Vocabulary Learning Strategies of Taiwanese EFL Senior High School Students

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ABSTRACT

With the significant influence of vocabulary knowledge on second language acquisition, this study aims to investigate Taiwanese EFL senior high school learners’ use of vocabulary learning strategies. The participants were 202 students from two senior high schools located in central Taiwan. The research instruments included the Vocabulary Levels Test (VLT) and the Vocabulary Learning Strategy Questionnaire (VLSQ). The results indicated that the participants of the current study were merely moderate users of vocabulary learning strategies and they only sometimes adopted vocabulary learning strategies. Among the five major strategy categories, determination strategies were found to be most frequently used, whereas social strategies were least often used.

Regarding the gender differences in the use of vocabulary learning strategies, an independent samples t-test indicated that female learners not only outperformed their male counterparts in the overall strategy use, but significant differences were also found in the use of determination strategies, social strategies, and metacognitive strategies. As for the strategy use between different proficiency levels, an independent samples t-test revealed that high proficiency students adopted overall vocabulary learning strategies more often than low proficiency ones. Also, significant differences were also found in determination strategies, social strategies, memory strategies, and metacognitive strategies between these two groups of learners.

Key words: vocabulary knowledge, vocabulary learning strategies, the Vocabulary Levels Test, the Vocabulary Learning Strategy Questionnaire

1. INTRODUCTION

1.1 Background Statement

Vocabulary acquisition is the major component of developing successful communication and literacy skills. Lewis (1993) argues that learning vocabulary is one of the major tasks in second language acquisition (SLA), and any language skills of listening, speaking, reading, and writing cannot be completed without the use of vocabulary. Nevertheless, lexical knowledge and vocabulary acquisition used to be a neglected aspect of
second language (L2) research (Nation, 2001; Schmitt, 2000). Much of the studies had focused on the acquisition of language structure throughout the development of second language acquisition research (Brown, 2011; Lewis, 2000; Nation, 2001).

In recent decades, however, interest in the area of vocabulary acquisition has grown enormously (Nation, 2001; Read, 2000; Qian, 2002; Schmitt, 2008). Since the 1970s, under the influence of Communicative Language Teaching (Celce-Murcia, 2001), the important role of vocabulary learning and teaching has been repeatedly acknowledged in the field of second language acquisition research. Krashen (1989) vividly described learners’ interest in vocabulary by the fact that they carry a dictionary more often than a grammar book. Moreover, Wilkins (1972) stressed the important role of vocabulary knowledge and noted that “without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (p.111). Essentially, the appropriate amount of vocabulary knowledge is the prerequisite for successful language learning.

1.2 Statement of the Problems

Despite the important role of vocabulary knowledge in second language acquisition, the majority of Taiwanese EFL students encounter enormous difficulties in learning vocabulary, which leads to general weakness in the fluency of their English and their overall performance (Huang, 2001). Specifically, foreign language learning difficulties have been a problematic issue for Taiwanese EFL students due to students’ inadequate vocabulary knowledge (Yeh, 2003).

1.3 Purpose of the Study

The purpose of the present study is to explore the different vocabulary learning strategies adopted by Taiwanese senior high school students. It is expected that the findings of the students’ strategic behaviours could determine the role that individual differences play in lexical learning. By identifying students’ beliefs of their vocabulary learning strategies, EFL teachers are more capable of helping learners to enhance their lexical competence and become more independent learners.

1.4 Research Questions

Based on the literature review and the fact that vocabulary learning difficulties encountered by Taiwanese EFL learners, the current study aims to address the following specific research questions:
1. What vocabulary learning strategies do Taiwanese senior high school students use?
2. Is there any significant differences of Taiwanese senior high school students’ vocabulary learning strategies between male and female students?
3. Is there any significant differences of Taiwanese senior high school students’ vocabulary
learning strategies between high proficiency and low proficiency students?

2. LITERATURE REVIEW

2.1 An Overview of Vocabulary Learning Strategies

The use of vocabulary learning strategies in learning words has been regarded as a prominent role by various theorists and researchers in the field of SLA (Nation, 2001; Schmitt, 2008). Studies on vocabulary learning strategies reveal that there is a wide range of them employed by learners while aiming at learning L2 vocabulary (Read, 2000; Schmitt, 2008). As word knowledge is defined by Nation (1990) as the knowledge of its spelling, pronunciation, collocations, and appropriateness, vocabulary competence is further than the ability to know the meanings of a number of words. Vocabulary knowledge covers a wide range of knowledge which, in turn, L2 learners may use various strategies to acquire the target word knowledge.

The use of vocabulary learning strategies has accompanied the shift from a predominantly teaching-oriented perspective to one that includes interests in how the actions of the learners might affect their acquisition of language (Schmitt, 2010). With the emergence of the concept of language learning strategies, second language researchers have attempted to link these strategies with language learning skills and they believe that each strategy enhances vocabulary acquisition. O’Malley and Chamot (1990) assert that most language learning strategies are used for vocabulary learning tasks. Nation (2001) further makes clear that vocabulary learning strategies are one part of language learning strategies which in turn are part of general learning strategies. As learning vocabulary can employ a variety of learning strategies, the strategies for learning vocabulary should not be separated from the language learning strategies. For example, Oxford (1990) suggested a list of language learning strategies, including Memory, Cognitive, Compensation, Metacognitive, Affective and Social strategies. Later, these strategies were adopted and developed into vocabulary learning strategies by Schmitt (1997).

Among all language learning strategies which are used to handle a variety of language tasks, vocabulary learning strategies are the ones that implemented for building vocabulary. They constitute knowledge about what students do to find out the meaning of new words, retain them in long-term memory, recall them when needed in comprehension, and use them in language production (Ruutmets, 2005). Since learning new words is a time-consuming process, Nation (2001) suggested that learners need to learn how to record, store, and practice new words by using different types of vocabulary learning strategies. A large number of vocabulary learning strategies are helpful at all steps of vocabulary learning for second/foreign language learners and can be used to an extensive range of vocabulary. The main benefit gained from vocabulary learning strategies is the fact that they enable learners to
take more control of their own learning so that students can take more responsibility for their vocabulary learning (Nation, 2001). Hence, vocabulary learning strategies substantially promote “learner autonomy, independence, and self-direction” (Oxford, 1990: 29). Equipped with a range of diverse vocabulary learning strategies, learners are more able to decide how appropriately they would like to deal with unknown words. With the adequate knowledge of vocabulary learning strategies and the ability to apply them in suitable situations might simplify the learning of new vocabulary for students (Schmitt, 2000; Gu and Johnson, 1996).

Over the decades, many second language researchers have made efforts not only to classify, but also gather these strategies in order to support learners’ learning. The following section presents Schmitt’s (1997) classification of the vocabulary learning strategies.

2.2 Schmitt’s Taxonomy of Vocabulary Learning Strategies

Schmitt’s (1997) taxonomy of vocabulary learning strategies is primarily based on Oxford’s (1990) taxonomy of the more general language learning strategies (Nation, 2001). According to Schmitt’s (1997) descriptions, the taxonomy should be regarded “as a dynamic working inventory which suggests the major strategies” (p. 204). His taxonomy includes a variety of different strategies, and these strategies were categorised into the following six subgroups:

1. Determination strategies are individual learning strategies, which help learners to discover the meaning of words by themselves without any assistance from peers. They include guessing the words from the context, the analysis of part of speech, the use of word lists, and the use of dictionary… etc.

2. Social strategies are learners who attempt to enhance their language learning by interacting with other people (O’Malley & Chamot, 1990: 45; Oxford, 1990: 135). Examples involve asking teachers or classmates for the meaning of the words, discovering and practicing word meaning in a group. Students can employ social strategies both for discovering the meaning of a new word and for practicing vocabulary.

3. Memory Strategies (MEM) consist of those approaches helping learners link their learning of new words to mental processing by associating their existing or background knowledge with the new words, such as using imagery and grouping.

4. Cognitive strategies (COG) refer to the function of “manipulation or transformation of the target language by the learner” (Oxford, 1990, p.43). These strategies do not particularly concentrate on mental processing but is more mechanical. The examples include verbal and written repetition of new words, taking notes in class or keeping a vocabulary notebook.

5. Metacognitive strategies refer to a conscious overview of the learning process and making decisions about planning, monitoring, or evaluating the best ways to study. They are concerned with more efficient learning and indirectly involved in vocabulary learning. These
include using materials from the media to learn, such as reading books, and watching movies.

Schmitt’s taxonomy of vocabulary learning strategies has been considered the most comprehensive and widely used instrument to assess learner’s vocabulary strategy use in recent decade due to the wide varieties and richness of its strategy items (Catalán, 2003). More importantly, previous studies adopting Schmitt’s scheme have obtained high overall internal consistency reliability with Cronbach’s alpha value above 0.90 (Liao, 2004; Wang, 2004). The researcher of the present study adopted Schmitt’s taxonomy in her study.

3. METHODOLOGY

3.1 Participants
The participants of this study were sampled on the basis of convenience and availability. Six intact classes of 212 third year senior high students, including 102 boys and 110 girls were recruited as the participants in the present investigation. The proportion of male to female students was controlled to be approximately equal. Due to incomplete responses to the tests and the questionnaire, 10 participants were eliminated from the quantitative data analysis. The final sample was composed of 202 participants, including 100 (49.5%) male students and 102 (50.5%) female ones, with an age range of 16 to 17 years old. All sampled students had a similar educational background in order to minimise the influence of word knowledge and knowledge of academic subjects on their performance at testing.

3.2 Instruments
Research data in the present study were collected mainly quantitatively. The Vocabulary Levels Test (VLT) and the Vocabulary Learning Strategy Questionnaire (VLSQ) were used to collect the data. The Vocabulary Levels Test was developed by Nation (2001), which measures students’ vocabulary size. There were 90 items in VLT with a reliability coefficient of 0.946. The questionnaire was adapted from Schmitt’s (1997) Vocabulary Learning Strategy Questionnaire. An likert-scale questionnaire involved 60 items with a reliability coefficient of 0.935 in the current study.

The criteria of the distinctions between the high proficiency and the low proficiency groups were based on the students’ performance on the Vocabulary Levels Test. The students whose scores of the VLT fell into the top 25 percent were categorised into a high proficiency group, which consisted of 50 students. On the other hand, those whose scores on the VLT fell into the bottom 25 percent were categorised into a low proficiency group, which was made up of 51 students.

3.3 Data Collection Procedures
Quantitative data collection was conducted at two senior high schools located in central
Taiwan. First, the Vocabulary Levels Test was distributed to the participants. They were allowed to complete this test within 30 minutes. After a short break, the participants were requested to answer the Vocabulary Learning Strategy Questionnaire (VLSQ) with no more than 20 minutes. The researcher herself administered both the VLT and the VLSQ. The participants were assured that their responses will be kept confidential and will not affect their performance at school. All required information was given to the participants before administering the instrument.

3.4 Data Analysis

Data collected from the Vocabulary Levels Test (VLT) and the Vocabulary Learning Strategy Questionnaire (VLSQ) were analysed using the Statistical Package for Social Science (SPSS) version 18. Descriptive statistical procedures were used to analyse the results of the VLT and the VLSQ to obtain means, standard deviations, and frequency percentage from the participants’ answers. Two independent t-tests were also run to determine gender differences and different proficient groups of using vocabulary learning strategies. In addition, Oxford’s (1990) scoring system was adopted to determine high, moderate or low vocabulary strategy users. According to Oxford’s (1990) scoring system, 1 – 2.04 is categorised into low strategy use, 2.4 - 3.5 belonged to medium strategy use, and 3.5 – 5 was high strategy use.

4. RESULTS

4.1 Learners’ Frequency of the Vocabulary Learning Strategy Use

This section aims to report the frequency of the strategy use by all the participants. The descriptive statistics related to the participants’ reported use of vocabulary learning strategies, measured by the vocabulary learning strategy questionnaire is summarised in Table 1.

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>Rank Order</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination Strategies</td>
<td>1</td>
<td>3.53</td>
<td>1.29</td>
<td>202</td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>2</td>
<td>3.11</td>
<td>1.46</td>
<td>202</td>
</tr>
<tr>
<td>Metacognitive Strategies</td>
<td>3</td>
<td>3.04</td>
<td>1.30</td>
<td>202</td>
</tr>
<tr>
<td>Memory Strategies</td>
<td>4</td>
<td>3.03</td>
<td>1.29</td>
<td>202</td>
</tr>
<tr>
<td>Social Strategies</td>
<td>5</td>
<td>2.74</td>
<td>1.17</td>
<td>202</td>
</tr>
<tr>
<td>Overall Strategies</td>
<td>N/A</td>
<td>3.09</td>
<td>1.32</td>
<td>202</td>
</tr>
</tbody>
</table>

As depicted in Table 1, the frequency of the five specific types of vocabulary strategy use ranged from 2.74 to 3.53 and the overall mean of strategy use fell into the “medium-use” (2.5 - 3.4) range (M = 3.09). The findings suggested that Taiwanese senior high school students at the current study were moderate users of vocabulary learning strategies, and they
merely “sometimes” employed these strategies.

With regard to the five major vocabulary learning strategy categories, determination strategies were found to be the most frequently used strategy category (M=3.53), followed by cognitive strategies (M=3.11), metacognitive strategies (M = 3.04), memory strategies (M = 3.03), and social strategies were found to be least often used (M = 2.74). Most of the five strategy categories have means falling within the medium range of 2.5 to 3.4, except determination strategies whose mean belongs to high use range. The results showed that the participants of the present study adopted determination strategies most frequently. However, they used memory strategies and social strategies least frequently.

### 4.2 Gender Differences in the Vocabulary Learning Strategy Use

This section reports the results of gender differences in the vocabulary strategy use. To explore whether gender differences affected the respondents’ strategy use, the results of descriptive statistics and an independent samples t test on strategy use by male and female learners was examined. Table 2 demonstrated the summary of descriptive statistics and independent t test on the overall strategy use and five major strategy categories for male and female learners.

#### Table 2: An Independent-Samples T-test on the Means of Vocabulary Learning Strategies by Male and Female Students

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination Strategies</td>
<td>Male</td>
<td>100</td>
<td>3.40</td>
<td>.546</td>
<td>-3.416*</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>3.65</td>
<td>.504</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Strategies</td>
<td>Male</td>
<td>100</td>
<td>2.62</td>
<td>.657</td>
<td>-2.484*</td>
<td>.014</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>2.86</td>
<td>.707</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory Strategies</td>
<td>Male</td>
<td>100</td>
<td>2.96</td>
<td>.564</td>
<td>-1.767</td>
<td>.079</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>3.10</td>
<td>.546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>Male</td>
<td>100</td>
<td>3.03</td>
<td>.629</td>
<td>-1.638</td>
<td>.103</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>3.19</td>
<td>.686</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognitive Strategies</td>
<td>Male</td>
<td>100</td>
<td>2.84</td>
<td>.656</td>
<td>-3.991*</td>
<td>&lt;.0005</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>3.24</td>
<td>.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Strategies</td>
<td>Male</td>
<td>100</td>
<td>2.98</td>
<td>.487</td>
<td>-3.065*</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>3.19</td>
<td>.499</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* signifies significant gender effect on the type of VLS use (p < .05).

As presented in Table 2, the means of the overall strategy use by male learners was 2.98 (SD = .487), and by female learners, 3.19 (SD = .499). The statistical analysis associated with an independent-samples t-test produced a significant difference on the overall strategy use.
(t = -3.065, p = .002) between male and female learners. In other words, the female students tended to apply strategy significantly more frequently than their male counterparts. In addition, the female learners significantly adopted more strategies than their male counterparts not only in overall strategy use but also in three strategy categories, namely, determination strategies (t = -3.416, p = .001), social strategies (t = -2.484, p = .014), and metacognitive strategies (t = -3.991, p < .0005). In short, female participants in the present study tended to have a significantly higher frequency of overall strategy use and the main strategy categories, except that of memory and cognitive strategies.

4.3 The Differences of the Vocabulary Learning Strategy Use by High and Low Proficiency Students

In order to find out if there were any significant differences between students with high and low proficiency level in their use of vocabulary learning strategies, an independent samples t-test was conducted to compare the frequencies of the overall strategy use between high proficiency and low proficiency learners.

As shown in Table 3, the results indicated that the means of the overall strategy use between these two groups were significantly different (t = -4.834, p < .0005). The mean scores of high proficiency learners were 3.33, while the low proficiency learners were 2.84. This finding suggested that high proficiency vocabulary learners were more inclined to use more vocabulary learning strategies than their low proficiency counterparts did.

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>Achievement</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination Strategies</td>
<td>Low</td>
<td>51</td>
<td>3.27</td>
<td>.5770</td>
<td>-4.889</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>3.79</td>
<td>.4842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Strategies</td>
<td>Low</td>
<td>51</td>
<td>2.59</td>
<td>.6063</td>
<td>-2.304</td>
<td>.023*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>2.91</td>
<td>.8148</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory Strategies</td>
<td>Low</td>
<td>51</td>
<td>2.77</td>
<td>.6175</td>
<td>-4.311</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>3.27</td>
<td>.5398</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>Low</td>
<td>51</td>
<td>2.98</td>
<td>.7170</td>
<td>-1.755</td>
<td>.082</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>3.22</td>
<td>.6657</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognitive Strategies</td>
<td>Low</td>
<td>51</td>
<td>2.65</td>
<td>.6172</td>
<td>-5.765</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>3.46</td>
<td>.7783</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Strategies</td>
<td>Low</td>
<td>51</td>
<td>2.84</td>
<td>.5216</td>
<td>-4.834</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>50</td>
<td>3.33</td>
<td>.5053</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* signifies significant language proficiency effect on the type of VLS use (p < .05).
As illustrated in Table 3, the high proficiency and the low proficiency learners differed significantly in four out of these five major strategy categories. The results suggested that high proficiency vocabulary learners were more likely to employ determination strategies (t = -4.889, p< .0005), social strategies (t=-2.304, p = .023), memory strategies (t = -4.311, p< .0005), and metacognitive strategies (t = -5.765, p < .0005) than their low proficiency counterparts. However, there was no significant differences found in cognitive strategy use between these two groups of learners.

5. DISCUSSION

According to the results presented in Table 1, the participants as a group were only moderate users of vocabulary learning strategies, and they did not use vocabulary learning strategies very frequently. This finding confirmed that Asian EFL learners generally were not sophisticated users of vocabulary learning strategies (Gu & Johnson, 1996; Fan, 2003; Wang, 2004). The moderate use of vocabulary learning strategies could be explained by the following major factors. The first factor was attributed to learners’ attitudes toward the usefulness of the strategies. Senior high school students might find a small group of strategies appropriate for them, and mainly focused on using certain strategies and ignored other important ones. The second possible factor might be that the students used some strategies subconsciously, and did not report them as strategies.

Regarding the vocabulary learning strategy use by male and female students, the results showed that gender had a great influence on the choice of vocabulary learning strategies. Female learners not only outperformed their male counterparts in the use of overall vocabulary learning strategies, but also in the use of determination strategies, social strategies, and metacognitive strategies. The more frequent use of overall vocabulary learning strategies by female learners can be based upon the innate characteristics of female and male brains. Females and males are inclined to operate differently as they seem to use different parts of their brains to encode memories, sense emotions, solve problems and make decisions (Zaidi, 2010). According to Zaidi (2010), certain characteristics in the brain play important roles in the language development. The structure of female’s brain is more precisely organised in visual processing and storing language and personal memories. This contributes their better language learning and predisposes female students as a whole to be more strategic vocabulary learners than their male counterparts.

According to the results presented in Table 3, the finding highlighted that there was a significant difference in overall vocabulary learning strategy use between high proficiency and low proficiency learners. Apparently, high proficiency learners used vocabulary learning strategies significantly more frequently than low proficiency students. There are some reasons to explain this phenomenon. One possible reason could be that high proficiency

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students had more motivation to acquire vocabulary learning strategies than low proficiency students. Oxford and Nyikos (1990) indicated that successful learners are strongly motivated to learn, more willing to guess and make mistakes, practice and monitor their own language and the language of others. In contrast, low proficiency learners had less positive attitudes and lower motivation in learning English. Another alternative explanation is an awareness of strategy effectiveness between the high proficiency and the low proficiency students. According to Nation (2001), compared with high proficiency students, low proficiency students are reluctant to utilise vocabulary learning strategies because they are not aware of the effectiveness and value of strategy use. This reason may also explain why high proficiency students adopt the overall vocabulary learning strategies more often in the current study.

6. CONCLUSIONS AND IMPLICATIONS

The investigation of the present study could be concluded that the knowledge of vocabulary learning strategies in some ways could be beneficial for second language learners. When learners are more aware of the use of vocabulary learning strategies, they become more motivated in the process of learning vocabulary. In order to effectively enhance Taiwanese senior high school learners’ vocabulary knowledge and help them solve their learning obstacles, second language learners are suggested to adopt the vocabulary learning strategies. However, in the current study, the overall means of the language learners in relation to all items were approximately reaching the medium level. These relatively low means suggested that the language learners did not frequently use strategies. One of the main implications of the study was that the vocabulary learning strategy instruction needs to be improved. It has been recommended that teaching vocabulary should not only consist of teaching certain words, but also providing learners with strategies necessary to develop their vocabulary knowledge (Hulstjin, 1993). To better enhance learning performance, teachers require knowledge of comprehensive strategy repertoire to train their student both for instructional context and independent study.

7. REFERENCES


