A study investigated how students of English as a second language (ESL) improved their use of learning strategies through awareness-raising in group interviews and informal training. Subjects were 68 Taiwanese university students in two freshman English classes. Subjects responded to an English learning strategy questionnaire in the beginning and at the end of the semester. During the semester, students were interviewed in small groups, in which they examined and discussed details of their strategy use when learning vocabulary, listening, reading, writing, and speaking inside and outside the classroom. Statistical analysis of pre- and post-test results found significant increases in learning strategy use. It is suggested that the group interview provided learners with an important opportunity to focus not only on language but also on the learning process, and offered teachers an opportunity to convince their students of the value of learning strategies and to encourage their active use and improvement. Resulting recommendations for learning strategy instruction include: discovering students' beliefs and strategies; explaining and modeling the strategies explicitly; providing authentic context for strategy use; making strategy training interactive; dealing with students' motivation; and implementing strategies-and-beliefs components within the language curriculum. Contains 49 references. (Author/MSE)
EFFECTIVE AWARENESS-RAISING IN LANGUAGE LEARNING STRATEGY TRAINING

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EFFECTIVE AWARENESS-RAISING IN LANGUAGE LEARNING STRATEGY TRAINING

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Abstract

This paper reports a study which investigated how EFL students improved their use of learning strategies through awareness-raising in group interviews and informal learner training. In this study, college students enrolled in Freshman English classes in Taiwan were selected to participate. They answered an English Learning Questionnaire in the beginning of the semester and again at the end of the semester. Also, during the semester, students were interviewed in small groups, in which details of their strategy use when learning vocabulary, listening, reading, writing, and speaking English inside or outside of the classroom were examined and discussed. Paired t-test procedures were computed, and significant differences were found between students' use of learning strategies in the pre-test and post-test. The paper then discusses how the interactive discussion in group interviews helped to raise strategy-related awareness among respondents and improves their use of learning strategies in both frequency and variety at the end of the Freshman English class. Finally, implication for future research and practical suggestions for the learner training instruction will be offered.

1. INTRODUCTION

In the past two decades, many language teachers and researchers have shifted their focus from selecting specific teaching methods to paying attention to how students were doing in their language learning. They found that students, as unique, thinking and feeling individuals, were not just passive subjects who only responded to what was taught. Some students seemed to be successful no matter what teaching methods or techniques were used in the language classroom. In fact, students were found to employ various learning strategies to assist themselves when learning a second or foreign language. The areas of discovering optimal learning strategies for successful acquisition of a second language and training learners in strategy use, as a result, have attracted a continuing interest for research (Brown, 1994; Hosenfeld, 1979; Tarone & Yule, 1989).
In the current paper, the author will first review related research on language learning strategies. The term “learning strategies” refers to those steps or operations used by learners to facilitate their acquisition, storage, retrieval, and use of information (Rubin, 1987). The author will then report her study which investigated how EFL students improved their use of learning strategies through awareness-raising in group interviews and informal learner training. The discussion will include how the interactive group interviews helped to raise strategy-related awareness among respondents and improved their use of learning strategies in both frequency and variety at the end of the Freshman English class. Finally, implication for future research and practical suggestions for the learner training instruction will be offered.

2. LITERATURE REVIEW

The following section will review research on language learning strategies and discuss studies on learning strategy training.

2.1 Research on Language Learning Strategies

Investigations of language learning strategies date from the “good language learner” studies in the early seventies (e.g., Naiman et al., 1978; Rubin, 1975; Stern, 1975). These studies intended to identify the strategies of successful learners and make them available to less successful learners. Based on her observations of second language learners, Rubin (1975), for example, suggested that a good language learner demonstrated the following characteristics: being a willing and accurate guesser; having a strong, persevering drive to communicate; often being uninhibited and willing to make mistakes in order to learn or communicate; focusing on form by looking for patterns; taking advantage of all practice opportunities; monitoring his or her own speech as well as that of others; and paying attention to meaning.

Naiman, Fröhlich, Stern, and Todesco (1978) interviewed 34 proficient adult language learners and performed a classroom study which included classroom observations, tests, and interviews with secondary students of French. Their study suggested that there were no stereotyped successful or good language learners who, for instance, had “a high language aptitude or an exceptionally good memory” (p. 103). Naiman et al. (1978) concluded that the findings from their adult interview study, however, still offered general confirmation of the strategies used by the good language learner. They reported five major strategies and related techniques which were essential for successful language learning:

1. Actively involving oneself in the language learning process by identifying and seeking preferred learning environments.
2. Seeing the second language as a formal rule system.
3. Seeing the second language as a means of communication and interaction.
4. Coping with the affective demands of the second language.
5. Constantly monitoring and revising one's understanding of the second language.

On the other hand, in studying unsuccessful college foreign language (Spanish and German) students, Reiss (1981) found that less successful students (i.e., the "C/D" students) seemed unaware of a particular learning strategy. They produced "vague" statements and thus "vague learning", while successful FL students (i.e., the "A" students) reported specific thinking and a specific learning approach.

Bialystok and her colleagues examined the effects of using some learning strategies (i.e., formal practicing, monitoring, functional practicing, and inferencing) on students' second language performance. Bialystok (1981) defined functional strategies and formal strategies based on their purposes. According to Bialystok (1981), typical classroom exercises used for the sake of mastering the formal aspect of the language, such as memorizing vocabulary lists, filling in the blanks with the proper forms, and reciting various sounds, belong to the category of formal practice. On the other hand, functional strategies occurs when language learners use the target language for communicating meanings, such as going to movies, reading newspapers and magazines, or talking to native speakers. Bialystok (1981) found that while the use of these learning strategies had positive effects on students' achievement, functional practice consistently accounted for significant effects on their achievement on all tasks.

Studies of second-language learning strategies have attempted to identify and classify all possible learning strategies used by second language learners. For example, O'Malley, Chamot, and their colleagues conducted a series of studies in the United States with beginning and intermediate students of English as a Second Language (ESL). They (O'Malley et al., 1985a, 1985b) identified 26 language learning strategies through interviews and also classified these strategies into three categories: (1) cognitive learning strategies (e.g., repetition, translation, elaboration, inferencing), (2) metacognitive learning strategies (i.e., planning, monitoring, and evaluating), and (3) social-affective learning strategies (e.g., cooperation, question for clarification).

Chamot and Küpper (1989) conducted a three-year investigation of the use of learning strategies by foreign language (Spanish and Russian) students and their teachers. They did three studies under the project: (1) a descriptive study, which examined the learning strategies by interviewing small groups of secondary foreign language students; (2) a longitudinal study, which
identified and analyzed changes in strategy use over time; and (3) a course developmental study, in which foreign language teachers taught students to apply learning strategies. Recently, Chamot and her colleagues (Chamot et al., 1993; Chamot, Robbins, & El-Dinary, 1993) also reported their projects which attempted to teach learning strategies in foreign language classroom.

Oxford (1989) has developed the *Strategy Inventory for Language Learning* (SILL) to assess learners’ strategy use. Many of the recent studies on language learning strategies employed the SILL to measure the frequency of strategy use by foreign language learners (e.g., Ehrman & Oxford, 1989; Oxford & Nyikos, 1989; Oxford, Park-Oh, Ito, & Sumrall, 1993) and by ESL or EFL (English as a Foreign Language) students (e.g., Green, 1991; Oxford, Talbot, & Halleck, 1990; Philips, 1991).

In Taiwan, Yang (1992) has first investigated the use of learning strategies by college EFL students. Yang (1992) modified and translated the SILL (ESL/EFL version) into Chinese to survey over five hundred students at various levels and in different universities in Taiwan. These EFL students in Taiwan were found to use formal oral-practice strategies and compensation strategies more frequently and cognitive-memory strategies least frequently (Yang, 1992, 1993a). Students’ frequent use of formal oral-practice strategies, such as saying or writing words repeatedly and practicing the sound of English, as indicated by Yang (1992), was connected to their overwhelming endorsement of the learners’ beliefs about the value of learning spoken English such as the importance of excellent pronunciation and the need to practice a lot. Furthermore, these students’ strong self-efficacy toward their learning was closely related to the use of functional practice strategies such as watching English movies and listening to English-speaking radio programs (Yang, 1992, 1993b).

Klassen (1994a, 1994b) adopted the same Chinese version of the SILL to survey 228 Freshman English students at a private university in Taiwan for their strategy use. In comparison to the results of the same survey reported by Yang (1992) measuring the strategies of a large sample and greater variety of students, he found that the scores of the students in his study were mostly lower but follow the same trends. Sy (1994) used a longer version of the SILL (80 items) to investigate 411 college students in Taiwan but focused on sex differences and use of language learning strategies. Similar to Yang’s study, Sy found students used compensation strategies most frequently and memory strategies least often. Both studies, Yang’s and Sy’s, showed female students generally using language learning strategies more frequently than male students.

Many researchers have studied learner variables or factors that affect students’ strategy use. These factors include: (1) age, (2) learning stage, (3) gender, (4) learning context (second language
vs. foreign language), (5) type of task, (6) year of study, (7) learner’s language proficiency, (8) national origin or ethnicity, (9) field of specialization, (10) motivation, (11) learning styles, (12) personality trait, (13) beliefs about language learning, and (14) language teaching methods (e.g., Bialystok, 1981; Ehrman & Oxford, 1989; O’Malley & Chamot, 1990; Oxford & Nyikos, 1989; Politzer & McGroarty, 1985; Yang, 1994c).

In summary, most studies have found that (1) the use of appropriate language learning strategies leads to improved proficiency and achievement overall or in specific skills (e.g., Chamot & Küpper, 1989; O’Malley & Chamot, 1990; Wenden & Rubin, 1987); and (2) successful language learners generally used more learning strategies, and more facilitative ones, than do poor learners (e.g., Bialystok, 1981; Chamot & Küpper, 1989; Naiman et al., 1978; Oxford 1990, 1993; Ramirez, 1986; Rubin, 1975, 1987).

2.2 Studies on Language Learning Strategy Training

Most studies on learning strategy training (e.g., Chamot & Küpper, 1989; O’Malley et al., 1985b; Oxford, 1990) focus on how to help unsuccessful language learners utilize learning strategies used by successful language learners. Considerable research has been done outside the field of second language acquisition for training strategy use in memorization, reading comprehension, and problem solving (e.g., Weinstein, Goetz, & Alexander, 1988). In the context of second language acquisition, earlier training studies have been conducted specifically on learning vocabulary by the keyword method, a memory device which links a visual image to a sound, (e.g., Atkinson & Raugh, 1975; Willerman, 1977) and on reading strategies (e.g., Hosenfeld et al., 1981); whereas recent strategy training studies have emphasized completely informed training (e.g., Nyikos, 1990; Oxford et al., 1990).

The effectiveness of these strategy training projects has varied. Atkinson and Raugh (1975) reported success with their mnemonic keyword method in the learning of Spanish and Russian vocabulary. Willerman’s (1977) dissertation study, however, revealed no significant differences among rote, keyword, and imagery instructions for the acquisition of French vocabulary. O’Malley et al (1985b) also reported mixed results from their training study. In the study, high school ESL students were taught to use learning strategies for vocabulary, listening comprehension, and formal speaking tasks. The students’ proficiency on speaking skills tasks showed an improvement through learning strategy training. But on listening skills tasks, the researchers found that when students were faced with a very difficult task, they derived little help from using learning strategies. O’Malley et al. (1985b) thus noted that the “transfer of strategies...
... to new learning activities may be extremely sensitive, requiring continued prompts and structured directions until the strategies become autonomous" (p. 576).

Researchers have offered various suggestions on how to conduct a strategy training program. Wenden and Rubin (1987) believed that an ideal training package might consist of practices in both cognitive strategies and metacognitive strategies. Based on six case studies, Oxford et al. (1990) argued that affective factors (e.g., language learners' motivation, beliefs, and attitude) should be considered in developing strategy training for language learners. Chamot and Kúpper (1989), according to the results of their course development study, suggested that learning strategy instruction can best be implemented by foreign language teachers rather than by researchers. They also indicated that the success of such training depends on teacher interest, development of appropriate teaching techniques, and how trainers “provide a motivational framework that can convince students of the value of learning strategies” (p. 18).

In addition, while students may be trained to use learning strategies, they can have difficulty transferring strategies to new tasks. Thus, strategy training is suggested to be better when conducted in conjunction with the regular course of instruction over an extended period of time, rather than as a separate intensive “how to learn” course (Chamot & O’Malley, 1987; Oxford, 1990; Wenden, 1987). Furthermore, researchers have suggested a sequence or steps to follow when conducting learning strategy instruction (e.g., Hosenfeld et al., 1981; O’Malley & Chamot, 1990; Oxford, 1990, 1993; Weinstein & Underwood, 1985). These general procedures are summarized as follows:

1. *Diagnosis:* Developing students' awareness of different strategies; identifying and assessing students' learning strategies through observations, interviews, questionnaires, diaries, or think-aloud procedures.

2. *Preparation:* Explaining the concept and importance of learning strategies; providing students knowledge about language learning strategies and information on motivation, beliefs, and other related factors; developing goals for strategy use and affective control for individuals and the entire class.

3. *Instruction:* Providing direct and informed instructions on learning strategies through explanation, modeling, practice, and integration; providing different practice opportunities with varied learning tasks or content.

4. *Evaluation:* Helping students evaluate their own strategy use; evaluating the whole strategy training and revising the training component if necessary.
In summary, many attempts to teach students to use learning strategies have indeed produced good results. However, not all studies on second language learning strategy training have been uniformly successful or conclusive. Thus, more research is essential in the area of learning strategy training.

3. THE STUDY

The current study, undertaken as a continuation of Yang's (1992) study, intended to examine college students' use of learning strategies in depth by using multiple methods. First, an English Learning Questionnaire (Yang, 1992) was adopted in this study to measure the frequency of strategy use by college students in the beginning and at the end of the semester. Then, the author and another assisting English teacher interviewed students from their Freshman English classes in small groups on their use of learning strategies when learning vocabulary, listening, reading, writing, and speaking English in class or outside of the classroom. The objective of this study is to investigate students' language learning strategy use in depth and to incorporate some of the training principles to effectively raise students' awareness in strategy use. It is also hoped that instead of being investigated by researchers from outside of the language courses, the study conducted by the course instructors can contribute more to the strategy training and provide more information for the improvement of language instruction.

3.1 Subjects

The subjects of this study (68 students) came from two Freshman English classes at two major universities in Taiwan. Among them, 38 students were English majors (19 males and 19 females) and 30 students were Sociology majors (7 males and 23 females). Most students have received six years of formal English instruction in high school before they entered the university. Less than 9 percent of the subjects have ever traveled to English-speaking countries for a short period of time. To most students, English is taught as one of the academic subjects and tested in paper-and-pencil format in all entrance exams. Their age ranged from 19 to 30, with an average of 20.

Altogether 64 students participated in the interviews. They included 37 English majors (18 males and 19 females) and 27 Sociology majors (4 males and 23 females).

3.2 Instruments

1. The English Learning Questionnaire used in this study was composed by the author (Yang, 1992). It contains a section of 49 items adapted from Oxford's Strategy Inventory for
Language Learning (SILL, ESL/EFL version 7.0, 50 items). This section assessed the frequency with which students used various language learning strategies. According to Oxford (1990), the SILL consists of six subgroups of language learning strategies: (1) Memory strategies for remembering more effectively, (2) Cognitive strategies for using all one’s mental processes, (3) Compensation strategies for compensating for missing knowledge, (4) Metacognitive strategies for organizing and evaluating one’s learning, (5) Affective strategies for managing one’s emotions, and (6) Social strategies for learning with others. In this section, the subjects were asked to rate statements, such as “I try to find patterns in English” on a 5-point scale from (1) I never do this to (5) I always do this. To calculate the score for this section, the answer to each item, 1 to 5, was added up for every subject. The overall average indicated how often the subject tended to use learning strategies in general, while averages for each subgroup of the SILL indicated which strategy groups the subject tended to use most frequently.

Another section of this questionnaire intended to investigate students’ beliefs and attitude about language learning. In this section, the subjects read statements, such as “It is best to learn English in an English-speaking country.” Then for each statement, the students decided whether they: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4), agree, or (5) strongly agree. A final item (item 36) was added by the author to elicit additional beliefs: “What else do you think about English learning which is not included above?”

The last section intended to obtain students’ background information, such as their gender, age, major, their perceived motivation and proficiency in learning English, and experiences of traveling or living in an English-speaking country. This information was solicited to help researchers and teachers better contextualize the results of the former strategy section.

2. The Group Interview Question Guide was prepared by the author (see Appendix). The questions concern students’ use of strategies in six specific learning activities or tasks planned or occurred in their learning process: (1) vocabulary learning, (2) listening comprehension, (3) reading comprehension, (4) writing English compositions, (5) oral presentation in class, and (6) communicating in English.

3.3 Procedures

Students in the two selected Freshman English classes were encouraged to participate in the study. In the beginning of the semester, all students answered an English Learning Questionnaire. Then at the end of the semester, students answered the same questionnaire again as a post-test.2
Then during the spring semester of 1993, the author and another assisting English instructor interviewed students from their Freshman English classes in small groups. The interviews were conducted in Mandarin Chinese so that some students' insufficient English oral proficiency would not hinder them from participating in a full discussion of their own learning strategies. On the average, each interview lasted for about an hour. Interview questions were prepared by the author to guide the process of interviews. The first question, as a warm-up activity, asked the students how they felt about their college English class so far. Then students were invited to compare college English class to their previous English learning experiences in high schools. The major part of the questions asked students to describe any special techniques or methods they used in understanding and producing English in six specific language learning activities or tasks: vocabulary learning, listening comprehension, reading comprehension, writing English composition, oral presentation in class, and communicating in English. All interviews were tape-recorded. They were then transcribed and analyzed.

For data analysis with the questionnaire data, this study involved two major statistical procedures, which were computed using the SPSSX (Statistical Packages for the Social Sciences): (1) Descriptive statistics, including frequencies, means, and standard deviations, were calculated; and (2) Paired t-test procedures were computed in order to compare the difference between the two sets of related data, that is, students' responses to the questionnaire on their language learning strategy use in the pre-test at the beginning of a semester and in the post-test at the end of the semester. The results were used to check the hypothesis that there was no difference in students' use of learning strategies after the group interview and information sharing in the strategy training. An alpha level of .01 was used for all statistical tests.

3.4 Results

According to the results of the questionnaire, these students’ use of learning strategies increased in both frequency and variety at the end of the Freshman English class. In fact, among the 49 strategy items, there were 37 items in which the students' average SILL scores had increased from pre-test to post-test. The descriptive statistics in Table 1 also show the increase of the means of SILL overall average scores for all subjects from pre-test (M = 3.13) to post-test (M = 3.25).
TABLE 1
Means and Standard Deviations of the SILL Overall Average Scores for Male, Female, and Total Subjects in the Pre-Test and Post-Test

<table>
<thead>
<tr>
<th>Test</th>
<th>PRE-TEST</th>
<th></th>
<th></th>
<th>POST-TEST</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subjects</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>24</td>
<td>3.12</td>
<td>.51</td>
<td>26</td>
<td>3.19</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>42</td>
<td>3.13</td>
<td>.44</td>
<td>42</td>
<td>3.28</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>66</td>
<td>3.13</td>
<td>.46</td>
<td>68</td>
<td>3.25</td>
</tr>
</tbody>
</table>

Table 2 presents the means, standard deviations, minimums, maximums, and frequency order of the students' average scores for the six SILL subgroups in the pre-test; while Table 3 presents those in post-test.

TABLE 2
Means, Standard Deviations, Minimums, Maximums, and Frequency Order of the Subjects' Average Scores for Six SILL Subgroups (Pre-Test)

<table>
<thead>
<tr>
<th>Memory</th>
<th>Cognitive</th>
<th>Compensation</th>
<th>Metacognitive</th>
<th>Affective</th>
<th>Social</th>
<th>SILL Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>M</td>
<td>2.92</td>
<td>3.02</td>
<td>3.57</td>
<td>3.16</td>
<td>3.28</td>
<td>3.04</td>
</tr>
<tr>
<td>SD</td>
<td>.48</td>
<td>.56</td>
<td>.48</td>
<td>.61</td>
<td>.72</td>
<td>.68</td>
</tr>
<tr>
<td>MIN.</td>
<td>1.78</td>
<td>1.57</td>
<td>2.33</td>
<td>1.56</td>
<td>1.40</td>
<td>1.00</td>
</tr>
<tr>
<td>MAX.</td>
<td>4.33</td>
<td>4.36</td>
<td>4.67</td>
<td>5.00</td>
<td>4.80</td>
<td>5.00</td>
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<tr>
<td>Order</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Memory = Memory Strategies, Cognitive = Cognitive Strategies, Compensation = Compensation Strategies, Metacognitive = Metacognitive Strategies, Affective = Affective Strategies, and Social = Social Strategies. SILL Total = SILL overall average scores.
TABLE 3
Means, Standard Deviations, Minimums, Maximums, and Frequency Order of the Subjects' Average Scores for Six SILL Subgroups (Post-Test)

<table>
<thead>
<tr>
<th>Memory</th>
<th>Cognitive</th>
<th>Compensation</th>
<th>Metacognitive</th>
<th>Affective</th>
<th>Social</th>
<th>SILL Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>68</td>
<td>68</td>
<td>68</td>
<td>68</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>M</td>
<td>3.08</td>
<td>3.21</td>
<td>3.65</td>
<td>3.21</td>
<td>3.31</td>
<td>3.18</td>
</tr>
<tr>
<td>SD</td>
<td>.54</td>
<td>.59</td>
<td>.54</td>
<td>.56</td>
<td>.60</td>
<td>.63</td>
</tr>
<tr>
<td>MIN.</td>
<td>1.67</td>
<td>1.93</td>
<td>2.50</td>
<td>2.11</td>
<td>1.60</td>
<td>1.83</td>
</tr>
<tr>
<td>MAX.</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>4.80</td>
<td>4.67</td>
</tr>
<tr>
<td>Order</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Memory = Memory Strategies, Cognitive = Cognitive Strategies, Compensation = Compensation Strategies, Metacognitive = Metacognitive Strategies, Affective = Affective Strategies, and Social = Social Strategies. SILL Total = SILL overall average scores.

Table 4 reports the results of the paired t-tests for the six SILL subgroups average scores as well as for the overall SILL average scores in the pre-test and post-test. As shown in Table 4, a significant difference was found between the subjects' overall SILL scores for the pre-test and those for the post-test ($t = -3.25$, $df = 65$, $p = .002$). The result of the paired t-test rejected the null hypothesis that there was no difference in students' use of learning strategies after the group interview and information sharing in the strategy training. The alternative hypothesis that students' strategy use would change in the post-test was thus supported. In fact, these students had increased their use of language learning strategies during the semester. The mean for students' overall SILL average scores had increased from 3.13 in the pre-test to 3.26 in the post-test (See Table 4). In addition, as the results of the paired t-tests for the six SILL subgroups average scores indicated, there were significant differences between subjects' use of cognitive strategies ($t = -3.67$, $p < .0005$) and memory strategies ($t = -3.08$, $p = .003$) over time. In other words, when comparing to their strategy use in the beginning of the semester, these students in the study had especially employed cognitive and memory strategies more frequently at the end of the semester.
TABLE 4
Paired T-Tests for Six SILL Subgroups and Overall Strategy Average Scores in Pre-Test and Post-Test

<table>
<thead>
<tr>
<th>Variable (Strategy Groups)</th>
<th>$N$</th>
<th>$c$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$t$ Value</th>
<th>$df$</th>
<th>2-tail Prob. $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory $^a$</td>
<td>66</td>
<td></td>
<td>2.92</td>
<td>.48</td>
<td>-1.7</td>
<td>.45</td>
<td>-3.08</td>
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<tr>
<td>Memory $^b$</td>
<td></td>
<td></td>
<td>3.09</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive $^a$</td>
<td>66</td>
<td></td>
<td>3.02</td>
<td>.55</td>
<td>-.21</td>
<td>.47</td>
<td>-3.67</td>
</tr>
<tr>
<td>Cognitive $^b$</td>
<td></td>
<td></td>
<td>3.23</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation $^a$</td>
<td>66</td>
<td></td>
<td>3.57</td>
<td>.48</td>
<td>-.08</td>
<td>.45</td>
<td>-1.47</td>
</tr>
<tr>
<td>Compensation $^b$</td>
<td></td>
<td></td>
<td>3.65</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognitive $^a$</td>
<td>66</td>
<td></td>
<td>3.16</td>
<td>.61</td>
<td>-.07</td>
<td>.48</td>
<td>-1.23</td>
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<tr>
<td>Metacognitive $^b$</td>
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<td></td>
<td>3.24</td>
<td>.56</td>
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<td></td>
</tr>
<tr>
<td>Affective $^a$</td>
<td>66</td>
<td></td>
<td>3.28</td>
<td>.72</td>
<td>-.02</td>
<td>.66</td>
<td>-.30</td>
</tr>
<tr>
<td>Affective $^b$</td>
<td></td>
<td></td>
<td>3.31</td>
<td>.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social $^a$</td>
<td>66</td>
<td></td>
<td>3.05</td>
<td>.68</td>
<td>-.14</td>
<td>.60</td>
<td>-1.94</td>
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<tr>
<td>Social $^b$</td>
<td></td>
<td></td>
<td>3.19</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall $^a$</td>
<td>66</td>
<td></td>
<td>3.13</td>
<td>.46</td>
<td>-.13</td>
<td>.34</td>
<td>-.325</td>
</tr>
<tr>
<td>Overall $^b$</td>
<td></td>
<td></td>
<td>3.26</td>
<td>.48</td>
<td></td>
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</table>

Note:

- $a$ Statistics are for pre-test.
- $b$ Statistics are for post-test.
- $c N = $ Number of cases, $M = $ Mean, $SD = $ Standard Deviation, $df = $ Degree of freedom.
- $d$ Two-tailed test. ** $p < .001$, * $p < .01$.

On the other hand, the interview study found that different kinds of language tasks (e.g., vocabulary learning, listening comprehension, or writing) elicited different strategy uses, though some strategies, like advance organizers, selective attention, repetition, note-taking, and seek for assistance, were applied to various language tasks. In general, these learning strategies could be classified into Oxford's six categories of learning strategies and could find their counterpart strategies in the questionnaire items.
Nevertheless, the interviews provided more details about the individual learning strategies and in-depth information about the condition of strategy use. For example, when asked what they did to help them answer the questions in the reading comprehension test, about one half of the students answered that they usually read the questions before they read the passage. When the interviewer explored the reasons, most of these students indicated that they employed this strategy because they were taught to do so or because it helped them to find the answers in the reading passage more effectively and quickly. Because of the time limit in exams, they usually did not have enough time to read through the whole reading passage. Some of the students also explained that they developed the strategy of "jumping" between reading the passage and the questions to help them find the answer. When discussing how students memorized new vocabulary, one student also explained how she used sound/image associations to help her memorize a certain word. In short, through the use of interview technique, the author could not only identify which language learning strategies students used for specific learning tasks, but could also explore how and why certain strategies were used.

4. DISCUSSIONS AND CONCLUSIONS

4.1 Discussions

Generally speaking, the results of the questionnaire indicated that the subjects in this study employed a variety of learning strategies to learn English, with some groups of learning strategies receiving more frequent uses than others. Some of these frequently used strategies included compensation strategies for overcoming deficiency in English and affective and metacognitive strategies for managing emotions and learning; while a few strategies, such as thinking in English and some mnemonic strategies, were mentioned less frequently by these subjects.

Although some variations were expected to occur due to different samples, the pattern of using various learning strategies by these students, in general, looked very similar to those reported in Yang's study (1992) and Klassen's study (1994). The most frequently used group of learning strategies reported by the subjects in the pre-test of this study, in order, were compensation strategies, affective strategies, metacognitive strategies, social strategies, cognitive strategies, and memory strategies (See Table 2). The order of the pre-test was exactly the same as that found with 505 college students in Yang's study (1992) and Klassen's study (1994). As for the post-test, the order of strategy use was similar, except for a rise of the cognitive strategies from fifth to the third place (See Table 3). A summary of these comparison is presented in Table 5. The similar pattern of language learning strategy use by college EFL students in Taiwan is an interesting phenomenon for further research.
TABLE 5
Comparisons of the Means and Rank Order of Usage of the Six Subgroups of Learning Strategies for the Pre-Test and Post-Test of this Study and Those in Yang’s (1992) and Klassen’s (1994) Studies

<table>
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<tr>
<td></td>
<td>Mean</td>
<td>Rank Order</td>
<td>Mean</td>
<td>Rank Order</td>
</tr>
<tr>
<td>Memory Strategies</td>
<td>2.92</td>
<td>6</td>
<td>3.09</td>
<td>6</td>
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<tr>
<td>Cognitive Strategies</td>
<td>3.02</td>
<td>5</td>
<td>3.23</td>
<td>3</td>
</tr>
<tr>
<td>Compensation Strategies</td>
<td>3.57</td>
<td>1</td>
<td>3.65</td>
<td>1</td>
</tr>
<tr>
<td>Metacognitive Strategies</td>
<td>3.16</td>
<td>3</td>
<td>3.24</td>
<td>4</td>
</tr>
<tr>
<td>Affective Strategies</td>
<td>3.28</td>
<td>2</td>
<td>3.31</td>
<td>2</td>
</tr>
<tr>
<td>Social Strategies</td>
<td>3.05</td>
<td>4</td>
<td>3.19</td>
<td>5</td>
</tr>
</tbody>
</table>

When comparing the results in the pre-test to those in the post-test, the subjects in this study have improved their average scores in each strategy subgroup. The increase of students’ strategy use between pre-test and post-test was also supported by the significant differences revealed in the paired t-tests. In particular, these students employed cognitive strategies and memory strategies more frequently at the end of the semester—the use of cognitive strategies, in particular, rose from the fifth to the third place in the post-test. When examined closely, these cognitive strategies, whose frequency of use had increased, shared one major similarity. They all involved and required learners’ actively seeking out opportunities to practice English. Several of these strategies were mentioned in the group interviews and were called for use in the course requirements. In fact, at the end of the semester, more students reported using the English words they know in different ways; starting conversation in English; watching TV shows or movies spoken in English or listening to English radio programs; reading English for pleasure; writing notes, messages, letters, or reports in English; trying to think in English; and doing analysis, synthesis, or summaries of information that they hear or read in English. One possible explanation
for the increase overall might be that students’ increased awareness produced further strategies and greater strategy use.

In this study, the group interview could not only serve as a useful research tool to elicit information about strategies used by the respondents, but it could also be used for raising students’ awareness about language learning strategies in their English study. The question-and-answer process in the group interview provided learners with an important opportunity to focus, not only on language, but also on the learning process itself. Through the interview, participating students had a chance to think about their learning strategies and at the same time to reflect on their own learning. For instance, one student in the interview finally realized that she, though considered herself following the “old way” of learning, started to combine her own way (to learn from Chinese translation) with a new way or strategy (to learn from English definition) suggested by the teacher in learning about the meaning of a new word. So the interview raised her awareness about strategy use in the process of language learning. She said:

I’ve tried to adjust myself to the new learning environment [i.e., college], yet my methods are different from what teacher suggested. In fact, I’m still using my old way to learn. For example, you [teacher] want us to use English-English dictionary and try to define English vocabulary in English. But I found I didn’t learn much new vocabulary in the new way, while I had deeper impressions of the words if I memorized them in Chinese definition. So, I learn both English and Chinese definitions now.

In answer to the response, teachers were offered invaluable opportunities in the group interview to convince their students of the value of learning strategies and to encourage students to try out different strategies and find a better way to learn for themselves.

Once when asked about what they did in writing an essay, some students were confused. But as the interviewer/teacher asked whether they did an outline or any revision, the participating students started to think about how they “finished” an essay. One answer built on the previous one. Finally, they realized people did not write in the same way. As a matter of fact, some would think while writing; others would think for a long time before they write; still others would write down everything then organize the ideas. The same with other learning tasks, learners used a variety of learning strategies in learning English. The difference is that some strategies are effective and others are less effective for certain learning tasks.

Therefore, when students were asked about their use of various learning strategies during the group interviews, they at the same time shared the variety of learning strategies in the discussions. The sharing of different language learning strategies provided participants with a variety of alternatives that they might never think of and might be helpful to them. Some of the shared strategies like those cognitive strategies mentioned above were thus adopted by other
motivated students, while other strategies which were recognized or confirmed by the teacher were employed more frequently by the reporting students. Since many factors affect the effectiveness of certain learning strategy use, it is important to help language learners to build a repertoire of learning strategies. The discussions therefore offered the students a great chance to build such a strategy repertoire for their future use.

In addition to the information sharing during group interviews, some instructional materials were selected so that they could provide students with information concerning certain strategies. For example, an article “Need an Ideal Conversation Partner? Try a Nonnative!” written by Tim Murphey (1992), was chosen because it introduced some important social strategies and affective strategies. In the article, Murphey challenged the native speaker myth and encouraged his EFL students in Japan to try to create opportunities to practice with their non-native partners or classmates. The article was heartily discussed in small groups and then with the whole class. Related affective strategies like positive self-talk and social strategies like practice with others, were thus introduced to the students.

During the semester, besides the regular reading instruction given in the Freshman English course, the study also designed other learning tasks to provide as many opportunities as possible for students to try out different learning strategies. Students from both classes were required to prepare and present selected readings orally as a group in class. They also needed to write several English essays and diaries during the semester. As a result, they had chances to try to apply several strategies in their speaking, listening, and writing. In short, the use of various learning strategies was discussed at group interviews as well as encouraged in class by both English instructors.

Above all, the discussions during the group interviews raised students’ awareness about language learning strategies, which thus had an effect on their subsequent use of learning strategies. The discussions also served the purpose of learning strategy training and helped students learn how to learn more effectively and efficiently. Participating students learned about various learning strategies during the group discussions. Some of these learning strategies were encouraged for use by instructors and some of them were found to be useful by other students. With the instructor’s encouragement during the semester, students also came to discover that some learning strategies were effective for accomplishing the different learning tasks such as, writing compositions and giving oral presentation for the English class. Students, thus, learned to employ these learning strategies more frequently at the end of the semester. In summary, the author found that group interview has several advantages: First, by using group ‘interview, teachers and/or researchers may explore how and why certain strategies were used rather than just identify them.
Second, the sharing of different language learning strategies provided participants with a variety of alternatives that they might never think of and might be helpful to them. Finally, the interactive discussion, no matter between teacher and students or among students, helps to raise strategy-related awareness among respondents and increased awareness leads to greater strategy use.

In conclusion, although this study only offered informal training for students' use of learning strategies, this study had tried to adopt most of the following principles for strategy training as recommended by Oxford (1993) and others (see literature review):

1. Students' affective factors were accounted for in strategy training. For example, from the questionnaire and interview, the instructors learned more about their students' attitudes, beliefs, stated needs, anxiety, motivation, and interests. Thus, instructors could modify their instruction to meet students' needs and interests.

2. The groups of strategies were chosen to fit the requirements of the language task and the learners' goals. For example, students were encouraged to use some cognitive strategies and social strategies to assist them to accomplish the task for speaking and listening in English.

3. The training were integrated into regular L2 activities over a long period of time (a semester or a year) rather than taught as a separate, short intervention. It was also conducted by the instructors of the course rather than by researchers from outside.

4. The training provided plenty of practice with varied L2 tasks involving authentic materials to facilitate the transfer of strategies.

5. Students were helped to evaluate their strategy use through survey and group interviews. These processes raised learner-awareness and improved their motivation to continue effective strategy use.

4.2 Limitations of this Study

Further research is needed for validating the results of the current study. Although the questionnaire has evidence that it will not provoke high social desirability among its subjects, and the subjects were all assured that the results of the questionnaire survey would not influence their final grade for the English course, cautions should still be taken for explaining self-report results (Yang, 1992).

It should also be noted that the results are based on a sample of 68 undergraduate students of English in Taiwan's universities. Thus, the generation of the results to other populations with different native languages or educational backgrounds may be limited. However, for the purpose of instructional implications, it is possible to apply some of the results to similar context.
4.3 Suggestions for Future Research

The significant increase of strategy use by these students at the end of this study and the active learning behaviors observed after the group interviews have both supported that even an informal strategy training, as that in this study, will benefit students. Based on the results of this study, research which involves more complete strategy training plan and integrate more of the training principles suggested in the literature review is recommended to follow. Information of students' final achievement may be included to study the effectiveness of the strategy training on their learning achievement. Studies with subjects other than college students are suggested for checking with pattern of strategy use by college students in this and previous studies. The following recommendations will be useful and can be adopted for future instructional research.

4.4 Recommendations for Instruction

The recommendations for instruction on learner strategy presented here build on the research review (e.g., Jones et al., 1987; Oxford, 1993; Wenden, 1991) and the empirical findings of this study. Key recommendations include discovering students' beliefs and strategies, explaining and modeling the strategy explicitly, providing authentic context for strategy use, making the strategy training interactive, dealing with students' motivation, and implementing strategies-and-beliefs components within the language curriculum.

1. Discovering students' beliefs and strategies. It is important for teachers to find out what their students are thinking and doing in their English study. For the strategy instruction, the first good step is to assess students' strategy use: Are these students currently using any strategies in the language learning situation? What kinds of learning strategies do they use? Several methods are available for this purpose: Teachers can interview students individually or in a group, give a survey for a systematic assessment, ask students to write learning diaries, or have them "think aloud" the process they are doing. This gathered information can be used for planning the next step for instruction.

2. Explaining and modeling the strategy explicitly. Teachers should explicitly inform their students about (1) what strategy they are learning, (2) how they should employ the strategy, and (3) in what context, i.e., when and where, they should employ the strategy. According to many researchers, only when students are clearly aware of what they are learning and why, can they transfer and apply this strategy to future use. In addition to explanation, teachers can model or demonstrate how they use certain learning strategies. For example, in the process of guiding students in reading an article, teachers can model how they read and comprehend the article. They can also articulate the conditions under which the strategy is most useful.
3. **Providing authentic context for strategy use.** Wenden (1991) has recommended strategy training be "contextualized." In other words, English teachers should try to integrate learning strategy training into regular classroom activities and thus provide authentic context and ample opportunities for students to practice. For the present study, the researcher designed class activities so that students had chances to speak, listen, read, and write in English and to try various learning strategies to assist them accomplish the learning tasks. This also contributed to the increase of strategy use by students at the end of the semester.

4. **Making the strategy training interactive.** Another suggestion offered by Wenden (1991) is: strategy training should be "interactive." Teachers should not leave students on their own to practice without providing any guidance or feedback. Research with mother-child dyads and teacher-pupil interactions has shown that this interactive process is important in "scaffolding" students' or children's learning. Besides, as maintained by Vygotsky (1978), students can better realize their learning potential through the interactive guidance of supportive other persons such as teachers and peers. Therefore, teachers should make use of group or in-class discussion to allow students interact with each other and to provide feedback when needed.

5. **Dealing with students' motivation.** The results of Yang’s study (1992, 1993b) as well as others have indicated that learners' beliefs and motivation likely affect their learning strategy use, the use of learning strategies may also influence learners' self-efficacy and other beliefs about language learning. As research has suggested, teachers really can have a positive and influential effects on both the linguistic performance and the emotional well-being of their students (Brown, 1987). Klassen (1994) also discovered in his study that students often follow teachers' recommendations. By learner strategy training, English teachers can enhance learning by encouraging optimal strategy use. By clarifying some erroneous beliefs and encouraging effective beliefs in the instruction, English teachers may also enhance effective use of learning strategies and therefore further contribute to students' continuing motivation to learn English.

6. **Implementing strategies-and-beliefs components within the language curriculum.** There are several ways to implement curricular components concerning strategies and beliefs into the present EFL curriculum. First, it is important to combine strategy training with the communicative approach of language teaching. Furthermore, as recommended by several researchers (e.g., Chamot & Küpper, 1989; Oxford, 1990, 1993; Rubin, 1987), strategy training is best integrated into content-based language classes by language teachers on a daily or regular basis, though other successful modes of strategy training might also be possible. Second, it is possible to introduce a strategies-and-beliefs component through extra-curricular activities, then
gradually build it into the formal curriculum. Introducing it in this way can prevent resistance from the administration and others who do not understand the purposes of strategy training.

4.5 Concluding Remarks

In conclusion, although serving as pilot strategy instruction research, this study had tried to adopt most of the recommended principles for strategy training and produced encouraging results by raising students' awareness about strategy use. In brief, teachers and others studying second language acquisition can benefit from knowing more about students' attitudes, strategies, and their beliefs about language learning. This study, in particular, can provide the participating teachers with a better understanding of students' "expectation of, commitment to, success in, and satisfaction with their language classes" (Horwitz, 1988, p. 283). Also, the author hopes that the information about their students' strategy use can help college EFL teachers in assisting their students to make learning English quicker, easier, more effective, and more fun.

Note:

1. The study was funded by the National Science Council project. See Yang (1994b) for details.
2. The English majors answered the questionnaire in the beginning of Fall 1992 semester, while the Sociology majors did in the beginning of Spring 1993 semester. Both classes answered the same questionnaire again at the end of Spring 1993 semester.
3. For details of the interview results, see Yang (1994a, 1994b).
BIBLIOGRAPHY


APPENDIX

Group Interview Question Guide

1. Introduction of this interview (Warm-up)

This is part of a research project, the study intends to investigate how college students learn English and wish to use this information to improve the English instruction and help other college students in their English studies. Your answer to the following questions will be used for research purpose only. Your name and answers will not be revealed to others.

2. Making the Transition to University

In your past years of English study, you might have had teachers who emphasized vocabulary, grammar, or reading. Then you enter the university and the Freshman English class, which no matter in presentation or testing, places different emphasis (e.g., reading and writing).

2.1 Did you find this transition difficult in the beginning? What did you do to help yourself make the transition?

2.2 How about the changes from last semester to this new semester? How did you help yourself to accommodate to this new semester?

3. Vocabulary Learning

In high school English classes, there was usually a list of vocabulary for you to memorize. But there is often no such specified list of English vocabulary provided in reading selections now.

3.1 How do you approach a new reading?

3.2 How do you deal with unfamiliar vocabulary?

3.3 Do you have any special trick to help you learn and remember the new words and their meanings?

4. Listening Comprehension

When your teacher speaks to you in English, no matter in explaining the vocabulary, making conversation, or giving you directions and assignments, there may be several words you do not know in what your teacher says.

4.1 How do you figure out the meanings of the new words? Do you have special tricks or ways that help you understand what the teacher says in English?
4.2 What's your general approach to listening to English (in tapes, movies, radios, TV programs, or lectures)?

4.3 What do you do if you don’t understand the English you hear?

5. **Reading Comprehension**

   In class or during test, you have to read a short story or perhaps an article that contains some new words. Then you have to answer some questions on the reading passage.

   5.1 What do you do that helps you answer the comprehension questions? Do you ever read these questions before you read the passage? If so, why?

   5.2 As you are reading, what do you do that helps you to understand the meaning of the reading passage? Describe your general reading approach.

6. **Writing English Composition**

   You are assigned a new essay to write:

   6.1 Do you do anything before you start to write? What is it? How does this help you?

   6.2 As you are writing, what helps you to write better? Describe your general approach to writing in English.

   6.3 Do you do anything (e.g., revision) after you have written the essay? What?

7. **Student Oral Presentation**

   In your group oral presentation:

   7.1 How do you prepare for the oral presentation? (as a group? individual?)

   7.2 What helps you to present your part and complete the task well?

   7.3 What do you do to help yourself speak?

8. **Communication in English** (optional)

   Have you had encountered a native speaker of English and had the opportunity to talk with him or her? (If yes, proceed; if no, skip the section and stop here.)

   8.1 How often?

   8.2 What do you do that helps yourself speak?

   8.3 What do you do if you don’t understand what the native speaker say?

   8.4 What do you do if the person to whom you’re speaking does not understand you?