

**AN INVESTIGATION INTO VOCABULARY LEARNING
STRATEGIES USED BY SENIOR HIGH SCHOOL
STUDENTS IN TAIWAN**

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ABSTRACT

This study investigated the vocabulary learning strategies used by senior high school students in Taiwan. The aim was (a) to find out the most and the least frequently used strategies, and (b) to identify the differences in strategy use between good and poor learners. A total of 271 senior high school students in Taiwan participated in the study. A vocabulary learning strategies questionnaire and a Vocabulary Levels Test were administered to the participants. The collected data were analyzed by using SPSS version 10.0, including descriptive statistics, and independent-samples t-tests. The results are summarized as follows: (1) cognitive strategies were reported as the most frequently used strategies while social strategies were the least frequently used; (2) the most frequently used strategies were mostly related to “rote repetition” or “the form of a word;” (3) the least frequently used strategies were related to the use of study aids, social learning, and dictionaries with L2 definitions; (4) there were significant differences in strategy use between good and poor learners. Good learners favored verbal repetition and tended to learn words in context, while poor learners favored written repetition and tended to learn words in isolation.

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1. Introduction

“Without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (Wilkins 1972:111). Vocabulary plays a crucial part in language learning. It is the basic factor in communication with other people (Krashen & Terrel 1983). Both reading and listening comprehension are also strongly related to vocabulary knowledge. Laufer (1991) found significant correlations between vocabulary tests and reading success of second language learners. In spite of the fact that many variables affect reading, the performance related to the variable of vocabulary is regarded as the most highly predictive of reading comprehension (Anderson & Freebody 1981). Hu (1999) also found that students with textual vocabulary knowledge or background knowledge perform better on listening comprehension than those without such knowledge.

A large vocabulary is always viewed as an asset. Take the GRE and TOEFL for example, these tests regard a rich vocabulary as one of the best indicators of potential academic success. And oftentimes we are judged by our ability in using words, whether we are students or teachers, politicians or salesmen (Sloat & Taylor 1996). However, it is not easy for Chinese EFL learners to have a rich vocabulary due to the large amount of English vocabulary. We can't help but ask this question: How do people who have good English proficiency learn English vocabulary?

When asking forty prominent Taiwanese professionals about how they had mastered English, Chang (1990) found that they used a variety of strategies to learn vocabulary. Some made notes of new words, while others read dictionaries directly or used review cards to learn words. This is the case with adults, but how about younger learners—senior high school students?

In Taiwan, students have serious problems with English vocabulary learning, particularly for senior high school students. Junior high school students are only exposed to about 1000 high frequency words in their textbooks (Huang 1997). However, senior high school graduates are expected to have a vocabulary size of 5000-7000 words, which is a requirement in

comprehending college-level English textbooks (Chen 1999). There is obviously a large gap between what is expected of junior high school and senior high school graduates. Owing to these requirements, students are soon faced with difficulties in learning so many new words once they enter senior high school. They often complain that there are too many new words to memorize. Still, there are some good learners who perform very well on vocabulary tests. It is very likely that they use certain common strategies to learn vocabulary. Although many studies have been conducted on vocabulary or on learning strategies, little research has been done in relation to vocabulary and learning strategies in a single study, especially with senior high school students. Hence, the purpose of this study was to find out the most frequently and the least frequently vocabulary learning strategies used by senior high school students, and also to identify the differences in the use of vocabulary learning strategies between good and poor learners.

2. Literature Review

With the increasing understanding of second language acquisition during the 1970s, teachers and researchers began to realize that no single method of language teaching could absolutely lead to success in teaching a second language. Some learners “seemed to be successful regardless of methods or techniques of teaching” (Brown 2000:123). This implies that language achievement depends quite heavily on the individual learner’s endeavors. Therefore, research attention in second or foreign language learning has gradually shifted from a teaching-oriented perspective to that of individual differences of language learners. Among the individual difference variables, learning strategies are of particular interest to teachers and researchers (Cohen 1998). Since this study focuses on vocabulary learning strategies, first the most commonly mentioned vocabulary learning strategies in the literature will be detailed, and then several taxonomies of vocabulary learning strategies will be presented; and finally previous studies on vocabulary learning strategies will be reviewed.

2.1 Vocabulary Learning Strategies

This section introduces a variety of the commonly mentioned vocabulary learning strategies found in the literature. It also introduces the Depth of Processing Theory which was proposed to interpret deep and shallow strategies.

Commonly mentioned vocabulary learning strategies

Commonly mentioned vocabulary learning strategies include the use of word lists, flashcards, dictionaries, guessing from context, analyzing word parts, grouping, association, visual imagery, aural imagery, Keyword Method, the Peg Method, the Loci Method, scales for gradable adjectives, semantic map, semantic feature analysis, physical response, spaced word practice, self-testing, study aids (e.g., labels, pictures, tapes), verbal repetition, written repetition, vocabulary notebook, English media (e.g., novels, magazines, newspapers, TV, songs, and movies), etc. (Thompson 1987; Oxford & Crookall 1990; Schmitt 1997). Some of the strategies mentioned above require deeper mental processing, others do not.

The Depth of Processing theory

Craik and Lockhart (1972) proposed the Depth of Processing Theory and indicated that the effectiveness of learning is dependent on the level at which the information is processed. This means the deeper the processing is done in studying the information, the more conducive it is to learning. In other words, the deeper the information is processed, the more likely it is that the information will be retained in long term memory. With vocabulary learning, research has shown that some “deep strategies,” which require deeper mental processing, such as “association,” “imagery,” and the “Keyword Method,” will enhance the retention of target words (Cohen & Aphek 1981; Pressley et al. 1982). In contrast, the “shallow strategies,” in which a word is processed only at a superficial level, such as “taking notes,” “repetition,” rote memorization of “word lists,” and “flash cards,” are viewed as less effective learning methods.

2.2 Taxonomies of Vocabulary Learning Strategies

Although recent publication in the area of vocabulary learning strategies mentioned a lack of taxonomy development (Kojic-Sabo & Lightbown 1999), there were still some researchers attempting to develop a classification system.

Mayer and Nation (1990) first proposed a basic, but still helpful classification of vocabulary learning strategies — discovery strategies and consolidation strategies.

Sanaoui (1995) also identified two distinct approaches to vocabulary learning: a structured and an unstructured approach. Further details of her study will be discussed later in Section 2.3.2.

Both Sanaoui's and Mayer & Nation's classifications are too simple. Stoffer (1995) developed a more reliable and valid categorization of vocabulary learning strategies, the Vocabulary Learning Strategy Inventory (VOLSI), which contains 53 items. By using statistical factor analysis, she demonstrated that the 53 items on her VOLSI can be categorized into the following 9 groups.

1. Strategies involving authentic language use
2. Strategies involving creative activities
3. Strategies used for self-motivation
4. Strategies used to create mental linkages
5. Memory strategies
6. Visual/auditory strategies
7. Strategies involving physical action
8. Strategies used to overcome anxiety
9. Strategies used to organize words

One of the most recent and comprehensive classifications of vocabulary learning strategies is Schmitt's taxonomy, which consists of 58 strategies divided into five groups. Schmitt's taxonomy of vocabulary learning strategies were based on Oxford's classification system and Mayer & Nation's Discovery/Consolidation distinction.

He adopted four of Oxford's six strategy groups which are most useful for his purpose (Schmitt 1997:205).

1. Social strategies (SOC) "use interaction with other people to

- improve language learning.”
2. Memory strategies (MEM) “relate new material to existing knowledge.”
 3. Cognitive strategies (COG) “exhibit the common function of manipulation or transformation of the target language by the learner.” They are similar to memory strategies, but are not focused specifically on mental processing.
 4. Metacognitive strategies (MET) “involve a conscious overview of the learning process and making decisions about planning, monitoring, or evaluating the best ways to study.”

In addition, Schmitt created a new category called Determination Strategies (DET). The reason is that in Oxford’s taxonomy “there is no category which adequately describes the kind of strategies used by an individual when faced with discovering a new word’s meaning without recourse to another person’s expertise” (Schmitt 1997:205). Altogether, there are five strategy categories containing 58 strategy items in Schmitt’s taxonomy of vocabulary learning strategies (see Appendix A).

2.3 Previous Studies on Vocabulary Learning Strategies

So far, most research on vocabulary learning strategies has focused on two dimensions. One is memory strategies. Many researchers have explored various methods of vocabulary presentation and their effects on retention, and tried to discover the best strategy for retention (Gu & Johnson 1996). The other trend is “learning vocabulary from context.” Because the majority of memory strategies are unnaturally decontextualized or semi-contextualized, considerable research has begun to emphasize the importance of context, such as incidental vocabulary learning, learning vocabulary from reading, or guessing words from context. The studies on these two dimensions have tended to deal with a particular strategy or compared a small number of strategies, rather than exploring vocabulary learning strategies as a whole (Schmitt 1999). However, learners seldom use only one certain strategy, but rather combine various strategies to learn new words (Ahmed 1989; Sanaoui 1995). For this reason, some researchers, though not

many, have begun to study vocabulary learning strategies as a whole in recent years.

2.3.1 Studies with Sudanese Learners

The pioneer in the area of studying vocabulary learning strategies as a whole was Ahmed (1989). He gave 300 Sudanese learners of English the task to learn fourteen new words. Think-aloud task, observation, and interview were used to elicit the approaches which the students used to deal with their vocabulary learning. The results indicated that students used a total of 38 types of microstrategies that could be grouped into 6 macrostrategy types. Cluster analysis was then done to produce five groups of students. Ahmed concluded that good learners were more aware of how to learn new words, and used more strategies than poor learners.

2.3.2 Studies with ESL and FSL Learners

Another researcher trying to group learners by the pattern of their use of strategies is Sanaoui (1995). She conducted three consecutive studies with ESL and FSL (French as a second language) learners and found that participants in the three studies seemed to fall into two groups: those using structured or those using unstructured learning approaches. Compared with Ahmed's five groups of learners just mentioned, Sanaoui's structured/unstructured categorization seems to be too simple to cover differences in the patterns of learners' use of strategies.

2.3.3 Studies with EFL and ESL Learners

Sanaoui's research dealt with ESL and FSL learners, but did not touch upon EFL learners. In order to understand the situation of EFL learners and find out whether there are any differences in the use of vocabulary learning strategies between ESL and EFL learners, Kojic-sabo and Lightbown (1999) modified Sanaoui's questionnaire and used it to survey 47 ESL and 43 EFL students. The results revealed that ESL and EFL students follow similar strategies in dictionary use and note-taking, but are different in their use of review strategies and the variable of learner

independence. Another important finding is that the variable “strategy use” was strongly correlated with vocabulary knowledge and overall English proficiency. This finding is in line with the finding of a study by Gu and Johnson (1996), who argued that learners’ vocabulary size as well as their overall language proficiency seem very much related to learners’ strategy use.

2.3.4 Studies with Chinese Learners in Mainland China

Gu and Johnson (1996) investigated Chinese learners’ use of English vocabulary learning strategies by administering a vocabulary learning questionnaire to non-English majors at Beijing Normal University. They then performed a series of statistical analyses to look into the relationships between participants’ reported use of strategies and their scores on tests of vocabulary size and general English proficiency. The results were summarized as follows: firstly, vocabulary size and general English proficiency correlated highly with each other. Secondly, contextual guessing, skillful use of dictionaries, note-taking, paying attention to word formation, contextual encoding, and activation of newly learned words were also positively correlated with general English proficiency and vocabulary size, and yet visual repetition correlated negatively with both general proficiency and vocabulary size.

It is worth noting that the participants in this study did not use much rote memorization, and they reported using more meaning-oriented strategies than rote memorization strategies. This finding clearly contradicts the popular beliefs that Asian students persist in using rote repetitive strategies (O’Malley et al. 1987). Gu and Johnson’s findings also showed disagreement with the findings of Schmitt’s (1997) and Chen’s (1998) studies below.

2.3.5 Studies with Japanese Learners

Different from Gu and Johnson’s focus on the relationship between vocabulary learning strategies and vocabulary size, Schmitt’s (1997) study concentrated on the relationships between strategy use and perceived usefulness. Schmitt employed his own

taxonomy of vocabulary learning strategies to identify the most often used and the least often used strategies as well as what the learners think are the most helpful and the least helpful strategies. He gave surveys to four groups of Japanese learners, including junior high school students, senior high school students, university students, and adult learners. The results indicated that the most often used strategies and the most helpful strategies which learners reported have six in common: use of a bilingual dictionary, written repetition, verbal repetition, saying a new word aloud, studying the spelling of a word, and taking notes in class. These are strategies which the learners already used and believed beneficial.

2.3.6 Studies with Taiwanese learners

In the conclusion of his study above, Schmitt emphasized that vocabulary learning strategies may be different for learners from other cultures. With this in mind, Chen (1998) followed Schmitt's survey procedures to investigate the vocabulary learning strategies of college freshman and senior high school students in Taiwan. His study focused mainly on a comparison of strategy use between Japanese and Taiwanese learners. The results showed that there were many similarities in strategy use between Taiwanese and Japanese learners. First, both Taiwanese and Japanese learners believed that a bilingual dictionary is the most effective way of discovering the meaning of a new word. Second, guessing from context is also considered very helpful by both groups. Third, many Taiwanese and Japanese learners still believed certain shallow, rote strategies, such as verbal and written repetitions, to be the most helpful learning strategies. Such findings echoed O'Malley et al.'s (1987) findings that Asian students persisted in using rote repetitive strategies to deal with vocabulary learning. However, a recent study in Hong Kong conducted by Fan (2003) seems to contradict this common belief.

2.3.7 Studies with Hong Kong Learners

Similar to Schmitt's (1997) and Chen's (1998) studies above, Fan (2003) conducted a large-scale study with Hong Kong

university students in order to investigate students' frequency of use, perceived usefulness, and actual usefulness of vocabulary learning strategies. After analysis of data, Fan indicated that learners may or may not consider the strategies they often used to be actually useful. For instance, students reported using a guessing strategy significantly more often than dictionary strategies; but they perceived the latter as more useful. Also he found an interesting result: Hong Kong learners did not use repetition strategies more often than other strategies, and neither did they consider repetition strategies useful in vocabulary learning. This is consistent with the results of Gu and Johnson's (1996) study, but shows a contrast to those of Schmitt's (1997) and Chen's (1998) studies. Therefore, there is a need for further investigation of this point.

2.3.8 The Present Study

In Taiwan, Chen's (1998) preliminary investigation, as mentioned in Section 2.3.6, helps us to gain a better understanding of the vocabulary learning strategies used by Taiwanese learners and the similarities and differences between the strategies of Japanese and Taiwanese learners. However, both Schmitt's and Chen's studies have certain limitations in common. First, they only asked the participants to answer "Yes" or "No" to the questions of whether they used a particular strategy. The simplified, binary Yes/No answers fail to reveal how often students used a particular strategy. The same answer "Yes" may represent very different frequencies ranging from one time to ten times within a certain period of time. Second, the participants of both studies included students of different ages, but some complicated strategies detailed in the questionnaire, such as "semantic map" or "cognates," may not be known or practiced by younger students. In light of the limitations of the studies above, the present study adopted a 5-point Likert-scales to explore students' frequency of strategy use, and selected the same age group as subjects of the present study. Since there has been no study on vocabulary learning strategies exclusively with senior high school students in Taiwan, the present study focused on

investigating vocabulary learning strategies of the senior high school students. In addition, Ahmed (1987) also found that good learners and poor learners showed some differences in the use of vocabulary learning strategies (see Section 2.3.1). Therefore, the following research questions were posed in the present study:

1. What are the most and the least frequently used vocabulary learning strategies by senior high school students in Taiwan?
2. Are there any differences in use of vocabulary learning strategies between good and poor learners?

3. Methodology

The present study investigated the vocabulary learning strategies used by 271 senior high students in Taiwan. A questionnaire and a vocabulary test were used as instruments. Data were analyzed by using SPSS (Statistical Package for the Social Science) version 10.0, including descriptive statistics, and an independent samples t-test.

3.1 Participants

The participants in the study were made up of 271 third-year female students from three senior high schools in Taipei (for sampling convenience, the researchers restricted the population to females only).

The participants were selected for two reasons. First of all, these participants have very similar backgrounds. They are almost of the same age (about 18) and preparing for university entrance examination the next year. They all have at least 5 years' experience in learning English. The researchers believed they are mature enough to report the strategies they used on the questionnaire. The second reason is that the researchers assumed these participants constituted a representative sample of the population as a whole. According to the results in the senior high school entrance examination, the three schools represent different levels of academic achievement. One is at a top level, another at a middle level, and the other at a lower level. Due to the fact that these participants include different levels of senior high school students, they may well represent the general senior high students

in Taiwan, particularly female students.

3.2 Instruments

The instruments employed in the study included a questionnaire on vocabulary learning strategies and a Vocabulary Levels Test.

3.2.1 Vocabulary Learning Strategies Questionnaire

The researchers adopted a questionnaire as a major research method to elicit participants' vocabulary learning strategies. The questionnaire used in this study was based on Schmitt's (1997) taxonomy of vocabulary learning strategies. The researchers paraphrased and translated Schmitt's taxonomy of vocabulary learning strategies into Chinese (see Appendix B). Some changes were made to make the questionnaire more suitable for the participants of the present study. For instance, some original items, such as use of "semantic feature grids," "semantic map," "scales for gradable adjectives," "Peg Method," "Loci Method," "spatial grouping," and "configuration," were deleted because they are too complicated for senior high school students to comprehend. Another item, "cognates," was also deleted. Chinese participants cannot take advantage of this strategy to learn English vocabulary due to the fact that Chinese is not an Indo-European language.

On the other hand, some items were added to the questionnaire due to the inadequacy of the original items. For example, dictionary strategies in Schmitt's bilingual and monolingual dictionaries are supplemented with bilingualized and electronic dictionaries. Another strategy "use of English language media" is subdivided into six items: English films, songs, newspapers, magazines, storybooks, and radio programs.

In total, the questionnaire consisted of fifty items of vocabulary learning strategies, which were grouped into five categories – Determination Strategies (DET), Social Strategies (SOC), Memory Strategies (MEM), Cognitive Strategies (COG), and Metacognitive Strategies (MET). As for the way of responding to the questionnaire, the researchers changed

Schmitt's Yes/No choice to 5-point Liker-scale questions. The participants were asked to rate the frequency of each strategy they used on a 5-point Likert-scale, ranging from never (1 point), seldom (2 points), sometimes (3 points), often (4 points), to always (5 points).

3.2.2 Vocabulary Levels Test

The Vocabulary Levels Test (hereafter VLT) was used to measure the participants' vocabulary size and thus to distinguish good learners from poor learners.

The VLT has often been used by researchers who need to estimate the vocabulary size of non-English speaking learners (Read 2000) due to the fact that the test is quick to take, easy to mark, and the results are easy to interpret (Nation 2001). Meara (1996) even called VLT "the nearest thing we have to a standard test in vocabulary." The test was devised by Nation (1990), who divided the VLT into five frequency levels: 2,000-word level, 3,000-word level, 5,000-word level, university word level, and 10,000-word level. According to Nation, the 2,000-word and 3,000-word levels contain the high-frequency words that all learners need to know in order to be able to function effectively in English. Therefore, the present researchers adopted the 2,000-word and 3,000-word levels to measure the senior high school students' vocabulary size (see Appendix C).

Good vocabulary learners and poor vocabulary learners were determined according to the participants' overall scores on the VLT. The researchers gave one score for each correct matching of a word and its definition. The full score is 36. After scoring, the top 25% of the participants were defined as good vocabulary learners, while the bottom 25% poor vocabulary learners.

3.3 Procedures

The researchers carried out this study through two stages: first, a pilot study and then a main study.

3.3.1 Pilot Study

A pilot study was conducted in late September, 2003. It

aimed at testing the practicability of the instruments used by the researchers, including the clarity and comprehensibility of all items and instructions on the questionnaire and the VLT, and the reliability coefficients. Some problems were found and revisions were made for the main study.

The results of the pilot study showed that the questionnaire was reliable. To measure the internal-consistency reliability of the questionnaire, Cronbach's alpha for the total scale and each subscale were calculated. As shown in Table 1, Cronbach's alpha for the total scale is .93, and most of the subscales exceed .70. According to Litwin (1995), levels of .70 or more are generally viewed as showing good reliability. Hence, this questionnaire is considered to be reliable and practicable.

Table 1
Internal Consistency Reliability in the Questionnaire

Subscale	Cronbach's alpha
Determination strategies	Alpha = .62
Social strategies	Alpha = .75
Memory strategies	Alpha = .87
Cognitive strategies	Alpha = .62
Metacognitive strategies	Alpha = .79
Total scale	Alpha = .93

3.3.2 Main Study

The main study was conducted in late October, 2003, one month after the pilot study. The researchers administered the improved questionnaire along with the VLT to six classes from three senior high schools during regular English class time. The same procedures for administration were followed in all six classes. Written instructions in the two instruments were repeated orally, including the purpose of the questionnaire, that the participants could not discuss responses with each other, that they were to respond honestly, and that their responses to the questionnaire and their personal data would be treated

confidentially. Participants were also reminded to check if they had any missing answers before handing in the questionnaire and the VLT. Of the 271 collected questionnaires, four were eliminated because there were too many missing answers. Altogether, 267 valid questionnaires were adopted for data analysis.

3.4 Analysis

The data gathered in the study were mainly analyzed quantitatively by using SPSS version 10.0, including descriptive statistics and independent samples t-tests.

The purpose of the data analysis was to find out the answers to the following research questions:

1. What are the most and the least frequently used vocabulary learning strategies used by senior high school students in Taiwan?
2. Are there any differences in the use of vocabulary learning strategies between good and poor learners?

To answer Research Question 1, descriptive statistics, such as means, standard deviations, were calculated to show how often different strategies were used, and to find out the most and the least frequently used vocabulary learning strategies.

To answer Research Question 2, independent-samples t-tests were performed to see if there is any significant difference in the strategy use between good and poor learners.

4. Results

The results comprise two major sections. Section 4.1 reports the results for Research Question 1 – What are the most and the least frequently used vocabulary learning strategies? Section 4.2 reports the results for Research Question 2 – Are there any differences in the use of vocabulary learning strategies between good and poor learners?

4.1 The Most and the Least Frequently Used Strategies

This section reports the results for Research Question 1: What are the most and the least frequently used vocabulary

learning strategies by senior high school students in Taiwan? The most and the least frequently used strategy category will be shown in Table 2, and the ten most and the ten least frequently used strategies will be shown in Tables 3 and 4.

4.1.1 Frequencies of Use of Overall Strategies and Five Strategy Categories

The overall mean of the participants' use of vocabulary learning strategies, as shown in Table 2, was 3.05. This suggests that the participants were moderate users of vocabulary learning strategies. That is, they did not use vocabulary learning strategies very often. As for the five strategy categories, the most frequently used strategy category was cognitive strategies ($M = 3.28$), followed by determination strategies ($M = 3.26$), memory strategies ($M = 3.10$), metacognitive strategies ($M = 2.88$), and social strategies ($M = 2.64$). The results indicate that participants employed cognitive strategies most frequently, and they used social strategies least frequently.

Table 2
Frequencies of Overall Strategy Use and by Category of Strategy Use

Strategy Category	N	Mean	SD	Rank Order
Determination	267	3.26	.56	2
Social Strategies	267	2.64	.64	5
Memory Strategies	267	3.10	.56	3
Cognitive Strategies	267	3.28	.51	1
Metacognitive Strategies	267	2.88	.63	4
Overall Strategies	267	3.05	.46	

Note. N means the number of the valid responses.

4.1.2 Ten Most Frequently Used Vocabulary Learning Strategies

The ten most frequently used strategies out of the total of fifty items were ranked according to the mean scores in

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descending order. As shown in Table 3, Item 37 “take notes in class” with the highest mean of 4.60 ranked first; Item 24 “study the sound of a word” (M = 4.44) ranked second; Item 33 “verbal repetition” (M = 4.39) ranked third; Item 34 “written repetition” (M = 4.35) ranked fourth; Item 7 “electronic dictionary” (M = 4.33) ranked fifth; Item 23 “study the spelling of a word” (M = 4.27) ranked sixth; Item 26 “underline the new word” (M = 3.89) ranked seventh; Item 38 “use the vocabulary section in the textbook” (M = 3.85) ranked eighth; Item 3 “guess from textual context” (M = 3.80) ranked ninth; Item 4 “bilingual dictionary” (M = 3.72) ranked tenth. Of the top ten most frequently used strategies, there were six strategies which appear to have

Table 3
Top Ten Most Frequently Used Vocabulary Learning Strategies

Strategy Item	Description	Mean	SD	Rank Order
37	Take notes in class	4.60	.65	1
24	Study the sound of a word	4.44	.77	2
33	Verbal repetition	4.39	.78	3
34	Written repetition	4.35	.88	4
7	Electronic dictionary	4.33	.90	5
23	Study the spelling of a word	4.27	.78	6
26	Underline the new word	3.89	1.19	7
38	Use the vocabulary section in the textbook	3.85	1.09	8
3	Guess from textual context	3.80	.95	9
4	Bilingual dictionary (paper)	3.72	1.12	10

something to do with “rote learning” or the “form” (spelling/sound) of a word, such as “take notes in class,” “study the sound of a word,” “verbal repetition,” “written repetition,” “study the spelling of a word,” and “underline the new word.”

4.1.3 Ten Least Frequently Used Vocabulary Learning Strategies

The ten least frequently used strategies out of the total of fifty items were ranked according to the mean scores in ascending order. As shown in Table 4, the least frequently used strategy was Item 40 “put English labels on physical objects” ($M = 1.34$), followed by Item 5 “monolingual dictionary” ($M = 1.73$), Item 14 “interact with native speakers” ($M = 1.73$), Item 22 “group words together within a storyline” ($M = 1.96$), Item 39 “listen to tapes of word lists” ($M = 2.05$), Item 32 “use physical action when learning a word” ($M = 2.06$), Item 12 “discover a new word’s meaning through group work activities” ($M = 2.11$), Item 15 “study a word with a pictorial representation of its meaning” ($M = 2.11$), Item 6 “bilingualized dictionary” ($M = 2.21$), and Item 41 “keep a vocabulary notebook” ($M = 2.22$). The ten least frequently used strategies seemed related to study aids (e.g., labels, tapes, pictures, physical actions), social learning behavior (e.g., group work, interact with native speakers), and dictionaries with L2 definitions (e.g., monolingual and bilingualized dictionaries).

Table 4
Ten Least Frequently Used Vocabulary Learning Strategies

Strategy Item	Description	Mean	SD	Rank Order
40	Put English labels on physical objects	1.34	.64	1
5	Monolingual dictionary (paper)	1.73	.85	2
14	Interact with native speakers	1.73	.88	2
22	Group words together within a storyline	1.96	.95	4
39	Listen to tapes of word lists	2.05	.98	5
32	Use physical action when learning a word	2.06	1.04	6
12	Discover a new word's meaning through group work activities	2.11	1.08	7
15	Study a word with a pictorial representation of its meaning	2.11	1.05	7
6	Bilingualized dictionary (paper)	2.21	1.07	9
41	Keep a vocabulary notebook	2.22	1.13	10

4.2 Good Learners' Vocabulary Learning Strategy Use vs. Poor Learners' Vocabulary Learning Strategy Use

This section reports the results for Research Question 2: Are there any differences in vocabulary learning strategy use between good and poor learners? Good learners in the present study were those whose score on the VLT were among the top 25% of the participants whereas poor learners were those among the bottom 25%. As a result, good learners were made up of 64 students who scored 29 or more out of the total score of 36, and poor learners consisted of 69 students who scored 15 or less.

Section 4.2.1 compares the strategy category use between good and poor learners. Section 4.2.2 compares the top five most often used strategies. Section 4.2.3 reports the strategies that good learners used significantly more often than poor learners. Section 4.2.4 reports the strategies that poor learners used significantly more often than good learners.

4.2.1 A Comparison of Strategy Category Use between Good and Poor Learners

A series of t-tests were conducted to compare the frequencies of the overall strategy use and five strategy categories between good and poor learners. As Table 5 shows, there was a significant difference in the frequencies of overall strategy use between good and poor learners. This implies that good learners tended to use overall strategies more often than poor learners did.

Table 5
A Comparison of Strategy Category Use between Good and Poor Learners

	Good Learners (N=64)		Poor Learners (N=69)		t	p
	Mean	SD	Mean	SD		
Overall Strategy Use	3.29	.41	2.78	.45	6.8	.000*
Determination Strategies	3.65	.47	2.91	.52	8.61	.000*
Social Strategies	2.83	.73	2.44	.60	3.37	.001*
Memory Strategies	3.40	.44	2.77	.57	7.20	.000*
Cognitive Strategies	3.23	.48	3.19	.49	0.48	.632
Metacognitive Strategies	3.18	.60	2.55	.54	6.44	.000*

Note. 1. Because a Bonferroni adjustment was made, the t-test was declared significant at .05 level when it produced a t-value significant at .0083 (= .05/6) level.

2. Number of good learners=64; Number of poor learners= 69

Besides, good and poor learners differed significantly in four strategy categories – determination strategies, social strategies, memory strategies, and metacognitive strategies. However, there was no significant difference in the use of cognitive strategies use between good and poor learners. This suggests that good learners used determination strategies, social strategies, memory strategies,

and metacognitive strategies significantly more often than poor learners. Yet, both groups used cognitive strategies with nearly equal frequency.

4.2.2 A Comparison of the Top Five Most Frequently Used Strategies between Good and Poor Learners

The top five most frequently used strategies by good learners, as shown in Table 6, are “take notes in class” (M = 4.77), “study the sound of a word” (M = 4.72), “electronic dictionary” (M = 4.42), “verbal repetition” (M = 4.42), and “guess from textual context”(M = 4.39), while the top five strategies by poor learners are “written repetition” (M = 4.59), “take notes in class” (M = 4.38), “verbal repetition” (M = 4.23), “electronic dictionary” (M = 4.14), and “study the sound of a word” (M = 4.14).

Table 6
Top Five Most Frequently Used Strategies by Good and Poor Learners

Rank	Good Learners	Poor Learners
1	Take notes in class (M = 4.77, SD = .50)	Written repetition (M = 4.59, SD = .65)
2	Study the sound of a word (M = 4.72, SD = .52)	Take notes in class (M = 4.38, SD = .81)
3	Electronic dictionary (M = 4.42, SD = .87)	Verbal repetition (M = 4.23, SD = .86)
4	Verbal repetition (M = 4.42, SD = .77)	Electronic dictionary (M = 4.14, SD = .90)
5	Guess from textual context (M = 4.39, SD = .66)	Study the sound of a word (M = 4.14, SD = .93)

It is interesting to note that of the top five most frequently used strategies, good and poor learners have four strategies in common—“take notes in class,” “study the sound of a word,” “electronic dictionary,” and “verbal repetition.” However, the greatest difference lies in the fact that good learners included “guessing from textual context” in the top five most frequently

used strategies; in contrast, poor learners included “written repetition” on the top five list, and ranked it first.

4.2.3 Strategies Good Learners Used Significantly More Often Than Poor Learners

The ten strategies which good learners used significantly more often than poor learners, as shown in Table 7, are “analyze parts of speech,” “learn the whole phrase including the new word,” “remember parts of speech,” “guess from textual context,” “use new words in sentences,” “learn new words from reading English stories, novels,” “say a new word aloud when studying,” “paraphrase the word’s meaning,” “learn new words from reading English magazines,” and “learn new words from listening to English radio programs.” It is important to note that most of the

Table 7
Strategies That Good Learners Used Significantly More Often Than Poor Learners

Strategy Item	Description	Mean Difference ($M_{\text{good}} - M_{\text{poor}}$)
1	Analyze parts of speech	1.30
31	Learn the whole phrase including the new word	1.29
29	Remember parts of speech	1.22
3	Guess from textual context	1.10
21	Use new words in sentences	1.07
46	Learn new words from reading English stories, novels	1.04
25	Say a new word aloud when studying	1.03
30	Paraphrase the word’s meaning	1.03
45	Learn new words from reading English magazines	.92
47	Learn new words from listening to English radio programs	.92

Note. Strategies listed above are $M_{\text{good}} - M_{\text{poor}} > .90$

ten strategies appear to be related to context. This implies that good learners used strategies related to “context” significantly more frequently than poor learners.

4.2.4 Strategies That Poor Learners Used Significantly More Often Than Good Learners

There were four strategies which poor learners used significantly more often than good learners. They are, as shown in Table 8, “written repetition,” “word lists,” “flash cards,” and “skip or pass new words.” Of the four strategies, the first three strategies—“written repetition,” “word lists,” and “flash cards,” appear to be related to “decontextualized methods.” This implies that poor learners tended to learn new words in isolation more often than good learners.

Table 8
Strategies That Poor Learners Used Significantly More Often Than Good Learners

Strategy Item	Description	Mean Difference
34	Written repetition	-.59
35	Word lists	-.58
36	Flash cards	-.57
50	Skip or pass new words	-.50

5. Discussion

This section interprets the results in Section 4. Section 5.1 interprets the results related to the most and the least frequently used strategy categories; Section 5.2, the results related to the top ten most frequently used strategies; Section 5.3, the results related to the least frequently used strategies; and Section 5.4 interprets the differences in vocabulary learning strategy use between good and poor learners.

5.1 The Most and the Least Frequently Used Strategy Categories

Cognitive strategies were the most frequently used category,

while social strategies were the least used category.

The participants in the present study reported using cognitive strategies most frequently. This result echoes Oxford's (1990) findings that cognitive strategies were the most popular strategies for language learners. The possible reason for this result could be the ease of use of cognitive strategies. Cognitive strategies involved more direct manipulation or transformation of the target language (Oxford 1990). "They are similar to memory strategies, but are not focused so specifically on mental processing" (Schmitt 2000:136). Typical examples of cognitive strategies for vocabulary learning included "repetition," "taking notes," "word lists," "flash cards," etc. These strategies do not involve a complicated mental process and thus could be easier to use for younger learners like senior high school students.

On the other hand, the participants reported using social strategies least frequently. This finding is in agreement with that of Schmitt's (1997) study. Three possible reasons to explain why students did not favor social strategies for vocabulary learning could be that, first, most of the language learners have a common impression that vocabulary learning is achieved individually. It may appear reasonable to them that they can deal with new words by themselves and do not necessarily need interaction with others. Second, in an EFL country like Taiwan, there are few opportunities for learners to practice or use new words with other people, let alone with foreigners. Third, there might be a cultural factor. Politzer and McGroaty (1985) contended that social interaction learning behavior is more a part of western learning behavior than Asian learning behavior.

5.2 The Ten Most Frequently Used Strategies

The top ten most frequently used strategies in the present study—"take notes in class," "study the sound of a word," "verbal repetition," "written repetition," "electronic dictionary," "study the spelling of a word," "underline the new word," "use the vocabulary section in the textbook," "guess from textual context," and "bilingual dictionary"—were found to include the following characteristics.

1. The ten most frequently used strategies are mostly “shallow strategies.” Strategies, like “study the sound of a word,” “study the spelling of a word,” “verbal repetition,” “written repetition,” and “underline the new word,” focused only on the “form” of a word. In other words, the participants favored strategies which emphasize either orthographic form (i.e., spelling) or phonological form (i.e., pronunciation). There are two possible explanations for this phenomenon. First, these shallow strategies, which processed words only at a superficial level and involve less mental processing, might be easier to understand and easier to use for senior high school students. Another possible reason that the participants favored shallow strategies is that these strategies seem to be emphasized by school teachers due to the education system in Taiwan. Again, perhaps we could view it as a cultural effect.
2. Rote strategies, such as “taking notes,” “repetition strategies,” appear to play an important part in the present study. Of the top ten most frequently used strategies, “taking notes” ranked first. This could be due to the traditionally teacher-orientated education system. Teachers in Taiwan play a role of authority, and also symbolize a source of knowledge. All students are required to do is to listen attentively to the teachers’ lectures and take notes of what is said.

As for the use of repetition strategies, “verbal repetition” and “written repetition” ranked third and fourth respectively, near the very top of the ten most frequently used strategies. The results are in line with the findings of O’Malley (1987) that Asian students persisted in using repetition strategies to tackle vocabulary learning. Schmitt (1997) and Chen (1998) also support this claim by the findings in their studies. This phenomenon could be related to students’ L1 learning and teachers’ style of instruction. As far as students in Taiwan are concerned, they have been instructed to perform written repetition and verbal repetition to memorize Chinese characters beginning in elementary school. The strategies they used for learning Chinese characters may be transferred to English vocabulary learning. The repetition strategies are

deep-rooted and thus naturally become the primary means used in learning English vocabulary. However, a finding from Gu and Johnson's (1996) research contradicts the claim that Asian students favored repetition strategies. The possible reason that the participants in Gu and Johnson's study did not use much repetition strategies is that the participants are all from Beijing Normal University and hence belong to a special population of advanced students. Cognitive maturity, and language proficiency should be taken into account when studying learning strategies (Yang 1996).

5.3 The Ten Least Frequently Used Strategies

The ten least frequently used strategies in the present study — “put English labels on physical objects,” “monolingual dictionary,” “interact with native speakers,” “group words together within a storyline,” “listen to tapes of word lists,” “use physical action when learning a word,” “discover a new word's meaning through group work activities,” “study a word with a pictorial representation of its meaning,” “bilingualized dictionary,” and “keep a vocabulary notebook”—were found to include the following characteristics.

1. It appears that the participants did not like to use strategies related to study aids, such as visual aids (e.g., labels and pictures), auditory aids (e.g., tapes), and physical aids (e.g., physical action). “Put English labels on physical objects” can make words salient, yet it can be so troublesome that the participants may not have wish to do it. “Pair L2 words with pictures” is remembered more easily than “pair L2 word with L1 definition” (Paivio and Caspo 1973). However, not all words are picturable. Most of the words encountered by senior high school students are abstract and not easy to express through pictures. Hence, pictures could be more suitable for children or beginning learners. This is the same with “physical action.” As for “listen to tapes of word lists,” it might be boring to students because of lack of context.
2. Strategies related to social learning, such as “interact with native speakers,” and “learning through group work,” were

also rarely used by the participants. The possible reasons for this phenomenon have been discussed earlier in Section 5.1.

3. Dictionaries related to L2 definitions, such as “monolingual,” and “bilingualized” dictionaries, were also of little interest to the participants. Conversely, “bilingual” and “electronic” dictionaries were on the top ten most frequently used strategies. The possible reason that students preferred the use of bilingual dictionaries lies in the fact that learners will feel secure if they can relate a foreign word to a meaning in their L1. In contrast, monolingual dictionaries which offer only L2 definition and L2 sentences might make learners feel uncertain about the exact meaning of the new word. Although bilingualized dictionaries, which contained monolingual information and also the L1 translation, have been reported to be the most useful kind of learners’ dictionary (Laufer & Melamed 1994), they were seldom used by participants. This could be due to the fact that bilingualized dictionaries include both L1 and L2 definitions and thus slow the speed of consultation. Therefore, students would rather choose “bilingual” instead of “monolingual” or “bilingualized” dictionaries.

5.4 The Differences in Strategy Use between Good and Poor Learners

The results of the t-tests showed that there was a significant difference between good and poor learners in the use of vocabulary learning strategies. For overall strategy use, good learners used a range of vocabulary learning strategies significantly more often than poor learners. This is in agreement with the findings of Ahmed (1988), Sanaoui (1992), and Kojic-sabo and Lightbown (1999). In addition, good learners and poor learners also showed significant differences in each strategy category except that of cognitive strategies. In this section, we will discuss the greater differences in individual strategy use between good and poor learners – “verbal repetition” vs. “written repetition” ; “learning words in context” vs. “learning words in isolation.”

5.4.1 “Verbal Repetition” vs. “Written Repetition”

According to the results in Section 4.2.2 and 4.2.4, good learners favored “verbal repetition” while poor learners favored “written repetition.”

“Repetition” has long been regarded as a bad strategy by educators working in the western tradition because it is related to rote learning. However, the evidence in the present study showed that both good learners and poor learners used repetition a lot. The greatest difference lies in the fact that good learners favored “verbal repetition” over “written repetition,” while poor learners favored “written repetition” over “verbal repetition.”

Some researchers maintain that “verbal repetition” is superior to “written repetition.” Thomas and Dieter (1987) claimed that written repetition only improved the knowledge of written form but did not contribute to form-meaning connection. Seibert (1927) also found that the subjects using “saying words aloud” performed far better in retention than those using “written repetition” or “silent repetition.” This might be due to the fact that words encoded in a sound form will pass into long-term memory more easily (Ellis 1995). Fay and Cutler (1977) also contended that the syllable structure and stress pattern of the word are important for storing in memory. Therefore, the researchers concluded that rote learning is not necessarily a bad learning strategy. However, it depends on what kind of rote learning you use and how you perform it. Such rote strategy as “verbal repetition,” perhaps, is one of the reasons that good learners become good learners. This argument supports O’Malley et al.’s (1985) findings that some Asian students applied rote memorization strategies successfully in learning L2 vocabulary.

5.4.2 “Learning Words in Context” vs. “Learning Words in Isolation”

The results in Section 4.2.3 showed that the strategies which good learners used much more often than poor learners are related to “context,” such as “learn the whole phrase including the new word,” “guess from textual context,” “use new words in sentences,” “paraphrase the word’s meaning,” “analyze parts of

speech,” and “learn words from story books, magazines, radio programs.” On the other hand, the results in Section 4.2.4 showed that the strategies which poor learners used significantly more often than good learners are related to “decontextualized methods” or “words in isolation,” such as “written repetition,” “word lists,” and “flash cards.” For good learners, to learn a word does not just mean to know its isolated meaning, it includes knowing the use of the word in relationship to the other words around it, such as collocations, phrases, sentences, or the usage of the word. That is, good learners tended to deal with words in context. For poor learners, to learn a word seems to just memorize the form of the word and its corresponding L1 equivalent. Each new word is learned as if it had no relationship with other words. That is, poor learners tend to deal with words in isolation. Many researchers (Gairns & Redman 1986; Oxford & Crookall 1989) also contend that learning words in context is a more effective vocabulary learning strategy than learning words in isolation. This could be due to the fact that context makes a word meaningful, and also makes a word easy to remember by providing rich information about the target word.

6. Conclusion

This final section summarizes the major findings of the study and presents some pedagogical implications.

6.1 The Major Findings of the Study

There are four major findings in the present study. First, the participants employed cognitive strategies most frequently, and social strategies least frequently.

Second, the most frequently used strategies are mostly related either to “rote learning” or to “the form of a word,” such as “take notes in class,” “study the sound of a word,” “verbal repetition,” “written repetition,” “study the spelling of a word,” or “underline the new word.” Third, the least frequently used strategies are related to the use of (1) study aids, such as labels, tapes, pictures, and physical actions; (2) social learning, such as group work and interaction with native speakers; (3) dictionaries

with L2 definitions, such as monolingual and bilingualized dictionaries. Fourth, good learners and poor learners showed some significant differences in strategy use: (1) Good learners used vocabulary learning strategies significantly more often than poor learners, especially in determination, memory, and metacognitive strategies. (2) Good learners favored “verbal repetition” while poor learners favored “written repetition.” (3) Good learners tended to use strategies related to “context” while poor learners tended to use strategies related to “decontextualized methods.”

6.2 Pedagogical Implications

Four pedagogical implications can be drawn from the present study. First, teachers should introduce senior high school students to a variety of vocabulary learning strategies. According to the results in the study, good learners used overall strategies significantly more often than poor learners. This finding provides evidence that the use of vocabulary learning strategies might contribute to vocabulary learning. However, the results in the study also show that students did not use vocabulary learning strategies very often. It is possible that students are not aware of these strategies very well. It seems that vocabulary learning strategies have not been overtly taught by teachers (Porte 1988). Most teachers leave vocabulary learning to students themselves (Waring 2002). Therefore, it is important for teachers to help students become familiar with various vocabulary learning strategies and encourage them to try these strategies.

Second, teachers should pay more attention to deep strategies. There has been little guidance to the learners who ask questions such as: How do I memorize vocabulary better? (Thompson 1987). According to the Depth of Processing hypothesis referred to in Section 2.1, the more or the deeper one manipulates the information, the better the information will be retained. If we follow this hypothesis, then such deep memory strategies as “imagery,” “association,” “grouping,” or “keyword method” would be helpful for vocabulary retention. However, the results in the present study indicate that senior high students favor

shallow strategies, which process words at a superficial level and mostly focus only on the form of a word. This might be due to the fact that deep strategies are more complex or not familiar to senior high school students. Therefore, teachers should teach some deep strategies in order to help students to remember vocabulary better.

Third, teachers should encourage students to use more verbal repetition than written repetition. The results in the study showed that good learners favored verbal repetition while poor learners favored written repetition. In addition, research has provided evidence that verbal repetition, as opposed to written repetition, could contribute more efficiently to the retention of words (see Section 5.4.1). Hence, teachers should place more emphasis on verbal repetition, which could be more effective in vocabulary learning than written repetition.

Fourth, teachers should present new words in context when teaching vocabulary. According to the “levels-of-processing” model (Craik & Lockhart 1972), “meaningfulness” will aid in enabling information to be retained longer. With vocabulary, the meaning of a word occurs in context, namely, context determines the meaning of a word. In addition to making a word “meaningful,” context provides more information about a word and thus contributes to the retention of a word. This argument is supported by the findings of the present study. The results of the present study show that the greatest difference between good and poor learners lies in the fact that good learners used strategies related to context significantly more often than poor learners. The finding above provides evidence that context may well contribute to vocabulary learning. Therefore, teachers should teach words in context instead of in isolation.

In conclusion, vocabulary learning is a lifelong, continuous process. It is impossible for teachers to teach students all the words. Ultimately students need to learn words independently. Before they could do so, teachers have to help their students make the most of the vocabulary learning strategies available to them.

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APPENDIX A.

A taxonomy of vocabulary learning strategies (Schmitt 1997: 207-208)

Strategy Group

- DET Analyse part of speech
- DET Analyse affixes and roots
- DET Check for L1 cognate
- DET Analyse any available pictures or gestures
- DET Guess from textual context
- DET Bilingual dictionary
- DET Monolingual dictionary
- DET Word lists
- DET Flash cards

- SOC Ask teacher for an L1 translation
- SOC Ask teacher for paraphrase or synonym of new word
- SOC Ask teacher for a sentence including the new word
- SOC Ask classmates for meaning
- SOC Discover new meaning through group work activity
- SOC Study and practice meaning in a group
- SOC Teacher checks students' flash cards or word lists for accuracy
- SOC Interact with native-speakers

- MEM Study word with a pictorial representation of its meaning
- MEM Image word's meaning
- MEM Connect word to a personal experience
- MEM Associate the word with its coordinates
- MEM Connect the word to its synonyms and antonyms
- MEM Use semantic maps
- MEM Use "scales" for gradable adjectives
- MEM Peg Method
- MEM Loci Method
- MEM Group words together to study them
- MEM Group words together spatially on a page
- MEM Use new word in sentences

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- MEM Group words together within a storyline
- MEM Study the spelling of a word
- MEM Study the sound of a word
- MEM Say new word aloud when studying
- MEM Image word form
- MEM Underline initial letter of the word
- MEM Configuration
- MEM Use Keyword Method
- MEM Affixes and roots (remembering)
- MEM Part of speech (remembering)
- MEM Paraphrase the word's meaning
- MEM Use cognates in study
- MEM Learn the words of an idiom together
- MEM Use physical action when learning a word
- MEM Use semantic feature grids
- COG Verbal repetition
- COG Written repetition
- COG Word lists
- COG Flash cards
- COG Take notes in class
- COG Use the vocabulary section in your textbook
- COG Listen to tape of word lists
- COG Put English labels on physical objects
- COG Keep a vocabulary notebook

- MET Use English-language media (songs, movies, newscasts, etc.)
- MET Testing oneself with word tests
- MET Use spaced word practice
- MET Skip or pass new word
- MET Continue to study word over time

APPENDIX B

字彙學習調查表

請根據你平時學習字彙的實際情形**圈選**一個適合的選項

	從 未 如 此	很 少 如 此	偶 而 如 此	經 常 如 此	一 直 如 此
1. 我會分析生字的詞類（動詞、名詞等）來判斷它的意思。	1	2	3	4	5
2. 我會分析字根、字首或字尾以猜測單字的意思。 例如：impossible = im+possible；artist = art+ist	1	2	3	4	5
3. 我會從文章的上下文來推測單字的意思。	1	2	3	4	5
4. 我會用英漢辭典來查生字的意思。	1	2	3	4	5
5. 我會用英英辭典來查生字的意思。	1	2	3	4	5
6. 我會用英英、英漢雙解辭典來查生字的意思。	1	2	3	4	5
7. 我會用電子辭典來查生字的意思。	1	2	3	4	5
8. 我會要求老師翻譯生字的中文意思。	1	2	3	4	5
9. 我會要求老師提供生字的同義字。	1	2	3	4	5
10. 我會要求老師提供一個包含生字的句子。	1	2	3	4	5
11. 我會請教同學生字的意思。	1	2	3	4	5
12. 我會透過小組討論的方式，找出生字的意思。	1	2	3	4	5
13. 我會和同學一起練習所學的單字。	1	2	3	4	5
14. 我會利用新學的單字和英美人士交談。	1	2	3	4	5
15. 我會將單字和代表此字的圖畫一起配對學習。	1	2	3	4	5
16. 我會將單字的意思在內心形成一個意象來記。 例如：學習 cloud 時，心中便浮現天空的	1	2	3	4	5

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	從 未 如 此	很 少 如 此	偶 而 如 此	經 常 如 此	一 直 如 此
一片雲。					
17. 我會把單字連結到自己個人的經驗上。 例如：學 snow 時，想到以往在山上賞雪的情景。	1	2	3	4	5
18. 我會將一個單字連結到與其相關的字。 例如：apple，想到其它水果 pear，cherry 等。	1	2	3	4	5
19. 我學單字時會同時注意它的同義字和反義字。 例如：學習 beautiful 時，同時學其同義字 pretty 和反義字 ugly。	1	2	3	4	5
20. 我會將單字分類整理來學習。 例如：家具類的名稱一起學。	1	2	3	4	5
21. 我會用新學的單字來造句。	1	2	3	4	5
22. 我會結合幾個新學的單字，串聯成故事來幫助記憶。	1	2	3	4	5
23. 我在學習單字時，會去記它的拼法。	1	2	3	4	5
24. 我在學習單字時，會去注意它的發音和念法。	1	2	3	4	5
25. 我在學習單字時，會大聲念出來。	1	2	3	4	5
26. 我會在新學單字下劃線，加強印象。	1	2	3	4	5
27. 我會找出與英文發音相近的中文諧音來幫助記憶新單字。例如：學 cool 時，利用中文的諧音「酷」，想像一位很「酷」的歌手在「涼爽」的樹下唱的「很棒」。	1	2	3	4	5
28. 我會記住單字之字根、字首、字尾。	1	2	3	4	5
29. 我會記住單字的詞性。	1	2	3	4	5
30. 我會用一段文字來解釋單字的意思。	1	2	3	4	5

	從 未 如 此	很 少 如 此	偶 而 如 此	經 常 如 此	一 直 如 此
例如：housekeeper 解釋為 a person who looks after a house					
31. 我會把包含此單字的整個片語或成語一起記下來。 例如：學習 attempt 時，記住此片語 in an attempt to	1	2	3	4	5
32. 我會用肢體動作來幫助記住新學的單字。 例如：我跳起來，記住「jump」這個字。	1	2	3	4	5
33. 我會重複誦唸，來記住單字。	1	2	3	4	5
34. 我會重複地書寫單字，以便記憶。	1	2	3	4	5
35. 我會利用單字表來記單字（單字表內含英文單字並搭配其中文意思）。	1	2	3	4	5
36. 我會用單字卡來記單字（卡片一面寫英文單字，另一面寫相對應的中文意思）。	1	2	3	4	5
37. 我會在上課時作筆記。	1	2	3	4	5
38. 我會利用教科書內字彙註解的部分來學習單字。	1	2	3	4	5
39. 我會聽單字表的錄音帶。	1	2	3	4	5
40. 我會在實物上貼上英文標籤，來幫助記住單字。 例如：在花瓶上貼一個 vase 的標籤。	1	2	3	4	5
41. 我會隨時帶著記單字專用的筆記本，以便記下新字彙。	1	2	3	4	5
42. 我會利用英文歌曲來學習單字。	1	2	3	4	5
43. 我會看英語發音的影片來學習單字。	1	2	3	4	5
44. 我會看英文報紙來學習單字。	1	2	3	4	5
45. 我會看英文雜誌來學習單字。	1	2	3	4	5
46. 我會閱讀英文課外讀物來學習單字	1	2	3	4	5

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	從 未 如 此	很 少 如 此	偶 而 如 此	經 常 如 此	一 直 如 此
(如：小說、短篇故事等)。	1	2	3	4	5
47. 我會收聽英文廣播節目來學習字彙。	1	2	3	4	5
48. 我會用字彙測驗來測試自己是否記住新學的單字。	1	2	3	4	5
49. 我會每隔一段時間就複習一次所學過的字彙。	1	2	3	4	5
41. 我碰到新單字時會略過或跳過。	1	2	3	4	5

APPENDIX C

字彙測驗 (Vocabulary Levels Test, Nation 1990: 264-268)

請從左邊選出一個符合右邊意思的單字，並將答案的代號
(1,2,3,4,5,6) 填入

每一個空格中。例如：

1. business		
2. clock	_____ 6 _____	part of a house
3. horse	_____ 3 _____	animal with four legs
4. pencil	_____ 4 _____	something used for writing
5. shoe		
6. wall		

Part I

1. original		
2. private	_____	complete
3. royal	_____	first
4. slow	_____	not public
5. sorry		
6. total		

1. apply		
2. elect	_____	choose by voting
3. jump	_____	become like water
4. manufacture	_____	make
5. melt		
6. threaten		

1. blame		
2. hide	_____	keep away from sight
3. hit	_____	have a bad effect on something
4. invite		
5. pour	_____	ask
6. spoil		

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1. accident		
2. choice	_____	have a high opinion of
3. debt		yourself
4. fortune	_____	something you must pay
5. pride	_____	loud, deep sound
6. roar		

1. basket		
2. crop	_____	money paid regularly for
3. flesh		doing a job
4. salary	_____	heat
5. temperature	_____	meat
6. thread		

1. birth		
2. dust	_____	being born
3. operation	_____	game
4. row	_____	winning
5. sport		
6. victory		

Part II

1. administration		
2. angel	_____	managing business and
3. front		affairs
4. herd	_____	spirit who serves God
5. mate	_____	group of animals
6. pond		

1. bench		
2. charity	_____	part of a country
3. fort	_____	help to the poor
4. jar	_____	long seat
5. mirror		
6. province		

1. coach	_____	a thin, flat piece cut from
2. darling	_____	something
3. echo	_____	person who is loved very
4. interior	_____	much
5. opera	_____	sound reflected back to
6. slice	_____	you

1. marble	_____	inner surface of your hand
2. palm	_____	excited feeling
3. ridge	_____	plan
4. scheme	_____	
5. statue	_____	
6. thrill	_____	

1. discharge	_____	use pictures or examples
2. encounter	_____	to show the meaning
3. illustrate	_____	meet
4. knit	_____	throw up into air
5. prevail	_____	
6. toss	_____	

1. annual	_____	happening once a year
2. blank	_____	certain
3. brilliant	_____	wild
4. concealed	_____	
5. definite	_____	
6. savage	_____	