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INTEGRATING VOCABULARY LEARNING STRATEGY INSTRUCTION INTO EFL CLASSROOMS

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ABSTRACT

In the current study, explicit vocabulary learning strategy instruction was integrated into an EFL curriculum to investigate its effects on learners' vocabulary acquisition. A total of 180 EFL learners enrolled in the freshmen English program at a university in Taiwan participated in the study. The participants were guided to explore and practice an array of vocabulary learning strategies over a full semester. Participants' use of these different vocabulary learning strategies and their perceived usefulness of the strategies before and after strategy training were then compared. Student attitudes and opinions toward vocabulary learning strategy use and strategy training were compiled as well. The results suggest that vocabulary learning strategy training can bring about positive effects in students learning, as the majority of the participants reported using a greater number of strategies, using strategies more frequently, and found that such use of strategies was more useful. Differences in changes in vocabulary study habits after strategy training were found among those participants who had different levels of vocabulary proficiency. The most striking result to emerge from the data is that strategy training resulted in a radical increase in the frequency of low-level students' strategy use.

Keywords: learning strategies, explicit instruction, vocabulary, EFL

INTRODUCTION

Over the last three decades, there has been intensive interest in researching the role of learning strategies to deliver effective second and foreign language acquisition. Large numbers of studies have explored the precise connection between learning strategy use and language proficiency. With the empirical evidence suggesting that appropriate use

of learning strategies does positively relate to higher language learning achievement (Aziz, 2005; Bruen, 2001; Green & Oxford, 1995; Griffiths, 2003; Lai, 2009; Nacera, 2010; Nisbet, Tindall, & Arroyo, 2005; Wharton, 2000; Wong & Nunan, 2011; Yang & Plakans, 2012; Yeh &Wang, 2004), improving the use of learning strategies is now perceived as a key to enhancing language acquisition and is more intensively advocated (e.g., Chamot & Kupper, 1989; O'Malley & Chamot, 1990; Oxford, 1990).

Based on the assumption that strategies are indeed teachable (Chamot & Kupper, 1989; O'Malley & Chamot, 1990; Oxford, 1990), many attempts have been made to develop approaches that will guide learners toward more effective use of learning strategies, with the ultimate goal being to empower learners to take personal control of these strategies for their own learning. In the meantime, considerable concern has been raised about the possible effects of strategy instruction on learners' actual language acquisition.

LITERATURE REVIEW

Through strategy training, language learners are guided to learn and use a wide range of learning strategies. To provide teachers with practical advice for planning and carrying out training in language learning strategies, several models for strategy instruction in second and foreign language have been proposed (e.g., Chamot, Barnhardt, El-Dinary, & Robbins, 1999; Cohen, 1998; Macaro, 2001; O'Malley & Chamot, 1990; Oxford, 1990, Oxford et al., 1990). These frameworks address important components for strategy instruction and suggest step-by-step procedures for guiding teachers to develop their students' use of learning strategies. These models stress the importance of raising learners' awareness of their learning process; presenting strategies; providing opportunities for practice; and modeling and evaluating students' strategy use.

The instructional approach used to conduct strategy instruction may affect the effectiveness of learner training. In contrast to implicit strategy instruction, explicit strategy instruction is generally considered more beneficial, so many researchers strongly suggest its use (e.g., Chamot et al., 1999; Chamot & O'Malley, 1987; Cohen, 1998; Oxford & Leaver, 1996; Wenden, 1987). Unlike implicit strategy instruction, which does not provide learners with specific guidance on what is to be learned from

language tasks, explicit strategy instruction cultivates learners' awareness of their strategy use, presents strategies, provides opportunities for practice, models learners' strategy use, and assists learners in evaluating their strategy use. The importance of conscious learning has been supported by research demonstrating that awareness of strategy use and the ability to tailor strategy use to the demands of language tasks are critical for successful language learning (Chamot, Kupper, & Impink-Hernandez, 1988; Cohen, 1998; O'Malley & Chamot, 1990). Thus, informing students about how, when, and why to use strategies and then enabling them to apply strategies to different language activities and extend strategies to new language tasks during the training is decisive.

Compared to separate training or strategy workshops that typically consist of isolated lectures and discussions of learning strategies, integrating strategies into the course content is seen as much more effective and thus has been extensively promoted. Chamot et al. (1999) and others (e.g., Chamot & O'Malley, 1987; Oxford & Leaver, 1996; Wenden, 1987) have suggested incorporating strategy instruction into regular language curriculum to optimize student learning. These advocates consider such embedded strategy training to be more valuable and believe that it is more likely to be effective than separated training, primarily because it involves actual language learning tasks and extends over a longer period of time. Such an approach is more likely to allow learners to internalize strategies and refine their ability to transfer strategies to new language tasks.

In order to determine whether strategy instruction could bring about better strategy use and enhanced language ability, intervention studies have been conducted in both first- and second-language contexts. Many studies have investigated the effects of strategy instruction by examining learners' gains after the strategy instruction or comparing language performance of the learners who received strategy instruction to those who did not. To date, researchers have found positive effects of strategy training—a discovery that may improve language instruction and offer the promise of developing strategy instruction.

Research evidence has suggested that strategy instruction can improve language competence. Nguyen and Gu (2013) have incorporated metacognitive strategy instruction into a writing program and found that learners who received strategy–based instruction outperformed their counterparts in both the post- and the delayed writing

tests. O'Malley and Chamot's (1990) comparative study determined the effects of strategy training on different types of language tasks. Their results showed that strategy instruction could be effective for listening and speaking language tasks, but not for vocabulary learning. Their findings also suggested that effectiveness of strategy training could be influenced by difficulty of learning materials.

In two separate investigations of the effects of reading strategy instruction, Macaro and Erler (2008) and Urlaub (2012) found that learners who underwent strategy training outperformed those who did not in the reading comprehension tests. Urlaub compared improvements in tests score for the intermediate and advanced level and found that the training was more beneficial for the learners of low language proficiency.

In vocabulary research, the explicit vocabulary strategy training devised by Mizumoto and Takeuchi (2009), and an explicit metacognitive strategy training carried out by Rasekh and Ranjbary (2003) both resulted in improvements in vocabulary learning and demonstrated that learners who were taught to use strategies outperformed their peers who had not received that training.

Previous empirical findings have also demonstrated that strategy training could positively influence learning behavior. Aside from improved vocabulary knowledge, Mizumoto and Takeuchi (2009) also detected a significantly greater amount of strategy usage and enhancements in intrinsic motivation among the group that received strategy training. The last observation made by Mizumoto and Takeuchi that strategy instruction may enhance motivation toward learning has been supported by Nunan (1997) and many others (e.g., Macaro & Erler; 2008; Oxford, 1989). In Nunan's study, those who underwent strategy training also gained significantly more enhancements in knowledge of the strategies and perceived value of the strategies; however, contrary to Mizumoto and Takeuchi's findings that showed increased strategy usage in those who received strategy training, no such significant differences were detected. Nunan speculated that both the control and experimental groups in his study probably used the strategies more intensively during the time of the investigation because of the change of the learning environment, i.e., the shift from high school to college. In other words, as college freshmen, they gained more opportunities to utilize a greater number and variety of strategies. Somewhat mixed results were seen in Takač's (2008) study, who reported a weak connection between vocabulary strategy teaching and learning strategies employed by

elementary school EFL learners.

Blanco, Pino, and Rodriguez (2010) implemented a strategy awareness raising program exploring its effects on students' learning process. The positive impacts brought about by the training included students' enhancements in awareness of the strategies, their increase in the use of these strategies, and their ability to transfer the strategies learned in the strategy awareness program to other subjects. As in previous studies (e.g., Fowle, 2002; Mizumoto & Takeuchi, 2009; Oxford et al., 1990), Blanco et al. found that this group of students was positive about the strategy instruction.

From this review of the literature, it can be seen that some studies only partially support the claim that strategy instruction can have positive effects on language acquisition, and there is no consensus on which types of instructional activities or techniques best facilitate vocabulary acquisition. Nonetheless, considerable empirical research has demonstrated the value of appropriate training in learner strategies. Previous learner strategy studies tended to focus on identifying and describing learners' actual use of strategy. Although intervention research has expanded, it has mainly examined learners' language gains after strategy instruction. As pointed out by Mizumoto and Takeuchi (2009), very little attention has been paid to the impact of strategy training on learners' actual learning habits. Schmitt (2010) further indicated there is a lack of studies with a longitudinal design, which is crucial when conducting precise intervention research, as such studies are more likely to contribute to effective long-term language acquisition and also allow researchers to examine the long-term effects of different language treatments. To gain a better understanding of the role of strategy training in language learning and teaching, more longitudinal studies are needed to ascertain the effects of strategy instruction, including learners' perceptions of strategy instruction and whether undergoing strategy training does change the way learners approach their language learning.

The present study seeks to address this gap by incorporating strategy training into delivering the English as a foreign language (EFL) curriculum over a full academic year and investigating the influences of strategy instruction on learners' use of a specific strategy, their perceived usefulness of these strategies, ands their attitudes toward strategy training in general. The effects of strategy training on student strategy choices based on vocabulary size are also investigated.

METHOD

Research Questions

1. Will training in the use of vocabulary learning strategies produce any changes in students' use of strategy and their perceived usefulness of a specific strategy or strategies? What, if any, are the changes with such use?
2. Are there differences in the changes in strategy use for students based on vocabulary size following strategy training? What, if any, are the differences in terms of frequency and choice of strategy use among the high-, mid- and low-level students?
3. What are students' reported intention of future strategy use?
4. What are the students' reasons, if any, for their infrequent use of certain strategies?
5. What are students' opinions of and attitudes toward learning and using vocabulary learning strategies?

Participants

Five Freshman English classes (N = 207) at a university in Taiwan were invited to participate in the study. The Freshman English course is a one-year, two-credit class in which students learn to speak, understand, read, and write English. All participants were native Chinese speakers and they all had taken English as a compulsory foreign language in their secondary education. These participants were between 18 and 20 years of age at the beginning of the study. Of 193 volunteers from the five classes, 13 participants were excluded because they either dropped the second semester of the course or did not complete both the Pre-Training and the Post-Training Questionnaires. This adjustment left 180 participants (45 males, 135 females) for a final data analysis.

Framework

This research incorporated vocabulary learning strategy instruction into the language curriculum, following Schmitt's (1997) taxonomy of vocabulary learning strategies. In Schmitt's framework, 58 strategy items are categorized into five groups: determination (items 1-9), social (items 10-17), memory (items 18-44), cognitive (items 45-33), and metacognitive (items 54-58) strategies. The researcher adopted Schmitt's

taxonomy considering that it is comprehensive and detailed—it was compiled from various sources and it covers a wide array of learner's learning behaviors. The taxonomy was applied here to gather self-report data on participants' strategy use. The 58 strategies also served as a self-monitoring checklist, so the participants could evaluate their own learning. The strategy training approach implemented in this study incorporated the various training models proposed by Chamot et al. (1999), Cohen (1998), Macaro (2001), and O'Malley and Chamot (1990).

Instruments

Pre-training questionnaire. At the beginning of the first semester (fall semester), the participants completed a Pre-Training Questionnaire (see Appendix A). In Part A, the participants rated their frequency of vocabulary learning strategy use, using a 5-point Likert scale ranging from 1 ("never or almost never") to 5 ("always or almost always"). In Part B, the participants rated each strategy item in terms of its usefulness based on their own self-learning experiences, using a 5-point scale ranging from 1 ("not at all useful") to 5 ("extremely useful"). If the participants did not know or were unfamiliar with certain individual strategies and were, therefore, unable to judge the usefulness of specific strategy items, they selected 0 ("Don't know or uncertain") as their response. Schmitt's (1997) taxonomy of vocabulary learning strategy was translated into Mandarin Chinese to make it more easily understood by the participants.

Post-training questionnaire. In order to compare students' learning habits before and after the strategy training, at the end of the second semester (spring semester), a Post-Training Questionnaire (see Appendix B), was administered to the participants. The questions were divided into four sections:

- Section I: Students' frequency of strategy use, their perceived usefulness of the strategies, and their willingness to continue using the strategies.
- Section II: Students' self-perceived training-related change in vocabulary learning.
- Section III: Students' reasons for their selections of vocabulary learning strategies.
- Section IV: Students' attitudes toward vocabulary learning strategies training in general.

Vocabulary Levels Test. To determine whether the strategy training influenced students who had different vocabulary achievement levels and the different ways in which the strategy training affected these students, the participants were assigned to three approximately equal-sized groups using Schmitt's Vocabulary Levels Test (2000) and comparison of changes in the strategy use patterns for the three groups were made. Four frequency-levels in Schmitt's Vocabulary Levels Test—2000, 3000, 5000, and 10,000—were used in this study. In the test, the participants had to match three definitions with three out of the six words provided. Each word correctly chosen was given one point. There were 30 items in each level, making the maximum score of the test 120.

All student participation was voluntary. To take part in the study, students had to sign an informed consent form, take the Vocabulary Levels Test, and complete both the Pre- and the Post-Training Questionnaires. Since the researcher was also the instructor for all five English classes, the participants might have responded to the survey questions in a manner that would be viewed favorably by the researcher. Thus, a data matching procedure was done to ensure that none of individual respondents could be identified. The research, in this case, was designed also so the instructor was not able to match the students with their questionnaires and their Vocabulary Levels Test papers. At the end of the second semester, once the participants completed the Post-Training Questionnaire, they were given back their Pre-Training Questionnaires and test papers. They were then asked to detach the upper portion of the first page of the Pre-training Questionnaire and the first page of the test paper where their student identification numbers appeared and staple the two sets of completed questionnaires and the test paper together before returning them for full data analysis. The respondents' identities were not shown on the test papers and either of the questionnaires, so the participants' responses to the survey questions and their test scores thus remained unknown to the instructor.

Procedure

On the first day of each class, after taking the Vocabulary Levels Test, a 60-minute vocabulary learning strategy training session was conducted with the participants. The aim of the introductory session on vocabulary learning was to raise participant awareness and explore the range of vocabulary learning strategies available. Using Schmitt's (1997)

taxonomy, with the instructor's guidance, the participants explored 58 vocabulary learning strategies. Detailed explanations of each strategy were provided, including when, why, and how to use the strategies. Afterwards, the participants worked individually on the Pre-Training Questionnaire.

In subsequent classes, tips on how to organize vocabulary learning in relation to strategy use were introduced to the participants. These tips included word choice, vocabulary learning tips, and schedule development for the review of new words. Most of these learning techniques were embedded in the course content and included in Gu and Johnson's (1996), Nation's (2001), Oxford's (1990), and Schmitt's (1997, 2000) learning strategy taxonomies. Over the academic year (two semesters), the participants were provided with multiple opportunities to gain exposure to and practice all the 58 strategies, individually and in groups. These practice sessions were intended to familiarize the participants with the strategies, help them make better use of the strategies, and allow them both to evaluate and select the strategies that worked best for them.

One of the course textbooks, *Active Skills for Reading: Book 3* (Anderson, 2008), which is designed with embedded vocabulary learning strategies, was an important instructional resource for integrating strategy instruction into the course. The book covers vocabulary learning skills that can help learners associate and recall vocabulary, such as making inferences by using context clues, grouping words, creating word webs, learning affixes and roots, creating a sentence using the words, and drawing a picture related to the words. The participants were told about the purpose, value, and usage of each of these strategies. In addition to the skills highlighted in the textbook, the instructor guided the participants to access and employ other strategies listed in Schmitt's (1997) taxonomy through classroom activities and homework.

Examples of strategies explicitly taught and practiced using reading passages in a course textbook are the following:

- The instructor explained and demonstrated how to discover the meaning of the students' unknown words in reading passages by identifying their parts of speech; analyzing prefixes, suffixes and word roots; and using context clues to determine their meanings.
- Using textbook-guided exercises, the instructor demonstrated how to use grouping and mapping to organize newly learned target words for easier recall and longer memory retention, and

to introduce suffixes, affixes, and roots to help expand learners' vocabularies.

- The instructor promoted student deep processing of word meaning by guiding students in creating new sentences and finding synonyms or antonyms for target words. Cooperative activities, including both pair and group work involvement, were conducted to practice these strategies.

For homework, students compiled vocabulary notebooks beginning in the third week of the first semester. The participants were advised to record those words that were useful, important, or relevant for them personally. Specific important skills for practicing words— discussed by Cohen (1990, pp. 32-37), Gairns and Redman (1986, pp. 22-30 & 69-71), McCarthy (1990, pp. 12-22), Nation (1990, pp. 166-174), and Sökmen (1997)—were introduced to the participants. The participants were required to complete weekly vocabulary logs consisting of 16 entries. For each vocabulary entry in their notebooks, they needed to include the part of speech, phonetic spelling, a definition or synonym, sample sentence, and additional parts of speech for the word. They were also asked to include other relevant information, including specific strategies from Schmitt's (1997) taxonomy, i.e., Item 18, 21, 22, 23, 24, 27, 28, 29, 35, 36, 44, 38, 39, 40, 42, and 44 (see Appendix A for the strategies). The participants could practice these learning skills randomly; however, they were told that they had to practice each of the specified strategies cited above 10 times as a minimum requirement each semester. The instructor checked the students' self-monitoring checklist to monitor their learning progress.

A strategy checklist, which contained 58 strategies, was given to the participants so that they could personally evaluate their own strategy usage and its success. Each week they reviewed their checklists and indicated which strategies they had practiced that week. This checklist also allowed the instructor to monitor participants' practice of strategies other than the ones included in their vocabulary notebooks and those that were not identified through direct classroom observation. The participants were urged to use 10 or more strategies each week and were expected to use all 58 strategies at least 10 times each semester. To monitor participants' progress and ensure they compiled their notebooks correctly, the notebooks were checked once a month. Each semester, in the ninth and then the eighteenth week, the instructor checked for completion of the students' vocabulary assignments, including a review

of their vocabulary notebooks and strategy checklists.

Data Analysis

Descriptive statistics, paired-samples t-test, and correlational analysis were carried out using the SPSS software. To determine significance, a standard of $p < .05$ was used. Qualitative data was analyzed using content analysis.

RESULTS

Research Question 1: Effects of Strategy Training for the Whole Group

The mean score of the overall strategy, the five strategy subcategories, and each individual strategy were calculated for the Pre-Training Questionnaire and also Section I in the Post-Training Questionnaire. The means for the participants' self-reported data prior to and after the strategy training were compared so as to examine changes in the participants' strategy use as well as their perceptions of the usefulness of the strategies. Comparisons were made using a paired-samples *t* test.

Table 1 summarizes the participants' self-reported data on their strategy use and strategy perceived usefulness prior to and after the strategy training for the overall strategy and also the five strategy subgroups. Paired-samples *t* test results showed that the scores of strategy frequency use and strategy usefulness were both significantly higher for the post-training than for the pre-training for the entire strategy as well as for the social, memory, cognitive and metacognitive strategy categories. The rank order of the five strategy subgroups for student frequency usage and their perceived usefulness both remained largely unchanged after the strategy training.

The participants were asked to reflect on their changes in strategy use after the training ended. The majority of the students reported increases in their strategy use, both in number and frequency. In terms of the number of strategies used, 84% of the students reported using "much more" or "somewhat more" strategies; 16% reported using "about the same" number of strategies; and just 1% reported using "somewhat fewer" strategies. Overall, the participants also perceived a considerable increase in their frequency of strategy use. The percentages of students

who reported using strategies "much more," "more," "about the same," "somewhat less," and "much less" frequently were 14%, 65%, 19%, 2%, and 0%, respectively.

To determine the relationship between student perception of strategy usefulness and frequency of use, Pearson's product-moment correlation was performed. A strong correlation was found between strategy usefulness and frequency of strategy use both before and after the training (pre-training: r (178) = .72, p < .001; post-training: r (178) = .78, p < .001).

With regard to the 58 individual strategies, many strategies showed significant increases in strategy usage frequency as well as strategy perceived usefulness after the training. Paired-samples t test results indicated 17 items as being used significantly more frequently and 27 items as being significantly more useful. No significant decrease was found in any strategy item. A comparison of the above analyses revealed 16 overlapping strategies, which were not only used more frequently, but that were also considered to be more useful after the training. These were "Monolingual dictionary," "Discover new meaning through group work activity," "Study and practice meaning in a group," "Teacher checks student's flash cards or word lists for accuracy," "Use semantic maps," "Peg Method," "Use new word in sentences," "Group words together within a storyline," "Image word form," "Underline initial letter of the word," "Configuration," "Listen to tape of word lists," "Put English labels on physical objects," "Keep a vocabulary notebook," "Testing oneself with word tests," and "Use spaced word practice."

For both the pre-training and the post-training data, the frequency of use and the usefulness of the 58 strategies were ranked for comparison. Very little variability in student individual strategy use and the perceptions of usefulness existed before and after the training. Most of the 10 most and least frequently used strategies on the pre-training ranking lists remained stable on the post-training ranking lists. The pre-training and the post-training frequency ranking lists shared nine of the 10 most frequently used strategies as well as nine of the 10 least frequently used strategies. The only changes following the training were that "Analyze part of speech" was added to the top 10 most frequently used strategy list after the strategy training; "Monolingual dictionary," which originally ranked 7th on the least used list and became more popular with its mean increasing by .55 (M=2.41) and thus rating outside the top 10 least used strategies list.

When comparing these 10 most useful and least useful strategies before and after the strategy training, the results varied slightly. The differences found were as follows: "Use English-language media," which was originally not on the top 10 list before the training, became the 10th most useful strategy after the training, with its mean increase of .20 (M=3.74). Two strategies: "Loci Method," mean increased by .29 (M=2.36); and "Monolingual dictionary," mean increased by .71 (M=2.98), were regarded as more useful after the strategy training and were no longer on the students' 10 least useful strategy list.

According to the survey administered at the beginning of the first semester, the following strategies were reported by more than one-fourth of the participants as being unknown or unfamiliar: "Configuration" (N=75, 42%), "Underline initial letter of the word" (N=63, 35%), "Group words together within a storyline" (N=55, 31%), "Put English labels on physical objects" (N=51, 28%), "Image word form" (N=50, 28%), "Peg Method" (N=48, 27%), "Monolingual dictionary" (N=45, 25%), and "Discover new meaning through group work activity" (N=45, 25%). At the end of the second semester, as expected, students who reported not knowing or being unfamiliar with the strategies decreased greatly with the number of students giving the same responses (unknown or unfamiliar) all fell to less than eight.

More outcomes that were positive emerged after the strategy training sessions ended. There were several strategies that the students never or seldom used before receiving strategy training, but later found to be useful after they had been given the chance to learn and use these strategies. Table 2 shows the 10 most frequently cited in this category.

Research Question 2: Differences in Strategy Choice Changes for Participants Having Different Vocabulary Proficiency Levels

The participants were divided into three groups—high-, mid-, and low-level—based on their Vocabulary Levels Test scores (see Table 3). Changes in the strategy use patterns of the three groups were compared to determine whether the strategy training influenced students who had different vocabulary achievement levels and the different ways the strategy influenced these students. The results of the paired-samples *t* tests, as shown in Table 4, indicated that overall scores of strategy use were significantly higher for the low-level group after the post-training than for the pre-training and also for the social, memory, cognitive, and

metacognitive strategy categories. However, a significant increase was found only in the metacognitive strategy category for the mid-level group and only in the social strategy category for the high-level group.

Similar patterns for the three groups were found when comparing individual strategy items that did show significant increases after the training. First, the total number of strategies that showed significantly more use for the low-level group was similar to that for the mid- and high-level groups. The number of strategies that showed significant increases in strategy use frequency after the training for the low-, mid-, and high-level groups were 13, 14, and 11, respectively. Second, five overlapping strategies were identified for all three groups. These were "Monolingual dictionary," "Study and practice meaning in a group," "Use semantic maps," "Underline initial letter of the word," and "Listen to tape of word lists." Despite the similarities found in some of the overlapping favored strategies, differences were still detected, as shown below. The mean scores of "Study the spelling of a word" and "Word lists," showed no significant increase for the whole group as well as none for the mid- and low-level group after the training, but were significantly higher for the high-level group. For "Learn the words of an idiom together" and "Take notes in class," a significant increase pattern was found for the mid-level group only.

Research Question 3: Anticipating Participant Strategy Use Patterns for Future Learning

The survey asked respondents to report on how they would use the vocabulary learning strategies for their future learning to obtain a picture of how the strategy training might potentially affect the participants' vocabulary learning strategy use in the long run, once the training sessions ended and the participants were no longer required to practice all the strategies. The top 10 strategies the participants considered continuing to use, ranging from most to least frequent, were: "Say new word aloud when studying," "Study the sound of a word," "Verbal repetition," "Take notes in class," "Continue to study word over time," "Written repetition," "Bilingual dictionary," "Study the spelling of a word," "Use English-language media," and "Use the vocabulary section in your textbook." It was also noted that all except "Use English-language media" also had relatively high mean and ranking scores for both frequency of use and usefulness in the pre- and post-training

questionnaires. "Use English-language media," which ranked 17th among frequently used strategies before the training, turned out to be the 10th most frequently used strategy after the training. This strategy was viewed as very favorable as it became the ninth ranked among the top 10 of the most-willing-to use strategies.

Strategies that ranked in the top 10 lowest (means were between 1.93 and 2.43), arranged from least frequent to most frequent, were: "Peg Method, "Group words together within a storyline," "Configuration," "Underline initial letter of the word," "Use physical action when learning a word," "Study and practice meaning in a group," "Loci Method," "Discover new meaning through group work activity," "Image word form," and "Put English labels on physical objects." The frequency of use and perceived usefulness of these strategies, as rated by the participants, remained unchanged from the very beginning until the end of the training—they were also considered least useful and used least frequently in both instances.

Interestingly, when the above "10 least likely to be used strategies (for future use)" are compared with the "10 least frequently used" strategies and the "unknown or unfamiliar" strategies (as discussed previously), as reported by the participants prior to the training, only "Monolingual dictionary" and "Interact with native speakers" seemed to be no longer rejected by the participants, as neither were on the top 10 "least likely to be used strategies" list. The finding reveals certain strategies that the participants resisted, even when offered the opportunities to learn and practice them. These unpopular strategies were: "Peg Method," "Group words together within a storyline," "Configuration," "Underline initial letter of the word," "Discover new meaning through group work activity," and "Put English labels on physical objects."

Research Question 4: Participant Reasons for Infrequent Strategy Use

Although the average mean for students' strategy use increased considerably after the strategy training, certain strategies did not receive much attention. The survey results clearly show that the participants tended to neglect certain strategies. Typical reasons for why the participants "never, or almost never" or "seldom" used certain strategies are categorized and presented in Table 5. The total number of participants who cited "strategies were not useful/helpful," and

"strategies were complicated or confusing" as top reasons, was 32%, followed closely by "don't fit students' personal learning styles," at 28%.

To find out whether there were certain useful strategies that students might still avoid using, the participants were asked to list those strategies that they found useful yet would likely not continue to use. The 10 most frequently mentioned are shown in Table 6. When further analyzing the data of Section I in the post-training questionnaires, additional similar strategies were identified. In addition to "Group words together to study them," "Discover new meaning," "Peg Method," and "Configuration," appearing in Table 6, there were four more strategies. These were: "Study and practice meaning in a group," "Image word form," "Underline initial letter of the word," and "Put English labels on physical objects." These strategies showed a significant increase in both usage and perceived usefulness; however, they did not gain much popularity among the students in that they ranked in the bottom 10 strategies for those students who considered them for future use. The reasons for the participants' resistance to these potentially useful strategies are listed in Table 7. "Strategies being complicated or confusing (16%)" remained the top reason. Other major causes for low use of nonuse were "strategies don't fit personal learning styles (14%)," and "lack of learning environment, resources or opportunities to use the strategies (13%)."

Research Question 5: Student Opinions of Learning and Using Vocabulary Learning Strategies

The vast majority of the participants were positive towards the idea of strategy implementation and regarded employing vocabulary learning strategies as beneficial for enhancing vocabulary growth. As shown in Table 8, for each question posed in this section, more than 96% of the participants selected "agree" or "strongly agree" as their responses. None gave negative responses.

DISCUSSION AND CONCLUSIONS

This study investigated the influences and outcomes of incorporating strategy training into the EFL classroom. It provides additional data for how strategy training can potentially influence the way learners can approach vocabulary learning. The study results demonstrate that strategy training can alter students' learning habits, which also supports

the assertion that learning strategies are indeed teachable (Blanco et al., 2010; O'Malley & Chamot, 1990; Oxford, 1990). The combined findings of Macaro and Erler (2008), Mizumoto and Takeuchi (2009), Nguyen and Gu (2013), Rasekh and Ranjbary (2003), Urlaub (2012) and the present study confirm that explicit strategy instruction can lead to positive changes in language learning. From a practical perspective, the findings of this study provide useful information to classroom teachers for assisting their students to improve their strategy use and expand their vocabulary.

The strategy training implemented in this study widened and deepened the participants' understanding of vocabulary learning strategy use. The results of the study suggest that vocabulary learning strategy training can bring about positive effects in students' learning, as the majority of the participants in this study reported using a greater number of strategies, using strategies more frequently, and found such strategies useful. The findings also reveals that strategy training can affect students' strategy choice differently, depending on the level of their vocabulary. Additionally, the participants were generally positive toward strategy implementation, as found in Nunan's (1997) study, and regarded employing vocabulary learning strategies as important in further development of their lexical competence.

The findings of this investigation are consistent with those of Blanco et al. (2010) and Mizumoto and Takeuchi (2009) who discovered an increase in students' strategy awareness and frequency of strategy usage and thus learning. These training outcomes are considered positive as the research has validated the importance of strategy awareness in students (Abraham & Vann, 1987; Chamot et al., 1988; Khaldieh, 2000; O'Malley & Chamot, 1990), and demonstrated that the use of a greater number and a higher frequency of learning strategies is associated with a higher level of language achievement (Bruen, 2001; Green & Oxford, 1995; Griffiths, 2003; Lai, 2009; Nisbet et al., 2005; Park, 1997; Wharton, 2000; Yeh &Wang, 2004).

One of the significant findings to emerge from the study is that after undergoing strategy training, although the ranking order of usefulness of 58 strategies did not change by much, some strategies were discovered to be more effective. It was found that certain strategies that students regarded as not being as useful and used more infrequently were later viewed favorably following this study and, therefore, used much more intensively. Taking the use of monolingual dictionaries as an example,

the pre-training survey data indicated that the majority of the participants reported using bilingual dictionaries and only a small percentage reported using monolingual dictionaries; surprisingly, there were substantial increases in both usefulness and usage of this strategy after the training.

Given the opportunity to learn and practice using all the vocabulary learning strategies listed in the strategy training materials, the participants' frequency of strategy use did increase substantially. More encouragingly, the participants learned more strategies, including those they had never heard about before and those that they had never or seldom used before the training. Another notable finding of this study was that there were several strategies that the participants reported rarely or never using before the strategy training, which students then considered useful after having had the opportunities to practice them. These changes suggest that strategy training can assist students in developing a better understanding of strategy use, and thus contribute to their discovery of new or useful strategies.

Differences in vocabulary study habits after strategy training were found among students with different levels of vocabulary proficiency. The most striking result to emerge from the data is that strategy training resulted in a dramatic increase in the frequency of low-level students' use of a strategy overall as well as for five of the six strategy categories. Such significantly increased usage, however, was detected only in one strategy category for the high- and mid-level groups. Similar results were reported by Mizumoto and Takeuchi (2009) who found a substantial growth in the use of learning strategies among the learners with low and moderate levels of proficiency, but not among those with high level of proficiency. The researcher speculates that strategy training does not lead to a substantial increase in strategy use by higher level students' use probably because they had used strategies relatively more frequently than their lower-level counterparts even before the training began. There was, therefore, not much room for their ability to grow to use these strategies more frequently.

Another difference observed among the three groups in their change in study habits that resulted from strategy training was that the high-level students seemed to become much more aware of a word's spelling and other dimensions of lexical knowledge, such as word definitions, part of speech and phonetic transcription, and tended to spend more time studying the spelling of a word and using word lists when memorizing

vocabulary words. Researchers have long acknowledged the importance of vocabulary knowledge (e.g., Carroll, 1964; Laufer & Ravenhorst-Kalovski, 2010; Nation, 2001; Schmitt, 2000). As Schmitt asserts, vocabulary knowledge is essential for the most effective use of language. It is also believed that attentiveness to vocabulary knowledge can greatly enhance not only students' vocabulary competence but also their language proficiency. This training outcome was very positive.

An unanticipated finding was that many of the overlapping strategy items fell into three different groups. The researchers examined which strategies were used significantly more frequently by the participants following the training. The reason for this finding was not clear, but indeed, some of the overlapping strategies were among those that were more intensively practiced either during class hours when doing group activities or after class when working on a vocabulary notebook assignment alone. Since these assignments were required by the instructor, all the participants to some extent were forced to work on these assignments. Thus, they consequently ended up making use of the strategies being researched much more frequently. It seems possible that this result may be due to the assignment previously given to these participants.

Although significant increases in participants' frequency of strategy use in this study were identified after the strategy training, their preferences for strategy selection did not change greatly, as noted by Mizumoto and Takeuchi (2009). When comparing the strategies the participants used before and after the training, this study found that students had a tendency to stick to their old habits. The order of their preferred strategies remained largely unchanged; in addition, students tended to avoid using some specific strategies, even if they were useful.

One of the major reasons that can cause students to be reluctant or unwilling to use certain strategies was that the strategies were not effective for them or did not fit their learning styles. We must admit then that no single strategy is the best one, given the individual differences in learning. Each learner takes a different approach to his or her learning, and these differences can result in their infrequent use of some of these strategies.

With regard to the comments made by some students that some strategies were too complicated, difficult to apply, confusing or even counterproductive, one possibility for analysis is to assume that because the strategies were not compatible with these students' preferred styles,

they had difficulties in using those strategies. A more likely explanation, however, might be that these students did not fully understand how to apply these strategies into real learning situations. If that is the case, then a teacher should offer learners additional assistance and guidance on specific strategies. It is imperative that learners have a thorough understanding of all vocabulary learning strategies that are available. In addition, while learners are undergoing strategy training, assessing their strategy use, monitoring their learning, and detecting their difficulties to give them more assistance cannot be overemphasized.

In strategy training, teaching students how to use different strategies is essential, but that alone may not be sufficient. Another main cause of the low use of some strategies, according to many participants, is that students have a lack of access and no environment, or opportunities to use different strategies. To overcome resource and environmental constraints, teachers should offer greater access and resources, and create a more varied learning environment inside the language classroom. At the same time, teachers should suggest ways in which their students can independently seek out resources and opportunities to apply different strategies after class and then encourage them to do so. Ensuring that learners have the opportunity to practice vocabulary outside the classroom is crucial in EFL settings, where English is not widely used.

Some limitations of this study do need to be addressed. First, the population represented Chinese college EFL learners, which may limit the generalizability of the study findings to other learning groups. Findings of this study may not be transferable to learners in different language settings or to different age groups or to those with different vocabulary proficiency levels or those who indicated different preferred learning styles. All these learner variables, which may affect the actual choice of learning strategies, need to be taken into full account when developing strategy training and delivering successful foreign and second language instruction. The second limitation lies in that even though the participants did report how they would probably use the vocabulary learning strategies for future learning, their responses may not precisely or accurately reflect their actual future strategy use. This issue also relates to another study limitation—the inherent issues with self-reported data (Ellis, 1994; LoCastro, 1994). If the participants did not respond to the survey questions accurately or honestly, the findings may be different and the validity may be threatened.

The present study was designed to determine the influences of

strategy training on language learners' strategy use behaviors; measuring vocabulary growth was, therefore, not within the scope of investigation. Future studies could explore the effects of strategy training by adding another variable—gains in learner vocabulary. In addition, longitudinal studies, which observe learners' actual strategy usage after they have completed strategy training, are needed to determine the long-term influences of training in learner strategy.

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APPENDIX

Appendix A. Pre-Training Questionnaire

(Mandarin Chinese version was given to students)

Student ID Number:
Listed in the Table below are 58 strategy items. Please answer the questions in Part A and Part B. For each strategy, circle the response that best fits you.
Part A (Frequency): How frequently do you use the strategy?
Using the rating scale below, circle the number that best describes your actual strategy use.

1. Never or almost never
2. Seldom
3. About half the time
4. Usually
5. Always or almost always

Part B (Usefulness): To what extent do you find the strategy useful?
How would you rate the usefulness of the strategy?
Using the rating scale below, circle the number that best reflects your opinion.

1. Not at all useful
2. Not very useful
3. Somewhat useful
4. Very useful
5. Extremely useful
0. Don’t know or uncertain (because you do not know or are not familiar with the strategy)

Strategy Item	**Part A (Frequency)**	**Part B (Usefulness)**
1. Analyze part of speech	1 2 3 4 5	1 2 3 4 5 0
2. Analyze affixes and roots	1 2 3 4 5	1 2 3 4 5 0
3. Check for L1 cognate	1 2 3 4 5	1 2 3 4 5 0
4. Analyze any available pictures or gestures	1 2 3 4 5	1 2 3 4 5 0
5. Guess from textual context	1 2 3 4 5	1 2 3 4 5 0
6. Bilingual dictionary	1 2 3 4 5	1 2 3 4 5 0
7. Monolingual dictionary	1 2 3 4 5	1 2 3 4 5 0
8. Word lists	1 2 3 4 5	1 2 3 4 5 0
9. Flash cards	1 2 3 4 5	1 2 3 4 5 0
10. Ask teacher for an L1 translation	1 2 3 4 5	1 2 3 4 5 0
11. Ask teacher for paraphrase or synonym of new word	1 2 3 4 5	1 2 3 4 5 0
12. Ask teacher for a sentence including the new word	1 2 3 4 5	1 2 3 4 5 0
13. Ask classmates for meaning	1 2 3 4 5	1 2 3 4 5 0
14. Discover new meaning through group work activity	1 2 3 4 5	1 2 3 4 5 0
15. Study and practice meaning in a group	1 2 3 4 5	1 2 3 4 5 0
16. Teacher checks student's flash cards or word lists for accuracy	1 2 3 4 5	1 2 3 4 5 0
17. Interact with native-speakers	1 2 3 4 5	1 2 3 4 5 0
18. Study word with a pictorial representation of its meaning	1 2 3 4 5	1 2 3 4 5 0
19. Image word's meaning	1 2 3 4 5	1 2 3 4 5 0
20. Connect word to a personal experience	1 2 3 4 5	1 2 3 4 5 0
21. Associate the word with its coordinates	1 2 3 4 5	1 2 3 4 5 0
22. Connect the word to its synonyms and antonyms	1 2 3 4 5	1 2 3 4 5 0
23. Use semantic maps	1 2 3 4 5	1 2 3 4 5 0
24. Use 'scales' for gradable adjectives	1 2 3 4 5	1 2 3 4 5 0

25.	Peg Method	1 2 3 4 5	1 2 3 4 5 0
26.	Loci Method	1 2 3 4 5	1 2 3 4 5 0
27.	Group words together to study them	1 2 3 4 5	1 2 3 4 5 0
28.	Group words together spatially on a page	1 2 3 4 5	1 2 3 4 5 0
29.	Use new word in sentences	1 2 3 4 5	1 2 3 4 5 0
30.	Group words together within a storyline	1 2 3 4 5	1 2 3 4 5 0
31.	Study the spelling of a word	1 2 3 4 5	1 2 3 4 5 0
32.	Study the sound of a word	1 2 3 4 5	1 2 3 4 5 0
33.	Say new word aloud when studying	1 2 3 4 5	1 2 3 4 5 0
34.	Image word form	1 2 3 4 5	1 2 3 4 5 0
35.	Underline initial letter of the word	1 2 3 4 5	1 2 3 4 5 0
36.	Configuration	1 2 3 4 5	1 2 3 4 5 0
37.	Use Keyword Method	1 2 3 4 5	1 2 3 4 5 0
38.	Affixes and roots (remembering)	1 2 3 4 5	1 2 3 4 5 0
39.	Part of speech (remembering)	1 2 3 4 5	1 2 3 4 5 0
40.	Paraphrase the word's meaning	1 2 3 4 5	1 2 3 4 5 0
41.	Use cognates in study	1 2 3 4 5	1 2 3 4 5 0
42.	Learn the words of an idiom together	1 2 3 4 5	1 2 3 4 5 0
43.	Use physical action when learning a word	1 2 3 4 5	1 2 3 4 5 0
44.	Use semantic feature grids	1 2 3 4 5	1 2 3 4 5 0
45.	Verbal repetition	1 2 3 4 5	1 2 3 4 5 0
46.	Written repetition	1 2 3 4 5	1 2 3 4 5 0
47.	Word lists	1 2 3 4 5	1 2 3 4 5 0
48.	Flash cards	1 2 3 4 5	1 2 3 4 5 0
49.	Take notes in class	1 2 3 4 5	1 2 3 4 5 0
50.	Use the vocabulary section in your textbook	1 2 3 4 5	1 2 3 4 5 0
51.	Listen to tape of word lists	1 2 3 4 5	1 2 3 4 5 0
52.	Put English labels on physical objects	1 2 3 4 5	1 2 3 4 5 0
53.	Keep a vocabulary notebook	1 2 3 4 5	1 2 3 4 5 0
54.	Use English-language media (songs, movies, newscasts, etc.)	1 2 3 4 5	1 2 3 4 5 0

55. Testing oneself with word tests	1 2 3 4 5	1 2 3 4 5 0
56. Use spaced word practice	1 2 3 4 5	1 2 3 4 5 0
57. Skip or pass new word	1 2 3 4 5	1 2 3 4 5 0
58. Continue to study word over time	1 2 3 4 5	1 2 3 4 5 0

Appendix B. Post-Training Questionnaire

(Students were given Mandarin Chinese version)

Section I.
Listed in the Table below are 58 strategy items. Please answer the questions in Part A, B, and C. For each strategy, circle the response that best fits you.
Part A (Frequency): How frequently do you use the strategy?
Using the rating scale below, circle the number that best describes your actual strategy use.

1. Never or almost never
2. Seldom
3. About half the time
4. Usually
5. Always or almost always

Part B (Usefulness): To what extent do you find the strategy useful?
Using the rating scale below, circle the number that best reflects your opinion.

1. Not at all useful
2. Not very useful
3. Somewhat useful
4. Very useful
5. Extremely useful
0. Don’t know or uncertain (because you do not know or are not familiar with the strategy)

Part C (Future Use): How likely is it that you will continue to use the strategy?

Rate the possibility by circling the number that best reflect your response.

1. Definitely won't use
2. Might use
3. Likely to use
4. Very likely to use
5. Definitely will use

Strategy Item	Part A (Frequency)	Part B (Usefulness)	Part C (Future)
1. Analyze part of speech	1 2 3 4 5	1 2 3 4 5 0	1 2 3 4 5

Note: Item numbers 2 to 58 are omitted from this table due to space constraints. For the complete list of the strategies, please see Appendix A.

Section II. Self-Perceived Training-Related Change in Vocabulary Learning

Using the rating scale below, circle the number that best describes your change in the use of vocabulary learning strategies.

1. Much more
2. Somewhat more
3. About the same
4. Somewhat less
5. Much less

1. How has your strategy use changed in its type (number), after undergoing the strategy training?	1 2 3 4 5
2. Compared to before receiving learning strategy training, how frequently do you currently use vocabulary learning strategies?	1 2 3 4 5

Section III. Reasons for Strategy Selection

1. What are the reasons that you "never, or almost never (1)," or "seldom (2)" use certain strategies? To find your least used strategies, it might be helpful to refer to your answers (choosing 1 or 2) in Part A of Section I.
   - Answer:

2. Which strategies are those that you "never, or almost never (1)," or "seldom (2)" used before receiving strategy training, but later find "very useful (4)" or "extremely useful (5)," after given the opportunities to use them. Please select all strategies that apply, up to 10. If none, leave the answer blank. To find the strategies that apply, you may refer to your answers in Section I, Part A and B.
   - Strategy Item number: ____, ____, ____, ____, ____, ____, ____, ____, ____, ____.

3. (a).Which strategies are those that you regard as useful, but will choose not to continue using in the future? Please select all strategies that apply, up to 10. If none, leave the answer blank.
   - Strategy Item Number: ____, ____, ____, ____, ____, ____, ____, ____, ____, ____.

   (b). What are your reasons for not being willing to use the strategies you listed above?
   - Answer:

Section IV. Opinions Concerning Vocabulary Learning Strategies Training

Using the rating scale below, circle the number that describes your opinion of vocabulary learning strategy training.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

1. Use of vocabulary learning strategies helps build vocabulary.	1 2 3 4 5
2. Explicit instruction in vocabulary learning strategies can benefit students in their development of vocabulary.	1 2 3 4 5
3. Students can benefit from being introduced to different vocabulary learning strategies and their uses.	1 2 3 4 5
4. Students can benefit from practicing vocabulary learning strategies in the classroom.	1 2 3 4 5
5. Students can benefit from a strategy checklist used during their vocabulary learning process for monitoring and evaluating their learning.	1 2 3 4 5

Table 1. *Mean Scores of Strategy Use Frequency and of Strategy Perceived Usefulness Before and After Strategy Training*

	Frequency of use						Perceived usefulness					
	Pre-Training		Post-Training				Pre-Training		Post-Training			
Strategy	*M*	*SD*	*M*	*SD*	*t* (179)	Comments	*M*	*SD*	*M*	*SD*	*t* (179)	Comments
Overall	2.86	.41	2.95	.43	-2.95	Pre-training < Post-training**	2.91	.72	3.14	.49	-4.36	Pre-training < Post-training***
DET	3.21	.47	3.17	.50	.93	Pre-training > Post-training	3.20	.67	3.30	.57	-1.73	Pre-training < Post-training
SOC	2.53	.52	2.68	.56	-2.99	Pre-training < Post-training**	2.76	.89	3.03	.63	-3.80	Pre-training < Post-training***
MEM	2.65	.52	2.76	.51	-2.65	Pre-training < Post-training**	2.69	.81	2.92	.54	-4.06	Pre-training < Post-training***
COG	3.27	.66	3.38	.66	-2.15	Pre-training < Post-training*	3.31	.86	3.55	.72	-3.49	Pre-training < Post-training**
MET	3.09	.70	3.29	.62	-3.43	Pre-training < Post-training**	3.14	1.00	3.51	.71	-4.56	Pre-training < Post-training***

Note. DET = determination; SOC = social; MEM = memory; COG = cognitive; MET = metacognitive.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. Infrequently Used Strategies Participants Found to Be Useful After Training

Rank	**Strategy (With item number)**	***N***	**%**
1	17. Interact with native speakers	37	21%
1	33. Say new word aloud when studying	37	21%
3	54. Use English-language media (songs, movies, newscasts, etc.)	35	19%
4	32. Study the sound of a word	32	18%
5	46. Written repetition	30	17%
6	6. Bilingual dictionary	29	16%
7	22. Connect the word to its synonyms and antonyms	28	16%
8	2. Analyze affixes and roots	27	15%
9	18. Study word with a pictorial representation of its meaning	26	14%
9	45. Verbal repetition	26	14%

Note. Respondents could give more than one reason, so percentages do not equal 100%.

Table 3. *Distribution of Participants by Vocabulary Size*

Group	**Number of students**	***M***	***SD***	**Range of Score**
High-level	61	65.51	8.41	55-86
Mid-level	59	46.51	4.03	40-54
Low-level	60	30.93	6.44	14-39
Total	180	47.76	15.69	14-86

Note. The possible total score range ran from 0-120, with a higher score indicating a higher level of vocabulary competence. The participants were assigned to three approM,ximately equal-sized groups.

Table 4. *Mean Scores for Strategy Use and for Strategy Categories Before and After Training*

	High-level group						Mid-level group						Low-level group					
	Before		After				Before		After				Before		After			
Strategy	*M*	*SD*	*M*	*SD*	*t* (60)	*p*	*M*	*SD*	*M*	*SD*	*t* (58)	*p*	*M*	*SD*	*M*	*SD*	*t* (59)	*p*
Overall	3.01	.47	3.09	.44	-1.39	.170	2.83	.37	2.88	.42	-.91	.367	2.72	.33	2.88	.41	-2.74	.008**
DET	3.33	.53	3.31	.45	.27	.788	3.19	.41	3.12	.51	.94	.349	3.12	.45	3.09	.52	.40	.694
SOC	2.56	.65	2.80	.66	-2.39	.020*	2.56	.44	2.54	.44	.17	.870	2.49	.45	2.69	.54	-2.62	.011*
MEM	2.82	.58	2.89	.53	-1.11	.270	2.62	.46	2.70	.48	-1.1	.278	2.51	.47	2.68	.50	-2.26	.026*
COG	3.20	.63	3.56	.62	-.66	.509	3.18	.62	3.25	.67	- .85	.399	3.12	.66	3.33	.65	-2.07	.043*
MET	3.34	.66	3.43	.61	-.94	.351	3.09	.66	3.27	.61	-2.16	.035*	2.85	.71	3.16	.64	-2.78	.007**

Note. DET = determination; SOC = social; MEM = memory; COG = cognitive; MET = metacognitive.

* $p < .05$. ** $p < .01$.

Table 5. *Reasons for Not Favoring Use of Certain Strategies*

Rank	**Reasons**	***N***	**%**
1	Not useful/ helpful	58	32%
1	Complicated, confusing, difficult to understand and/or use	58	32%
3	Don't fit students' personal learning styles	51	28%
4	Less effective compared with other strategies	25	14%
5	Time consuming/takes up too much time	22	12%
6	Lack of access to learning environment, resources, or opportunities to use the strategies	21	12%
7	Not familiar with the strategies or strategy usage; are still learning to use the strategies	8	4%
7	Not motivated to learn (no time, too lazy, don't like to use the strategies)	8	4%
9	Makes learning more confusing	4	2%

Note. Respondents could give more than one reason, so percentages will not total 100%.

Table 6. *Strategies Participants Regarded as Useful but Would Rather not Use*

Rank	**Strategy (With item number)**	***N***	**%**
1	30. Group words together within a storyline	34	19%
2	17. Interact with native-speakers	33	18%
3	14. Discover new meaning through group work activity	26	14%
4	26. Loci Method	24	13%
5	25. Peg Method	23	13%
6	43. Use physical action when learning a word	20	11%
7	36. Configuration	19	11%
8	48. Flash cards	18	10%
9	23. Use semantic maps	15	8%
9.	29. Use new word in sentences	15	8%

Note. Respondents could give more than one reason, so percentages will not total 100%.

Table 7. *Typical Reasons for Not Considering Use of Strategies Regarded as Useful*

Rank	**Reasons**	***N***	**%**
1	Complicated, confusing, difficult to understand and/or use	28	16%
2	Don't fit students' personal learning styles	25	14%
3	Lack of access to learning environment, resources, or opportunities to use the strategies	24	13%
4	Time consuming	18	10%
5	No time, too lazy, not motivated to use learning strategies	12	7%
6	Less effective compared to other strategies	11	6%
7	Not familiar with the strategies or strategy usage; are still learning to make use of the strategies	5	3%
7	Makes learning more confusing	5	3%

Note: Respondents could give more than one reason, so percentages will not total 100%.

Table 8. *Student Opinions of Learning and Using Vocabulary Learning Strategies*

Opinions		**SD**	**D**	**N**	**A**	**SA**
1.	Use of vocabulary learning strategies helps build vocabulary.	0%	0%	2%	84%	14%
2.	Explicit instruction in vocabulary learning strategies can benefit students in their development of vocabulary.	0%	0%	2%	78%	20%
3.	Students can benefit from being introduced to different vocabulary learning strategies and their uses.	0%	0%	0%	71%	29%
4.	Students can benefit from practicing vocabulary learning strategies in the classroom.	0%	0%	4%	72%	24%
5.	Students can benefit from a strategy checklist used during their vocabulary learning process for monitoring and evaluating their learning.	0%	0%	4%	82%	14%

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

英語字彙學習策略訓練

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本研究旨在探究英語字彙學習策略訓練對學生在英語字彙學習上所帶來之影響。一百八十位臺灣的大一學生參與這項研究調查。研究結果顯示，學習策略訓練能對學生的字彙學習帶來正面的影響。在為期一學年的學習策略訓練結束之後，整體而言，學生對於字彙學習策略的瞭解程度增加，包含學習策略的種類及其運用方式。另外，在英語字彙學習上，學生所使用的學習策略，於數量與種類以及使用之頻率上皆顯著提高。相較於詞彙能力較高之群組，這項訓練對詞彙能力較低之群組在字彙學習策略的使用上所帶來的改變更為明顯。

關鍵詞：學習策略、 明示教學、 字彙、英語為外語