

## **Introduction**

It has been a common phenomenon in Taiwan that many elementary school children start taking English lessons in institutions outside of their regular school curriculum during their early school years. Some children even start taking English lessons before entering elementary school. Thus, it is not surprising that there is a wide disparity in language learning experience, as well as English proficiency, among elementary school students. Teachers using the same materials for all children in the same EFL classroom often have to attend to student differences to provide appropriate instruction for everyone in the mixed-ability classroom. How to meet the needs and interests of students and how to teach effectively in the classroom are certainly challenging tasks for many elementary school English teachers. There is, therefore, a need to gain more in-depth understanding of the relations among the variables related to individual differences in language learning and academic performance of young EFL learners. The present study aims to study two of the most important affective variables: academic self-concept and motivation in language learning. As suggested by numerous researchers, these variables play important roles in students' language learning process (Brown, Robson, & Rosenkjar, 2001; Gardner, 1985; Green, Nelson, Martin, & Marsh, 2006; Muijs, 1997).

## **Academic Self-Concept**

Most papers have defined academic self-concept as one component of overall self-concept, which is related to specific content areas such as math and English (Marsh & Yeung, 1998). In academic self-concept research, the major focus has been on the relation between academic self-concept and achievement. The mutual reinforcing relation between these two variables has been demonstrated in numerous research studies (De Fraine, Van Damme, & Onghena, 2007; Marsh, Parker, & Barnes, 1985; Muijs, 1997). Green, Nelson, Martin, and Marsh (2006)

pointed out that enhancement in students' academic self-concept is more likely to be short-term if their academic performance does not improve. Likewise, student improvement in educational outcomes is not likely to last long unless their academic self-concept is fostered simultaneously. The so-called "reciprocal effects model", which is a compromise between the self-enhancement model and the skill development model, has been supported by most educational psychologists and provides important implications for educational practices (Marsh, Hau, & Kong, 2002).

More and more researchers have reached the consensus that prior academic self-concept affects subsequent achievement and prior achievement affects subsequent academic self-concept as well. Marsh et al. (2002) demonstrated that support for the reciprocal effects model was not limited to the Western setting. For example, support for the model did not differ due to the language of instruction (English and Chinese) among Hong Kong high school students, even though the use of a second language in instruction had negative effects on both academic self-concept and achievement. In that large-scale longitudinal study, they found that the effect of prior academic self-concept on subsequent achievement was "clearly stronger and more consistent" than the effect of prior achievement on subsequent academic self-concept.

Other researchers, although showing support for the mode, found the effect of one variable on the other in the opposite direction. In Muijs' (1997) study, data were collected twice in 1994 (time 1) and 1995 (time 2) in Belgian primary schools. Results showed that students' academic self-concept at time 2 was significantly predicted by the following three variables: academic self-concept measured at time 1, school grades measured at time 1, and students' family socio-economic status (SES). Similarly, the significant predictors of student academic achievements at time 2 were school grades at time 1, academic self-concept at time 1, and SES. Both academic self-concept and achievement were significant predictors of each

other; nonetheless, academic achievement appeared to have more predominant effect in the relationship than the other way around. De Fraine et al. (2007) suggested that the contrasting findings may due to the differences in age of the samples in Marsh et al.'s (2002) and Muijs' (1997) studies.

### **Motivation and Language Learning**

For several decades, a great deal of research has examined the role of motivational variables in second or foreign language learning. Research on motivation in the second language learning context has been dominated by the pioneering work of Gardner and his associates (Gardner, 1985, 1988; Gardner & Tremblay, 1994). They first proposed a social-educational model of second-language learning and made a distinction between integrative and instrumental orientations. According to the model, students can be classified as either integratively or instrumentally motivated depending on the reason for learning the second language (Gardner, 1985). Students are regarded as integratively oriented if their interest in learning a second language involves positive attitudes toward the second language group and the desire to communicate with members of that group. On the other hand, students are considered instrumentally oriented if the reason for learning a second language is to help them obtain a better job or pass an examination. Gardner (1985) viewed motivation as the combination of (1) the desire to learn the language, (2) favorable attitudes toward learning the language, and (3) effort to achieve the goals.

Building on the work of Gardner and his associates, a number of researchers have started to consider alternative models of language learning motivation (Crookes & Schmidt, 1991; Dörnyei, 1990, 1994; Ely, 1986; Noels, Pelletier, Clement, & Vallerand, 2000; Oxford & Shearin, 1994). Concerned about the applicability of second language learning situation to foreign language learning environment, Dörnyei (1990) investigated the motivational components in the

Hungarian FL context. Results of the study indicated that both the integrative and instrumental motives contribute to motivation in foreign language learning. In addition, the “integrative motivational subsystem” is multifaceted and composed of four aspects: (1) desire for knowledge, (2) desire to take on new challenges, (3) interest in foreign languages and cultures, and (4) willingness to integrate into a new culture. Results of the study also showed that the theoretical construct of motivation should include two additional components: need for achievement and attributions about past failure. Clement, Dörnyei, and Noels (1994) proposed that within a foreign language learning context, three important determinants of motivation are: integrative motivation, self-confidence, and evaluation of the classroom environment. Among these components, self-confidence is related to students’ attitude toward and effort expended on learning a foreign language.

One of the most widely recognized and well-known motivation theories is the one that makes a distinction between intrinsic and extrinsic motivation (Deci & Ryan, 1985; Noels, Pelletier, Clement, & Vallerand, 2000). Intrinsic motivation refers to reasons for engaging in an activity because of the feelings of enjoyment and inherent interest. On the contrary, extrinsic motivation is characterized by reasons that are meant to achieve some instrumental purpose, such as obtaining a reward (e.g., good grades), achieving a goal, or avoiding some punishment (Dörnyei, 1994; Noels, 2001). According to the self-determination theory introduced by Deci and Ryan (1985), these orientations toward learning a language lie on a continuum, from intrinsic orientation on one side, through extrinsic orientation, to amotivation on the other side. The feelings of “amotivation” are similar to “learned helplessness” (Noels, 2001). This happens when there is no clear link between students’ behaviors and the consequences of the behaviors. At this point, students may want to quit investing any more energy in the learning activity as soon as possible (Noels et al., 2000).

## **Research Questions**

The purpose of the study is to gain more insight into the roles of the two important affective variables, academic self-concept and motivation, in foreign language acquisition among elementary school students. Hopefully, the findings can provide insightful and useful implications for English teachers working in the Taiwan EFL setting. The study intends to ascertain the following research questions: (1) Is there any significant correlation between students' academic self-concept and their English performance? (2) Is there any significant correlation between students' motivation and their English performance? (3) Do years of taking extracurricular English lessons outside regular classrooms have any relation to students' academic self-concept and motivation in learning English? (4) Is there any significant relation between academic self-concept and motivation in learning English? (5) Do students of different proficiency levels have significantly different academic self-concept and motivation in learning English?

## **Method**

### **Participants**

Sixth-grade students ( $N = 188$ ) from an elementary school in central Taiwan participated in the study. The sample was composed of 92 (48.9 %) boys and 96 (51.1%) girls. These students started taking regular English lessons from the time that they entered the school. They took English lessons once a week for the first four years and twice a week for the last two years in the school. A total of six classes of students were administered questionnaires and an English ability test during the first semester of the sixth-grade academic year. During the semester they participated in the study, they were all instructed by the same teacher using the same teaching materials.

## **Instrument**

The instrument administered to measure students' academic self-concept was adapted from the ASC scale developed by Liu, Wang, and Parkins (2005). It was a 19-item, 5-point Likert-type questionnaire (1 = strongly disagree and 5 = strongly agree). Two subscales, the 9-item academic confidence (AC) subscale and 10-item academic effort (AE) subscale, were designed to assess students' "perceptions about their academic competence" and their "commitment to, and involvement and interest in schoolwork" (Liu & Wang, 2005). The Cronbach alphas for the ASC scale, AC subscale, and AE subscale were .87, .76, and .83, respectively.

The motivation scale used to assess students' motivation was adapted from Attitudes and Motivation Test Battery (AMTB) developed by Gardner (1985). The AMTB was designed to measure various affective variables. The subscales selected for use in the present study were designed to assess students' motivation in three dimensions: attitudes toward learning English (8 items), motivational intensity (7 items), and desire to learn English (8 items). The subscale for measuring the first component of motivation, attitudes toward learning English, used a 5-point Likert-type format, ranging from strongly disagree (1) to strongly agree (5). The other two subscales for assessing motivational intensity and desire to learn English were constructed in multiple-choice item format. Each item had three alternative choices. Higher scores indicate higher motivation to learn English. The internal consistency coefficient for the complete motivation scale was found to be .93. The reliability estimates for the three subscales were .92, .76 and .76, respectively.

An English test was also administered to all of the six classes of students to objectively evaluate their language ability. The test was devised by the English instructor of these young learners to measure their English performance. Various types of items, giving correct answers by looking at pictures, making a correct sentence by unscrambling words, selecting a correct alternative to complete a sentence, and listening questions, were included in the in-class test. One major

reason for not choosing a standardized achievement test was the concern that such a test may be too difficult for most of the young learners who still had very limited English proficiency. When a test is too difficult for the majority of the examinees, it is likely to have low discrimination power.

### **Data Analysis**

To assess the relationship between all of the variables, including the factors of academic self-concept, motivational components, years of taking English lessons outside the elementary school classroom, and students' English performance, the correlation coefficients of these variables were calculated and analyzed. For research questions 1, 2, and 4, Pearson's product-moment correlation coefficients were computed. As to question 3, Spearman rank order correlation coefficients were calculated since data for one of the variables, years of taking English lessons outside the elementary school classroom, was of ordinal scaling.

Further, in order to ascertain the last research question concerning whether students of different proficiency have significantly different perceptions of academic self and motivation in learning English, subjects were organized into four different levels of English proficiency based on their performance on an English ability test. There were two criteria for setting the cut-off points: (1) students with higher scores were assigned to higher level and (2) the numbers among the four levels of students were about evenly distributed for the purpose of statistical analysis. The multivariate analysis of variance (MANOVA) was then performed to analyze the data.

### **Results and Discussion**

Data concerning the years of taking English lessons outside the classroom among elementary school children in this study were shown in Table 1. Obviously, these participants had various English learning experiences. About 20% of them

had never taken extracurricular English lessons, whereas nearly 18% of them had been taking extra English lessons for more than 5 years.

**Table 1**

Participants' Years of Taking Extracurricular English Lessons (N = 188)

Years of learning	Number of participants	Percent
0	41	21.8%
Less than 2 years	32	17%
2-3 years, but less than 3 years	30	16%
3-4 years, but less than 4 years	36	19.1%
4-5 years, but less than 5 years	16	8.5%
More than 5 years	33	17.6%

The Pearson correlations among students' English performance, academic self-concept, and motivation to learn English were first computed. Spearman's correlation coefficients were then calculated to investigate the relationship between academic self-concept, motivation, and years of taking extra English lessons outside of school. The correlations are all reported in Table 2. The results show that all of the correlations were positive and highly significant. Students' English performance was moderately correlated with academic self-concept and motivation (.462 and .422, respectively). As students have more positive academic self-concept or higher learning motivation, they are more likely to have better English performance, and possibly vice versa. Similarly, years of taking extra English lessons outside the regular classroom also has significant relation with students' perceptions of academic self and motivation in learning English (.487 and .412, respectively). The longer the students took English lessons outside of school, the more positive were their perceptions of themselves, which indicated more positive perceptions about their self-confidence and academic effort. Also, they were more motivated to learn English. This may due to the fact that these



students tended to have better English performance in school. A correlation of .692 was found between students' English grades and years of taking extracurricular English lessons. In addition, academic confidence was found to be more strongly correlated with English performance and years of taking extra lessons than with the other variables (.501 and .565, respectively).

**Table 2**

Correlations between Students' English Grade, Years of Taking Extra English Lessons, Academic Self-Concept, and Motivation in Learning English

	English Grade (Pearson's <i>r</i> )	Years of Taking Extra English Lessons (Spearman's $\rho$ )
Academic Self-Concept		
1. AC	.501**	.565**
2. AE	.367**	.370**
3. Overall	.462**	.487**
Motivation		
4. Attitudes	.357**	.354**
5. Intensity	.481**	.469**
6. Desire	.369**	.378**
7. Overall	.422**	.412**

Note. AC = Academic Confidence; AE = Academic Effort; Attitudes = Attitudes toward Learning English; Intensity = Motivational Intensity; Desire = Desire to Learn English

\*\*  $p < .01$

To address the fourth research question, a Pearson product-moment correlation matrix between the factors of academic self-concept and motivation components was obtained (see Table 3) for the full sample. A high correlation coefficient (.843) was found between students' overall academic self-concept scores and their overall scores on the motivation scale. The results reveal a strong link between these two important affective variables of academic performance. All of the correlations between the factors of academic self-concept and motivation components were highly significant and positive, ranging from .602 to .866. The variables were either

moderately or strongly correlated. It should be noted that while academic confidence had moderate correlations with all of the motivation components, students' perceived academic effort tended to have high correlations with all of the motivational components. Students with higher perceived academic effort scores should be the ones who were more committed to or involved in language learning, and naturally they should also be the ones more motivated to learn.

**Table 3**

Correlations between Academic Self-Concept and Motivation in Learning English

	1	2	3	4	5	6	7
<b>Academic Self-Concept</b>							
1. AC	—						
2. AE	.711**	—					
3. Overall	.909**	.939**	—				
<b>Motivation</b>							
4. Attitudes	.620**	.829**	.794**	—			
5. Intensity	.662**	.772**	.780**	.740**	—		
6. Desire	.602**	.773**	.752**	.769**	.820**	—	
7. Overall	.677**	.866**	.843**	.950**	.892**	.908**	—

\*\* p < .01

To gain a better understanding of the academic self-concept and learning motivation of the elementary school children who had a wide range of ability levels, these students were further grouped into four English proficiency levels based on their performance on an in-class English ability test developed by the instructor. Students who scored below 60 were grouped into the lowest level, level 1, while those scored above 92 were grouped into level 4. Students who scored between 60 and 92 were distributed into the middle two groups. More specifically, forty seven (25%) students were grouped in level 1, 54 (28.7%) in level 2, 41(21.8%) in level 3, and 46 (24.5%) in the highest level, level 4. As mentioned previously, for the

purpose of statistical analysis, the researcher also tried to evenly distribute these subjects into four level groups. The means and standard deviations of the subjects' English test scores and academic self-concept and motivation scale and subscale scores are all presented in Table 4. As demonstrated in the table, students who had higher English ability also had higher academic self-concept and motivation scale and subscale scores.

**Table 4**

Means and Standard Deviations of Students' English Grade and Academic Self-Concept and Motivation Scale and Subscale Scores

	Level 1		Level 2		Level 3		Level 4	
	M	SD	M	SD	M	SD	M	SD
English Grade	41.36	10.98	72.43	7.89	89.24	2.36	95.87	2.24
Academic Self-Concept								
AC	26.68	5.79	29.37	6.34	32.38	6.50	37.41	5.36
AE	33.85	7.23	37.10	8.53	38.76	8.24	44.59	7.35
Overall	60.52	11.13	66.47	13.67	71.13	13.44	82.00	11.64
Motivation								
Attitudes	28.01	6.63	31.83	7.63	32.46	7.53	36.81	6.70
Intensity	12.77	3.32	15.50	3.47	16.76	3.54	17.85	2.99
Desire	14.23	3.77	16.06	3.68	17.00	3.64	18.07	3.32
Overall	55.02	12.38	63.39	13.42	66.22	13.68	72.72	11.86

To determine whether these differences in the overall academic self-concept and motivation scores are significant, a one-way MANOVA test was conducted to analyze the data using ability level as the sole independent variable (see Table 5). First, differences in English grades among these four groups of subjects were tested and the results are also reported in Table 5 (  $F(3,184) = 539.297, p < .001$ ). Post hoc comparisons of these group means further confirm that there are significant differences among each ability level. The higher the ability level, the higher the

grades.

**Table 5**

Results of Multivariate Analysis of Variance Test for English Performance, Academic Self-Concept, and Learning Motivation

Dependent Variable	Source of Variation	SS	df	MS	F	Sig.
English Grade	Level	81728.401	3	27242.800	539.297	.000 **
	Error	9294.833	184	50.515		
Academic Self-Concept	Level	11566.282	3	3855.427	24.521	.000 **
	Error	28930.146	184	157.229		
Motivation	Level	7503.500	3	2501.167	15.135	.000 **
	Error	30407.822	184	165.260		

\*\*  $p < .01$

Second, the MANOVA results establish that differences in academic self-concept and motivation in learning English among these four ability groups are statistically significant. Students with higher English ability not only had more positive perceptions of academic self (  $F(3,184) = 24.521, p < .001$  ) but also higher motivation in learning English (  $F(3,184) = 15.135, p < .001$  ). The Scheffe test was further employed to make post hoc comparisons among these group means. Based on the group means of academic self-concept, level 1 and level 2 students could be grouped as a homogeneous subset, and level 2 and level 3 students could be grouped as a subset since their means were not significantly different. As to level 4, the highest ability group among these students, their academic self-concept was not only the highest but also significantly higher than all of the other three groups.

Third, according to the results of the post hoc comparisons between the group

means of students' scores on the motivation scale, level 2 and level 3 were not significantly different and level 3 and 4 were not significantly different. Level 1, the lowest ability group among the subjects, had significantly lower motivation than all of the other groups.

### **Summary and Conclusion**

This study is designed to investigate the roles of two important affective variables, academic self-concept and motivation, in foreign language learning. Exploring the relation of these variables with each other and with language performance in elementary school English classrooms, particularly in the Taiwan setting, should provide some references for the language instructors who have to deal with a wide range of English abilities among young EFL learners. Important research findings of the current study are summarized as follows:

First, English grades and years of taking extracurricular English lessons were found to be moderately and significantly correlated with both students' overall academic self-concept and motivation scores. These young EFL learners appeared to have various experiences of learning English as a foreign language and thus showed a great disparity in their language abilities. The findings indicate that students with better grades and longer experience of learning English have more positive academic self-concept and higher motivation in learning English. Nevertheless, the possibility that the relationship between academic self-concept/motivation and English performance is the other way round cannot be excluded based on the prior research findings (De Fraine, Van Damme, & Onghena, 2007; Green, Nelson, Martin, & Marsh, 2006; Marsh, Hau, & Kong, 2002; Muijs, 1997).

Second, the academic dimensions of self-concept and motivation were found to be significantly highly correlated. The more positive students' perceptions had about their academic self, the more motivated they were to learn English. They

either had more positive attitudes toward learning English or stronger desire to learn English. Not surprisingly, both academic self-concept factors, academic effort and confidence, were either highly or moderately correlated with all of the motivation components. Taking the academic effort/motivation relation as an example, students with higher perceived academic effort were more committed to and involved in their English coursework. They should naturally be the ones with stronger motivation in learning English.

Third, students grouped in the highest ability level had the highest academic self-concept and motivation scores, whereas those in the lowest level had the lowest scores. Post hoc test results show that academic self-concept scores of the highest ability group were significantly higher than in any other group. On the other hand, the academic motivation scores of the lowest ability group were significantly lower than those of the other groups. The results correspond to the aforementioned findings that students' English performance is closely related to both their perceptions about academic self and motivation in learning English.

The close link between academic self-concept, academic motivation, and foreign language performance is well supported by the present research findings, even among subjects who were only sixth-graders. Whether the effect of academic self-concept/motivation on academic performance is stronger or the other way around needs to be further investigated. However, many researchers concur with the idea that these constructs are reciprocally related (De Fraine et al. 2007; Green et al. 2006; Guay, Marsh, & Boivin, 2003; Marsh & Yeung, 1997). Enhancement of one construct may lead to the enhancement of the other. The bidirectional relation between these constructs needs to be taken into consideration by classroom teachers or whoever is involved in the educational process.

According to De Fraine et al. (2007), early adolescent academic self-concept may experience a decline, particularly during the period of middle school education. From a developmental perspective, young learners are more easily affected by

“social comparisons.” School environment also plays a role in affecting students’ academic self-concept. The academic self-concept/achievement relationship may even become stronger or weaker with age (De Fraine et al. 2007; Sanchez & Roda, 2003). It is important for educators to realize that students’ academic self-concept and motivation are not only complex but also subject to change. Substantial research studies have also shown that various factors contribute to the formation of the constructs, particularly motivation, which can be determined by a multitude of components (Crookes & Schmidt, 1991; Dörnyei, 1994).

How to enhance students’ academic self-concept or motivation in the foreign language classroom is beyond the scope of this study. One can refer to Dörnyei (2001) for 35 useful motivational strategies, which can be further organized into a few categories: creating the basic motivational conditions, generating initial motivation, maintaining and protecting motivation, and encouraging positive self-evaluation. It is not an easy task for language instructors to implement all of the motivation-sensitive strategies in their teaching practice. However, to increase students’ chances of success in language learning, teachers should bear in mind that more effort needs to be expended on maintaining students’ positive academic self-concept and motivation.

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