

CHAPTER FIVE

CONCLUSIONS, DISCUSSIONS AND RECOMMENDATIONS

This chapter presents (1) a summary of the study, (2) a summary of the findings, (3) discussions, (4) pedagogical implications for L2 classroom reading instruction, (5) conclusions and (6) recommendations for further research.

5.1 SUMMARY OF THE STUDY

The objectives as well as subjects, materials and procedures of this research investigation are briefly elucidated as follows:

5.1.1 Objectives of the Study

This study aimed to investigate the significance of background knowledge and L2 proficiency towards reading comprehension of low proficient and high proficient L2 learners in the sample groups.

5.1.2 Subjects, Materials and Procedure

The subject of this study were 60 M. 5 students whose ages were between 16-17 years old, from the Science-Mathematics program from Benjamarachutit School in Nakhon Si Thammarat, Thailand. As an experimental study, subjects were categorized into two groups – control and experimental groups — by scores of the midterm and final examination from the Foundation English course of the previous semester. There were 15 low proficient students and 15 high proficient students in each group.

As the present study also focused on roles of background knowledge in L2 reading comprehension, semantic mapping was employed as a mean to enhance background knowledge. Different from the control group (without any pre-reading activities), pre-reading activities including a clip, a map, an atlas, and a semantic map were implemented with the experimental group. Furthermore, to concentrate on effects of content schemata, a 500-word reading text about unfamiliar Irish culture and ways of living was utilized in this investigation.

Two days after a 50-minute reading class instructed by the author, both groups of student took a 10-item Reading Comprehension Test. 1 point was given to each correct answer and no penalty was given to the wrong answer. Thus, the maximum score was 10 marks. After the subjects completed the Reading Comprehension Test, they completed a questionnaire so that the author could access subjects' opinions about the passage, subjects' reading behavior and recall.

5.2 SUMMARY OF THE FINDING

Results of the present study can be summarized as follows:

5.2.1 There was a significant difference between the Reading Comprehension Test score of the control group and that of the experimental group ($t_{58} < -4.392$ and significance level $t = 0.000$, $p \leq 0.05$). The score difference was 2.167 marks on average. In addition, the experimental group with pre-reading activities outclassed the control group in terms of the overall score ($X = 5.8$, $S.D. = 2.25 > X = 7.97$, $S.D. = 1.50$) and of proficiency levels (high proficiency level: $X = 8.67$, $S.D. = 1.18 > X = 7.07$, $S.D. = 1.87$ / low proficiency level: $X = 7.27$, $S.D. = 1.49 > X = 4.53$, $S.D. = 1.88$).

In addition, results of the Reading Comprehension Test by test items show that scores of the subjects in the experimental group were higher than those in the control group in all items except item 9. Respecting item 9, 70% of subjects in the control group and 66.7% of those in the experimental group chose the correct answer.

Furthermore, on average, the recall score of the control group was 2.52 ($X = 2.52$, $S.D. = 1.447$) and that of the experimental group 3.6 ($X = 3.6$, $S.D. = 1.192$). On the one hand, in the control group, the recall score of high proficient subjects was 3.17 ($X = 3.17$, $S.D. = 1.305$) and that of low proficient subjects 1.87 ($X = 1.87$, $S.D. = 1.316$). On the other hand, in the experimental group, the recall score of high proficient subjects was 4 ($X = 4$, $S.D. = 0.964$) and that of low proficient subjects 3.2 ($X = 3.2$, $S.D. = 1.293$).

5.2.2 Within the sample groups, both L2 proficiency level ($F_{1} < 21.815$ and significance level $F = 0.000$, $p \leq 0.05$) and background knowledge ($F_{1} < 26.477$ and significance level $F = 0.000$, $p \leq 0.05$) play important parts in the Reading Comprehension Test score. However, interactions between subjects' English proficiency

levels and subjects' background knowledge do not play any significant role in the Reading Comprehension Test ($F_{1,05} > 1.811$ and significance level $F = 0.184$, $p \leq 0.05$).

5.2.3 Results of subjects' opinions on the passage and subjects' reading behavior during the Reading Comprehension Test presented in the questionnaire demonstrate that both groups of subjects share a variety of common characteristics. For example, background knowledge of the subjects in both groups before reading the passage was low (control group: $X = 1.80$, $S.D. = 1.10$, experimental group: $X = 1.53$, $S.D. = 0.776$). Additionally, 90% of each group of students guessed the meaning of an unknown word by its context clues.

5.3 DISCUSSIONS

On account of the results in the previous chapter, this section focuses on the three research questions investigated in this study, and implications from the results of both the Reading Comprehension Test and the questionnaire, as follows:

5.3.1 Research question 1: Are effects of background knowledge in L2 reading significant at all for the participants in this study?

The effects of background knowledge in L2 reading are significant for all subjects in this study regarding both Reading Comprehension Test and the recall test.

Consistent with previous studies on background knowledge and L2 reading comprehension (Johnson, 1982; Krekeler, 2006), results of the Reading Comprehension Test in the present study shows that background knowledge assists reading comprehension to a great extent. As a result of background knowledge, subjects in the experimental group slightly outperformed the subjects in the control group.

Observably, effects of background knowledge in L2 reading comprehension are significant for all subjects in the experimental group in this study. Subjects in both levels of proficiency in the experimental group outdid subjects at the same proficiency level in the control group. The findings seemed to support Johnson's study (1982) and Krekeler's study (2006) that background knowledge has a greater role than language proficiency on reading comprehension because, on average, low proficient subjects in the experimental group performed somewhat better than high proficient subjects in the control group. This may mean that low proficient subjects could

compensate for their lack of L2 proficiency. Undeniably, background knowledge had a significantly strong influence especially on low proficient subjects.

Additionally, results of the Reading Comprehension Tests by items expressed strong effects of background knowledge and proficiency. On average, subjects with pre-reading activities scored higher than those without pre-reading activities in most items (items 1, 2, 3, 4, 5, 6, 7, 8 and 10). Likewise, on average, high proficient subjects scored higher than low proficient subjects in all items except item 9.

On average, subjects in the experimental group scored higher than those in the control group in every item except item 9. For item 9, subjects in the control group scored 3.3% higher than those in the experimental group. Item 9 aimed to test reference. Normally, reference questions in the tests administered by the English Department, Benjamarachutit School, only refer to a single noun reference. However, reference tested in the Reading Comprehension Test of the present study referred to an idea of the whole sentence. Apparently, certain subjects were not familiar with this type of test item.

Furthermore, results of item 3 are rather unexpected. Item 3 discussed the main idea in the introduction of the passage. Surprisingly, low proficient subjects in the control group scored a lot higher than high proficient subjects in the same group (66.7% > 26.7%). Furthermore, the recalls of high proficient subjects in the control group pointed out that some of them entirely misinterpreted the introduction. Certain high proficient subjects in the control group wrote, “Ireland used to be a colony of USA.”, “Irish people are English but they do not accept themselves as English.” and “The passage starts with the history of Ireland.” Apparently, subjects without background knowledge about Irish history employed improper background knowledge in order to create meanings of the unfamiliar concepts. Because of their lacking knowledge about the world, the subjects might think that Ireland used to be colonized by the powerful USA. In addition, the way the subjects stated that “Irish people are English but they do not accept themselves as English.” may be caused by incomplete background knowledge or typical problems of Thai learners of English. According to MacLeish (1968), Thai students sometimes use ‘yes’ and ‘no’ in English improperly because these words are used differently in Thai. For example, sometimes Thai students use “No, we can.” or “Yes, we can’t.” Therefore, those subjects may miscomprehend the messages because of this negative transference.

Furthermore, history of Ireland was not discussed at all in the introduction. Thus, lack of background may affect recall of high proficient subjects in the control group.

Additionally, though all unfamiliar vocabulary items in the passage were explained to the subjects in the control group after they finished reading the text, score of subjects in the control group on the items 7 and 8, which aimed to test vocabulary, were low on average (33.3% and 56.7% respectively). The results of both items by subjects in the control group were along the lines of the opinions of MacLeish (1968). According to MacLeish, vocabulary in the authentic passage is another problem of Thai learners of English because vocabulary in real-world texts is generally cultural-biased. Furthermore, vocabulary items related to Western culture are uncommon in rural areas in Thailand. Benjamarachutit School is also located in rural Thailand and chances are that vocabulary items asked in the Reading Comprehension Test are cultural-biased. Although subjects in the control group knew definitions of those words, they were confused and thus cannot understand those words in context for they lacked useful background knowledge.

Also, results of the recall clearly reflect effects of background knowledge, especially for low proficient subjects. While recalls of low proficient subjects in the experimental groups show high comprehension of the passage ($X = 3.2$, $S.D. = 1.293$), recalls of low proficient subjects in the control group contain a lot of erroneous information ($X = 1.87$, $S.D. = 1.316$).

Dhirawit Pinyonathagarn (2001) stated that adequate content knowledge is essential to Thai students because lacking sufficient content knowledge will encourage misleading and ambiguous communication. In agreement with Dhirawit Pinyonathagarn's assertion, most low proficient subjects in the control group recalled incorrect information about the passage. Even though the passage presented that Queen Victoria reigned in the 19th century, 20% of low proficient students in the control group mentioned that Queen Elizabeth visited Ireland in the 19th century. The subjects must be familiar with the present queen of England and, thus, this piece of background knowledge negatively interfered with their recall. Moreover, some of the recall shows that they did not comprehend the text. For example, one subject imprecisely recalled that people from Canada, Ireland and New Zealand did not like American people. Also, certain subjects wrote that the Dubliners wore the trousers, suits and a cap. Recalls of the subjects

displayed that they were not familiar with the word 'tracksuit' and, consequently, they guessed that this new vocabulary item and 'suit' shared the same meaning.

Additionally, as mentioned earlier, high proficient subjects in the control group also recalled inaccurate pieces of information. Certain high proficient subjects provided extremely incorrect recalls. Some examples are "Ireland used to be a colony of USA.", "The passage starts with the history of Ireland.", "Irish people are English but they do not accept themselves as English." and "Irish people do not like drinking beer." The examples show that the subjects did not understand some main ideas of the passage at all. Furthermore, because of lacking background knowledge, high proficient subjects interpreted the passage by using their own background knowledge that "In the rainy season, people seldom leave their houses so they seldom talk to each other.", "The pubs have limited hours to reduce criminal rates." and "People in the country know each other and talk like they are in the same family. However, people in the city do not care about each other. They live on their own." The mentioned recalls displayed strong Thai culture of the subjects. It rains heavily almost all year in Nakhon Si Thammarat, their hometown, and when it rains, people seldom leave their houses. Additionally, pubs in Thailand have limited opening hours because the government wants to decrease the criminal rates. Moreover, in Thailand, people in the country are viewed as friendlier and more generous than those in Bangkok.

In addition, consistent with the findings of Moore, Readence, and Rickelman (1993), recall results of the subjects in the experimental group showed that pre-reading activities can enhance, increase, justify and modify background knowledge of the learners. None of the subjects in the experimental group brought up misleading information previously mentioned by subjects in the control group. Furthermore, subjects in the experimental group also draw on background knowledge presented in the pre-reading activities. Certain subjects mentioned information presented in the pre-reading activities. Both high and low proficient subjects in the experimental group mentioned dark beer and Guinness beer shown in the clip. Additionally, a couple of high proficient subjects wrote that Ireland was an island at the edge of the Europe continent. Geographical settings of Ireland were not discussed in the passage but they were discussed when the author showed the map and the atlas during pre-reading activities.

5.3.2 Research question 2: Does second language proficiency or background knowledge play a more essential role in second language reading in the sample groups?

The present study showed that both background knowledge and English proficiency levels play a significant role in reading comprehension ($_{05} F_1 < 26.477$ and significance level $F = 0.000, p \leq 0.05$. and $_{05} F_1 < 21.815$ and significance level $F = 0.000, p \leq 0.05$ respectively).

On the topic of background knowledge, the findings are in line with an investigation by Chan (2003). The results of the present study show that background knowledge is especially advantageous to low proficient learners. On average, low proficient subjects in the experimental group obviously outperformed those in the control group. Actually, on average, low proficient subjects in the experimental group even scored 0.20 mark higher than high proficient subjects in the control group. The score from the Reading Comprehension Test of low proficient subjects in the experimental group reflects that background knowledge from pre-reading activities can make up for their low L2 proficiency.

Furthermore, similar to Chan's study (2003), effects of content schemata of high proficient subjects are not so significant in the present research investigation. To wit, scores of high proficient subjects in the experimental group were merely slightly higher than those of high proficient subjects in the control group.

Unquestionably, students in the experimental group with background knowledge enhanced received higher score than those without background knowledge in the control group. By the same token, high proficient students scored higher than low proficient students in the same group. Although background knowledge seemed to play a more important role in reading comprehension ($_{05} F_1 < 26.477$), the evidence shows that background knowledge and second language proficiency worked in close association. Background knowledge alone cannot help L2 learners to effectively comprehend the text. For example, it is obvious that low proficient students cannot outshine high proficient students in the same group.

Moreover, the research investigation exhibited that interactions between English proficiency levels and background knowledge of the students in Reading

Comprehension Test were not significant ($F_{1, 105} > 1.811$ and significance level $F = 0.184$, $p \leq 0.05$). This suggested that, for this group of subjects, background knowledge did not depend on language proficiency; in other words, background knowledge has effects upon students in all proficiency levels. Evidence was that students in both proficiency levels in the experimental group outdid those in the control group on average.

5.3.3 Research question 3: What is the reading behavior while taking the Reading Comprehension Test, and opinions on the passage, of the subjects in the sample groups?

Discussions for this research question are divided into Subjects' opinions on the passage and Subjects' reading behavior during the Reading Comprehension Test.

5.3.3.1 Subjects' Opinions on the Passage

Opinions on the passage of the subjects in both groups were vastly similar. Their answers showed that both groups of subjects shared common qualities, for example, the same levels of education and same interests. As a result, their opinions on the difficulties of the content, of the vocabulary and of the structures, and on the levels of interest and of preference were somewhat alike.

On the other hand, Nguyen (2005) stated that Thai people try to avoid conflicts and thus try to be neutral and that Thai students tend to feel uncomfortable when their teacher asks questions or encourages them to express opinions. In line with statements by Nguyen, except the questions about background knowledge, subjects constantly chose neutral options, 4 (much), 3 (moderate), 2 (little). Very few subjects chose the extreme 5 (very much) and 1 (not at all). Therefore, their answers also showed effects of Thai culture which have long been enrooted in the subjects.

Although the results showed that the subjects enjoyed reading the passage and that, in general, they thought that the passage was interesting, the mentioned results cannot be considered strongly reliable. The reasons are that teachers have a high social status in Thai society, especially in the countryside, and; in the classroom, Thai students pay a high respect to their teachers (Smyth, 2001; Pimyupa Watkhaolarm, 2005).

As a result, they may try to please the teacher by answering mainly neutral 3 (moderate) and 4 (much).

Furthermore, on average, all subjects in the study felt that they possessed small pieces of background knowledge before they read the text. Before reading the text, subjects in the control group thought that they had more background knowledge than those in the experimental group ($X = 1.80$, $S.D. = 1.10 > X = 1.53$, $S.D. = 0.776$). Thus, the subjects' opinions reflect that they may not be able to fully assess themselves. According to traditional teacher-centered instruction, typical Thai students are seen as passive learners rather than active learners because they get used to receiving knowledge submissively (Smyth, 2001; Pamararat Wiriyakarun; 2003). Moreover, the traditional instruction does not encourage Thai students to effectively monitor themselves or to express their thoughts freely (Smyth, 2001). As a result, the subjects – typical Thai students who have undergone traditional methods of teaching – may not become accustomed to assess themselves or speak their minds. Hence, the results in this part were somewhat distorted.

5.3.3.2 Subjects' Reading Behavior during the Reading Comprehension

Test

Reading behavior of the subjects in both groups was tremendously alike. Like the results on the opinions on the passage, results of subjects' reading behavior during the Reading Comprehension Test display that that both groups of subjects shared a variety of common qualities. Noteworthy matters from subjects' reading behavior during the Reading Comprehension Test are as follows:

Firstly, it is noticeable that, when taking the Reading Comprehension Test, major subjects in the control group (66.7%) read the questions and then tried to find the answer. On the contrary, most subjects in the experimental group (80%) skimmed through the passage, then read the questions, and answered the questions. Scores from the Reading Comprehension Test may reflect that the test-taking strategy used by the majority in the control group is not effective. Furthermore, subjects without background knowledge from pre-reading activities may not effectively comprehend the passage. Thus, in their perspectives, reading the passage may not help

them much. Instead, they needed to see the questions first so that they knew which direction they should take.

Secondly, 90% of each group of the subjects guessed the meaning of an unfamiliar word from its context clues. Possibly, their behavior expressed the effects of the entrance examination in their learning. Every year, the entrance examination includes vocabulary tests. The test-takers have to guess the meaning of the underlined word by its context clues to choose the similar meaning from the four choices. The subjects may prepare for the coming examination or their English teachers must train them to use this reading strategy. However, the effectiveness in applying this strategy of the subjects is still in doubt. 80% of low proficient subjects both in the control group and in the experimental group stated that they used this strategy during their Reading Comprehension Test. Nevertheless, the low score from the Reading Comprehension Test of low proficient students in the control group hints that they may not be able to use the context clues to efficiently guess the meaning of the unfamiliar words. Item 8 in the Reading Comprehension Test is a case in point. Item 8 aims to test knowledge of the subjects regarding vocabulary in context. While 66.7% of low proficient subjects in the experimental group chose the correct answer, only 40% of low proficient subjects in the control group could answer item 8 correctly.

Thirdly, effects of background knowledge and language proficiency were observable for the subjects in the control group. Because of their lack of English proficiency, low proficient subjects had to make extensive use of their existing background knowledge. Most of the low proficient subjects in the control group (93.3%) had to picture while they read to compensate for their low English proficiency. Also, all of low proficient subjects in the control group used knowledge and personal experience pertinent to the passage to help them comprehend the story. However, since they did not have a chance to justify or modify their background knowledge through pre-reading activities, their existing content schemata were misleading or inaccurate. Their score from the Reading Comprehension Test exhibited that their low score is the result of applying distorted background knowledge in L2 reading.

5.4 PEDAGOGICAL IMPLICATIONS FOR L2 CLASSROOM READING INSTRUCTION

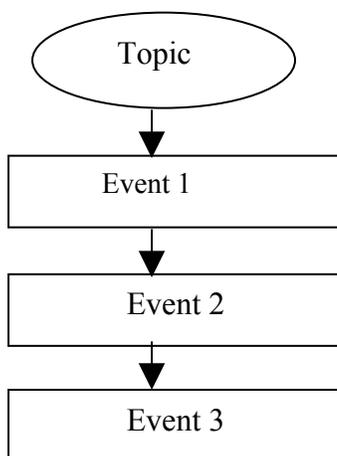
The following pedagogical implications for L2 classroom reading instruction can be drawn from this research study:

5.4.1 Pre-reading Activities Should Be Encouraged

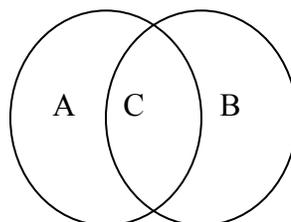
Pre-reading activities are beneficial for both reading teachers and students in many ways. Firstly, as Moore, Readence, and Rickelman (1993) stated, pre-reading activities can increase motivation of students. Secondly, pre-reading activities can help teachers to access students' background knowledge and help students to justify and adjust their background knowledge (Alvermann and Phelps, 1994; Moore, Readence and Rickelman, 1993). Without pre-reading activities, students' unmatched prior knowledge may result in misleading comprehension. In the present research study, some subjects without pre-reading activities interpreted the reading texts wrongly because of their inaccurate background knowledge. Thirdly, pre-reading activities encourage prediction. Making predictions is a skill that helps students to bridge their background knowledge and new information they will be reading (Gillet and Temple, 1990).

Apart from semantic mapping, teachers can make use of other visual organizers during pre-reading activities. Kang (2004) suggests that chain of events, the Venn diagrams, and compare/contrast matrixes be used as pre-reading activities.

Chain of events is used to describe a sequence of events. Following is an outline of a chain of events by Kang (2004):



The Venn diagram contains a minimum of two overlapping circles. It is used to compare at least two concepts. An example of the Venn diagram is as follows:



A compare/contrast matrix is used to show resemblances and differences between two things as follows:

Topic		1	2
Attribute 1	/		
Attribute 2			
Attribute 3			

However, no pre-reading activities are perfect in all situations. Therefore, a reading teacher should take levels, needs and characteristics of the students, topics of the text, available materials, class time and other factors into his/her consideration before implementing a pre-reading activity in the classroom. For example, Visual Reading Guide (VRG) cannot be applied with reading texts with no picture.

5.4.2 Vocabulary Should Be Mentioned before or during a Reading Task

Since the more vocabulary items students know, the more they have chances to comprehend the text, vocabulary is inevitable in reading instruction. This research investigation reveals that discussing vocabulary items after students finish reading the text is not as effective as talking about unfamiliar vocabulary items before reading the passage. From the present study, even though words such as ‘Yank’ and ‘yap away’ were mentioned after the silent reading, most students failed to give correct answers in the test items relevant to these vocabulary items.

There are various ways to introduce unfamiliar vocabulary to students. Nation (1990; as cited in Anderson, 1999, p. 26) presented four common ways in introducing new vocabulary to students as follows:

1. Carefully control vocabulary in the text to be taught.
2. Discuss new vocabulary as it arises.
3. Instruct vocabulary with reference to other language activities.
4. Explain vocabulary items without connection to other language activities.

Moreover, Anderson (1999) points out that knowing affixes can help students in guessing meaning of unfamiliar words. Teacher should teach meanings of prefixes, suffixes and roots in order that students can use this knowledge in guessing unknown vocabulary in the reading passages.

In addition, teaching vocabulary is beneficial because vocabulary recognition builds reading fluency and increases reading speed of the students (Anderson, 2006). According to Anderson (1999), fast reading rates encourage reading comprehension. He also notes that, in order to achieve reading comprehension, the reading rate of L2 readers should be 200 words per minute. However, the results of the subjects' reading behavior for items 5, 6, 7 and 8, in Part 4 of the questionnaire show that the subjects in the present study tried to read every word in the passage. Accordingly, their reading rates may be lower than 200 words per minute. According to Smyth (2001) and Pamararat Wiriyakarun (2003), Thai students are rather passive learners because of traditional teacher-centered instruction. Traditional Thai teachers of English put the translation method into practice and they encourage their students to translate every word in the passage. Consequently, their reading rates will drop because they have to stop and re-read the sentences to get the meaning. Therefore, Rate Buildup Reading, a reading activity suggested by Anderson (2006), can increase reading rates of the readers. In this activity, students are asked to read as much as they can within 60 seconds. After that, they start reading again from the beginning of the passage with another additional 60 seconds. The procedures are repeated for 3-4 times. Students will increase their reading rates as they continue doing this activity.

Yet again, each reading teacher should carefully take students, types of texts and vocabulary items, class time and other factors into account because there is no one and only flawless instruction strategy.

5.4.3 Teach Grammar

The present study discovered that L2 proficiency also enables reading comprehension. Since grammar is an essential element in increasing L2 proficiency (Kirkland and Saunders, 1991; Koda, 2005), students should have fair knowledge of grammar usage to understand English structures and thus to comprehend structures in the reading passages.

Thornbury (1999) suggests that apart from teaching grammar from rules and example, grammar can be taught through texts. From Thornbury's perspectives, teaching grammar through reading texts is beneficial because students are exposed to grammar usage in contexts of real language use. However, texts used in teaching grammar should be carefully selected. Texts can be from the provided textbook, authentic materials such as newspaper or magazines, the teacher and the students. Passages from the textbook are convenient to use but they may be too easy and unrealistic because they are adapted for L2 learners. On the other hands, authentic texts express real world communication but they might be too difficult and do not contain enough grammar points to be discussed. Thornbury suggests that text from teachers and students, perhaps, are more interesting. Stories of the teacher such as travel plans tend to interest students more than of unreal characters in a book. In the same way, the students will be motivated and interested in learning stories created by themselves.

5.5 CONCLUSIONS

The results of this research study indicate that both background knowledge and L2 proficiency play a remarkable role in L2 reading comprehension. Effects of background knowledge in this study are noticeable, especially for low proficient subjects. That is, proper background knowledge can make up for the lack of L2 proficiency of low proficient learners of English. On the other hand, high proficient learners can make use of background knowledge to increase their understanding in the reading task. In addition,

significance of L2 proficiency in reading comprehension is also apparent for high proficient subjects can compensate for their lack of background knowledge with their L2 proficiency. Also, with the same background knowledge, on average, students with higher proficiency scored higher than those with lower proficiency.

Therefore, reading teachers should use reading texts relevant to students' background knowledge and needs in the class. On condition that the instructions have to follow commercial textbooks provided by the institution, pre-reading activities should be implemented so that students' background knowledge and motivation are activated. Furthermore, linguistic knowledge, for instance, lexical and grammar knowledge and communicative language should be concentrated to increase students' proficiency of English.

5.6 RECOMMENDATIONS FOR FUTHER RESEARCH

On the basis of the findings and conclusions of this study, the following recommendations are made for future research:

5.6.1 As this is merely a small scale study, if the goal of the research investigation is to make more extensive generalizations, further research study should be conducted in multiple settings, and with multiple populations on a larger scale.

5.6.2 The present study concentrates only on semantic mapping. For further study, other pre-reading activities such as other types of graphic organizers may be carried out to show the effects of background knowledge to greater distance.

5.6.3 As a small-scale study, recall of the subjects has not been discussed in detail. Further research studies may closely examine the recall of the subjects to precisely analyze roles of background knowledge further.

5.6.4 This small-scale investigation does not discuss the questionnaire in detail. For further study, reading behavior of low and high proficient students should be concentrated in detail. The questionnaire should be meticulously constructed to avoid culture-biased aspects.