

## Variations in Learning Strategy Use Among Good, Average and Poor EFL Learners\*

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The use of language learning strategies has been linked to effective EFL learning. However, while some researchers have suggested that good language learners use more strategies and more sophisticated strategies than less successful learners, others have disputed the unconditional nature of this view with the suggestion that factors such as task demands may affect the relationship between learner proficiency and strategy use. To examine the connection between language learning and learning strategy use the study examines the use of language learning strategies by 48 Korean university students from elementary school to university. In addition, emotional intelligence is investigated with regard to its impact on strategy use. The results bolster claims that associate greater and more sophisticated strategy use with more successful learners. In addition, the results highlight the importance of encouraging learning strategy use at early educational levels and the influence of emotional intelligence on the use of particular strategy types.

**Key words:** language learning strategies, optional language learners, emotional intelligence, stimulated recall

### 1. INTRODUCTION

Successful and unsuccessful second language learners have been investigated for some time for clues as to how to maximize second language acquisition (Grenfell & Macaro, 2007). One area of research that has received a great deal of attention is the use language learning strategies to promote ESL/EFL learning (Oxford, 1990; Rubin, 1975). Research on learning strategies grew from the compilation of relatively short lists of common

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strategies to more comprehensive taxonomies that included a focus on frequency of use in addition to simple counts of strategies used by learners. Conditions supporting the use of learning strategies were examined in light of the postulated importance of causal factors such as motivation and personality to better understand why learners used the strategies that they did and why individual learners doing specific tasks benefited or were limited by the use of particular learning strategies. However, as research in this area continued some researchers began to question the simple linear relationship between successful learning and more strategy use and suggested that strategy type, whether simple or more cognitively demanding, and combinations of strategies employed affected language acquisition (Griffiths, 2003; Oxford & Cohen, 1992; Vann & Abraham, 1990). Some researchers suggested that proficiency and stage of learning might be important determinants in learning strategy use (Chesterfield & Chesterfield, 1985; Grenfell & Macaro, 2007) whereas others cautioned against focusing on these factors to the exclusion of others such as learning style and task requirements (Grenfell & Harris, 1999; Macaro, 2001).

The present study uses retrospective student accounts of EFL language learning to explore the frequency and type of learning strategies used by good, average and poor Korean students in elementary, middle and high school and university. The intent of the research is to better understand the relationship between learner proficiency and frequency and type of learning strategy use as they develop over time. In addition, though the effect of personality on learning strategy selection has been the subject of research (Ehrman & Oxford, 1989), one potential influential factor which has received little attention, emotional intelligence, was examined in the study in relation to participants' learning strategy use.

## **2. LITERATURE REVIEW**

### **2.1. Learning Strategies and Good Language Learner Research**

Research into the behavior of good language learners began to garner attention with the publication of work by Rubin (1975) and Naiman, Fröhlich, Stern and Todesco (1996). Rubin noted that students often had difficulty acquiring a second language and suggested that given this, it seemed reasonable to examine the behavior of successful second language learners for information about language learning strategies that might be taught to less successful learners. Griffiths (2008) writes that after 30 years of debate regarding the learning strategy construct, a consensus definition is that learning strategies are “activities consciously chosen by learners for the purpose of regulating their own learning” (p. 87). Research into the learning strategies used by second language learners resulted in the compilation of lists of activities (Oxford, 1990; Stern, 1975) and the classification of

similar activities into types of strategies. Strategy types included meta-cognitive strategies, thinking about the process of learning by doing things such as selecting strategies to use and evaluating learning (O'Malley & Chamot, 1990; Wenden, 1999), and cognitive strategies, the use of which according to Oxford involves manipulating or transforming the target language through activities such as language practice and analysis. Strategies associated with the use of language include compensation strategies, overcoming knowledge limitations when using the target language by, for example, guessing, affective strategies, dealing with emotional challenges to language learning such as anxiety through meditation or deep breathing, and social strategies, learning in association with other people such as by asking questions related to language learning. Oxford's taxonomy includes another strategy type, memory strategies, which are activities specifically intended to help learners remember the target language.

## 2.2. Targeting Language Learning Success with Learning Strategies

While initially it might have been assumed that the road to success lay in teaching poor language learners to use the strategies used by good language learners, it became clear that this was not always the case. Studies came to show that sometimes poor learners used a large number of strategies and even the same strategies as good learners (Vann & Abraham, 1990). This realization led researchers to shift attention away from simply focusing on good and bad learners and toward circumstances in which learning strategies could be deployed successfully (Cohen, 1990). Similarly, MacIntyre and Noels (1994) in a review article on good language learners write the following: "It seems much more productive to think in terms of successful strategies for certain types of people in certain contexts rather than simply in terms of purely successful or unsuccessful people" (p. 279). Gu (2003) specifies that the strategies chosen by a learner and the effectiveness of those strategies depends on learner characteristics such as motivation, attitude, the learning context and the nature of task to be completed. With regard to the need to analyze strategy use with reference to particular task demands, Vann and Abraham (1990) found that unsuccessful learners, while similar to successful learners in terms of the number of strategies used, failed to adjust strategy use to account for task complexity. Oxford and Burry-Stock (1995) reporting on a number of studies state that the frequency of learning strategy use varies according to a host of factors including university major, cultural background, gender, type of institution and learning context (EFL or ESL).

The stage of proficiency development of the learner is also held to be an important learner variable with regard to learning strategy use (Grenfell & Macaro, 2007). They have suggested that examining learners at different stages of proficiency development is important as it is theoretically possible for a learner to be a good beginning learner and a

poor advanced learner. Griffiths (2008) writes that some students at a lower stage of proficiency might learn more quickly than students at a higher stage, thus making the lower level students better learners in terms of rate of development. With regard to this issue, some studies have shown that higher proficiency learners use learning strategies more frequently (Green & Oxford, 1995) while others have reported that lower proficiency learners use strategies equally frequently (Griffiths, 2003). In addition, some studies have suggested that the proficiency level of the learner may also influence the types of strategies used with lower level learners choosing simpler or surface level strategies and higher level learners using more sophisticated strategies that entail the deep processing of information (Griffiths, 2003; Moir & Nation, 2008; O'Malley, Chamot, Stewner-Manzanares, Kupper & Russo, 1985; Tragant, Thompson & Victori, 2013). According to Tragant et al. (2013), cognitive and metacognitive strategies that require deep information processing assist in the long-term retention of learning while strategies requiring only surface level language processing aim at task completion and memorization without a learning goal. Furthermore, a question posed by Griffiths (2003) is if higher level learners do use strategies more frequently and use types of strategies that are qualitatively more sophisticated, what is the causal relationship between proficiency and strategy use? That is, does the learner's higher proficiency encourage the use of more sophisticated strategies or does the use of more sophisticated strategies result in higher proficiency? To examine this question one would need to explore the development of strategy use as proficiency level changes over time.

### 2.3. Emotional Intelligence and the Use of Learning Strategies

One learner variable related to learning strategy use that seems not to have received much attention is emotional intelligence (EI). While some studies have focused on personality factors such as extroversion in relation to strategy use (Ehrman & Oxford, 1989, 1990; Rubin, 1975), EI in particular seems not to have been extensively investigated with regard to its influence on the use of learning strategies.

EI has been variously defined. According to Mayer, Roberts and Barsade (2008), "emotional intelligence concerns the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional thought" (p. 511). Bar-On (1997) states that emotional intelligence is "an array of personal, emotional and social competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p. 14). With regard to success in life, research has demonstrated that high EI correlates with positive social outcomes among children, adolescents and adults, greater overall life satisfaction and academic success, although questions remain as to the role of IQ (cognitive intelligence) versus EI in academic success (De Weerdts & Rossi, 2012; Mayer, Roberts & Barsade, 2008). Research on the impact of intelligences other than IQ on

success grew in the 1980s (Gardner, 1983; Sternberg, 1985). Gardner (1983) included a number of intelligences such as musical intelligence, interpersonal intelligence and intrapersonal intelligence in his model (Brown, 1994). Bar-On (1997), in the test of EI used in this study, includes measures of interpersonal and intrapersonal intelligence as well as measures of adaptability, stress management and total EQ (Bar-On & Parker, 2000).

It seems reasonable to question the relationship between EI and learning strategy use given the abovementioned effect of individual learner variables on strategy use. In particular, interpersonal intelligence, which Bar-On claims reflects an individual's ability to have satisfying relationships, and listen, understand and appreciate the feelings of others (Bar-On & Parker, 2000), would seem to be closely related to Oxford's (1990) social learning strategies which include ways to cooperate and empathize with others. Also, intrapersonal intelligence, the ability of people to understand themselves and express their feelings, seems similar to Oxford's affective strategy group which includes strategies to help students understand and deal with their emotions in relation to language learning.

### **3. RESEARCH QUESTIONS**

1. What differences exist among Good, Average Plus, Average Minus and Poor students with respect to the frequency of language learning strategies used in elementary, middle and high school and university?
2. What differences exist among Good, Average Plus, Average Minus and Poor students with respect to the number and type of language learning strategies used to learn vocabulary in elementary, middle and high school and university?
3. What differences exist among Good, Average Plus, Average Minus and Poor students with respect to the types of language learning strategies used in elementary, middle and high school and university?
4. To what extent can differences in Good, Average Plus, Average Minus and Poor students' emotional intelligence account for differences in learning strategy use?

### **4. METHOD**

#### **4.1. Participants and Context**

The 48 students who participated in this study were Korean native speakers studying English as a foreign language (EFL) in an intermediate-level speaking and listening course at a university in the Republic of Korea. They were divided into four groups for the

purpose of data analysis, Good, Average Plus, Average Minus and Poor, based on test scores described below. The 12 students in each of the four groups were found to be similar with regard to some aspects of their English language learning background and different in terms of others at the beginning of the study (Table 1).

**TABLE 1**  
**Participants' English Language Learning Background Information**

Factors	Good	Average +	Average -	Poor
Major: English/other (%)	75.0/25.0	66.7/33.3	75.0/25.0	75.0/25.0
Age (years)	22.2	22.5	22.7	21.8
Gender: M/F (%)	41.7/58.3	33.3/66.7	41.7/58.3	50.0/50.0
English Study (years)	14.1	13.2	10.5	11.0
Study Abroad (months)	12.8	6.9*	0	.2

*Note.* \* See comment below

First, the majority of students in all four groups were English majors and the average ages of the students were similar, which suggests that these factors are unlikely to account for differences in learning strategy use. Next, the proportion of female students to male students was somewhat higher in every group with the exception of the Poor group. As women tend to use language learning strategies more frequently than men (Nyikos, 2008), the gender composition of the groups may have had an influence on the results. However, variation in learning strategy use between the genders has been shown to be relatively small, so the influence of this factor should not be overstated (Griffiths, 2003). Finally, the Good and Average Plus groups both reported studying English for more years and studying English abroad more than the Average Minus and Poor groups, though in the case of the Average Plus group much of the latter score was attributed to one student's extensive foreign experience. Nevertheless, even after removing that student from the analysis, the average study abroad time for the Average Plus group was higher than that of the two less proficient groups at 2.1 months. It may be that studying English longer and learning English in foreign contexts reflect a stronger motivation to learn English. Sustaining the desire to learn a language can be difficult and good language learners seem to be adept at using strategies to facilitate this process (Ushioda, 2008). Following this line of reasoning, there may be a relationship between length and type of English learning and the use of strategies to bolster motivation such as affective learning strategies.

At present, English language learning remains a highly regarded subject in the Korean school system as it can be important for acceptance to university, which in turn is often a significant determinant in a student's future success. Given this, students remain highly committed to the advancement of their English skills, which suggests that they would be receptive to knowledge pursuant to this goal such as the effective use of language learning

strategies.

## 4.2. Procedure

### 4.2.1. Data collection

The research was conducted during a regular 16-week university semester. Data collection started in the first week of the semester when a vocabulary test and grammar test were administered to the 48 students. In addition, the participants completed a background questionnaire related to English language learning outside of class. In the second week of classes the students were given a listening test. The participants were also told that they would have an interview with the researcher / course instructor for approximately one hour to discuss their English language learning history. During the interview the students completed a stimulated recall task to assess their use of learning strategies during their four stages of English language learning—elementary, middle and high school and university. To complete the task, students were first asked a series of questions to stimulate their recall of each period of education. While focusing on each educational period, the students were asked to complete a vocabulary learning task in the manner in which they had learned vocabulary at that time. Each task consisted of 30 words. The task words varied according to word frequency level for each period of learning with 1,000, 2,000 and 3,000 frequency level words used for the elementary, middle and high school tasks, respectively. Vocabulary from the Academic Word List (Coxhead, 2000) was used for the university level task. Immediately after each task was finished the participants were asked to describe the learning strategies that were used to learn the words. The interviews were recorded for later analysis. Next, two speaking tests were administered, one in the 8<sup>th</sup> week of the semester and one in the 16<sup>th</sup> week. The first speaking test was a conversation test in which the participants spoke with one classmate while the final test was an interview with the researcher in which the interviewee answered questions about a topic randomly chosen from the course textbook.

After the last speaking test was completed the students took an online emotional intelligence test. The instrument selected for this phase of the research project was the short version of the Bar-On Emotional Quotient Inventory: Youth Version (EQ-i: YV(S)). This is a 30-item test with strong validity and reliability (Bar-On & Parker, 2000) that measures core aspects of emotional intelligence (interpersonal, intrapersonal, adaptability and stress management strengths) and total emotional intelligence, and checks for exaggerated responses with the Positive Impression scale. While the youth version is ideally suited to individuals aged 7 to 18 years of age, the test was used in this study with somewhat older students because it was believed the less complicated English of the test items compared to

the adult version would reduce the likelihood of the participants misunderstanding the questions. In addition, the participants were told they could ask the researcher for clarification if they were unsure of the meaning of a question. Test takers were also assured of the confidentiality of their results in order to diminish inflated scores by students wishing to appear more socially desirable, as recommended by the test developers.

Finally, a well-known learning strategy inventory, the Strategy Inventory for Language Learning (SILL) (Oxford, 1990), was used to measure learning strategy use during the participants' elementary, middle and high school years and in university. The 50-item version of the SILL for speakers of other languages learning English was adapted to collect learning strategy data for the designated time periods. The SILL is divided in six parts with each part measuring one of the following types of strategies: memory (Part A), cognitive (Part B), compensation (Part C), metacognitive (Part D), affective (Part E) and social (Part F). Each part contains a number of language learning strategy statements such as *I have clear goals for improving my English skills*. Students were required to select the degree to which they agreed with the statements about using learning strategies by choosing one of the following numbers: 1-*Never or almost never true of me*, 2-*Usually not true of me*, 3-*Somewhat true of me*, 4-*Usually true of me* or 5-*Always or almost always true of me*. The SILL was administered toward the end of the semester after the students had completed their interviews. Before completing the SILL, they were cautioned regarding the importance of thinking carefully about the particular strategies used in each of the relevant time periods, just as they had done when doing the task during their interviews.

To identify learning strategy use by the participants over time a verbal and written retrospective report methodology was employed. Verbal accounts of language learning processes are a way of accessing information that is often difficult to attain otherwise (Mackey & Gass, 2005) and have often been used in learning strategy research (Larsen-Freeman & Long, 1991). Retrospective reports, in which the participants describe the past use of learning strategies, have also been widely used in learning strategy research (Ellis, 1994; White, Schramm & Chamot, 2007). One type of retrospective report, stimulated recall, asks participants to report on thought processes used during a task after the completion of the task. According to White et al., allowing participants to freely report task-based strategy use permits students to identify strategies that might not be captured by researcher-provided strategy lists. However, though retrospective reports can provide researchers with otherwise difficult to access information, they have been criticized for possibly supplying unreliable information because of the gap between the time the processes are employed and reported (Nunan, 1992). To reduce such unreliability, it has been suggested that the time between task and report be as short as possible (White, Schramm & Chamot, 2007) and, according to Mackey and Gass (2005), that the recall stimulus be as strong as possible so as to activate accurate memories. Furthermore, Ellis



(1994) notes that many of the most successful studies have used multiple data collection procedures and have focused on strategies used to complete individual tasks while White et al. (2007). write that retrospective reports that focus on specific thinking processes have yielded good results. The present study enhanced data reliability by collecting learning strategy information through the use of two instruments, a vocabulary learning task and the SILL. The vocabulary task examined a particular cognitive process, learning strategy use, immediately after the task was completed. Also, before completing the vocabulary task, participants were asked a lengthy series of questions to actively facilitate the recall of memories from each time period under investigation. Similarly, before completing the SILL, the participants were instructed to recall the time periods focused on during the vocabulary task and to provide information with respect to those periods.

#### 4.2.2. Data analysis

The data analysis commenced with the division of the 48 participants into four groups of 12 students based on relative English language proficiency: (1) Good, (2) Average Plus (AP), (3) Average Minus (AM) and (4) Poor. The composition of the groups was determined by the results of five English language tests with each test type representing 25% of the total score. Thus, the Good group in this study consisted of the participants who had the highest test scores, the AP group was made up of students who had the next highest scores and so on. Two of the test types measured the skills of speaking and listening while the other two assessed subskill knowledge of grammar and vocabulary. The vocabulary test consisted of 60 items that tested productive vocabulary knowledge of 45 words drawn from the Oxford 3000 wordlist of frequently used words in the British National Corpus—the Oxford Corpus Collection—and 15 items that tested lower frequency words. Next, each item in the 40-item grammar test asked the participants to examine one sentence and identify and correct the one grammatical error in the sentence. The items tested knowledge of the use of prepositions, the article system, subject-verb agreement, adjective and adverb placement, relative clauses, tense, aspect and number. The listening test consisted of three parts with texts taken from two high-intermediate level textbooks: *Atlas 4* (Nunan, 1995) and *Active Listening: Expanding Understanding Through Content* (Helgesen, Brown & Smith, 1996). Test takers were required to answer 34 questions that tested their understanding of main ideas, specific information and inferential knowledge in conversations. The speaking portion of the proficiency score comprised two tests, a paired conversation test and an interview. The paired conversation test was a seven- to eight-minute interaction in which classmates talked about a topic randomly chosen from two previously announced topics. For the interview test, each participant discussed with the researcher one randomly chosen topic among three topics they were given one week prior

to the test. The scores of the speaking tests were based on the following criteria: grammar and vocabulary knowledge, pronunciation, organizational structure, the length and appropriateness of responses, and fluency. When an analysis of variance and a Scheffe test were conducted on the proficiency data, statistically significant differences were found among the four groups ( $F = 99.098 (3,44), p = 0.000$ ). This finding supports the division of the participants into the four proficiency groups: Good, AP, AM and Poor. Finally, the data were tested for normality and the homogeneity of variances. Parametric statistical tests were used when these assumptions were met and non-parametric tests when only normality was violated.

## 5. RESULTS AND DISCUSSION

### 5.1. Frequency of Language Learning Strategy Use

The first research question examined the frequency of learning strategy use by the participants as they learned English in elementary, middle and high school and university. First, when strategy use for all four levels of education was combined a statistically significant difference was found for the frequency of strategies used by the four groups (Kruskal-Wallis H,  $X^2(3) = 24.637, p = 0.000$ ). The average use score for the Good group was 2.95, which is based on the SILL scale in which 1 equals *Never or almost never true of me* and 5 equals *Always or almost always true of me* with regard to the 50 learning strategies measured. The mean scores for the AP, AM and Poor groups were 2.84, 2.77 and 2.61, respectively (Table 2). Pairwise comparisons using the Mann-Whitney test revealed that the Poor group used strategies significantly less often than the other three groups. Also, the Good group used strategies more often than the AM group but not the AP group while no significant difference was found between the AP and AM groups. These findings suggest that the Poor students' ability to learn English may have been compromised by insufficient use of learning strategies overall. Also, the Good students seem to have benefited from their greater use of learning strategies as compared to the AM and Poor students. The lack of a statistically significant difference in frequency of strategy use between the Good and AP groups suggests that another explanation is required to account for this.

Next, a Friedman test combined with pairwise Wilcoxon Signed Ranks tests showed that all of the groups statistically significantly increased the frequency of their use of learning strategies as they progressed from elementary school to university with significant increases at each level of education. Of interest is that it was the AM and Poor students who increased their use of learning strategies the most as they advanced from one educational

**TABLE 2**  
**Total Learning Strategy Use by Group per Level of Education (M/SD)**

School	Good	Average +	Average -	Poor
Elementary	2.43/.489	2.47/.503	1.99/.303	1.87/.327
Middle	2.72/.473	2.65/.496	2.57/.391	2.37/.338
High	3.13/.514	2.93/.577	2.96/.482	2.80/.468
University	3.54/.697	3.32/.590	3.53/.532	3.39/.535
Total	2.95/.690	2.84/.626	2.77/.710	2.61/.070

level to another. Total percentage increases in strategy use were 30.8 and 30.4 for the AM and Poor groups, respectively, while the increases were 22.2 for the Good students and 17.0 for the AP group. In fact, by the university level the Poor group did not significantly differ from the other groups in its use of learning strategies, and only the Good group used statistically significantly more strategies in high school (Table 3). It seems that the greater use of learning strategies in elementary school by the Good and AP groups as compared to the AM and Poor groups may have conferred a learning advantage on these learners that was not compensated for by the greater increases that occurred later among the AM and Poor students. It may be that the use of learning strategies by younger learners produces especially beneficial effects compared to their use by older learners. Perhaps the theorized advantages attributed to students learning within the Critical Period (Ellis, 1994) of language development enhance the effectiveness of learning strategies resulting in greater language learning.

**TABLE 3**  
**Significant Differences in Learning Strategy Use by Group per Level of Education**

School	Good (G)	Average + (A+)	Average - (A-)	Poor (P)
Elementary	A-, P	A-, P	G, A+	G, A+
Middle	P	P	P	G, A+, A-
High	P			G
University	A+	G, A-	A+	

In addition, a sharp increase in the frequency of strategy use among the A- students in middle school resulted in use levels not statistically different from the Good and AP groups whereas the Poor students remained at a lower level of use. This early more frequent use of strategies may have contributed to the AM group's higher proficiency relative to the Poor group. Also of interest is the relative decrease in strategy use by the AP group in university compared to the Good and AM groups where both the Good and AM groups used strategies more frequently and the Poor group was not statistically significantly different in the frequency of strategies used. It may be that the AP students had the potential to be in the Good group but because of a reduction in strategy use were less successful learning English.

## 5.2. Strategies Used to Complete a Vocabulary Learning Task

The next results pertain to the stimulated recall vocabulary learning task (Table 4), research question 2, and provide information about the use of learning strategies to complete a specific language learning task. First, it should be noted that in absolute terms the Poor group of students used fewer strategies on average overall than the other three groups which suggests that a lack of learning strategy use may have contributed to the Poor learners' weaker language learning. Also, the Good group increased its use of strategies the most from elementary school to university with an increase of 1.3 strategies per student compared with 0.4, 0.8 and 0.9 for the AP, AM and Poor groups, respectively, which may partly account for its superior language learning.

However, the Good group also reported using the second-lowest number of strategies, which seems at odds with the belief that increased strategy use is associated with greater language learning. This finding highlights the complex nature of the relationship between learning strategy use and foreign language learning. For example, while using the SILL strategies more frequently overall may correlate with greater learning, as in the case of the Good learners in this study, this relationship may not hold for all aspects of language learning as was witnessed in the vocabulary task. It may be the case that using a small number of strategies highly frequently or using strategies better suited to learning particular aspects of language or to do certain tasks is more effective than using a larger number of strategies. Thus, it may be that the quality of learning strategies used in combination with a focus on selecting strategies to meet particular task demands and not merely using a large number of strategies may in part differentiate successful from unsuccessful learners (Grenfell & Macaro, 2007; Vann & Abraham, 1990).

**TABLE 4**

<b>Number of Learning Strategies Used on a Vocabulary Task by Group per Level of Education</b>				
<b>School</b>	<b>Good</b>	<b>Average +</b>	<b>Average -</b>	<b>Poor</b>
Elementary	2.3	2.9	2.5	2.1
Middle	2.3	2.6	2.9	2.1
High	2.8	2.9	3.1	2.3
University	3.6	3.3	3.3	3.0
Total	2.8	2.9	3.0	2.4

When completing the vocabulary task, the learners in all four groups primarily used strategies that entailed a shallow processing of information such as the repetitive cognitive strategies of repeatedly reading, writing and saying the target vocabulary. These sorts of strategies, while commonly used (Oxford, 1990), tend to result in poorer acquisition than strategies requiring deeper language processing (Schmitt, 2000). However, the Good

students used these shallow language processing strategies considerably less often than the students in the other three groups and instead used more strategies that required greater effort. For example, the Good students repeatedly read the target vocabulary more than three times less often than the other three groups on average and engaged in more effortful strategies such as self-testing and looking up the meanings of words in a dictionary more than twice as often as the other three groups on average. Self-testing by trying to recall information to be learned is not a commonly used meta-cognitive strategy, but the practice is associated with significantly better long-term retention than simply repeatedly reading study material (Karpicke & Roediger, 2008). Also, the Good students began to use the self-testing strategy at an early stage with nine students using the strategy in elementary and middle school combined compared to one AP student, two AM students and no Poor students. Even the relatively simple cognitive strategy of seeking L2-L1 translations in dictionaries requires more effort than simply repeatedly reading word lists, which suggests a relatively higher level of motivation to learn.

These results suggest caution in focusing the interpretation of learning strategy use exclusively on the frequency of strategies used. Rather, an examination of the types of learning strategies used in addition to the overall frequency of use seems warranted.

### 5.3. Types of Language Learning Strategies Used

Research question three focused attention on the six different types of learning strategies assessed by the SILL. No statistically significant differences were found in the frequency of learning strategies used for the four levels of education as a whole among the proficiency groups with respect to Parts A (memory), C (compensation) and E (affective). However, for Parts B (cognitive) and F (social), analyses of variance and post hoc Scheffe tests revealed that the Good students used these strategies statistically significantly more often than the Poor students (Table 5). This finding suggests that the Poor students might have benefited from using cognitive strategies more frequently such as ones related to practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output (Oxford, 1990). Also, more frequent use of social strategies by the Poor students such as asking questions, cooperating with others and empathizing with others might have resulted in enhanced language learning. In addition, with regard to metacognitive strategies, (Part D), a Kruskal-Wallis test combined with pairwise Mann-Whitney tests showed that the AP group used these strategies significantly more than the AM and Poor groups. The results suggest that using metacognitive strategies—centering your learning, arranging and planning your learning, and evaluating your learning—more often might have improved the performances of the AM and Poor groups.

**TABLE 5**  
**Total Type of Learning Strategy Use by Group (M/SD)**

Strategy Type	Good	Average +	Average -	Poor
Part A	2.61/.727	2.55/.576	2.70/.626	2.62/.548
Part B	3.06/.660	2.74/.532	2.75/.734	2.54/.685
Part C	3.20/.670	3.09/.527	2.91/.704	2.69/.740
Part D	3.14/.675	3.31/.560	2.89/.813	2.81/.753
Part E	2.63/.623	2.57/.722	2.56/.675	2.47/.812
Part F	3.02/.546	2.84/.536	2.75/.646	2.49/.693

*Note.* A = memory, B = cognitive, C = compensation, D = metacognitive, E = affective, F = social

Overall, it is the Poor group that once again stands out as lacking in its use of learning strategies, specifically two indirect types of learning strategies, metacognitive and social strategies, and one direct strategy type, cognitive strategies. These results further support the view that lower proficiency learners are less likely to use more sophisticated strategies such as metacognitive and social strategies than their more proficient counterparts.

Next, the study examined statistically significant differences in type of strategy use by the participants at each of the four levels of education investigated in the study (Table 6) (See Appendix A for a list of the strategy types used at each educational level by the study groups). The differences in Table 6 all represent a more frequent use of strategies by the more advanced proficiency group in each comparison except in the case of the AP versus AM university result. In that case, the AM group used significantly more B-type strategies than the AP group. According to the results, the Poor group showed a less frequent use of strategy types B, C, D and F compared to both the Good and AP groups in elementary school but the differences decreased with each advancement in school level until at the university level there were no statistically significant differences in strategy use among these groups. The AM group showed a similar weaker use of some strategy types in elementary school than the more advanced groups, though to lesser extent than the Poor group. However, this disparity disappeared altogether in middle school and high school

**TABLE 6**  
**Significant Differences in Type of Learning Strategy Use by Group per Level of Education**

School	Good (G)	Average + (A+)	Average - (A-)	Poor (P)
Elementary	A-: B, D, F P: B, C, D, F	A-: D, F P: B, C, D, F	G: B, D, F A+: D, F	G: B, C, D, F A+: B, C, D, F
Middle	P: B, F	P: B, D		G: B, F A+: B, D
High	P: B			G: B
University	A+: B	G: B A-: B	A+: B	

*Note.* A = memory, B = cognitive, C = compensation, D = metacognitive, E = affective, F = social

among the AM students, which suggests that the higher proficiency of the AM group compared to the Poor group may have been influenced by strategy use.

These findings once again highlight the importance of the early use of learning strategies in the educational process. In particular, the Poor group might have benefited from encouragement to use cognitive strategies (Part B) and social strategies (Part F) more frequently as they lagged the Good students in use of the former in elementary, middle and high school and the latter in elementary and middle school.

The final learning strategy analysis focuses on within group changes in strategy use as the participants moved from one educational level to another (Table 7). As there were no statistically significant reductions in learning strategy use among the groups as they progressed from one educational level to the next, all of the strategy types shown in Table 7 represent positive changes. The results show that both of the lower proficiency groups, A- and Poor, increased their use of almost all learning strategies as they progressed through the levels of education. In fact, the largest percentage increases in strategy use were found in the AM and Poor groups. From elementary to middle school the AM and Poor groups increased their use of learning strategies 11.6% and 10.0%, respectively, compared to 5.8% for the Good group and 3.6% for the AP students. Also, from high school to university the AM and Poor groups reported increases of 11.4% and 11.8%, respectively, while the Good group increased its use by 8.2% and the AP group's strategy use rose 7.8%. For the middle school to high school transition the percentage increases were more similar. However, the Poor students still reported the largest increase of 8.6% with the increases for the Good, A+ and A- groups being 8.2%, 5.6% and 7.8%, respectively.

**TABLE 7**  
**Significant Differences in Type of Learning Strategy Use**  
**by Group Between Levels of Education**

School	Good	Average +	Average -	Poor
Elementary to Middle	A, B, C, D	B, D	A, B, C, D, E, F	A, B, C, D, E, F
Middle to High	A, B, C, D	A, B, C, D, E	A, B, C, D, E	B, C, D, E
High to University	B, C, F	A, B, C, D, E, F	B, C, D, E, F	A, B, C, D, E, F

*Note.* A = memory, B = cognitive, C = compensation, D = metacognitive, E = affective, F = social

Thus, it is clear the less advanced students strongly increased their use of learning strategies as they moved through school, more so in fact than the higher proficiency students. However, it would seem that these later increases were not sufficient to overcome early deficiencies in language learning strategy use. It should also be noted that the AP group reported the weakest percentage increases in strategy use as the students moved through their years of English education. These students used learning strategies more frequently than all of the groups in elementary school but fell behind the Good students in

middle school and continued in this position for the remainder of their education (Table 2). This finding suggests that the more frequent use of learning strategies may explain to some extent the superiority of the Good group versus the AP group. Yet Table 2 also shows that the AM students used learning strategies more frequently than the AP group in high school and university. This seeming inconsistency is perhaps explained by the less frequent use of strategies by the AM students in middle school and especially in elementary school compared to the AP students. This interpretation suggests that though the AM students accelerated their use of learning strategies in later years, they were not able to overcome the deficit acquired in their early years of lower strategy use.

Finally, there was a lack of significant increases in the use of affective strategies (Part E) among the Good students throughout their years of education. As there were no significant differences in the overall scores for this strategy type among the four proficiency groups, and the AM and Poor groups reported significant increases at each higher educational level, the results suggest that the Good group may have begun their studies with relatively higher use of affective strategies than the Poor and AM students. This finding suggests that the Good students may have recognized the importance of emotional management with regard to language learning at an earlier time than the AM and Poor students, and this may have given them an early advantage over the less proficient students.

#### 5.4. Emotional Intelligence

To better understand why some groups of learners were more successful at meeting the challenges presented by English language learning than others, the BarOn EQ-i:YV(S) was administered to assess participants' intrapersonal and interpersonal strengths, as well as adaptability, the ability to cope with stress and their total EI. A score of between 90 and 109 on this test indicates adequate emotional and social capacity, while lower and higher scores suggest a need for improvement and enhanced functioning, respectively (Table 8). In addition, the Positive Impression (PI) scale checked for individuals who may have given an exaggerated positive impression of themselves, thus biasing their responses (Bar-On & Parker, 2000). With regard to the study results, 6 out of the 12 Poor students gave exaggerated responses according to the PI scale as opposed to 2 AP students, 1 AM student and no Good students. Thus, it may be that the strengths of the Poor group were actually lower than reported by the test.

With regard to the total EQ score for this test, the AP, AM and Poor groups were in the average range (AP: 106.7; AM: 95.3; Poor: 102.1) while the Good students were at the low end of the high range (Good: 110.0). Test takers scoring in the high total EQ range have well developed emotional and social capacities (Bar-On & Parker, 2000), which may have contributed to the Good group's greater learning by encouraging their use of learning



strategies that related to these capacities; for example, affective and social strategies. Though the test developers caution against attributing significance to very small differences in test scores, it seems clear that the Good students were superior to the other groups in terms of EI.

**TABLE 8**  
**EQ-i: YV(S) Scores (M and SD) by Proficiency Group**

Scale	Good	Average +	Average -	Poor
Intrapersonal	108.5/17.103	111.7/11.276	104.8/10.836	108.2/17.251
Interpersonal	97.9/14.022	94.8/12.757	82.9/9.000	86.1/17.212
Stress Man.	113.3/10.174	108.8/10.393	104.9/10.166	110.9/13.925
Adaptability	102.2/17.424	93.1/17.789	89.2/12.202	93.1/17.789
Total EQ	110.0/20.213	106.7/12.716	95.3/11.561	102.1/15.252

Next, the scores of both the Good and Poor groups exceeded the average range for stress management (Good: 113.3; Poor: 110.9), and the AP group scored above average for intrapersonal skills (111.7). The higher total EI scores for the two top proficiency groups, the Good and AP groups, suggest that the capacities measured by the EI test may have assisted in their superior language learning. However, the Poor group's higher total score and above average score for stress management as compared to the AM group suggest factors other than EI helped the AM learners to learn more effectively than the Poor students, or that the scores of the Poor students are inflated as suggested by the Positive Impression scale.

The EI test also revealed below average scores for interpersonal skills for the AM (82.9) and Poor (86.1) participants. The interpersonal scale measures students' ability to have satisfying relationships and listen to other people and appreciate and understand their feelings (Bar-On & Parker, 2000). It may be that a weaker ability to relate to other people negatively influenced language learning for these students. One explanation for this effect is that because the AM and Poor learners were less skilled at interacting with people, they did not benefit as much as the more socially able students from the communicative tasks found in many language classrooms. In addition, they may not have been as able as the more adept socializers to rely on the help of other students when confronted with learning difficulties. This interpretation is supported by the relatively weak use of social strategies reported above by the Poor students. Also, although the AM students did not use social strategies significantly less than the other groups overall (Table 5), they did use the strategies statistically significantly less than the Good and AP groups in elementary school (Table 6). This early weakness in strategy use may have had a deleterious effect on language learning that was difficult to compensate for in later years, as has been suggested above. The AM group also had a slightly low adaptability score of 89.2. Having trouble

adapting to the many changes learners experience during their years of education would undoubtedly disadvantage a learner.

### 5.5. Emotional Intelligence and Learning Strategy Use

EI assessment in this study captured participants' emotional intelligence in university. As EI is not regarded as a fixed intelligence, but one that can be developed (Goleman, 1998), it is uncertain as to the participants' level of EI at earlier times in their educational lives. However, the study found that the Good learners used significantly more social learning strategies than the Poor and AM learners in elementary school (Table 6) and also in middle school with regard to the Poor learners. As better social relations are related to higher levels of EI (Mayer et al., 2008), it may be that the Good learners had higher levels of EI in elementary school than the AM and Poor students. Also, with regard to language proficiency, when the participants were asked if they found learning English easy in elementary school, 83.3% of the Poor students responded affirmatively while 63.6%, 66.7% and 63.0% of the Good, AP and AM, respectively, chose the positive answer. This result suggests that English language proficiency may not have been greatly dissimilar among the study participants in elementary school. It may be then that a higher level of EI among the Good students encouraged them to use more social learning strategies early in their English education, which in turn may have contributed to their language learning and to their eventual inclusion in the Good group at the time of the study. This interpretation of the results suggests that learning strategy use promoted the growth of language proficiency.

It should be noted that the findings reported in this study and indeed all studies that rely on self-reports must be viewed with a degree of caution as the veracity of such data is difficult to ascertain. For example, the Positive Impression scale results reported above suggested that the Poor learners may have tried to give a more favorable impression of themselves than was strictly warranted. Furthermore, it may be that the participants' recollections of their learning strategy use in past years were unintentionally inaccurate due to the negative effect of time on memory. Even though a strong effort was made during the study to elicit accurate memories on which to base the findings, it cannot be stated with absolute certainty that this effort was always successful.

## 6. CONCLUSION

The present study examined the use of language learning strategies by EFL students at four proficiency levels in elementary, middle and high school and at university using a retrospective report methodology. First, with regard to the frequency of use of learning

strategies throughout their educational lives, the Poor students used strategies significantly less frequently than students in the other groups. The Good group used strategies more frequently than the AM and Poor groups but not the AP group. While all of the groups significantly increased their frequency of strategy use at each level of education, it was the AM and Poor students who reported the largest percentage increases in use. However, it is argued that this greater increase in use was not sufficient to overcome learning weaknesses resulting from lower frequencies of strategy use in their early years of English language education. These results suggest that the more frequent use of learning strategies especially during the early years of education may have contributed to enhanced language learning.

The vocabulary learning task results support the view that lesser learning strategy use by the Poor learners and especially a weaker increase in their use of strategies early in their educational lives relative to the students in the other groups may have impaired the Poor group's English language acquisition. Additionally, the task results suggest that the greater use of strategies which involve a deeper level of language processing and more effort may have contributed to the Good students' superior language learning. With regard to strategy type, it was found that the Poor students used cognitive and social strategies significantly less frequently than the Good students. The Poor students also used metacognitive strategies less frequently than the AP students in both elementary and middle school. These results suggest that the Poor students were less likely to use strategies that required a more elaborate processing of language such as metacognitive and social strategies than students in the higher proficiency groups.

The EI test results suggest that emotional intelligence may contribute to language learning as the Good students had the highest total EQ score and the AP students the second highest. Also, the test found particular weakness among the AM and Poor students on the interpersonal scale, which is related to the use of social skills. It is argued that this EI weakness may have resulted in a reduced use of social strategies which may in turn have impaired language learning.

The study supports the view that a greater frequency of learning strategy use coupled with the inclusion of strategies requiring the deeper processing of language in the strategy repertoire contributes to better language learning outcomes.

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## APPENDIX

Frequency of Learning Strategy Type Use per Group by Level of Education (M/SD)

School	Good	Average +	Average-	Poor
Elementary				
Part A	2.11/0.326	2.29/0.382	2.10/0.255	2.10/0.255
Part B	2.44/0.511	2.24/0.494	1.94/0.253	1.84/0.378
Part C	2.63/0.543	2.65/0.176	2.15/0.446	1.85/0.243
Part D	2.48/0.479	2.81/0.513	1.84/0.296	1.88/0.346
Part E	2.38/0.703	2.42/0.643	1.97/0.403	1.77/0.383
Part F	2.65/0.207	2.67/0.480	2.07/0.151	1.72/0.194
Middle				
Part A	2.49/0.501	2.39/0.437	2.57/0.287	2.58/0.186
Part B	2.79/0.488	2.55/0.298	2.49/0.389	2.25/0.335
Part C	2.88/0.412	2.90/0.434	2.68/0.349	2.43/0.258
Part D	2.86/0.428	3.17/0.320	2.72/0.421	2.47/0.304
Part E	2.48/0.556	2.37/0.712	2.38/0.542	2.28/0.601
Part F	2.75/0.394	2.55/0.451	2.60/0.400	2.23/0.163
High				
Part A	2.89/0.666	2.68/0.616	2.98/0.543	2.78/0.514
Part B	3.25/0.279	2.87/0.279	2.91/0.445	2.67/0.367
Part C	3.38/0.549	3.25/0.524	3.05/0.432	2.88/0.454
Part D	3.42/0.421	3.48/0.484	3.23/0.458	3.19/0.226
Part E	2.60/0.429	2.58/0.804	2.77/0.550	2.60/0.777
Part F	3.03/0.423	2.65/0.362	2.75/0.468	2.67/0.288
University				
Part A	2.94/1.00	2.84/0.718	3.16/0.727	3.03/0.652
Part B	3.76/0.460	3.31/0.318	3.67/0.371	3.41/0.395
Part C	3.88/0.436	3.55/0.472	3.77/0.339	3.60/0.469
Part D	3.81/0.473	3.80/0.406	3.78/0.367	3.71/0.183
Part E	3.07/0.683	2.90/0.790	3.12/0.674	3.22/0.771
Part F	3.65/0.518	3.48/0.286	3.58/0.313	3.35/0.586

Note. A = memory, B = cognitive, C = compensation, D = metacognitive, E = affective, F = social

Applicable levels: Elementary, secondary, tertiary

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