CHAPTER 6

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

This chapter provides a summary of research findings, pedagogical implications for vocabulary acquisition and teaching and recommendations for further research.

6.1 A Summary of Research Findings

The main research findings can be summarized as follows:

- 6.1.1 After using the CALL reading package which provided a variety of lexical information, immediate tests showed that students acquired 63% of 49 unfamiliar words, and delayed tests showed that they retained 20% of the 49 tested words two weeks later. Additionally, the number of words gained immediately after the reading treatment when compared with the number of words retained two weeks after the reading treatment was significantly different (Refer to Table 4.3, p.35). That is, there was a significant loss of vocabulary knowledge two weeks after the reading treatment. Although students' vocabulary knowledge tended to decrease over time, both acquisition rate (63%) and retention rate (20%) in this study display a sizable increase in vocabulary compared to previous studies of incidental vocabulary learning. It can be said that the provision of lexical information for word learning during reading tasks has a positive effect on vocabulary learning in both short-term and long-term retention. In other words, providing students with word meanings and related lexical information during the reading comprehension process helps raise level of students' vocabulary knowledge.
- 6.1.2 The relationship between look up behavior and levels of vocabulary acquisition and retention found in this study was summarized in the following aspects:

- 6.1.2.1 There was a positive relationship despite the weak correlation between the number of words looked up and the vocabulary acquisition and retention scores (Refer to Table 4.4, p.37). In other words, the number of words looked up in this study is related to scores on vocabulary acquisition and retention tests. That is, students who looked up more words were likely to obtain better scores on immediate and delayed vocabulary tests than students who looked up fewer words. It can be implied that looking up word meanings and related lexical information provided for instant use during the reading comprehension process would be a favorable way to learn vocabulary.
- 6.1.2.2 There was a positive relationship even with a weak correlation between the frequency of looking ups and the vocabulary acquisition and retention scores (Refer to Table 4.6, p.39). That is, students with a greater frequency of looking ups seemed to acquire more words immediately after reading and retain more words two weeks later than students with a smaller frequency of looking ups. It can be implied that the more students pay attention to unfamiliar words, the more they tend to maintain vocabulary knowledge in both short-term and long-term memory. Therefore, the more words attended to, i.e. highlighted words with multiple lexical information options to learn from, the greater the potential to enhance vocabulary acquisition and retention.
- 6.1.3 Look up behavior of the students was classified as two main types: L1 and L1+ types. L1 students preferred looking up only the meanings in Thai of unknown words whereas L1+ students selected the meanings in Thai together with word pronunciation and/or related lexical information of unknown words (English definition, synonym/antonym, and contextual example of word use). This finding shows evidence that the students rely on the meanings in Thai of words although other related lexical information for word learning is available during the reading comprehension process. Hence, the meaning in Thai is the students' primary source of vocabulary information when students read in order to comprehend a text. They also consider the pronunciation of the words meaningful for vocabulary learning.
- 6.1.4 There was no statistically significant difference between the vocabulary acquisition and retention scores of L1 and L1+ types. That is, the students of the two look up types demonstrated identical amounts of vocabulary knowledge after the

reading treatment at the two different times that vocabulary knowledge gain was assessed. It can be inferred that looking up word meaning only in L1 translation and in L1 translation together with pronunciation and related lexical information result in aiding short-term and long-term retention of vocabulary at a similar level. Thus, there is no impact of look up type on acquisition and retention of word meanings.

6.1.5 It was found that the provision of lexical information created positive attitudes towards reading comprehension and vocabulary acquisition and retention. That is, the students thought learning English through the CALL reading package, which provided various types of lexical information for word learning, helped them learn vocabulary and read for text comprehension at the same time. The students also felt that the CALL reading package was motivating, and helpful for developing independent learning.

6.2 Implications

The results of the current study may provide some useful information for classroom teaching and for designing CALL materials. This section suggests pedagogical implications as follows:

- 6.2.1 The findings of this study indicate that the provision of lexical information positively influenced vocabulary acquisition and retention. Additionally, it contributed toward the students' positive attitudes towards reading comprehension and vocabulary acquisition. Hence, teachers and CALL designers should consider the provision of lexical information in helping the students acquire and retain vocabulary during the reading tasks.
- 6.2.2 The findings of the current study show that the students immediately acquired word meanings after reading and retained, to a certain degree, word meanings in long-term retention as a result of looking up word meanings during the reading comprehension process. Hence, teachers need to be aware that looking up word meanings during the reading comprehension process is a potential means of vocabulary knowledge development for students. Furthermore, teachers should encourage students to look up word meanings in a dictionary when students encounter words whose meanings cannot easily be inferred from contextual information.

6.2.3 In this study, it was found that besides L1 translation, the students preferred the word pronunciation and English definition options. A further implication arising from the look up behavior of students is that teachers should focus on word pronunciations and English definitions when they teach English vocabulary. Also, students should be encouraged to learn English pronunciation and English definitions coupled with L1 translation when learning vocabulary in CALL and non-CALL context.

6.3 Recommendations for Further Research

Based on this study, in order to have a thorough understanding of the potential for the provision of lexical information, to confirm findings, and to produce new findings, some recommendations for further studies are made:

- 6.3.1 This study intended to discover look up behavior of intermediate EFL students while performing the CALL reading comprehension activities with the provision of lexical information for word learning. According to the current findings, since the subjects are at the same level of English proficiency, they demonstrated similar look up types, namely L1 and L1+. Different reading proficiency might produce a different finding in the area of look up behavior, so future research in this area is recommended. Thus, it would be useful to conduct similar research with a larger number of subjects from various levels of reading proficiency in order to find out whether students with different levels of reading proficiency show different look up behavior while reading.
- 6.3.2 The present study could be replicated in areas of the relationship between the number of words looked up with levels of vocabulary acquisition and retention, and the relationship between the frequency of looking ups and levels of vocabulary acquisition and retention to determine whether the number of words looked up and the frequency of looking ups can be associated with levels of vocabulary acquisition and retention. Further studies are needed for a thorough understanding of this aspect and for confirmation of the findings.

- 6.3.3 Another aspect to be explored is the effect of learning purpose on look up behavior and vocabulary acquisition and retention. In the present study, the students were asked to learn through the CALL reading package for text comprehension. It is recommended that a replicate study could be conducted with a vocabulary learning purpose. It would be interesting to compare results across purposes of learning through the CALL reading package providing the various types of lexical information for word learning to see whether learning purposes affect students' look up behavior, and to ascertain which learning purpose can better aid vocabulary acquisition and retention.
- 6.3.4 Another important area for further research would be to investigate levels of reading comprehension of students. This study did not explore levels of reading comprehension of students after using the CALL reading package. However, based on the questionnaire results, students mentioned that they enjoyed the lesson and that it was interesting and motivating to learn new words and it influenced their reading comprehension. Therefore, it is recommended that the relationship between look up behavior of students and levels of reading comprehension should be further explored in order to see whether the provision of lexical information positively enhance levels of reading comprehension. The results will be interesting and beneficial to the area of reading comprehension.
- options could be further explored. Since the present study provided students with a sole type of lexical information within one option, the students noted that consulting the various other look up options wasted their time. Thus, it might be better if further research offers students two types of lexical information for word learning such as, L1 translation coupled with English definition, and English definition coupled with contextual example of word use under the same look up option. In addition, the literature review indicated that word meanings with still pictures and word meanings with video clips could better aid long-term retention of vocabulary than word meanings only (Chun & Plass, 1996). It would be useful to provide more look up options that offer lexical information coupled with still pictures or video clips and investigate the effectiveness of the different types of look up options in helping intermediate EFL students acquire and retain word meanings of unfamiliar words.