

Chapter IV

Results and Analysis

This chapter presents the results and analysis of the research:

1. The Results and Analysis of Questionnaire
2. The Results and Analysis of Classroom Observation
3. The Results and Analysis of the Interviews

This study was designed to investigate what metacognitive strategies Chinese students used in their English academic reading and when, where, why and how these strategies were used. The data was obtained from three instruments described in the following.

1. The Results and Analysis of the Questionnaire

The results of the questionnaire were obtained in the following steps.

First, the participants' answers to the questionnaire were collected and scored.

Then, the results were tabulated and decoded the scores by using the following code system:

- 1). “+” means a high level of metacognitive reading strategy usage (mean of 3.5 or higher).
- 2). “O” means a moderate level of metacognitive reading strategy usage (mean of 2.5 to 3.4)
- 3). “ –” means a low level of metacognitive reading strategy usage (mean of 2.4 or lower) (see Appendix A: Table 1. and Table 2.)

Third, the researcher counted up the numbers of different level of metacognitive awareness of reading strategies and the results were tabulated (see Table 1.1 and Table 1.2).

Finally, the researcher also counted up the numbers of the participants who used metacognitive reading strategies in the questionnaire, then tabulated them by using percentages (See Appendix A: Table 3 and 4.) to see how often the participants had used these strategies (see Table 1.3, Table 1.4 & Table 1.5).

Table 1.1: The Results of Metacognitive Awareness of Reading Strategies

Metacognitive Awareness of Reading Strategies			
Levels	High (+)	Moderate (O)	Low (-)
Number of students	18 students	55 students	1 student
Percentages	24%	74%	1.3%

The Results of Metacognitive Awareness of Reading Strategies (see

Table 1.1) shows that the participants have different levels: high, moderate and low awareness of metacognitive reading strategies. But most of them (55 students) are in the moderate level, some of them (18 students) are in the high level, and only one student is in the low level.

Table 1.2: The Three Subscales of Metacognitive Reading Strategies (See Appendix A: Table 1. and 2)

The Three subscales of Reading Strategies	Global Reading Strategies			Problem Solving Reading Strategies			Support Reading Strategies		
	High (+)	Mod (O)	Low (-)	High (+)	Mod (O)	Low (-)	High (+)	Mod (O)	Low (-)
Number of Students	28	44	2	31	42	1	8	58	8
Percentages	38 %	59 %	2.7 %	42 %	57 %	1.3 %	11%	78 %	11%

The three subclasses of metacognitive reading strategies (see Table 1.2) shows that most of them are in the high (28 and 31 students) and moderate (44 and 42 students) levels of Global Reading Strategies and Problem Solving Reading Strategies. Three students are in the low level. But for Support Reading Strategies, most students (58 students) are in the moderate level, and only some of them (8 students) are in the high and low levels.

In Addition, the students used a variety of metacognitive reading

strategies. When they responded to 30 items on the questionnaire (See Appendix A: Table 3 and 4), the frequently used strategies are summarized as follows.

Global Reading Strategies

The students' answers show that they were often employed Global Reading Strategies. The following percentage table shows how often the students had used these strategies. The percentages came from three numbers (5, 4, 3) in the questionnaire, which "5" means "always or almost always do", "4" means "usually do", "3" means "sometimes do". These percentages were then added up because this study focused on the students' metacognitive awareness of reading strategies or the strategies they used. No matter the students choose 5, 4 and 3, anyway we can say that the students have at least 60% awareness of these strategies. So the researcher added up numbers in the column 5, 4 and 3, got the numbers on the following tables.

Table 1.3: The Results of Global Reading Strategies

Global Reading Strategies	Number of Students	Percentages
1. Planning before reading	62	84%
2. Using background knowledge	71	96%
3. Skimming and scanning	59	79%
4. Thinking about the purpose of a reading	51	69%
5. Noting length and organization	45	61%
6. Knowing what to read closely and what to ignore	45	61%
7. Using tables, pictures and context clues	55	74%
8. Using context clues	70	95%
9. Using bold face and italics to identify key information	51	69%
10. Analyzing and evaluating the information	38	51%
11. Checking understanding	59	80%
12. Guessing meaning from the context	70	94%
13. Checking if guesses are right or wrong	49	66%

Problem Solving Reading Strategies

For Problem Solving Reading Strategies, the following percentage table shows what percent of the students used these strategies.

Table 1.4: The Results of Problem Solving Reading Strategies

Problem solving reading Strategies	Number of Students	Percentages
1. Reading slowly and carefully	61	82%
2. Getting back on track when distracted	61	82%
3. Adjusting reading speed	62	84%
4. Thinking about difficulties while reading	47	63%
5. Stopping from time to time and thinking	57	77%
6. Visualizing information while reading	41	55%
7. Re-Reading	56	76%
8. Guessing unknown words	58	79%

Support Reading Strategies

For Support Reading Strategies, the following percentage table shows what percent of the students used these strategies.

Table 1.5: The Results of Support Reading Strategies

The Support Reading Strategies	Number of Students	Percentages
1. Taking notes while reading	39	53%
2. Underlining and circling	66	89%
3. Using dictionary or references	50	67%
4. Paraphrasing	38	52%
5. Going back and forth in reading	55	74%
6. Asking questions about the text	35	47%
7. Translation	64	86%
8. Using both English and Chinese to think about information	57	77%
9. Reading aloud to help them understand what they read	13	18%

In summary, the students in the two classes demonstrated a reasonable control of metacognitive reading strategies, even though there are some other similarities and differences between the two classes. For the Global Reading Strategies, the evidence showed that the strategies they often used were: planning, using background knowledge, using context clues, checking understanding, guessing meaning, skimming and scanning, and using tables and pictures. But the other strategies like noting length and organization, knowing what to read closely and what to ignore, analyzing and evaluating the information were used less often.

Among the Problem Solving Reading Strategies, the most popular strategies were: adjusting reading speed, reading slowly and carefully, guessing unknown words, re-reading and stopping and thinking. But students less likely used visualizing information while reading, and thinking about difficulties while reading.

Among the Support Reading Strategies, the most popular were: underlining and circling, translation, using native language and using the dictionary. Students seldom used: reading aloud to help them understand what they read, asking question about the text, paraphrasing and note taking.

These findings provide information on the frequency of the use of metacognitive reading strategies by students in their academic reading. On the one hand, this may help instructors understand students' strengths and weaknesses. It could help teachers find ways of helping students to become better, more aware readers, better able to monitor their understanding of texts. Hopefully teachers can provide instruction that will help students develop good reading strategies. Students could then, monitor, use, improve and evaluate these strategies. It is also important for the students to understand where, when, and how to use strategies, why strategies should be learned and the potential benefits that they bring. Research shows that students who are more aware of metacognitive strategies will be better able to learn from a variety of texts regardless of

whether the reading occurs in the context of the classroom or not (Paris, 1984). Helping students become more skilled at using metacognitive strategies in reading is vital. It will help students become more independent readers and will help them gain confidence while reading. Hacker (1998) states that only when students know the state of their own knowledge can they effectively self-direct reading to the unknown (p. 13).

2. The Results and Analysis of Observation

Some data was obtained from observation aided by a checklist and note taking. The researcher went to the class and sat down beside the students in the back of the classroom. When students were assigned to read, the researcher walked around the class, monitored the students' actions and drew a slash when she saw a highlighted action or strategy, meanwhile she also jotted down actions not included in the checklist. After observation the researcher counted up the slashed and tabulated the results. The order from most frequently to least frequently used metacognitive reading strategies is as follows:

1. Re-reading (124 times)
2. Underlining and circling (111 times)
3. Translation (English words into Chinese) (108 times)
4. Read questions before starting reading (82 times)

5. Finger or pen pointing while reading (71 times)
6. Skimming or scanning (42 times)
7. Using a dictionary or vocabulary list (18 times)
8. Note taking (17 times)
9. Asking classmates for help (11 times)
10. Lip reading (7 times)
11. Asking the teacher for help (3 times)

The results of observation show that most students used re-reading, underlining and circling, translation, reading question before starting reading, finger or pen pointing. Some of them used skimming and scanning, note taking and asking classmates for help. A few of them asked the teacher for help.

3. The Results and Analysis of Interviews

During observation, if the researcher saw some active students in reading, she would interview the students after the class.

Participants said that in their reading they used translation from English into Chinese in order to understand the text. They used contextual clues and a dictionary to help them guess or find the meaning of unknown words or phrases. They used their experience and general knowledge to help them predict what they read. They said they did the exercises after

each text to learn the meaning of unknown words and to test the degree of their understanding. They also said that they paid attention to the topic sentence of each paragraph and synthesized the main idea of the whole text. They said they read slowly and carefully in order to recognize the main points and supporting details. They stated that grammatical structures were not big problems in their reading, but unknown vocabulary and phrases or idioms in the text were still the cause of big problems. They said that in most cases if they knew the meaning of every word in a sentence, they had no problems in figuring out the general meaning of the sentence.

Using translation from English into Chinese

The participants in this study used word translation as a strategy in their reading when they encountered unknown words or phrases. This was seen both in the questionnaire and observation. They said they must decode every single word in order to help them understand the text. They said they wanted to memorize the information that they read. They also said if they translated unknown words or phrases into Chinese, it would be easier to think about the information in their native language (Chinese) rather than in English because they were familiar with Chinese characters. In the case of some new words, they could neither articulate nor spell them. In addition, both for words or phrases, translation helped them

visualize the information when it was first encountered.

Student 1: *I translate the new words into Chinese because it helps me understand the sentence and remember information easily. When I read a passage, I encounter many new words. Some of them I can guess. Some of them I cannot. And in most cases, the unfamiliar words I encountered I could neither articulate nor spell. If I translated the word or phrase beside or above it, it would be convenient for me to get the information and remember it when I come to it in re-reading. I needn't find out the meaning any more. To tell the truth, I cannot use my thinking in English directly unless I am very familiar with the word. I must think about meaning in my native (Chinese) to help me comprehend English.*
(Class A)

Student 2: *When I began to learn English, I remembered that I had to translate every single word into English first. Then I could understand what the sentence was. Therefore, when I read an English text, I got used to transferring the English word into Chinese or, otherwise I could not understand the whole sentences and text.* (Class B)

Guessing Meaning Through Contextual Clues or Using a Dictionary

The students said they guessed the meaning of unknown words or phrases in the text when they encountered them. This was especially true in the reading comprehension test. One reason for this is because if they looked up unfamiliar words or phrases or asked teachers or classmates to help, it would interrupt the reading and thinking about the story. Also this process was time consuming and affected their reading speed. The third reason is that they wanted to form good habits in reading because they believed that it is not appropriate for them to constantly or frequently look up words in the dictionary. When reading in a test, they are not

allowed to use a dictionary. They also face time limits in tests. They said they tried to guess the meaning of unknown words or phrases by examining the relationship with other words in the sentence. Dictionaries were only used when they could not guess the meaning or they wanted to if their guessing was accurate. They said that if their guesses were right, it gave them more confidence in the future.

Student 3: *First of all, I review the whole text very roughly. I pick up the new words or unknown phrases by underlining them. Then I read it again and pay an attention to guess the meaning by using word-building techniques such as prefix or suffix. It depended on. Sometimes I looked at the pre- and post- sentences. If all of these attempts failed, I would use a dictionary to check if it was right or wrong. If I succeed, I would like to use the same way in guessing next time. If I failed, I would think about my problems and try different one. (Class A)*

Student 4: *I want to use a dictionary when my guessing was failed. The more difficulty the word to be guessed, the more I was eager to know what the word was. But sometimes the dictionary meaning did not make sense. I still have to guess, too. When this happened, I would choose any random meaning I believe and put in the sentence, then read the sentence again and see which one makes sense according to the context. (Class B)*

Using Experience and General knowledge

Participants in this study believed that experience and general knowledge played very important roles in academic reading. They said if their reading material was concerned with some event they had experienced, they could understand and remember the text easily. They said they could connect their experience with the same experiences in the

story.

Student 5: *If a text provided a story I once heard of or experienced, when I read the text, normally I would have a picture according to the word description in my real life or the picture in the film I ever saw. Then this helped me predict the story's outcome. (Class B)*

Student 6: *General knowledge is very important in reading, I think. Once I read a text concerning solar energy, there are quite a few new words in it. Because I have some knowledge about it, I had no problems to understand it. So I like reading, no matter Chinese or English to improve my background or general knowledge. (Class A)*

Testing the Degree of Understanding

The students said that they wanted to know how much they could understand when they finished a text. In order to test their understanding, they liked to do the exercises at the end of the text. If they got right answers, they would have more motivation to read. If they got wrong answers, they would lose self-confidence.

Student 7: *I often read text, but sometimes I am not sure what I read is right or wrong, especially in reading comprehension test. So when I read a text, I would like to do the exercises after the text, I can check my vocabulary, sentence and reading ability. If I can finish independently, and most answers are correct, it means I will improve my reading and learning. (Class B)*

Student 8: *Normally, I would like to read questions or exercises first because they can give me a guide or language point in reading. (Class A)*

Student 9: *Generally speaking, I like to read one paragraph. Then think about the general idea of each paragraph and go on. After that, put all the general ideas together to make the whole story. If the story did not sound reasonable, I would go back to read the paragraph that did not make sense. (Class A)*

Paying Attention to the Topic Sentences and the Main Idea

While they were reading, the participants said that they searched for the main idea of a text. They thought that getting the main idea was the most important thing in reading. They wanted to find out what the passage was emphasizing, what the author said, when the event took place and what the conclusion was. Finding the topic sentences helped them find the main idea. They said they could usually find topic sentences at the beginning or at the end of each paragraph. This gave them the main idea of the paragraph being read. Here is what they concluded.

Student 10: *When I read a text, I think the most important thing is to know what this passage is talking about. Finding out the topic sentences helps me look for the main point in the whole text. Normally, I synthesize the main idea from the title, headline and topic sentences. For example, if I read a passage titled “online learning” in our textbook, I would read the first sentences in each paragraph. (Class A)*

Student 11: *My English teachers always said in class that main idea was very important in reading. So when I read, I read a text at least twice. First time, I review the whole text very roughly and see what this passage was mainly talking about. Then I read it more slowly and carefully in second time, check what I have read in first time is correct or wrong. (Class A)*

Student 12: *Finding out the main idea can help me read the details. If I know the topic of a text, I can understand the words and sentences easily because I know what some possible words are involved the sentences. (Class B)*

Reading Slowly and Carefully

The students said that vocabulary and phrases were big problems in their reading. They had to read slowly and carefully to think about the meaning in the texts in order to get the important information. And they said they read slowly and carefully to help their memory and to promote learning.

Student 13: *Because my English proficiency level is low, I cannot read fast. I want to know every word explicitly, and most texts I read at least twice, but sometimes I cannot understand it. Especially when I encounter difficult sentences or many unknown words or phrases, I have to read again and again until I understand them. Therefore, I cannot finish the assignment on time. (Class A)*

Student 14: *I cannot remember what the text is talking about by only reading the first time. I read at least twice. If the text is very difficult, I have to read three times, four times... It depends. In the intensive reading, such as our textbook, normally I read it at least five times. I want to understand every single word, phrase and sentence explicitly, because I think they are good examples in English learning. If I don't understand the text, I cannot read additional reading, either. (Class B)*

Student 15: *I only read the important information and difficult points slowly and carefully. I didn't read word by word. If I did, I could not finish the reading task on time. (Class B)*

Skimming Questions Before Reading Text

In order to read efficiently, the participants said they skimmed the comprehension questions before they started reading. They believed that comprehension questions usually were good indicators in reading. They could save time and energy because each question was adopted from the reading. They focused on only one short paragraph each time. In this way, they could remember the information exactly.

Student 16: *When I read, I should know what this text was for and what I should get from this passage. So I normally read the comprehension questions first. Then skim the text. According to the question, I can find out which question was in which paragraph, then go back and re-read it carefully. I skipped unrelated sentences in this paragraph, only focused on the sentence concerning with the question. If I was reading for a test, this method really works. (Class B)*

Student 17: *Before reading, I would like know whether the text had the comprehension questions or not. If it had, I would read the questions or True or False sentences first, then think about the questions while reading. I need not read the whole text. I can save time to re-read the main points and check the answers. For my experience, in this way I can get the answers quickly and efficiently and most of them are correct. (Class A)*

Using Self-Regulation

The participants in this study used different strategies to meet different purposes or goals. They said they would alter their reading strategies according to the materials and their purposes, i.e. reading for learning or reading for information or for a test.

Student 18: *I used different strategies to meet with my purpose or goals. For example, if I read text for learning, I would read the vocabulary list first until I was familiar with them. After that, I came to the passage. In this way, I could read the whole text without bothering the unknown words or phrases. But if I read the text first, I must turn over to the vocabulary list when I encountered unfamiliar words or phrases. It interrupted my thinking process and the cohesion of the story. But if I read a passage for a test, I should read the questions first before reading the passage. (Class A)*

Student 19: *My teacher told me in a reading class that when reading for a test, it was a better way to read the questions, then according to the*

guideline of the questions, came to the passage. But to me, it doesn't work, I should review the passage first, get the general idea then read the questions because the general idea could help me find what and where the questions came from. (Class B)

Problems in Reading

The participants in this study had the same problems. They said their English vocabulary was limited. When they read they often meet a lot of new words in their text. Sometimes they could guess a few meanings from the context clues, but most often they couldn't because they could not find any clues at all. If this situation occurred, they had to spend a lot of time looking up words in a dictionary. If there were too many words in a text, they felt it was too boring to look them up in a dictionary. In that case, they would skip them or give up.

Student 20: *The big problem in my reading is that I am limited to English vocabulary. When I read, I still have a lot of new words that I never met before. When this happened in my reading, at first I guess the meaning from the context clues. But if I failed, I began to look them up in my dictionary. I felt bored to look up a lot new words. When this happened, I would give up reading. (Class B)*

Student 21: *I realized that small vocabulary size is a big problem in my reading. So I keep on memorizing some vocabulary as long as I have time. But I still have a lot of new words in my academic reading. (Class A)*

Student 22: *I think that the grammatical structure is not my problem in reading if the text doesn't have too many complex sentences. But I can not understand a simple sentence if there are too many words. I have to rely on dictionary if I cannot guess. (Class B)*

In conclusion, the participants in this study had awareness and control of metacognitive strategies while reading academic texts. The participants used a variety of metacognitive strategies to plan, monitor, self-regulate, evaluate and remedy their comprehension in their academic reading. This study shows that metacognitive strategies play important roles in EFL academic reading, especially when readers are metacognitively aware. This awareness helps readers effectively plan, monitor, self-regulate and evaluate their reading actions and reflect on what makes reading difficult. They know what reading strategies are available, how they function, when they should be applied and why they help comprehension (Paris, 1984).

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