

CHAPTER 5

Discussion and Conclusion

5.0 Introduction

This chapter contains five major sections. Section 5.1 discusses the results of the present research; section 5.2 discusses pedagogical implications; section 5.3 discusses limitations of the present research; section 5.4 discusses suggestions for further research, and section 5.5 discusses conclusion of the present research.

5.1 Results of the Present Research

This section discusses the results of the present research, including 5.1.1 senior I vocabulary learning difficulties, 5.1.2 vocabulary teaching techniques 5.1.3 vocabulary practice activities, 5.1.4 vocabulary assessments, 5.1.5 vocabulary learning strategies, and 5.1.6 a summary of the major findings.

5.1.1 Senior I Vocabulary Learning Difficulties

This section discusses the results for Research Question 1: What are the reasons that account for vocabulary learning difficulties for Senior I students? The results of the present research show that substantial increase of vocabulary size and relatively demanding in-class vocabulary practices are two major reasons of vocabulary learning difficulties for Senior I students.

The first major reason of vocabulary learning difficulties for Senior I students is the substantial increase of vocabulary size. The wide gap between the required vocabulary size (1,000 words) of the junior high and that (700 words or even 2,000 to 2,500 words)

of Senior I explains the substantial increase of vocabulary size (see chapter one and two). One possible explanation for the substantial increase of vocabulary size in Senior I is that Senior I students not only have to learn the required new vocabulary items in the vocabulary sections in the English textbooks, but many of them also, for the first time, encounter the English explanations of new vocabulary items and example sentences. The English explanations and example sentences contain unknown words for senior I students as well, which could increase vocabulary learning load for Senior I students. Similarly, apart from the required new vocabulary items and the above-mentioned unknown words in the vocabulary sections, unknown words are also shown in other sections such as idioms and phrases, grammar focus, language use and conversation sections. This could also cause a vocabulary learning burden for Senior I students. Another explanation of the substantial increase of vocabulary size in Senior I is that many inflections and derivations in the vocabulary sections or introduced by their English teachers as supplementary materials also could cause extra vocabulary learning burden for Senior I students. For instance, some derivations are not rule-based and thus are hard to predict (Schmitt, 2000). Senior I students are likely to have difficulties learning them. This result supports Laufer's (1997) claim that inflectional and derivational complexity affects vocabulary learning and causes vocabulary learning difficulty.

The second major reason of vocabulary learning difficulties for Senior I students is the in-class vocabulary practices. One possible explanation could be that the vocabulary practices in Senior I, compared with the vocabulary practices in junior high English classrooms, are relatively more demanding. For example, junior high vocabulary practices mainly focus on spelling and pronunciation. However, the Senior I vocabulary practices include different exercises such as sentence making, synonyms or antonyms, word games and article reading. Senior I students might feel pressured and

have difficulty adjusting themselves to these practices. This big difference of vocabulary practice pattern between junior high and Senior I may also lead to vocabulary learning difficulty. Senior I vocabulary practices will be discussed in section 5.1.3.

5.1.2 Vocabulary Teaching Techniques

This section discusses the results for Research Question 2: What vocabulary teaching techniques are used in class? The results of the present study show that five teaching techniques are often employed by the teachers. They are teaching new words from example sentences in the vocabulary sections in English textbooks, reviewing the related old words first when teaching new vocabulary items, explaining new vocabulary items mainly in English, teaching idioms and phrases related to the new vocabulary items, and providing synonyms or antonyms when teaching new vocabulary items. On the other hand, six vocabulary techniques are seldom or never employed by the teachers. They are using pictures, realia, group work, multi-media, asking students to look up derivations on their own, and asking students to explain vocabulary in class.

The five most popular vocabulary teaching techniques confirm to many vocabulary teaching techniques in the vocabulary teaching and learning literature. For instance, teaching vocabulary items from examples sentences echoes Waring's (2001) and Moras' (2001) views that words should not be taught in isolation and that words should be put in context to raise students' awareness to notice word relationships and deepen word knowledge. Reviewing related learned words when teaching new words corresponds to many studies which stressed the importance of reviewing or recycling (e.g., Cross, 1995; Schmitt, 2000; Nation, 1990; Waring, 2001; Moras, 2001). Schmitt (2000) noted that "teachers must concentrate not only on introducing new words, but also on enhancing learners' knowledge of previously presented words" (p. 158). Cross (1995) stated that words need to be reviewed regularly so that students can internalize them. With respect

to explaining new vocabulary items mainly in English, a possible reason could be that teachers hope that their students will be getting used to the new words' English explanations and thus not rely only on the old habit of just memorizing their Chinese translations as they did in junior high. In terms of teaching idioms and phrases related to the new vocabulary items, this suggests that teachers do not teach words in isolation. This result lends support to the claim made by Lewis (1997) that only knowing individual words is not enough; if students want to master them, they have to know word relationships, related idioms and phrases, expressions, collocations and the like. As for teaching synonyms or antonyms, this can be explained that it is quite common that teachers will give synonyms or antonyms when introducing new words. This teaching technique is also suggested by some researchers (Cross, 1995; Hedge, 2000; Ur, 1996). Synonyms and antonyms are also a type of vocabulary knowledge that students need to know when learning new vocabulary items (Nation, 1990).

Regarding the six less popular vocabulary teaching techniques, a possible reason to account for why teachers seldom use pictures or realia when teaching new words is that pictures and realia seem to be more commonly used in early vocabulary learning stages. Senior I vocabulary tends to be more abstract and difficult, compared with junior high vocabulary, and, as a result, pictures and realia are seldom used by teachers. Group work was also seldom used by teachers when teaching new vocabulary items; this result implies that teachers seldom use vocabulary group learning activities while teaching vocabulary. A possible reason is that vocabulary group learning activities are time consuming so teachers tend to not use them. With respect to the fact that multi-media were seldom used by teachers, this may result from teachers' unfamiliarity with multi-media vocabulary teaching resources. As for teachers' seldom asking students to explain vocabulary in class, one possible reason is that the tight schedules and heavy

vocabulary teaching load do not allow teachers to employ this teaching technique in class. The result that teachers never asked students to look up derivations on their own could be attributed to the fact that most Senior I students are not yet trained to be independent vocabulary learners. Another reason for this result is that derivations are already presented in the vocabulary sections in their English textbooks.

5.1.3 Vocabulary Practice Activities

This section discusses the results for Research Question 3: What vocabulary practice activities are used in class? The results of the present study show that sentence making activity is most frequently used by the teachers, followed by synonyms and antonyms. However, five vocabulary activities are seldom or never used by the teachers. They are word chains, crossword puzzles, article reading, story telling and composition writing.

The two most frequently used vocabulary activities are congruent with a number of studies. The sentence-making practice, for example, echoes Nation's (1990) view that besides form and meaning, students should also be equipped with other important vocabulary knowledge such as grammatical, collocational and contextual knowledge. That is, words should be put in phrases or larger units to learn rather than put them in isolation (Moras, 2001). This result indicates that teachers notice that vocabulary should not be taught or learned in a one-word-one-meaning relationship only. Regarding synonyms or antonyms used as vocabulary practice, one possible explanation that they are used as in-class practice is that they are relatively easy for teachers to introduce and for students to understand and they do not take too much time. This result corresponds to Hedge's (2000) view that by introducing synonyms, students are able to understand the meaning relations among words and relate new words to old ones.

On the other hand, five vocabulary activities are least frequently used in class.

Both word chains and crossword puzzles are vocabulary games seldom used in class practice. A possible reason that the teachers seldom use these vocabulary games is because they are time-consuming and not easy to prepare, particularly for crossword games. As for using article reading to review learned words, a possible explanation for the teachers' seldom using such activity is that it is not easy and takes time finding and preparing suitable articles with learned words, although they know that words need to be learned and reviewed in context. Story telling and composition writing are never used as vocabulary activities in class. A possible reason is that these two activities require not only vocabulary knowledge but also syntactic and discourse knowledge, which may be too difficult for their students. Therefore, the teachers do not think it necessary to do them in Senior I English class.

5.1.4 Vocabulary Learning Strategies

This section discusses the results for Research Question 4: What vocabulary learning strategies are used for Senior I students after class? The results of the present study indicate that Senior I students sometimes or even seldom use vocabulary learning strategies. The results suggest that although they did use vocabulary learning strategies, they did not utilize learning strategies frequently to help their vocabulary learning. One possible reason is that they do not have a clear picture of vocabulary learning strategies. Another possible reason is that teachers offer little vocabulary learning strategy instruction and training in class. The two vocabulary learning strategies sometimes used by Senior I students are using English-language media and mnemonic techniques. In contrast, strategies of previewing new words, using flash cards, grouping words into words for production and recognition, using new words in sentences, and checking new words' derivations are seldom used by Senior I students.

The two vocabulary learning strategies sometimes used by Senior I students,

according to Schmitt (1997), belong to the categories of metacognitive and memory strategies. The metacognitive strategies sometimes used by Senior I students are listening to English songs, reading English magazines, and watching English movies. One possible reason that the students use these strategies is that they can not only enjoy English language media but also learn new words at the same time. This result supports Rasekh and Ranjbary's (2003) and Schmitt's (1997) claim that using metacognitive strategies can help to learn vocabulary effectively and efficiently and help learners become independent and responsible for their own learning. With regard to memory strategies, the results of the present study showed that memory strategies sometimes used by these students included pictorial or acoustic mnemonic techniques. Namely, these students used pictures, sounds, or their imagination to help them memorize new words. Such results suggest that Senior I students, besides using only rote memorization method to memorize vocabulary, they also, for the sake of remembering difficult words, intuitively or consciously apply pictorial, acoustic and other mnemonic techniques to facilitate retaining and recalling vocabulary. This result is similar to the findings of Huang and Cheng (2002), which showed that their subjects, Taiwanese senior high school students, used more memory strategies, despite the fact that they did not use memory strategies effectively. In addition, Schmitt (1997), Hulstijn (1997) and Lin (2000) recommended memory strategies to enhance vocabulary learning and long-term memory.

As for the five vocabulary learning strategies seldom used by Senior I students, previewing new words, a strategy encouraged by many teachers, is reportedly seldom used by the Senior I students. A possible reason that Senior I students seldom used the previewing strategy is that many of them take passive attitude toward English learning or vocabulary learning because of their teacher-centered and exam-oriented learning environment. Using flash cards as a vocabulary learning strategy is seldom used by

these students as well. This result confirmed the results of Schmitt (1997). In his study, he used Japanese EFL students of different age groups as subjects. The results showed that 51% of the junior high school students and 29% of the high school students used flash cards, whereas 12% of the university students and 10% of the adult students used flash cards. In view of this phenomenon, Schmitt indicated that as learners become mature, they would decreasingly use mechanical vocabulary learning strategies like using flashcards. The strategy of grouping words into words for production and recognition is seldom used by these students. A possible explanation is that such grouping may not be very clear and useful for the college entrance exam. Another possible reason is that grouping new words into production and recognition by themselves, according to word frequency, may be beyond their ability. Using new words in sentences is seldom used by these students. This could be explained that the students deem memorizing discrete new words more important than using them in sentences. In addition, the vocabulary sections in the textbook have already offer example sentences and teachers also provide sentence making practice in class. Therefore, they do not think it necessary to use new words in sentences after class on their own. Similarly, checking new words' derivations is seldom used as a learning strategy by Senior I students. This could be explained that most of these students are not active and independent vocabulary learners at this learning stage and that derivations are already listed in the vocabulary sections in their English textbooks.

5.1.5 Vocabulary Assessments

This section discussed the results for Research Question 5: What vocabulary assessments are given to Senior I students in class? The results of the present study show that the most frequently used vocabulary tests are dictation and blank-filling tests. On the other hand, five vocabulary tests are seldom used by the teachers. They are

dictation-translation, testing synonyms or antonyms, reading comprehension, cloze and sentence-making tests. Composition-writing tests, by contrast, are not adopted by the teachers.

The two most frequently used vocabulary tests are dictation tests in which the teacher dictate the target words and students write them down and blank-filling tests which consist of one single sentence with one blank with the first and last letters of the target words provided for each blank to ensure that the target word is the only correct answer. Regarding dictation, a possible reason that the teachers frequently used dictation as a kind of vocabulary tests or more commonly as in-class quizzes is that the teachers hope to get students familiar with both the words' pronunciation and forms rather than only memorize their forms. This supports Ur's (1996) suggestion that dictation as a useful vocabulary-testing technique, since it tests not only spelling but also sound recognition. Besides, it is quite easy to prepare, administer and mark. Blank-filling tests are also a popular vocabulary-testing technique used by the teachers. One possible reason that they are frequently used is that they are traditional vocabulary tests which have been widely used to test students' productive vocabulary knowledge. Another possible reason is that it is relatively easy to develop blank-filling test items and mark them. This result echoes Read (2000), in which he also used blank-filling tests as class tests to check his students' vocabulary learning progress and to encourage his students to study vocabulary regularly. Hughes (1989) also includes blanking-filling tests as a kind of vocabulary assessment to test students' productive vocabulary ability.

Next, we discussed the five vocabulary tests seldom used by the teachers. Dictation-translation is seldom utilized by the teachers. This could be due to the fact that teachers tend to consider such vocabulary tests involving Chinese translation may mislead students to think that Chinese translation is the only meaning for the target word.

Regarding the fact that synonyms or antonyms were seldom tested, a possible reason is that students have to tackle and memorize so many new vocabulary items, and thus synonyms or antonyms are not included as vocabulary tests.

As for the reason why reading tests are seldom adopted by the teachers to assess the students' ability to infer the meaning of unknown words, a possible reason is that it is time-consuming to prepare suitable reading tests with sufficient contextual clues. Another possible reason is that the teachers do not have time to train the students to infer the meanings of unknown words in a reading text. Similarly, multiple-choice cloze tests are seldom used by the teachers to assess the students' vocabulary knowledge. This could be due to the fact that these cloze tests with the focus on testing vocabulary knowledge are quite difficult to compose. Moreover, related testing sources are not easily available for the teachers. With respect to the reason why sentence-writing tests are seldom used by the teachers, a possible reason is that it takes time and is not easy to score with the target words objectively. In the present study, composition-writing tests are not used to test the students' vocabulary knowledge, and this can be due to the fact that the Senior I students are not capable of writing compositions. Accordingly, it is beyond their ability to use the target words productively in composition writing.

5.1.6 A Summary of the Major Findings

The major findings of the present study are summarized in the following five themes: Senior I vocabulary learning difficulties, vocabulary teaching techniques, vocabulary practice activities, vocabulary assessments and vocabulary learning strategies.

Senior I Vocabulary Learning Difficulties

There are two major reasons to account for vocabulary learning difficulties encountered by Senior I students. The first major reason is the substantial increase of

vocabulary size. The required new vocabulary items listed in the vocabulary sections of the English textbooks, the English definitions of new vocabulary items and example sentences, new words showed in other sections, and many inflections and derivations listed in the vocabulary sections all cause heavy vocabulary learning burden for Senior I students. The substantial increase of vocabulary size also causes the wide gap between the required vocabulary size (1,000 words) of the junior high and that (700 words or even 2,000 to 2,500 words) of senior I. The second major reason for vocabulary learning difficulties of Senior I students are the comparatively demanding in-class vocabulary practices such as sentence-making practice and synonyms or antonyms practice. Big vocabulary practice pattern difference between junior high and Senior I make senior I students consider vocabulary learning a hard task.

Vocabulary Teaching Techniques

The most popular vocabulary teaching techniques are teacher- centered ways of presenting new vocabulary items. They include teaching new vocabulary items from example sentences, reviewing the related old words first when teaching new vocabulary items, explaining new vocabulary words by using English definitions, teaching idioms and phrases related to the new vocabulary items, and providing synonyms or antonyms when teaching new vocabulary items. In contrast, the least popular vocabulary teaching techniques are not conventional ways of teaching vocabulary such as group work, multi-media, asking students to look up derivations on their own and asking students to explain vocabulary in class. Most of these teaching techniques involve student interaction and autonomous vocabulary learning. They are more student-centered and need cooperative learning.

Vocabulary Practice Activities

Sentence making and synonyms or antonyms practice are vocabulary activities frequently used in Senior I classroom. Despite the fact that they are considered effective ways of vocabulary practice, these two practices are only two of various kinds of vocabulary practices; students might be tired and bored with these monotonous practices. On the contrary, the least frequently used vocabulary classroom activities, for example, are word chains, crossword puzzles, article reading, and story telling. These are more interesting and challenging vocabulary classroom activities and are better ways to raise students' interests in vocabulary learning.

Vocabulary Learning Strategies

On the whole, the Senior I students did not utilize vocabulary learning strategies frequently to help their vocabulary learning. The vocabulary learning strategies sometimes used by Senior I students are metacognitive and memory strategies such as using English-language media to learn new words and using pictorial or acoustic mnemonic techniques to memorize and retain difficult new words. The vocabulary learning strategies seldom used by Senior I students are previewing new words, using new words in sentences and checking new words' derivations on their own. This revealed that students did not use a variety of vocabulary learning strategies to help their vocabulary self-learning and to enlarge vocabulary size on their own.

Vocabulary Assessments

Overall, Senior I English teachers use decontextualized vocabulary tests to test students' vocabulary ability. Dictation and blank-filling tests, for example, are the most widely used vocabulary tests used in classroom. In contrast, contextualized vocabulary tests such as reading comprehension, cloze, and sentence-making tests are seldom used by

the teachers to measure students' vocabulary learning progress.

5.2 Pedagogical Implications:

Based on the major findings of the present study, some pedagogical implications are proposed to facilitate vocabulary teaching and learning.

Deeper Memory Strategies. Since Senior I students considered substantial increase of vocabulary size caused vocabulary learning difficulties, how to help them remember vocabulary effectively is very important. Students should be aware that they have transitioned from beginning vocabulary learners to intermediate learners and they should change their ways of remembering vocabulary, too. As intermediate learners in senior high school, in addition to rote memorization, a shallow and mechanical vocabulary learning strategy more suitable for beginners to memorize words, they should be equipped with various deeper memory strategies which involve deep mental processing of words to help them remember new words and facilitate long-term retention (Hulstijn, 1997; Schmitt, 2000; Gairns & Redman, 1986; Sökmen, 1997). Mnemonic techniques such as keyword, word association, word grouping, imaginary, and semantic mapping should be introduced to students to help them retain words better and longer and store words in their long term memory.

Personal Vocabulary Notebooks. Because forgetting is quite common when learning or remembering new words (Schmitt, 2000; Moras, 2001; Garins & Redman, 1986), students should be encouraged to keep a personal vocabulary notebook, binder or word cards to increase the number of revisiting words and their meanings (Moras, 2001; Nation, 2003; Allen, 1983; Hedge, 2000). Since they are portable and handy, students can use them repeatedly to review the words and add new information about the words

such as new meanings, synonyms, antonyms, collocations, and derivations at any time. If students are willing to devote time and effort to vocabulary notebooks, they will be more likely to become independent vocabulary learners and that their vocabulary size and knowledge will be enlarged.

Word Family. As inflections and derivations are introduced in the vocabulary sections of the Senior I English textbooks, these words also cause vocabulary learning burden for Senior I students. Hence, teachers should emphasize the importance of the concept of word family, which includes prefixes, roots, and suffixes. Teachers should teach students the most common and useful prefixed and suffixes. When presenting a new word, teachers should provide its related inflections and derivations. By doing so, students' vocabulary knowledge is broadened accordingly and students can remember them as a word group more efficiently rather than viewing them as different words. As Schmitt (2000) remarks:

The idea of grouping orthographically similar words can be maximally exploited by working with word families instead of single words. Instead of just teaching *indicate*, for instance, it can be useful to show that it is just a part of a wider cluster of words: *indicate, indicated, indicating, indicates, indication, indicative, and indicator*. Research shows that students often do not master the derivative forms of a base word..., and so some extra attention to these forms may be warranted (pp. 52-53).

Moreover, teachers should know that teaching and learning word parts (i.e. prefixes and suffixes) has other advantages. Students can use the knowledge of word parts to guess the meanings of low frequency words from the context by breaking down its root, prefix and suffix, instead of directly checking a dictionary for help (Nation, 1990). Secondly, students can use knowledge of word parts to learn low frequency words on their own and gradually become vocabulary independent learners (Nation, 2003, 1990).

Words in Context. When teaching vocabulary, apart from teaching new words

from example sentences, explaining English definitions, teaching related idioms and phrases, and offering synonyms, antonyms, teachers should teach words in wider context so that students know that context plays an influential role when learning vocabulary and that vocabulary are often polysemous (Schmitt, 2000; Lee, 1987). In other words, many words usually have more than one meaning and their meanings may change in different contexts. As Schmitt (2000) argued that "...because meaning is typically flexible, numerous exposures to a word in various contexts are required before it is usually mastered. This means that teachers should not make the assumption that because a word was covered once its meaning has been learned" (p.30). Therefore, students should know words are context dependent. Each time when they encounter a new word, they should first look at the context surrounding the word in order to decide its proper meaning. By the same token, when students reencounter an old word in a different context, they should not look at the individual old word only and think they are already familiar with its meaning because it is very likely that its meaning may change as well.

Collocations. Collocation teaching should be incorporated into vocabulary instruction. In addition to teaching idioms and phrases, teachers should direct students' attention to collocations, another important aspect of vocabulary teaching and learning that most high school English teachers often neglect. (Lin & Yuan, 2001). Teachers should start from teaching the most frequently used types of collocations such as verb-noun or adjective-noun collocations. They can, for example, use students' existing vocabulary to make such collocations as "take medicine," "eat soup" and "heavy rain," "strong wind." to get students familiar with the concept of collocations. They can also provide related collocations when teaching a new word. Moreover, teachers should use exercises, activities or tests to raise students' awareness in noticing collocations (Moras, 2001). Another useful means of teaching collocations is to get students to use

collocation dictionaries (Lewis, 1997). Teaching collocations, teachers give students more opportunities to develop the ability of collocations and to try to use words appropriately and fluently like a native speaker (Liu, 2001).

Vocabulary Practice Activities. In terms of vocabulary practice activities, the result of the study showed that teachers often used repetitive activities to practice and review words previously taught. In light of this, it is necessary for teachers to adopt diverse unconventional and interesting vocabulary practice activities to stimulate students' interests and get students actively involved in these activities. To put them into use in the classroom, teachers, for instance, can use word games as warm-up activities at the beginning of a lesson to recycle key words presented in previous lessons (Huyen & Nga, 2003). Word games such as word chains, bingo, spelling contests, and crossword puzzles are fun, useful and can help students consolidate words. Jokes and songs can also be used as joyful vocabulary practice activities to attract students' attention in practicing and reviewing recently learned words. Article readings with the focus of previously taught words can be a good vocabulary practice activity as well.

Vocabulary Learning Strategies. A variety of vocabulary learning strategies should be explicitly instructed to students. The present study showed that Senior I students did not frequently use vocabulary learning strategies to foster vocabulary learning. One possible reason may be that they are not familiar with vocabulary learning strategies. Another possible reason is that teachers offer little vocabulary learning strategy instruction and training in class. Therefore, teachers should equip students with vocabulary learning strategies and train them to use suitable strategies to enhance their vocabulary learning (Chung, 2000; Chen, 2000). They should talk about different kinds of vocabulary strategies such as determination strategies, mnemonic strategies, metacognitive strategies, cognitive strategies, and social strategies (see Schmitt,

1997) to their students and ask them to practice them in and out of class. Once students have the knowledge of these strategies, they can choose suitable ones to enhance their own vocabulary learning and eventually make their vocabulary learning “easier, faster, more enjoyable, more self-directed, more affective, and more transferable to new situations” (Oxford, 1990, p.8).

Dictionary Use. Students should be encouraged and trained to use good dictionaries. As they are now encountering a great deal of new words in or out of class and it is impossible for teachers to teach all of them, it’s high time to teach and train students to make good use of dictionaries. Teachers can bring different types of commonly used good bilingual, bilingualized, or monolingual dictionaries which are especially made for ESL/EFL learners and introduce them to students. Among these dictionaries, bilingualized learner’s dictionaries are considered better dictionaries than bilingual or monolingual ones for bilingualized dictionaries provide both L1 translations and L2 definitions as well as L2 sentence examples. Students can thus have a better understanding of unfamiliar words by checking both their L1 translations and L2 definitions (Laufer & Hadar, 1997). As for the electronic dictionaries, since they are popular among many students for their compactness and convenience, teachers should also introduce some good electronic dictionaries for fear that students may use some compact, less helpful electronic dictionaries which contain L1 translation information only. Teachers should explain strengths and weaknesses of different types of dictionaries and let students know that they cannot rely on one type of dictionary only when learning new words (Wang, 1996). For example, teachers can suggest students use a bilingualized dictionary and an electronic dictionary complementally to meet their different vocabulary learning needs. Another important thing worthy of noticing is when using dictionaries, students should be taught to examine a new word’s meanings in

order to choose the appropriate meaning according to the context, since context plays a key role in determining the word's meaning (Hunt & Beglar, 2002).

Vocabulary Assessments. Contextualization should also be taken into consideration when developing vocabulary assessments to measure students' vocabulary progress. According to the result of the present study, the most frequently used vocabulary assessments are word dictation and blank-filling types. These two vocabulary tests are generally discrete, selective, and context-independent because they are designed to assess individual words and often occurred in one or two sentence context only (Read, 2000). In order to make students know the important role of context, more contextualized vocabulary assessments such as cloze tests, reading comprehension tests, and sentence-making tests should be adopted by the teachers. Cloze tests have been suggested by a number of researchers as effective integrative language assessments to measure vocabulary or reading comprehension ability (Read, 1997, 2000). For example, selective deletion cloze tests, in which content words to be tested are selected and deleted from the text, are suggested by Read (2000) as appropriate contextualized vocabulary tests. Read (2000) considers such cloze tests "offer greater opportunities to assess aspects of word knowledge in addition to meaning, for example, the grammar of the word, its inflectional and derivational forms, collocational possibilities, stylistic appropriateness to the context and so on" (p. 164). Apart from using decontextualized vocabulary tests, teachers should also develop contextualized vocabulary tests to urge students to pay more attention to contextual information when learning vocabulary rather than learning words in isolation or in a one-sentence context only.

5.3 Limitations of the Study

Since empirical research on Taiwanese Senior I high school students' vocabulary teaching and learning is lacking, few relevant research guidelines can be followed. Accordingly, there are several limitations of the study. First, the sample was not randomly selected; all of them were selected by convenience. Therefore, the findings of this study can be interpreted only within this group. Second, it is fairly difficult to construct a reliable questionnaire to examine senior I students' vocabulary learning difficulties, since the process of vocabulary learning is incremental, complex, dynamic and time-consuming. In addition, unlike some ESL/EFL studies on vocabulary learning strategies used imported questionnaires, for example, Oxford's (1990) SILL and Schmitt's (1997) strategy questionnaire, the present study, without any available questionnaire for reference or immediate use, had to design its own questionnaire items containing five major themes (i.e. vocabulary learning: junior high vs. Senior I, vocabulary teaching techniques, vocabulary practices, vocabulary assessments, and vocabulary learning strategies). Therefore, certain important types of questions may not be considered and included in each theme. It needs to be revised to include other questions items. Regarding vocabulary learning strategies, limited vocabulary learning strategies were developed; more various strategies should have been included.

Third, the answers of the questionnaire were based on the student' self-report.

However, these students may not honestly answer the items in the questionnaire, which might cause the invalidity of the study. Hence, interviewing the students and eliciting extensive responses could be conducted in order to present a more authentic and comprehensive interpretation of their vocabulary learning. Fourth, the questionnaire design was not open enough to collect sufficient information. Although at the end of the questionnaire, the researcher did ask the respondents to offer information not mentioned in the questionnaire, the respondents might have lost patience answering it. To improve the questionnaire, under each section of the questionnaire, an open-ended question should be listed in order to collect more complete data.

Finally, in addition to quantitative instrument (students' questionnaire), qualitative instrument (oral interviews for teachers) was also employed in this study. However, only three teachers joined the oral interviews. To have a more comprehensive view about senior I vocabulary learning and teaching, more teachers should have participated in the oral interviews.

5.4 Suggestions for Further Research

This study attempted to explore Senior I students' vocabulary learning and difficulties. However, the results of the study might not be generalized beyond these students. More research should be conducted to have a better understanding of Senior I vocabulary learning and teaching. Below are the suggestions for further research.

1. More research on Taiwanese Senior I or senior high school students' vocabulary learning and teaching is required.
2. As mentioned above, besides using questionnaires, more different research instruments such as oral interviews, classroom observations, case studies, and

longitudinal studies need to be used so that a more authentic and comprehensive view on vocabulary learning and teaching can be presented.

3. Because five major themes (i.e. vocabulary learning: junior high vs. Senior I, vocabulary teaching techniques, vocabulary practices, vocabulary assessments, and vocabulary learning strategies) are covered and explored in the present study, it is very unlikely for the present study to explore each theme thoroughly and deeply. In light of this, more in-depth empirical research studies on individual theme need to be conducted to further investigate the effects of each theme on senior I students' vocabulary learning.
4. More research on Taiwanese Senior I or senior high school students' actual vocabulary size is required. In addition, since vocabulary has a positive effect on reading comprehension, more research should be conducted to examine the relationship between Senior I students' reading comprehension and vocabulary knowledge. Similarly, since gender plays a role in vocabulary learning, research can be carried out to see if there is any difference of vocabulary learning difficulties between male and female students.
5. The present study examined Senior I vocabulary learning and teaching with the focus on reading, more related studies could be conducted to see the relationships between vocabulary and speaking, listening or writing.

5.5 Conclusion

For Senior I students whose vocabulary size is far below the vocabulary threshold, that is, 3,000 word families, and who are facing increasing difficulty and huge amount of the vocabulary they must learn, vocabulary cannot be left to take care of itself (Nation, 1990; Gairns & Redman, 1986). To help these learners learn vocabulary effectively and efficiently, vocabulary should be explicitly taught, regularly practiced, recycled and assessed; students should be equipped with vocabulary learning strategies and trained to use strategies which suit their needs. As Candlin (1988) asserts:

The study of vocabulary is at the heart of language teaching and learning, in terms of the organization of syllabuses, the evaluation of learner performance, the provision of learning resources, and, most obviously, because it is how most learners see language and its learning difficulty (vii).