CHAPTER 2
LITERATURE REVIEW

2.0 Introduction

One cannot learn a language without learning vocabulary; however, vocabulary learning is never an easy task for senior high school students, especially Senior I students. They had just left junior high schools and faced a huge amount of vocabulary, which is overwhelmingly much larger than that they learned in junior high school. According to Senior High School English Curriculum Guidelines (高級中學英文課程標準) (1996), senior high students are expected to learn 2,800 words totally with 700 vocabulary items in their first year, 900 and 1,200 words in their second and third year respectively. Meanwhile, the 700, 900 and 1,200 new words are chosen within 5,000, 6,000 and 7,000 frequently used words respectively. It is not surprising to find that there exists a gap of vocabulary amount between junior and senior high schools and that "too many words" are often what senior high school students complained most about English learning and that they think it is difficult to learn so many words in a short time. Most junior high school graduates would find it much more difficult in learning vocabulary when they become Senior I students, since they are expected to learn about only 1,000 new words in junior high schools.

Therefore, it is very important to find out Senior I students' vocabulary learning difficulties and help them effectively deal with vocabulary. In this chapter, the following important aspects of vocabulary teaching and learning will be explored: first, the definition of a word; second, vocabulary size of Taiwanese EFL learners; third, the relationship between vocabulary and reading comprehension; fourth, vocabulary teaching techniques. Next, vocabulary practice activities and vocabulary

assessments used by teachers will be reviewed. Finally, vocabulary learning strategies adopted by ESL/EFL learners will be reviewed.

2.1 The Definition of Knowing a Word

Many students think that knowing vocabulary is simply knowing its forms and translated meanings. However, many lexical researchers have mentioned that many types of vocabulary knowledge are necessary to be mastered in order to "know" a word. Nation (1990), for example, suggests that knowing a word means knowing its written and spoken forms, its meanings, its grammatical patterns, its collocations, associations, the frequency as well as its register. Laufer (1997) reviewed several researchers' definitions of a word and summarized a list of word features involved in the learning of a new word, including word form, that is, pronunciation and spelling, word structure such as roots, derivations and inflections, its syntactic patterns, its multiple meanings, metaphorical, affective and pragmatic meanings, its relations with other words such as synonyms, antonyms, hyponyms, and its common collocations. Gairns and Redman (1986) offered several aspects of knowing a word—a word's conceptual meaning, its polysemous meanings, its homonyms, its affective meanings, its style, register, and dialect, its sense relations such as synonyms, antonyms, its associations, its L1 translation equivalents, its multi-word verbs, idioms, collocations, its semantic relations, its grammar and pronunciation.

The various types of vocabulary knowledge mentioned above manifest that the nature of vocabulary acquisition is incremental, complex and time-- consuming and it is impossible to learn all of these types of vocabulary knowledge instantaneously (Schmitt, 2000). Therefore, vocabulary knowledge, in terms of receptive or productive use, has two categories (Nation, 1990). One is receptive knowledge,

which means being able to recognize words while reading or listening; the other is productive knowledge, which means being able to produce words when speaking or writing.

2.2 The Vocabulary Size of Taiwanese EFL Students

In order to know how many words that Taiwanese students really know, several research studies have been carried out to find out the vocabulary sizes that Taiwanese students in different school levels have.   Chen (1998) used two vocabulary size tests to measure the vocabulary size of 174 first-year students in a university.   According to the results of the two vocabulary tests, he found that about 60% to 70% of the subjects reached the 2,000-3,000 word level, while more than 30% of the subjects did not reach the 2,000-word level.   Less than one fourth of them reached the 3,000-word level or above.   He concluded that their average vocabulary size was about 2,000-3,000 words.

You et al. (2000) investigated the vocabulary size of 55 first-year students studying in a technological university and their major was machinery engineering. They adopted a short paragraph test and a vocabulary level test to estimate the students' vocabulary size.   The results of the study indicated that the average vocabulary size of these subjects was around 1,000-word level.   Moreover, they found a big difference existed regarding vocabulary size among these subjects.   That is, around 2,500 words were found as the biggest vocabulary amount, whereas there were students whose vocabulary size was even less than 500-word level.

In Yang's (2002) study, she developed a vocabulary size and analysis test for assessing vocabulary sizes and reading levels of 57 first-year students from the

mechanical engineering department in a technical university. This vocabulary size and analysis test with seven vocabulary levels consisted of 140 vocabulary items chosen from English textbooks used by junior high schools, vocational high schools, and vocabulary reference books used in colleges. The results of the study found that the students' average vocabulary size was around 1,400-word level. None of them achieved above 2,700-word level. Five students' vocabulary level achieved between 2,150-2,700 word level, whereas one student knew only 341-700 words.

Unlike the above studies focusing on investigating university students' vocabulary sizes, Huang (2000) conducted a more comprehensive study to investigate the vocabulary sizes and reading comprehension of different students studying in three junior, three senior high schools and four college/universities. Eight hundred and seventy-three subjects participated in his study, who was made up of 290 third-year junior high school students, 254 third-year senior high school students and 329 college/university juniors. Each participant was given the same time period to complete a vocabulary level test, two reading passages, the recall protocol test in Chinese and a questionnaire written in Chinese. He found that the junior high students did not reach the 1,000-word level, while the senior high students reached the 1,000-word level, but did not reach the 2,000-word level. The college/university students passed the 2,000-word level and almost reached the 3,000-word level.

Studies focusing on senior high school students seem comparatively few. Hung's (2003) study investigated the vocabulary size and reading comprehension of senior high school students. The subjects were 347 third-year students from five different senior high schools. The instruments of this study included a vocabulary level test, an English reading text, a recall protocol test in Chinese and a questionnaire written in Chinese. The findings of the study showed that the average vocabulary

size of these third-year high school students was between 1,000 and 2,000 word level.

2.3 Vocabulary and Reading Comprehension

Vocabulary plays an important role in listening, speaking, reading, and writing. The present study focused on vocabulary and reading comprehension. It is generally agreed that there is a strong relationship between vocabulary and reading comprehension (Laufer, 1997; Nation, 1990; Nation & Coady, 1988). Coady et. al. (1993) also found in their study that vocabulary not only has a positive effect on reading comprehension but also leads to reading proficiency. Despite the fact that vocabulary is a major factor in reading comprehension, research has showed that many Taiwanese students still regard vocabulary as their greatest reading difficulty or think that their lack of an adequate vocabulary hampers them from comprehending English texts or academic readings (cf. Gi & Chern, 1989; Haynes & Baker, 1993; Huang, 2000, 2003). How much vocabulary is necessary for EFL Taiwanese students to possess so that they will be able to comprehend English texts with ease?

Laufer (1997) discusses the minimum vocabulary needed for reading comprehension and suggests that "the turning point of vocabulary size for reading comprehension is about 3,000 word families … or about 5,000 lexical items" (p. 229). In other words, 3,000 word families or 5,000 lexical items are the vocabulary threshold that ESL/EFL readers need to possess in order to comprehend an English text. She further claims that vocabulary size is related to reading comprehension score and that when reaching this vocabulary threshold (i.e. 3,000 word families or about 5,000 lexical items), good L1 readers are more likely to transfer their L1 reading strategies to L2. However, if readers' vocabulary size is below this vocabulary threshold, reading comprehension difficulties arise.

According to the studies examining Taiwanese EFL students' vocabulary sizes mentioned above, it is very clear yet surprising to find that most of these students, even university students, did not reach the vocabulary threshold, since they are supposed to know about 3,850 words when graduating from senior high schools (Huang, 1997). Their lack of sufficient vocabulary hinders them from comprehending authentic English texts. As a result, these students usually will not have time to apply their L1 reading strategies when reading an English text for they are busy decoding unknown words due to their insufficient knowledge (Laufer, 1997).

2.4 Vocabulary Teaching Techniques

Traditionally, vocabulary is taught in isolation with a word list which contains English definitions, L1 meanings, example sentences, synonyms or antonyms. Nevertheless, traditional ways of vocabulary teaching has been criticized (Kang, 1995; Yuan & Lin, 2001). In light of this, many scholars have suggested various important vocabulary teaching techniques or instructional strategies such as teaching prefixes, suffixes, and roots, teaching collocations, polysemous words, words in context, guessing words from context, teaching culture, translation, songs, and dictionary skills to help students learn vocabulary (Nation, 1990; Sökmen, 1997; Lewis, 1993; Kang, 1995; Channell, 1981; Chia, 1996; Wu, 2002; Huang, 1997; Vanniarajan, 1997; Parry, 1991). What vocabulary teaching techniques do Taiwanese teachers actually use in classroom? Related studies on vocabulary teaching techniques or strategies adopted by Taiwanese teachers will be reviewed and discussed as follows.

Chi & Chern (1989) developed questionnaires to find out teaching and learning situations of English reading in senior high schools. Three hundred and thirty-eight third-year high school students and thirty-seven teachers from three senior high

schools participated in this study.   Based on the results of study, they found that, in terms of vocabulary instruction, 30% of the teachers used example sentences to explain new words; 25% of them explained new words in both Chinese and English; less than 20% used prefixes, suffixes and roots to explain new words; more than 50% of them encouraged their students to adopt guessing meanings from context when encountering unfamiliar words; 40% of them encouraged their students to check up new words in dictionaries; only few teachers encouraged students to skip new words and continue reading.   The researchers emphasize the importance of guessing from context and suggest that teachers should teach their students how to guess words' meanings from context by means of prefixes, suffixes and roots, contextual clues and discourse markers when reading.

Lee (1987) employed polysemous vocabulary to make junior high school students understand that words often have multiple meanings in different contexts. She used polysemous words that students were already familiar with such as "lie," "tear,' "book," "spring," to teach her third-year junior high school students. Examples were "He burst into tears. Don't tear that piece of paper." and "I have a book. I have booked two tickets for the play."   She further offered lots of interesting example sentences with polysemous words to raise students' vocabulary learning interests.   "Jack needs a jack to lift his car." and "Tom found a tom turkey in his yard" were two examples.   She claimed that, by effectively teaching polysemous words that students have already known, students' vocabulary could be broaden both in quantity and in quality without increasing their vocabulary learning burden.

Hsieh (1996) investigated the effect of group work on vocabulary learning. Ninety-seven English majors studying in a junior college joined the study.   In the study, the researcher presented new words to her subjects by using word definitions,

prefixes, suffixes and roots, word associations, and semantic mapping. These students were divided into groups to complete a project of choosing and studying a root, prefix, or suffix and making a semantic map. Each group also had to share and present their project. At the end of the study, students were asked to fill out a questionnaire to see their reactions to vocabulary group work instructional strategy. The results revealed that about 70% of the students thought that group work vocabulary study increased their vocabulary knowledge of prefixes, suffixes and roots. She concluded by suggesting that since most Taiwanese students are vocabulary passive learners, group work is a good instructional strategy to encourage students to be actively involved in vocabulary learning.

Again, Hsieh (1999) investigated the effects of pre-reading vocabulary instruction and cultural background knowledge activation on Taiwanese learners' reading comprehension. One hundred and eighty-nine fourth-year students studying in a junior college participated in this study and were grouped into four and received four different treatments—with vocabulary instruction, with cultural background knowledge activation, with both of them and with none of them respectively. The results of the study indicated that, first, most of the students considered that to have both pre-reading vocabulary instruction and cultural background knowledge activation benefited their reading comprehension most. Second, most of them mentioned that the most popular pre-reading activity their teachers did before reading was teaching vocabulary. Thus, many teachers often placed more emphasis on teaching vocabulary than on teaching cultural background knowledge. Third, vocabulary pre-teaching increased students' vocabulary knowledge but did not have significant effects on their reading comprehension. She suggests that teachers should know the importance of pre-reading activities and integrate both the pre-reading vocabulary instruction and cultural background knowledge activation in

their reading classes.

Unsatisfied by traditional ways of teaching vocabulary in isolation in junior and senior high schools, Yuan & Lin (2001) indicated that most high school English teachers neglect one crucial aspect of teaching vocabulary, that is, teaching collocations.   They argued that most high school English teachers only teach idioms but they neglect teaching collocation, which is at least as important as teaching idioms (Farghal & Obiedat, 1995).   Consequently, EFL teachers tend to teach words individually rather than collocationally.   Furthermore, Yuan & Lin claimed that the above inefficient methods of teaching vocabulary words and the neglect of teaching collocations cause college freshmen's lack of active vocabulary knowledge.

To have a better understanding of first-year college students' collocational competence, Yuan & Lin (2001) administered a translation test which contained 15 items of verb-noun collocation patterns to two groups of university freshmen.   One group comprised 56 non-English majors, while the other group was made up 32 English majors.   None of them had received any collocation instruction before. The results of the tests revealed that these subjects of both groups did not have collocational competence and their collocational errors were because of L1 interference.   Also, no significant difference of test performance was found between these two groups.   Their failure on collocation tests supports Bahns & Eldaw's (1993) claim that "collocation are not taught, learners do not therefore pay any attention to learning them" (p. 109).

Having found no studies conducted to examine Taiwanese senior high school students' collocational knowledge, Tseng (2002) investigated the collocational knowledge of 94 second-year students studying in a senior high school.   They were divided into the experimental group and the control group.   The experimental group

received explicit collocation instruction, while the control group did not receive any instruction in collocations. The instruments, a questionnaire, two collocation tests and two compositions, were used to test the subjects' collocational knowledge. The results of the study manifested that the subjects were severely deficient in collocations and that senior high school students were not able to learn collocations heuristically. Moreover, the results showed that explicit collocation instruction has positive effects on raising students' awareness in noticing collocations and learning collocation knowledge.

Su (1994) carried out an instructional experiment for one semester to assess the effectiveness of monolingual English dictionaries in word definition processing. Sixty-one college students participated in the study, in which they received training of text reading and dictionary checking per week. The training of monolingual dictionary skills had been already started from the previous semester and continued in this semester. In other words, students had been trained the skills of using monolingual dictionaries to find correct definitions of new words in a reading text for more than one semester. During the instructional experiment period, every week, students chose their own interested English text, looked up unfamiliar words in monolingual dictionaries and turned in their English texts with a list of unfamiliar words and their corresponding word definitions.

Their assignments were collected and analyzed and their definition mistakes were categorized. The results of the study showed that around 23% of the collected assignments were found to have definition mistakes. In general, most subjects tried their best to find proper definitions for the unfamiliar words they encountered. Therefore, monolingual dictionaries have positive effects on the definition process. The majority of the mistakes belonged to the categories of incorrect sense selection

and incorrect grammatical category. For example, some students were confused by the multiple meanings of new words and found the wrong word definitions. In addition, some students often found the new words' correct meanings but with wrong part of speeches. Also, some students had problems in defining idiomatic expressions and phrasal verbs. The researcher concluded that using monolingual dictionaries is a complex process and that students should be taught and trained how to effectively use dictionaries.

2.5 Vocabulary Practice Activities

A number of researchers (Garins & Redman, 1986; Nation, 1990; Schmitt, 2000; Waring, 2001) have indicated that, when learning vocabulary, if it is not repeated, forgetting is quite normal and thus practicing and reviewing previously taught vocabulary is very important. Moreover, Schmitt (2000) claimed that since forgetting is natural and vocabulary learning is incremental, words are learned gradually from numerous exposures. Nation (1990) reviewed previous studies on word repetitions and found that five to sixteen repetitions are necessary for learners to acquire a word. Similarly, a more recent study on the effect of exposure frequency on vocabulary acquisition conducted by Rott (1999) showed that six exposures during reading significantly increased more vocabulary growth. Vanniarajan (1997) also proposed that it is necessary for teachers to provide multiple exposures with an unfamiliar word in different contexts to learners.

A wide range of vocabulary practice or learning activities have been suggested by lexical researchers. Despite the fact that practicing and reviewing vocabulary previously learned is considered important, it seems that empirical research focusing on vocabulary practice or learning activities is lacking and their effectiveness is still

underinvestigated.   Therefore, vocabulary practice or learning activities that are most frequently suggested in the literature are introduced and discussed.

Vocabulary games are often used to raise students' interests in practicing previously learned words.   For example, Allen (1983) recommends using game-like activities and crossword puzzles to let students of intermediate levels have the chances to use and practice words they have learned.   Gairns & Redman (1986) offer seven different vocabulary practice activities for students of different proficient levels to review and practice vocabulary and suggest that they can be used as warm-up or end-of-class activities (pp. 163-170).   Huyen & Nga (2003) used vocabulary games such as crossword puzzles and concluded that games are interesting and effective tools and can be used in class for practice and review language lessons.   In order to increase students' interests and help students memorize learned words, You et al. (2000) used vocabulary games like Bingo, Crossword puzzles and Dissembled words to help students review previous learned words.   Sӧkmen (1997) suggests that some interesting and competitive word games such as Scrabble and Bingo can be employed in class to recycle vocabulary.

Semantic exercises or activities are another kind of vocabulary practice or learning activities recommended to review vocabulary.   They require students to deeply process words, form word associations, and relate new words with old ones (Sӧkmen, 1997).   Sӧkmen (1997) lists four techniques for semantic elaboration—semantic mapping, semantic feature analysis, ordering, and pictorial schemata (i.e. scales, clines, and diagrams).   She states that through these semantic techniques, related words are visually organized and their meanings are clearly distinguished.   As Channell (1981) argues that semantic feature analysis (i.e. grids) and scales "certainly tell the learner more than isolated dictionary entries or textbook

definitions" (p. 119).   However, Nation (1990) reminds the dangers of presenting words of similar meanings together that could cause interference and make related words difficult to learn.   Therefore, he recommends that it is better to use these semantic activities as review activities and related words' meanings can be deeply understood by learners.

Collocation exercises are also often advised as important vocabulary practice or learning activities.   Nation (1990) provides some practical collocation exercises and claims that collocation exercises are able to help learners expand their knowledge of words that they have already known.   Channell (1981) and Gairns & Redman (1986) suggest using collocational grids as useful visual displays to let students know words' possible collocations and restrictions.   Lewis (1997) stresses that teachers should make students aware of "the word partnerships", that is, collocations, and provide many opportunities for students to practice collocations.   He illustrates different collocations exercises to raise students' conscious awareness of different patterns of collocations.   Several exercise types are with the aim to raise awareness of strong word partnerships.   Some exercise types are focusing on practicing de-lexicalized verbs such as "TAKE."   To make collocation practice more enjoyable and diverse, he further gives some additional exercises like lexical crosswords, jigsaw dialogues and lexical dominoes.   Furthermore, he asserts that it is necessary to show efficient formats to teach students how to record and organize collocations in or out of class so that students can retrieve and review them easily.

Nation (1990) argues that it is worth learning common and useful Latin affixes and roots and knowing their corresponding meanings.   He suggests several exercises for recognizing and practicing affixes and roots.   First, students are offered words to practice breaking words into parts.   Second, words with a wide range of prefixes are

given so that students can be familiar with different prefixes.   Third, teachers can use the game Wordmaking and Wordtaking to let students understand how prefixes, roots or suffixes combine to form words.   Additionally, teachers can use the game Stemgo, similar to Bingo, to let students practice combing words with the given prefixes or stems.   Moreover, Schmitt (2000) suggests that the most regular prefixes and suffixes should be taught and learned first.   Special attention should be paid to suffixes to promote the learning of word families.   Teachers, for example, have students understand and practice derivational suffixes to make word families rather than just let students know individual words.

Liu (2001), in her research, suggests that students should be trained to notice collocations.   Also, teachers should get students familiar with different common types of collocations such as verb + noun, adj. + noun, adv + adj., and noun + verb; it's better to draw students' attention to only one pattern at a time.   Liu also provides different exercises to practice collocation for teachers to use.   For instance, teachers work with students and ask students to find collocations in a text.   Doing so, students will become more sensitive to different collocation patterns and probably can find different collocations on their own out of class.   Next, teachers can give exercises to make students distinguish synonyms or antonyms in collocations.   One example is asking students to find a list of adjectives that mean "very" for a list of adjectives by using collocation dictionaries.   Furthermore, teachers can focus on collocations that do not have direct Chinese equivalents and ask students to translate them into Chinese to let students understand the ideas of chunks and the importance of collocations. Using collocation games to familiarize students with different collocates of a keyword is also a good way.

2.6 Vocabulary Assessment

Since vocabulary is widely recognized as one of the key components necessary for second language proficiency, vocabulary assessment is inevitable in measuring learners' progress in vocabulary learning. However, according to the literature we collected, it was found that little empirical research focusing on second language vocabulary assessment has been carried out. As Read (2000) states "surprisingly few studies have been conducted throughout the twentieth century on aspects of second language vocabulary assessment" (p.77). One exception he mentioned is the research studies (Schmitt, 1999) related to vocabulary items in the Test of English as a Foreign Language (TOEFL). Read (1997) mentioned that many recent books on language testing pay less attention to vocabulary testing. One example is Hughes (1989), which covered vocabulary testing in only half of a chapter on grammar and vocabulary testing. Likewise, research studies on vocabulary testing are lacking as well in Taiwan EFL context. Most studies are related to examining test types and items developed in high school or college entrance English exams (Lu, et al., 2003; Shih, et al., 2000). Therefore, various vocabulary tests used in ESL/EFL context will be introduced and discussed as follows.

Ur (1996) listed many useful vocabulary testing techniques including multiple-choice tests, matching tests, sentence making, dictation, dictation-translation, blank-filling, translation tests and the like. He also gave comments on these different techniques. For example, he mentioned that designing multiple-choice tests is time-consuming and tricky, but their answers are clear and easy to score. As for sentence making, he remarked that it is difficult to grade them objectively.

Schmitt (2000) discussed four frequently used test formats to test vocabulary size—multiple-choice, matching, giving L1 equivalent, and blank-filling items. He

argues that these four items only show some partial knowledge of the target words. Many features of the knowledge of the target words such as polysemy, grammatical and morphological knowledge, register or collocations are not assessed. However, he states that, in fact, a test item measuring all possible aspects of the knowledge of the target word seems impossible. In this regard, he claims that "vocabulary tests give incomplete information about an examinee's lexical knowledge" (p. 178). Thus, he emphasizes that teachers need to be clear about the purpose of the test so that the most proper test can be developed.

Read (1997) argues that context plays an important role in vocabulary testing. He gave TOEFL vocabulary test items as examples to show how vocabulary items have changed from decontextualized tests (i.e. testing words in isolation) to contextualized tests (i.e. embedding vocabulary items in reading comprehension tests). Under the influence of communicative approach, he contends that "vocabulary knowledge may need to be reconceptualized within a broader framework of communicative lexical ability" (p.318). He further contends that decontextualized tests such as true/false and matching will have a negative washback effect and students will continue studying words in isolation. He suggests that teachers need to see context from a broader view to include whole texts or discourse. Finally, he concludes by predicting that "the future trend in vocabulary testing is likely to be towards the design of integrative test formats that have a strong lexical focus but in which vocabulary ability is one of several factors that contribute to test-taker performance" (p.320).

In his handbook "Assessing Vocabulary," Read (2000) proposes three dimensions of vocabulary assessment to broaden the view of what a vocabulary test is and to include a wide variety of vocabulary measures. The first dimension is discrete

and embedded vocabulary measures.   The second is selective and comprehensive measures.   The third one is context-independent and context-dependent vocabulary measures.   He argues that in addition to employing conventional vocabulary tests that tend to discrete, selective and context independent, teachers should also utilize a wider range of vocabulary tests that are embedded[1], comprehensive and context dependent to meet assessment needs and purposes.

He claims that conventional vocabulary tests have been mainly discrete, selective and context-independent and, for their convenient use, are more possible to be used regularly by classroom teachers for monitoring students' vocabulary learning progress. Multiple-choice, blank-filling, translation and matching are examples of popular conventional vocabulary tests.   He further states that, among them, multiple-choice items are particularly frequently used in standardized tests.   Such phenomenon has also existed in Taiwan's EFL testing context.   Furthermore, Read recommends several classroom progress tests used in his own class such as matching, blank-filling, and sentence-writing items to check students' vocabulary learning progress.   He argues that sentence making can be used to measure whether students can write both grammatically correct and appropriate sentences.

Another type of tests deserve mentioning is cloze tests which are also widely used for testing reading comprehension or overall second language proficiency. Read argues that cloze tests can be used as contextualized measures of vocabulary. For example, in rational (also called selective-deletion) cloze tests, targeted words to be tested can be selectively deleted to assess students' knowledge of the deleted words.   Then students' performance on the cloze tests is a measure of students'

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[1]   An embedded vocabulary measure is one that forms part of the assessment of some other, larger construct.   (see Read, 2000, p. 9)

knowledge of the deleted target words. With respect to multiple-choice cloze tests, reviewing related studies, Read indicates that multiple-choice cloze tests have some advantages. First, they are practical, objective and therefore are used in standardized tests like college entrance examinations and TOEFL tests. Second, the test items of multiple-choice cloze procedure to be deleted in the text can be a word, a phrase or even a whole sentence. Thus, the view of vocabulary is beyond the single word level only. In sum, Read claims that it is very difficult to estimate the contribution of vocabulary in cloze tests. As he states "a cloze tends to make a very embedded assessment of vocabulary, to the extent that it is difficult to unearth the distinctive contribution that vocabulary makes to test performance" (p.115).

2.7 Vocabulary Learning Strategies

According to the literature collected, there are many studies on language learning strategies and they are mainly carried out to examine factors that affect language learning strategy use such as gender (Chen, 2000), motivation (Chung, 2000), language proficiency (Bremner, 1998; Chamot & Kupper 1989; Chen, 2000; Park, 1997; O'Malley et al., 1985; Tzeng & Huang, 2000), type of language task (O'Malley et al., 1985), learners' beliefs (Yang, 1999), learners' learning style (Sy, 2003), and cultural context (Bremner, 1998). A majority of these studies are based on Oxford's (1990) Strategy Inventory for Language Learning (SILL) including six strategy categories: memory, cognitive, compensation, metacognitive, affective and social strategies. Also, some studies focused on language learning strategy instruction and training (Chamot & Kupper, 1989; Cheng & Huang, 2002).

Nevertheless, compared with language learning strategies, relatively few studies have been conducted on vocabulary learning strategies. The three more

comprehensive quantitative studies on various vocabulary learning strategies are Schmitt (1997), Chen (1998), and Gu & Johnson (1996). One qualitative, ethnographic study is on learners' approaches to vocabulary learning (Sanaoui, 1995). Other studies focused on one specific vocabulary learning strategy like keyword strategy (Lawson & Hogben, 1998), guessing strategy (Parry, 1991; Fraser, 1999) or focused primarily on combined strategies of vocabulary learning (Rodriguez & Sadoski, 2000; Brown & Perry, 1991).

Since the present study's concern is on vocabulary learning strategies employed by Taiwanese EFL learners, the focus will thus be put on vocabulary learning strategies. Studies on vocabulary learning strategies will be reviewed and discussed. Schmitt (1997) investigated Japanese EFL learners' vocabulary learning strategies. 600 Japanese EFL subjects consisting of 150 junior high school students, 150 high school students, 150 university students, and 150 adult learners participated in the study. They were given a survey which contained 40 vocabulary learning strategies and were asked to show their usage and perceptions of helpfulness of these vocabulary learning strategies. The results of the survey manifested that the most used and helpful strategies have six in common. They are bilingual dictionary, verbal repetition, written repetition, saying new word aloud, studying spelling and taking notes in class. On the contrary, three least used strategies are using physical action, using cognates in study, and using semantic maps; three least helpful strategies are imaging word's meaning, using cognates and using Keyword Method. The results also reveal that shallow[2] strategies are preferred by the subjects than the deeper[3] strategies such as using Keyword Method and semantic maps (Schmitt,

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[2] Shallow strategies are mechanical, rote-learning strategies such as verbal and written repetition (see Schmitt, 2000, p132).
[3] Deeper strategies need elaborative mental processing and can facilitate long- term retention, such as Keyword Method, inferencing and semantic mapping (see Schmitt, 2000, p132).

2000).

Schmitt (1997) further indicated that some strategies like written repetition, word lists and flash cards decrease while strategies which need deep processing like guessing increase as learners become more language mature. One thing worth pointing out is that culture background also has an influence on the choice of strategies. In other words, different learners from different cultures are very likely to use and prefer vocabulary learning strategies differently.

From the point of view of the researcher of the present study, it seems that Schmitt's vocabulary learning strategies need to be adapted when they are used to examine vocabulary learning strategies used by different learners with different language background. Take Chinese learners as an example, the strategy items of checking for L1 cognate or using cognates in study should be deleted because cognates do not exist in Chinese. Similarly, Bremner (1998) also questions the appropriateness of Oxford's (1990) SILL questionnaire items when they are administered to learners of different cultural contexts. In addition, he points out that learners may not be aware of some strategy items such as using rhymes or linking the sound of a new word to an image or picture. Next, learners may respond to vague strategy items with different interpretations.

Replicating Schmitt's (1997) study, Chen (1998) investigated Taiwanese EFL learners' vocabulary learning strategies. 275 subjects comprising 81 senior high school students and 194 college freshmen joined the study. The same instrument including 52 strategy items with six strategy items being deleted to simplify the questionnaire was given to the subjects. The results of the study showed that bilingual dictionary and verbal repetition are at the top of the most helpful strategies.

The results are consistent with that of Schmitt (1997). Both Taiwanese and Japanese learners favor mostly shallow strategies such as written or verbal repetitions. Likewise, in a study conducted by O'Malley et al. (1985), repetition strategies are also found as the most frequently used learning strategies adopted by ESL high school students. Additionally, Chen found both Taiwanese and Japanese groups of learners used more memory strategies. This again echoes a popular belief that Asian students favor using memory strategies (Oxford, 1990).

Regarding the strategies questionnaire, Chen (1998) deleted some strategies items without explicitly explaining the reasons. One of the deleted items is using Keyword Method. It seems hard to find any reasons to justify such deletion, since keyword method is generally regarded as an effective vocabulary learning strategy (Hulstijn, 1997; Nation, 1990). Clearly, owing to language distance, the item of checking for L1 cognate is deleted; however, the item of using cognates in study is kept without giving reasons. The item of using cognates in study should be deleted as well.

Gu & Johnson (1996) carried out a large-scale study investigating Chinese EFL learners' vocabulary learning strategies and learning outcomes. Eight hundred and fifty Chinese EFL university students participated in the study. They were given a vocabulary learning questionnaire which contained the following sections—beliefs about vocabulary learning, metacognitive regulation strategies, guessing strategies, dictionary strategies, note-taking strategies, memory strategies, and activation strategies. Vocabulary size tests were also administered to the subjects. The results of the study revealed that the subjects used a wide range of vocabulary learning strategies. In addition, the subjects generally did not seem to favor rote repetition strategies. Therefore, the results are inconsistent with Schmitt (1997) and

Chen (1998).

Furthermore, based on the results of their study, Gu and Johnson classified their subjects into five types of good and poor learners with different preferred vocabulary learning strategies. Among them, good learners are defined as *Readers* and *Active Strategy Users*. *Readers* are those subjects who learn vocabulary through reading, guessing, and contextual learning; *active strategy users* are those who use a wide variety of strategies such as guessing, using dictionary, taking notes, using memory strategies and actively making using of newly learned words. Both of these two types of good learners are highly motivated to learn vocabulary.

Similarly, in order to have a thorough understanding of how ESL learners learn vocabulary, Sanaoui (1995) conducted three consecutive studies to examine approaches used by second language learners to learn vocabulary. The first study is an exploratory study with 50 adult ESL university students who enrolled in a six-week vocabulary course. The subjects were asked to record and document the approaches they used to learn vocabulary per day. They were also asked to report and discuss their vocabulary learning approaches with other subjects in the course. Based on their self-reported approaches to vocabulary learning, Sanaoui found that two types of learners with distinct approaches seemed to be generated. One type of learners organized their vocabulary learning and the other type of learners seemed to learn vocabulary ad hoc. The former learners actively kept notebooks of new words and created many opportunities to practice and review them regularly. By contrast, the latter learners usually seldom took initiatives to learning vocabulary.

Four case studies of ESL learners were carried out right after the exploratory study. The cases studies were also conducted in another six-week vocabulary course. Four university students were also asked to keep a daily record of the approaches they

used to learn vocabulary they encountered for four weeks.   In the remaining two weeks, they were asked to record mnemonic techniques they used to help them retain vocabulary items they were learning.   The approaches to vocabulary learning they reported were quite similar.   Like the subjects of the first study, three of the four case study subjects also kept records of new words, regularly reviewing and practicing them by taking advantage of many opportunities.   In contrast, compared with the three subjects, the fourth subject reported that she kept fewer records of the new words, seldom practiced and reviewed them.   The four subjects reported using various mnemonic techniques to help them retain vocabulary items such as repetition, imagery, associating the new word to L1 or L2, using the new word in a sentence, and drawing.

The third study is conducted to investigate eight FSL (French as a Second Language) learners' approaches and mnemonic procedures used to learn vocabulary. The case studies of the FSL learners were conducted with similar methodology used in previous studies of ESL learners.   According to their reported vocabulary learning approaches, two groups of learners were classified.   Group A learners also kept records of the new words they were learning, reviewed and practiced them by various self-initiated learning activities.   Contrasted with Group A, Group B learners reported relying heavily on classroom instruction to learn and practice vocabulary. They seldom created opportunities to learn vocabulary.   The mnemonic procedures used by the eight FSL learners were similar to those used by the ESL learners in the second study.

According to the findings of the three studies, Sanaoui found two major distinct approaches to vocabulary learning—a structured one and an unstructured one. Learners structured their vocabulary learning, actively engaged in a wide range of

learning activities, regularly reviewed and practiced vocabulary items or they learned vocabulary in an unstructured way.   Moreover, the results also indicated that learners who used a structured learning approach were more successful learners than learners who used an unstructured learning approach.   To conclude, Sanaoui points out the importance of "learners' responsibility and engagement" in the learning process and stresses that "efforts should also be directed towards helping students become autonomous learners who are able to build, expand, and refine their vocabularies on their own, both in and outside classrooms" (p.25).

2.8 The Present Study

According to the literature reviewed above, few studies have been conducted to examine Taiwanese EFL high school students' vocabulary learning difficulties. More importantly, fewer studies have been undertaken to particularly investigate Senior I students' vocabulary learning difficulties.   Therefore, the present study aimed to explore Senior I students' vocabulary learning difficulties in the following aspects: vocabulary instruction, vocabulary practice, vocabulary assessment and vocabulary leaning strategies.