more on customers, through the use of expensive information technology, may fall on deaf ears unless it can be demonstrated that such investments will be (48) ____ in terms of revenue, market share and profits. Certain companies are responding to this new customer focus by completely (49) ____ their traditional financial-only measurements of corporate performance, and seeking new ways of measuring customers' perceptions and expectations.

(252 words)

- | | | | | |
|-----|----------------|-----------------|-----------------|------------------|
| 40. | A. case | B. point | C. issue | D. fact |
| 41. | A. turn out | B. make up | C. write out | D. show up |
| 42. | A. detected | B. regarded | C. conceived | D. distinguished |
| 43. | A. coincidence | B. similarity | C. agreement | D. connection |
| 44. | A. authority | B. command | C. advantage | D. preference |
| 45. | A. joined | B. linked | C. associated | D. combined |
| 46. | A. shift | B. fluctuation | C. motion | D. displacement |
| 47. | A. profiting | B. capitalizing | C. exploiting | D. benefiting |
| 48. | A. reinstated | B. restored | C. replaced | D. recouped |
| 49. | A. modifying | B. mending | C. refurbishing | D. overhauling |

PART SEVEN

Questions 50-56

- Read the article below about management styles and the questions below.
- For each question (50-56), mark one letter (**A, B, C or D**) on your Answer Sheet.

Generally, the culture of any firm can be described as principally action-orientated, people-orientated or system-orientated. That is to say, the behavior that the managers exhibit tends to emphasize one of these three approaches to leadership and management.

In successful firms where leadership is action-oriented, the culture is generally driven by one or a handful of managers who present a strong vision for the firm and lead by example. The emphasis is on getting things done, on driving for change. Such leaders constantly infuse energy throughout the firm and reinforce it through training that emphasizes individual action, showing initiative, taking considered risks and stressing individual output and results. It is a dynamic culture that rests on individuals being motivated to rise to the challenges of the business and being willing to take on responsibilities, often beyond what is considered their normal role.

The downside is that the approach can be somewhat ‘one-sided’, overlooking the need for systems to handle routine matters, and taking for granted that people are all driven by a sense of challenge. It can result in the strong and quick riding roughshod over the more considered and thoughtful. When overdone, action-oriented becomes ‘flare’ behavior, insensitive to differences in situations and people.

Successful people-oriented cultures derive from leadership that trains people to be ready to take responsibilities and then invests them with it. Such firms delegate responsibility down as far as possible. They are not the ‘do it, check it, recheck it, double-check it and then check it again to be sure’ types of cultures. They empower trained people and trust them to build quality in. They asked people to make decisions and expect them to do so. If the decisions prove to be wrong, the experience is used as the basis for learning rather than for criticism or punishment. They emphasize commitment and mutual support, reinforced through training that focuses on how and when to delegate responsibility, on understanding and recognizing that people are not all the same, learning how to get the best out of everyone.

However, people-orientated cultures are not warm and cuddly. They respect people, support them develop them – but they expect them to perform. If people fail to live up to expectations after proper training investment, appropriate steps are taken. The downside of people-orientated cultures occurs when responsibility is not appropriately delegated. Insufficient challenge for bright, trained people leads to poor performance. Equally, giving people more than they can handle without properly preparing them, and without providing adequate support if they initially falter, leads to the same result.

Successful system-orientated cultures focus on trying to deal systematically with recurring problems and situations. Basically, they have their feet on the ground; in most

organizations, 80% of what is done is routine, and the system-orientated firm knows this. So its procedures handle the routine, leaving managers to use their energy on that 20% of the work that needs their expertise.

The essence of a successful system-orientated culture is its ability and willingness to constantly question its system. Such organizations tend to have strong corporate cultures, and people have to buy into them before being given the right to question and criticize. But given that, every process is up for evaluation and improvement. The rule book really matters, but it is not cast in stone. Away from the rule book, initiative is a key characteristic, but it is initiative in a strong team environment. People consult where possible and take individual decisions only when it is not.

(580 words)

- 50.** According to the text, a company that has an action-orientated approach to management is likely to
- A. accept that some initiatives will be more successful than others.
 - B. view staff in terms of their personal achievements.
 - C. emphasize the importance of staff input strategy.
 - D. expect staff to work extra hours without remuneration.
- 51.** Which of the following does the writer consider a disadvantage of action-orientated management?
- A. It attracts people who are unreliable.
 - B. It focuses too heavily on controversial issues.
 - C. It gives out the wrong kind of message to new recruits.
 - D. It makes a questionable assumption about human behavior.
- 52.** Unlike action-orientated companies, those who favor people-orientated management
- A. keep a watchful eye on what their employees do.
 - B. are unwilling to tolerate errors of judgment.
 - C. are sensitive to individual differences.
 - D. see indecision as a positive feature.
- 53.** According to the text, which type of person may under-perform in a people-orientated company?
- A. an intelligent person who lacks stimulation
 - B. a new member of staff who is keen to learn new skills
 - C. a new employee who is given a challenging role.
 - D. an individual who learns less quickly than others

- 54.** In the writer's view, the system-oriented approach is
- A. visionary.
 - B. realistic.
 - C. uninspiring.
 - D. outdated.
- 55.** In a system-orientated culture, employees are
- A. encourage to share ideals.
 - B. not expected to criticize colleagues.
 - C. trained to focus on self-improvement.
 - D. not allowed to challenge company policy.
- 56.** Successful system-orientated cultures
- A. derive from leadership that trains people to be ready to take responsibilities
 - B. are warm and cuddly
 - C. are sensitive to individual differences
 - D. emphasize the ability and willingness to constantly question its system

APPENDIX B
Business English Reading Comprehension Test
Answer Sheet

Name _____ University _____ Year of Study _____

PART ONE (Questions 1-6)

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

PART TWO (Questions 7-13)

7. _____ 8. _____ 9. _____ 10. _____ 11. _____

12. _____ 13. _____

PART THREE (Questions 14-20)

14. _____ 15. _____ 16. _____ 17. _____ 18. _____

19. _____ 20. _____

PART FOUR (Questions 21-25)

21. _____ 22. _____ 23. _____ 24. _____ 25. _____

PART FIVE (Questions 26-39)

26. _____ 27. _____ 28. _____ 29. _____ 30. _____ 31. _____

32. _____ 33. _____ 34. _____ 35. _____ 36. _____ 37. _____

38. _____ 39. _____

PART SIX (Questions 40-49)

40. _____ 41. _____ 42. _____ 43. _____ 44. _____ 45. _____

46. _____ 47. _____ 48. _____ 49. _____

PART SEVEN (Questions 50-55)

50. _____ 51. _____ 52. _____ 53. _____ 54. _____ 55. _____

56. _____

APPENDIX C
English Reading Comprehension Test
(KEY)

PART ONE (Questions 1-6)

1. C 2. A 3. A 4. A 5. B 6. B

PART TWO (Questions 7-13)

7. A 8. C 9. B 10. C 11. B 12. B 13. A

PART THREE (Questions 14-20)

14. B 15. A 16. C 17. B 18. C 19. D 20. A

PART FOUR (Questions 21-25)

21. F 22. C 23. E 24. A 25. D

PART FIVE (Questions 26-39)

26. ✓ 27. with 28. have 29. which 30. from 31. unless 32. is

33. ✓ 34. ✓ 35. in 36. only 37. both 38. ✓ 39. as

PART SIX (Questions 40-49)

40. D 41. D 42. A 43. B 44. C 45. B

46. A 47. C 48. D 49. D

PART SEVEN (Questions 50-55)

50. B 51. D 52. C 53. A 54. B 55. A 56. D

APPENDIX D

Strategy Questionnaire for Business English Reading (SQBER)

This questionnaire is designed to collect the information about the university Business English majors' reading strategy employment when they read their specialized texts. I would like to ask you to do me a favor by answering the following questions concerning how you read business English texts. This is not a test, so there are no 'right' or 'wrong' answers. The aim of the questionnaire is to collect the personal opinions. I do hope to get your sincere answers. Your answers to the questionnaire will be used for academic research only and will be treated with the utmost confidentiality. Your cooperation and contribution will be very much appreciated.

Instructions: This questionnaire consists two parts:

Part 1. Personal information

Part 2. Reading strategy items

Part 1

Personal information

Instruction: Please provide your personal information by putting a tick (✓) in the box of the choices given or write the response where necessary.

Your gender: Male Female

The name of your university: _____

Academic year of study: 1st year 2nd year 3rd year 4th year

You regard your English reading proficiency as:

Very good Good Fair Poor Very poor

Do you like Business English?

Yes No

The frequency of reading Business English out of classroom:

Never/Seldom Sometimes Often Every day/almost every day

Part 2

Reading Strategy Questionnaire

Instructions: The following statements are the descriptions about Business English reading strategies. Please read each statement carefully and consider how frequently you employ the given strategies while reading Business English. Please mark your response with a '✓' in the corresponding space provided. The answers are just your own opinions and there are no 'right' or 'wrong'. Please give your answers sincerely.

“Never”	means that you <i>never</i> use the strategy when reading
“Sometimes”	means that you <i>occasionally</i> use the strategy when reading
“Often”	means that you use the strategy <i>frequently</i> when reading
“Always/Almost always”	means that you use the strategy <i>most of the time</i> when reading

1. Pre-reading Strategies: Before reading Business English texts, do you employ any strategies to help you understand the materials you are going to read? If yes, please specify the frequency.

Statements of the strategies	Frequency of your own reading strategies use			
	Never	Sometimes	Often	Always/ Almost always
1. Read the title of the text carefully				
2. Construct my related knowledge about the topic				
3. Set goals/purposes of reading.				
4. Read/check the new word list.				
5. Glance over the foot notes, tables and graphics, etc. (if any)				
6. Read the questions about the text. (if any)				
7. Read the first and the last paragraphs				
8. Skim the text				
9. Read the first or the last sentence of each paragraph				
10. Make predictions or inferences about the content of the text				
11. Search for some related information about the topic				

2. While-reading Strategies: While reading Business English texts, do you employ any strategies to enhance your comprehension or solve your reading problems and difficulties? If yes, please specify the frequency.

Statements of the reading strategies (Strategies for comprehending the text)	Frequency of your own reading strategies use			
	Never	Sometimes	Often	Always/ Almost always
12. Pay attention to the key words in the text				
13. Use specialized terms as clues or indications				
14. Search for the topic sentence of each paragraph				
15. Read every word and sentence slowly and carefully				
16. Confirm my predictions or inference				
17. Raise questions about some information in the text				
18. Make use of the features of the text (e.g. notes, tables and italics)				
19. Consider the logic, coherence and consistency of the textual information				
20. Draw on my prior knowledge about the topic				
21. Take notes or mark the important information in the text				
22. Pause and think about what I am reading from time to time.				
23. Skip or neglect the unneeded or unimportant content				
24. Do fast reading first and peruse later				
Statements of the reading strategies (Strategies for coping with difficulties)	Frequency of your own reading strategies use			
	Never	Sometimes	Often	Always/ Almost always
25. Analyze the formation of unknown words				
26. Guess the meanings of the words or the sentences from the context				
27. Analyze the structures of difficult sentences				
28. Adjust the reading rate accordingly				
29. Ask the teachers, classmates or friends for help				
30. Translate the text into Chinese				

Statements of the reading strategies (Strategies for coping with difficulties)	Frequency of your own reading strategies use			
	Never	Sometimes	Often	Always/ Almost always
31. Make use of word collocations				
32. Consult the dictionary for new words				
33. Reread the difficult parts				
34. Skip the new words or difficult sentences				
35. Consult references to solve reading problems or difficulties				

3. Post-reading Strategies: After reading Business English texts, do you employ any strategies to help you understand the texts better? If yes, please specify the frequency.

Statements of the strategies	Frequency of your own reading strategies use			
	Never	Sometimes	Often	Always/ Almost always
36. Make critical comments and evaluation on the content of the text.				
37. Look up the new words in the dictionary				
38. Reflect or evaluate my reading performance and results				
39. Summarize what I read				
40. Review the content of the text				
41. Read other resources about the same topic				
42. Review the notes and marks I made				
43. Conclude my reading problems/difficulties				
44. Summarize the mistakes I made				
45. Discuss my problems and difficulties with teachers or friends				

46. Apart from the strategies mentioned above, are there any strategies that you employ when you read Business English? Please identify:

Thank you very much for your cooperation!

APPENDIX E
Strategy Questionnaire for Business English Reading
(SQBER)
(Chinese Version)

商务英语阅读策略调查问卷

这是一份用于收集大学商务英语专业或英语专业（商务方向）学生阅读商务英语文章时使用阅读策略情况的调查问卷，希望能得到你的支持。请根据个人实际情况，回答下列有关大学商务英语专业或英语专业（商务方向）学生如何阅读商务英语文章的问题。该问卷不是测试，答案无对错之分，目的是为了收集个人信息，所以非常希望你提供你个人的真实观点和看法。你的答案只用于学术研究，并且会得到绝对保密。非常感谢你的支持、参与和配合。

说明： 本问卷包含两个部分
第一部分：个人信息
第二部分：阅读策略选项

第一部分：个人信息

请就你自己的实际情况，在每个选项的□里划上✓或根据要求在有横线的地方填写相关信息。

1. 姓名： _____ 学号： _____
2. 性别： 男 女
3. 所读学校： _____
4. 年级： 一年级 二年级 三年级 四年级
5. 你对自己英语阅读水平的自我评价：
 很好 好 一般 差 很差

6. 你喜欢商务英语吗?

是 不是

7. 你在课外阅读英语的频率:

从不读或几乎不读 有时读 经常读 每天或几乎每天都读

第二部分：阅读策略选项

说明：下列表格中是一些有关商务英语阅读策略的选项，请仔细阅读后认真思考你是否在阅读商务英语时使用了这些策略以及使用这些策略的频率。请将你的答案在表格相应的地方划“✓”。答案无对错之分，仅只是个人观点和看法，请务必根据你个人实际情况填写。

从不	表示你在阅读时从不使用该项策略。
有时	表示你在阅读时偶尔使用该项策略。
经常	表示你在阅读时频繁地使用该项策略。
总是/几乎总是	表示你在阅读时几乎一直都在使用该项策略。

1. **阅读前策略：**阅读商务英语文章前，你是否使用下列策略来帮助你理解你将阅读的材料？如果是，使用频率为：

阅读策略	策略使用频率			
	从不	有时	经常	总是/几乎总是
1. 阅读文章题目				
2. 回顾自己对该主题的已有相关知识				
3. 明确阅读目标或阅读目的				
4. 阅读/查看生词表				
5. 浏览文章脚注、图表、图标、符号等 (如果有的话)				
6. 阅读文章前面或后面的相关问题 (如果有的话)				
7. 首先阅读文章的第一段和最后一段				
8. 快速预览文章				
9. 阅读每段的第一个句子或最后一个句子				
10. 对文章内容作出预测和推断				
11. 搜寻相关材料以了解相关背景知识				

2. **阅读中策略：**当你阅读商务英语文章过程中，你是否使用下列策略来增强你对文章内容的理解或解决你的在阅读中遇到的问题和困难？如果是，使用的频率为：

理解文章内容的策略	策略使用频率			
	从不	有时	经常	总是/几乎总是
12. 关注文中的关键词				
13. 利用专业词汇作为线索或提示				
14. 查找文章各段落的主题句				
15. 仔细地阅读文章的每一个词和句子				
16. 确认、核实我的预测和推断				
17. 对文中的某些信息提出疑问				
18. 利用文章的某些特征（如注释、图表、符号、斜体或粗体字等）				
19. 思考文中信息的逻辑性与连贯性				
20. 利用自己对该主题的已有背景知识帮助理解文章内容				
21. 对文中的重要信息做笔记或作标记				
22. 偶尔停下来思考自己所读的内容				
23. 跳过或忽略不需要或不重要的内容				
24. 先快速阅读然后再精读				
25. 分析生词的结构				
26. 根据上下文猜测单词或句子的意思				
27. 分析难句的句子结构				
28. 根据内容难度调整阅读速度				
29. 向老师、同学或朋友寻求帮助				
30. 将文章翻译成汉语				
31. 关注词语搭配				
32. 利用词典查找生词的意思				
33. 反复阅读困难部分				
34. 跳过文中遇到的生词或难句				
35. 查阅相关参考资料以解决理解阅读中出现的问题与困难				

3. **阅读后策略：**在你读完商务英语文章后，你是否使用下列策略来帮助你更好地理解你所读的文章内容？如果是，使用的频率为：

阅读策略	策略使用频率			
	从不	有时	经常	总是/几乎总是
36. 评论或评价文章内容				
37. 查找文中生词的意思				
38. 反思或评价自己的阅读行为和效果				
39. 总结概括文章内容				
40. 回顾文章内容以增强对文章的理解				
41. 阅读相同主题的中文或英文相关资料。				
42. 回顾所做的笔记或标记				
43. 归纳文章的要点和难点				
44. 归纳自己阅读中出现的错误				
45. 和老师/同学/朋友探讨或咨询在阅读中遇到的问题 和困难				

感谢您的合作！



APPENDIX F

Foreign Language Reading Anxiety Scale

Directions: The following Statements refer to how you feel while reading English. For each statement, please choose the answer that best reflects your feeling about English reading by marking a “√” in the corresponding column (SD, D, N, A or SA) following the statement.

★ *SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree*

Statements	SD	D	N	A	SA
1. I get upset when I'm not sure whether I understand what I am reading in English.					
2. When reading English, I often understand the words but still can't quite understand what the author is saying.					
3. When I'm reading English, I get so confused I can't remember what I'm reading.					
4. I feel intimidated whenever I see a whole page of English in front of me.					
5. I am nervous when I am reading a passage in English when I am not familiar with the topic.					
6. I get upset whenever I encounter unknown grammar when reading English.					
7. When reading English, I get nervous and confused when I don't understand every word.					
8. It bothers me to encounter words I can't pronounce while reading English.					
9. I usually end up translating word by word when I'm reading English.					
10. By the time you get past the funny letters and symbols in English, it's hard to remember what you're reading about.					
11. I am worried about all the new symbols you [I] have to learn in order to read English					
12. I enjoy reading English.					
13. I feel confident when I am reading in English.					
14. Once you get used to it, reading English is not so difficult.					
15. The hardest part of learning English is learning to read.					
16. I would be happy just to learn to speak English rather than having to learn to read as well.					
17. I don't mind reading to myself, but I feel very uncomfortable when I have to read English aloud.					
18. I am satisfied with the level of reading ability in English that I have achieved so far.					
19. English culture and ideas seem very foreign to me					
20. You have to know so much about English history and culture in order to read English.					

APPENDIX G

Foreign Language Reading Anxiety Scale

(Chinese Version)

英语阅读焦虑问卷

说明：以下 20 项是关于阅读英语文章时的感受的陈述，请你根据你的实际情况选择最符合你对英语阅读感受程度的答案，在表格相应的地方划“✓”。

★ **SD** =完全不同意，**D** =不同意，**N** =不能确定，**A** =同意，**SA** =完全同意

阅读感受	SD	D	N	A	SA
1. 当我不能肯定我是否真正读懂我所读的英语内容时，我会感到不安					
2. 当我阅读英语时，我通常懂得单词的意思，但仍然不能理解文章的真正含义					
3. 当我阅读英语时，我常常感到很紧张和困惑而不能记住我所读的内容					
4. 我一看到一长篇英语文章，就感到很紧张和害怕					
5. 当我阅读我不熟悉的英语题材时，我会感到紧张					
6. 在阅读英语文章遇到不懂的语法时，我感到很懊恼					
7. 在阅读英语文章时，我为不能理解文中的所有词汇而感到紧张和困惑					
8. 阅读中一遇到生词，我就感到很紧张和烦躁					
9. 阅读英语文章时，我通常是逐词逐句地翻译					
10. 阅读中遇到陌生的单词和字符时，我感到很难记住所读的内容					
11. 为了阅读英语，我不得不学习很多的新词汇，这使我感到很烦恼					
12. 我很喜欢阅读英语					
13. 当我阅读英语时，我感到很自信					
14. 一旦习惯了，阅读英语就不再那么困难					
15. 学习英语最困难的就是阅读					
16. 比起同时要学英语口语和阅读，我更乐于只学英语口语					
17. 我愿意默读，但要我大声朗读英文时，我会感到很不自在					
18. 我对我目前的英语阅读水平感到很满意					
19. 我对英语文化和观念感到很陌生					
20. 要阅读英语，就必须了解很多英语历史与文化知识					

APPENDIX H

Semi-structured Interview Questions

1. What is your name?
2. Do you like Business English? Why? /Why not?
3. Do you think reading is important in Business English learning? Why/ why not?
4. Do you encounter any problems or difficulties when reading Business English? If you do, what problems or difficulties do you have and how do you usually solve them?
5. What strategies do you frequently use, and what strategies do you seldom use before reading Business English texts? Why?
6. What strategies do you frequently use, and what strategies do you seldom use while reading Business English texts? Why?
7. What strategies do you frequently use, and what strategies do you seldom use after reading Business English texts? Why?
8. Are there any other strategies do you often use while reading Business English in addition to the ones listed in the questionnaire? If yes, please list the strategies that you often use.
9. Do you have any suggestions or comments for teaching and learning Business English reading?

APPENDIX I

Semi-structured Interview Questions

(Chinese Version)

半结构化访谈问题

1. 你叫什么名字?
2. 你喜欢商务英语吗? 为什么?
3. 你认为阅读在商务英语学习中重要吗? 为什么?
4. 你在阅读商务英语文章时有没有遇到什么问题和困难吗? 如果有的话, 通常些是什么样的问题和困难, 你通常是如何解决这些问题和困难的?
5. 在正式阅读商务英语文章前, 你经常使用那些策略, 那些策略你不常使用? 为什么?
6. 在正式阅读商务英语文章过程中, 你经常使用那些策略, 那些策略你不常使用? 为什么?
7. 在阅读商务英语文章后, 你经常使用那些策略, 那些策略你不常使用? 为什么?
8. 阅读商务英语文章时, 除了问卷中所列举的策略, 你还经常使用其他策略吗? 如果是, 请列举你常使用的策略?
9. 你对商务英语教学有什么评价和建议吗?

CURRICULUM VITAE

Jun Chen was born in Guizhou Province, China in November 1968. He started teaching English to Chinese students in 1991. He is currently working at the Department of Foreign Languages, Qiannan Normal University for Nationalities, China. He received his master degree in Business English from Dongbei University of Finance and Economics in 2009. From 2010 to 2014, he studied for his Ph.D degree in English language studies in the School of Foreign Languages, Institute of Social Technology, Suranaree University of Technology, Thailand, where he has got a scholarship for his outstanding academic performance. His research interests include second language acquisition and Business English translation.

