



The Journal of Asia TEFL

<http://journal.asiatefl.org/>

e-ISSN 2466-1511 © 2004 AsiaTEFL.org. All rights reserved.



Importance of Ongoing Motivation for EFL Writers' Performance: Growth Curve Modeling

Soo Eun Chae

Gangneung-Wonju National University, Korea

The current study sought to examine the influence of Korean college students' initial motivation on their English as a Foreign Language (EFL) writing development, as well as the relationships among EFL writing performance, self-efficacy, communicative interest, and instrumental interest. A total of 187 Korean college students completed questionnaires at repeated intervals during one semester of an EFL writing course. Structural equation modeling was used to analyze the longitudinal data. The findings showed that the students' performance and self-efficacy developed significantly, whereas their interest decreased over the semester. The results of growth curve modeling with longitudinal data from three time points suggested that the students' motivational orientation significantly predicted their EFL writing performance at the beginning of the semester. However, the influence of initial motivation on the growth rate of EFL writing proficiency, specifically EFL writing performance, was negative. The conclusion of this study is that the contribution of motivational constructs to EFL writing performance depends on time.

Keywords: EFL writing, Korean college students, performance, interest, self-efficacy

Introduction

The current study sought to examine the influence of Korean college students' initial motivation on their English as a Foreign Language (EFL) writing development, as well as the relationships among their learner characteristics, including EFL writing performance, self-efficacy, and interest. Motivation has been shown to hold importance in EFL writing development, as EFL learners require psychological stability and sufficient energy to overcome anxiety (Cubukcu, 2008) and difficulties stemming from their unfamiliarity with the new language (Chae, 2014). Motivation encompasses various facets, such as goals, engagement, self-efficacy, and interest (Alexander & Winnie, 2006). Among these, self-efficacy and interest have been reported as the key elements that lead to change in writing performance (e.g., Pajares, 2003; Tran, 2007). Few studies have empirically investigated self-efficacy and interest in relation to EFL writing performance. Further, no study has documented how EFL learners' *initial* interest and self-efficacy contribute to writing performance development over time. The present research sought to answer the following question: To what extent and in

what manner do Korean college students' initial self-efficacy and interest contribute to changes in their EFL writing performance over time?

Self-Efficacy in Terms of EFL Development

According to a broad overview of EFL acquisition studies, *self-efficacy* and *interest* appear to be core contributors to language development. Numerous studies of EFL acquisition have reported self-efficacy as a determinant of student's EFL development (Chularut & DeBacker, 2004) and level of proficiency (Lin & Betz, 2009; Liu & Jackson, 2009). Although causal relationships have not been clarified, EFL and language researchers have also reported that self-beliefs or judgments on their own language abilities are significantly related to actual language achievement (Başaran & Cabaroğlu, 2014; Genç, Kuluşaklı, & Aydın, 2016).

Chularut and DeBacker (2004) reported that students with higher self-efficacy are likely to attain good grades on the TOEFL reading test. In their study, a quasi-experimental examination of the relationships among concept mapping instruction, self-regulation, self-efficacy, and students' EFL reading achievement was based on a well-known definition of self-efficacy: "personal beliefs concerning one's capability to learn or perform skills at designated levels" (Bandura, 1982, 1986; Chularut & DeBacker, 2004, p. 251; Schunk, 1991). In addition to the main concern of the study (i.e., the effect of the concept mapping instruction), Chularut and DeBacker (2004) indicated that the high school students' self-efficacy increased over time and as their English proficiency developed.

Lin and Betz's study (2009) also showed a significant impact of self-efficacy on EFL development. These researchers had 203 Chinese and Taiwanese international students in the U.S. respond to the Scale of Perceived Social Self-Efficacy (Smith & Betz, 2000) and the Scale of Perceived Level of English Mastery (Barratt & Huba, 1994), as well as two other measures. The major finding was that social self-efficacy in the English setting was significantly and positively related to English proficiency and length of residence in the U.S. The Chinese international students' English proficiency and length of residence were all significant predictors of the degree of social self-efficacy that respondents gained in interactions with others in English-speaking environments.

Self-efficacy implies a driving force to develop certain academic abilities from the initial time point. According to Bandura (1986), students with "a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own *initiative*" (p. 417). Such initially perceived self-efficacy has been found to mediate past academic success or failure and the arousal of anxiety (Meece, Wigfield, & Eccles, 1990). Students exposed to more failing experiences in terms of certain academic achievements initially are likely to feel anxious about later achievement, which is ultimately less self-efficacious. The importance of students' initial motivation seems to be amplified in EFL contexts in which they are highly influenced by language anxiety. Indeed, EFL learners with high levels of anxiety have been found to be less likely to take risks of failing in class, lowering their language self-efficacy and subsequently their overall ability (Horwitz, 2001; Liu, 2006; Sellers, 2000).

High self-efficacy also contributes to mutual enhancement, leading to success in certain levels or kinds of writing performance. Writers who doubt their ability to write well are more easily dissatisfied with failure. In contrast, writers with high expectations of their own writing abilities are less likely to be dissuaded by obstacles or failure (Zimmerman & Bandura, 1994). People develop self-efficacy by experiencing the fulfillment of valued standards and then seek to intensify their efforts to improve on deficient performance (Zimmerman & Bandura, 1994).

Given the positive relationship between EFL development and learners' initial self-efficacy, a learner who initially believes s/he writes well in English would be likely to easily make the necessary efforts to develop

his/her EFL writing as well as speech.

Interest in Terms of EFL Development

For decades, the conceptualization of interest in academia has varied depending on the environmental focus from which it emerges and the significance ascribed it by researchers (Renninger, Hidi, & Krapp, 2014). These include the person-object relationship (e.g., Fink, 1991), the person-stimulus relationship (e.g., Hidi, 1990), and the mutual relationship between the individual and larger society (e.g., Renninger & Leckrone, 1991). Given the roots of interest, Krapp, Hidi, and Renninger (2014) categorized academic interest into two categories, namely situational and individual. In a text-based environment, situational interest is activated by text through topics or ideas (Hidi & Anderson, 1992). In contrast, individual interest implies a certain “interestingness” of a situation, and focuses on the effect of interest across individuals (Hidi, 1990). From this view, EFL learners with individual interest would pay attention to the functionality of their use of English in actual situations, such as making friends with English speaking people (Oxford & Shearin, 1994).

The above individual vs. situational interest categorization, however, seems slightly different from that in language learning (Gardner, 1988; Wenden, 1987). According to Gardner (1988), motivational orientation in language learning can be categorized into “instrumentative motivation” and “integrative motivation.” Integrative motivation entails more socially integrated types of motivating factors. Thus, individual interest seems to be closely related to integrative interest. On the other hand, instrumentative motivation entails more functional reasons for learning a language, such as passing an exam and getting a job (Rifai, 2010). The conceptualization of instrumentative orientation is somewhat mixed if one wishes to describe it using the aforementioned individual vs. situational categorization of interest. Instrumentative orientation covers both situational interest, in terms of grammar and language functions in gaining higher scores, and individual interest, in terms of incorporating certain interest in topics and themes in language use. Gardner’s (1988) classification of integrative vs. instrumentative interest seems more applicable in the current study, in which language-specific investigation is undertaken.

Various kinds of interest have been shown to be important in improving written EFL performance. Previous studies have particularly highlighted topic interest, a kind of instrumentative interest, as a significant contributor to EFL performance. Erçetin (2010) found a significant relationship between topic interest and text recall in an investigation of proficient Turkish EFL learners’ language development through hypermedia text. The students with higher topic interest recalled more propositions, regardless of their levels of prior knowledge. Furthermore, when topic interest was high, the participants with greater prior knowledge accessed content-related annotations more frequently than did those with lower prior knowledge. This strong relationship between topic interest and text recall have significant implications for EFL writing performance, in which recalling is a central task.

Similarly, research among Vietnamese EFL students reported the potential of developing EFL writing skills by triggering their interest (Tran, 2007). Tran (2007) had 30 English-major students respond to questionnaires, and results indicated that the Vietnamese EFL writers had unexpectedly strong intrinsic motivation. A common perception in exam-centered societies such as that of Vietnam is that EFL students are motivated to write in English mainly due to extrinsic motivation, such as grades and job opportunities. However, Tran’s (2007) participants applied their passion and inspiration to become engaged and to gain identity through EFL writing. Tran (2007) concluded that intrinsic motivation factors, such as interest, passion, and inspiration, were linked to these students’ personal and cultural needs in writing. To develop student engagement in EFL writing, appropriate choice of writing topics was suggested. However, Tran (2007) did not indicate whether the students’ interest lasted or remained similarly influential in their writing performances over time.

Given the potential contributions of initial self-efficacy and interest to EFL development and performance, the present study sought to determine the influence of these factors on EFL writing performance over time. The current study aimed to address gaps in the previous research by incorporating temporal issues in its consideration of EFL writing performance development and writers' self-efficacy and interest.

Methods

Sample

A total of 245 Korean college students were involved in one or more of three sessions of data collection for this study. Of these, 178 responded at all three sessions, and 187 at Time 1 and Time 3. For the nine students with non-responses at Time 2, these and other non-responses that occasionally occurred in the final longitudinal dataset ($N = 187$) were replaced with randomly selected similar records using the hot-deck imputation technique (Iacus, 2011). Similarity of the records was determined by referring to all variables other than that corresponding to the non-responses in the dataset (which occurred mainly at Time 2). As a result, the final longitudinal dataset contained no missing data.

The Korean college students in the sample were enrolled in 11 classes with five instructors in three schools in the Seoul metropolitan region. All were taking a course created to assist EFL students in meeting the writing requirements of their academic and professional lives (i.e., a Fundamental Writing Class). All were invited and agreed to take part in the study.

In terms of gender, 110 (44.67%) participants were male and 135 (55.33%) were female. On average, the participants had taken Korean L1 classes for 14 years and EFL classes in either Korea or another non-English speaking country for nine years. All participants held high school diplomas, and were presumed to be novice writers. All were freshmen or sophomores, as most EFL writing courses are offered to students in the lower years at Korean colleges. Motivational and cognitive status in such a group may differ from that of advanced writers. Study participation was voluntary, and consent forms were completed by all participants.

Measures

EFL Writing Self-Efficacy

The Writing Self-Efficacy Scale (WSES; Pajares, 2007; Pajares & Valiante, 1999) was used to evaluate participants' writing self-efficacy. The WSES consists of 10 questions requiring respondents to "provide judgments of their confidence in their ability to successfully perform grammar, usage, composition, and mechanical writing skills, such as correctly punctuating a one-page passage or organizing sentences into a paragraph so as to clearly express a theme" (Pajares, 2007, p. 240). The version used in the current study asked participants in Korean to indicate their level of confidence in their EFL writing performance on a 100-mm line (e.g., Schraw, Potenze, & Nebelsick-Gullet, 1993). The WSES has been used in research on various writing contexts, across gender and age groups (Pajares, 2007), but mainly in the area of L1 compositions. The overall findings from such studies have demonstrated "acceptable" reliability for the measure, ranging from .68 to .92. The internal reliability of this self-efficacy tool in the current study was 0.96, indicating excellent reliability. Factor scores for EFL writing self-efficacy were computed prior to the main analysis.

EFL Writing Interest

An interest measure was used to assess participants' interest in the given writing topic and in writing as a domain, namely the writing class in which they were enrolled. Participants were asked in Korean to indicate how interested they were in taking an English writing class and performing English academic writing. The participants indicated the strength of their interest in English writing, and responded to eight researcher-developed questions targeting their EFL writing interest. The item composition of the interest measure is presented in Table 1.

Exploratory factor analysis of 18 items with regard to both EFL writing interest and self-efficacy with a promax rotation prior to the current analysis resulted in three factors. Ten self-efficacy items clearly loaded on the first factor, named "Self-Efficacy" (SE). Four of the eight interest items loaded on the second factor, named "Instrumental Interest" (II), and the remaining four loaded strongly on the third factor, named "Communicative Interest" (CI). This categorization is similar to Gardner's (1988) two kinds of language acquisition orientation (instrumentative vs. integrative orientation). II items were likely to measure participants' interest in learning the grammar and structure of EFL, whereas CI pertained to their interest in social integration in terms of writing. For all items in this measure, the participants responded on a 100-mm line scale ranging from "strongly disagree" to "strongly agree." The internal reliability of the interest measure was 0.83, indicating an acceptable level.

TABLE 1
Item Composition of the Interest Measure

Type	Item
Communicative Interest	I enjoy writing about my major in English.
	I enjoy communicating with professors and friends about my major through writing in English (e.g., e-mail, text messages, and letters).
	I want to know how to write about my major in more professional English.
	I am interested in writing about the topic of [the writing topic of the day].
Instrumental Interest	I am interested in learning more English vocabulary.
	I like the way the class instructor teaches English writing.
	I am interested in learning more about English grammar.
	I am interested in learning more about how to structure English essays.

EFL Writing Performance

The present study employed writing performance assessments on three different writing topics. The writing topics were drawn from sample writing topics given to students preparing for the Test of English as a Foreign Language (TOEFL®; Educational Testing Service, 2009b). These topics were available to the public through the Educational Testing Service (ETS) website, and the comparability of the writing prompts has been reported for groups with a range of language backgrounds (Lee, Breland, & Muraki, 2004). Thus, topic difference was expected to cause minimal or no variation in writing performance in the present study. Indeed, using three different topics at the three time points, rather than one identical topic, was expected to keep the participants' topic familiarity to a minimum, as topic familiarity has been reported to greatly affect EFL students' writing performance (Stapleton, 2001). The three topics were "school uniform policy," "living in a place with the same weather all year round," and "borrowing money from friends." The participants' essays were scored on a scale of 0 to 5. A scoring rubric for the TOEFL® writing test, developed by ETS, was used as the reference criterion (ETS, 2009a). Scoring reliability was checked by employing two coders on the performance task measure and comparing their scoring. Following training for scoring essays using the rubric, the two coders independently scored 64 randomly selected writing performance responses (approximately

10% of the dataset). The intra-class correlation computed for inter-rater agreement for the selected 64 writing samples was 0.82. Due to this high agreement, the remaining responses were scored independently by the researcher.

Procedures

Data were collected from March through July 2011. A performance task was administered asking participants to write about “school uniform policy” at Time 1, “living in a place with consistent weather” at Time 2, and “borrowing money from a friend” at Time 3. The time points for data collection were staggered approximately 1.5 months apart. Participants’ self-efficacy and interest were assessed at Time 1 and Time 3. Each data collection session took approximately 45 minutes and took place before the students began their regular class.

Statistical Analyses

Prior to growth curve analysis, a univariate test for within-subject effects with descriptive statistics analysis was performed. The univariate repeated measures targeted differences in the performance measures at each of the time gaps (i.e., Time 1 to Time 2 and Time 2 to Time 3), indicating the significance of change in EFL writing performance over time. A dependent samples *t*-test was also performed to examine differences in self-efficacy and interest measures between Time 1 and Time 3.

Latent growth curve models were run using EQS v 6.1 (Bentler, 2005). The correlations among the three motivation constructs were not strong (SE-II = 0.21; SE-CI = 0.38; II-CI = 0.41). Therefore, it was decided to use three separate growth curve models based on the low correlations among motivation constructs and the separate historical roots of motivation in EFL writing according to the literature (see Figure 1).

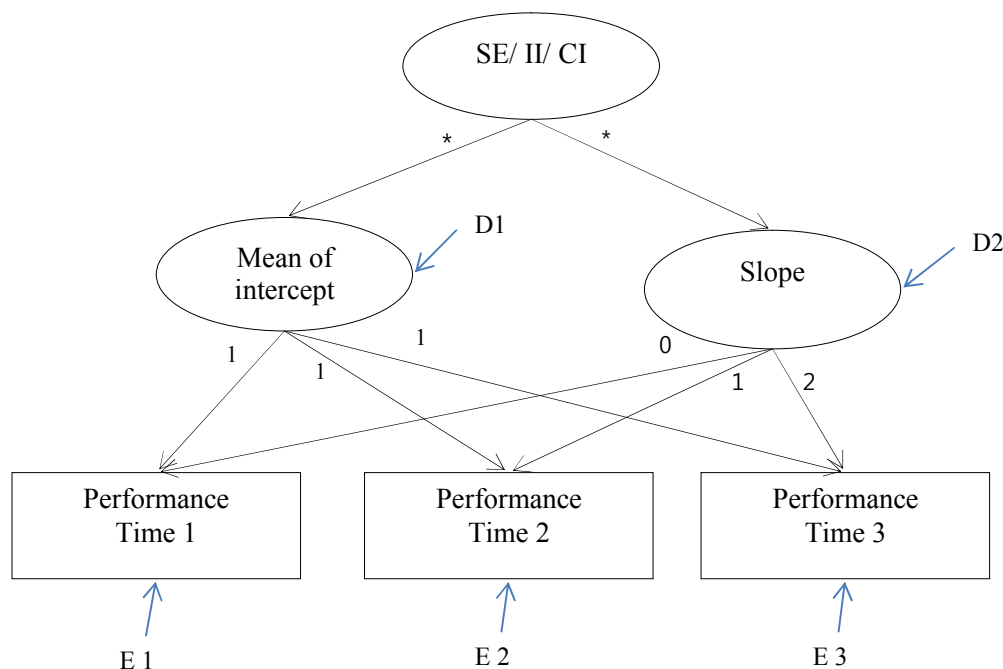


Figure 1. Growth curve models for three motivation constructs. SE = self-efficacy at Time 1; II = instrumental interest at Time 1; CI = communicative interest at Time 1.

Results

Descriptive Statistics and Test of Differences Between Time Points

To explore the contribution of these Korean college students' self-efficacy and interest at Time 1 to their EFL writing performance changes at Times 1, 2, and 3, means and standard deviations were calculated for their writing performance and motivation scores. Table 2 displays the descriptive statistics and univariate test results for the within-subject effects for performance, self-efficacy, and interest. The average scores for EFL writing performance increased from Time 1 to Time 3, as did those for self-efficacy but not for the two interest variables.

On average, there was a score increase of 0.22 between writing performance at Times 1 and 2, and of 0.43 between performance at Times 2 and 3. According to the univariate test for within-subject effects, EFL writing performance appeared to change significantly over time ($F = 66.99, p < 0.001$), whereas changes in other variables were not statistically significant. Further univariate repeated measures tests regarding differences in performance measures at each of the time gaps (i.e., Time 1 to Time 2 and Time 2 to Time 3) indicated significant changes between Times 1 and 2 ($F = 101.69, p < 0.001$), and between Times 2 and 3 ($F = 80.65, p < 0.001$).

With regard to motivation variables, a paired t -test for data from Times 1 and 3 showed a statistically significant increase in self-efficacy ($t = -2.75, p < 0.001$) but a significant decrease in instrumental interest ($t = 3.14, p < 0.001$). Communicative interest showed no significant changes between the two time points.

TABLE 2

Means and Standard Deviations for EFL Writing Performance, Self-efficacy, Instrumental Interest, and Communicative Interest at Each Time Point

Variable	Max.	Time 1	Time 2	Time 3	t/F	p	Growth
		M(SD)	M(SD)	M(SD)			
Performance	5	2.49(0.91)	2.64(0.90)	3.12(0.96)	66.99	<.01	↗
Self-efficacy	100	53.39(19.90)	N/A	58.26(18.45)	-2.75	<.01	↗
Instrumental Interest	100	77.56(17.54)	N/A	75.29(16.25)	3.14	<.01	↘
Communicative Interest	100	56.12(21.27)	N/A	55.84(19.78)	1.23	0.22	↘

Latent Growth Curve Modeling

Prior to determining the effect of initial motivation on change in EFL writing performance, a conceptual latent growth model (a longitudinal structural equation modeling (SEM) technique) with linear growth (see Figure 1) was tested using the Akaike Information Criterion. According to this model, the three initial motivation factors of SE, II, and, CI were hypothesized to be important determinants of the mean of intercept and slope for the performances at each of the three time points. The mean of intercept in the model represents the initial status of the performance scores, which were set at one over the time points. The slope represents the change of the loadings of the time points on the intercept factor, which were set at 0, 1, and 2, respectively, to show linear growth throughout the three time points. The correlation matrix and means for these variables are given in Table 3.

TABLE 3
Correlation Matrix for Performance, Self-Efficacy, and Interests

	P1	P2	P3	SE	II	CI
1. Performance at Time 1	1					
2. Performance at Time 2	0.63**	1				
3. Performance at Time 3	0.49**	0.71**	1			
4. Self-Efficacy	0.57**	0.40**	0.45**	1		
5. Instrumental Interest	0.28**	0.20**	0.15**	0.21**	1	
6. Communicative Interest	0.30**	0.21**	0.05**	0.38**	0.43**	1

Note: ** $p < .01$

The conceptual model appeared sustainable. The fit indices of all the models except for that of SE met the joint recommendations suggested by Hu and Bentler (1999). Using the comparative fit index (CFI), and according to Hu and Bentler's (1999) rule of thumb (CFI > 0.95), good fits for the longitudinal sample, including for those who responded at both Time 1 and Time 3, were identified in the SE model (CFI = 0.98), the II model (CFI = 1), and the CI model (CFI = 1). Likewise, the standardized root mean square residual was less than .09 in all of the models (.059 for SE; .004 for II; .009 for CI). However, the root mean square error of approximation (RMSEA) did not meet the recommended value of less than .06 for SE (RMSEA = .189), whereas the II model (RMSEA = .000) and CI model (RMSEA = .000) satisfied this guideline. The factor scores in the model helped to predict English writing performance at the three time points. This finding substantiates the impact of the three self-reported motivation constructs on participants' EFL writing performance at the beginning (indicated by the intercept) and the changes over time (indicated by the slope). As the conceptual model indicates, a linear growth with a 1-point score increase from Time 1 to Time 3 was tenable (see Table 4).

TABLE 4
Path Coefficients for Motivation Constructs

Variable	Mean of intercept				Slope			
	β	SE	b	R ²	β	SE	b	R ²
SE	0.601	0.051	0.475*	0.362	-0.097	0.032	-0.039	0.009
CI	0.367	0.058	0.267*	0.134	-0.329	0.031	-0.111*	0.109
II	0.318	0.059	0.234*	0.101	-0.155	0.032	-0.053*	0.024

Note. SE = self-efficacy; CI = communicative interest; II = instrumental interest; β = standardized coefficient; b = unstandardized coefficient; * $p < .05$.

1. Self-efficacy

SE at Time 1 was significantly associated with initial performance ($b = 0.475$, $p < 0.05$, $\beta = 0.601$). In particular, a 1-point increase in the SE factor score led to a .475-unit increase in initial performance score. In contrast, no significance was reflected in the relationship between SE and performance growth rate, meaning that participants' initial SE was not influential in changes in their EFL writing performance. Regardless of initial SE, participants' EFL writing performance tended to improve over time.

2. Communicative interest

(CI at Time 1 was significantly associated both with initial English EFL writing performance ($b = 0.267$, $p < 0.05$, $\beta = 0.367$) and growth rate ($b = -0.111$, $p < 0.05$, $\beta = -0.329$). That is, a 1-point increase in the CI factor score led to a .267-unit increase in initial performance score and a 0.039-unit decrease in growth rate.

Participants who were more interested in EFL writing as a communicative tool tended to perform *better* at the beginning of the semester. Conversely, the same participants with more interest were *less* likely to develop their English writing than were their counterparts. In other words, the more students were interested in communicating in English with their colleagues and teachers for their major and professional contents, the slower their English EFL writing developed.

3. Instrumental interest

Likewise, II at Time 1 was significantly related to both initial English EFL writing performance ($b = 0.234$, $p < 0.05$, $\beta = 0.318$) and growth rate ($b = -0.053$, $p < 0.05$, $\beta = -0.155$). A 1-point increase in the II factor score led to a .234-unit increase in initial performance score and a .053-unit decrease in growth rate. Participants who were interested in EFL writing for an instrumental purpose were *more* likely to outperform their peers with less interest at the beginning of the semester, but their EFL writing performance was *less* likely to improve in comparison to that of participants with lower levels of instrumental interest.

Discussion

The EFL literature pertaining to motivation has largely centered on goals, self-efficacy, and interest. The current study extended such investigations with a particular focus on changes in learner characteristics. Although strong relationships between *general* EFL development and the two motivation constructs applied here have been documented in EFL research (Chularut & DeBacker, 2004; Erçetin, 2010; Lin & Betz, 2009; Liu & Jackson, 2009), none of these prior investigations were specific to EFL *writing* contexts. The effects of initial self-efficacy, instrumental interest, and communicative interest were explored in this study among Korean college students and examined with regard to changes in their EFL writing performance over the course of a semester.

The present findings showed that participants' motivational orientation significantly predicted their EFL writing performance at the beginning of a semester. This result was consistent with previous studies regarding EFL acquisition and general learning. Students' EFL proficiency develops as their self-efficacy is encouraged or vice versa (Chularut & DeBacker, 2004; Lin & Betz, 2009; Liu & Jackson, 2009). Self-efficacy (Bandura, 1997) is known to be a prime factor enhancing students' academic performance (Linnenbrink & Pintrich, 2002) in various domains, including science (Andrew, 1998), educational psychology (Phan, 2009), and language (Mills, Pajares, & Herron, 2007). The positive influence of self-reported self-efficacy on initial performance has been reported for a range of EFL areas, including reading (Chularut & DeBacker, 2004) and students' perceived level of proficiency (Lin & Betz, 2009), and with this study, also for EFL writing.

In general, research has found positive effects of self-efficacy (e.g., Linnenbrink & Pintrich, 2002; Mills, Pajares, & Herron, 2007) and interest (Dewey, 1903) on academic achievement. Research specific to EFL writing (Leki, 2007) has reported a similar positive relationship between motivation and performance. While Leki's (2007) study highlighted goals rather than self-efficacy or interest, writers' EFL writing development accompanied their positive motivational changes, such as being more interested in the accomplishment of their own task purposes and diminishing superficial task features. In the current study, the EFL participants became more self-efficacious but less significantly interested in EFL writing as they developed in their EFL writing.

However, the influence of initial self-efficacy on the *growth rate* of EFL proficiency, specifically EFL writing performance, was *negative* in this study. This trend was even notable in terms of communicative interest and instrumental interest, as opposed to self-efficacy. This means that the initially motivated (or

interested) participants were likely to show slower growth than their initially less motivated (or less interested) counterparts, and this was even more apparent with regard to their interest in communication and in reaching the proposed learning goals (grammar, syntax, etc.).

Neither previous research nor the current study has provided evidence that students' initial motivation enhances their EFL writing achievement. The EFL literature has typically used cross-sectional data to establish this general pattern. Thus, no previous studies provided a foundation upon which to propose that the positive impact of self-efficacy lasted *over time* in accounts of the participants' different initial proficiency levels. Even findings of a positive relationship between self-efficacy and EFL proficiency (e.g., Linnenbrink & Pintrich, 2002; Mills, Pajares, & Herron, 2007) did not necessarily imply that self-efficacy predicted the rate of EFL proficiency *change* over time. To overcome this limitation, the current study incorporated multiple time sampling for EFL writing self-efficacy and performance *over the course of a semester*. Nonetheless, the end result was not significant; indeed, it was negative. Self-efficacy and interest constructs reported at the outset appeared not to be related to the degree to which EFL writing performance developed over time. Previous studies of learning changes have already documented that initial orientation is not a strong predictor of achievement at the end. "Undergraduates' level of interest in concepts in educational psychology as related to their personal interests and long-term goals at the beginning of the semester did not predict their performance in the domain at the end of the semester" (Fox & Alexander, 2004, p. 10). The current study, however, took this idea one step further, showing that greater motivational orientation predicted a lower likelihood of growth in EFL writing performance.

Why would negative effects of motivation on growth rate occur despite the theoretical grounds upon which the current study anticipated that motivation would develop together with EFL performance? Several explanations are possible for the negative effects of motivation constructs on the slope (i.e., the writing performance growth rate). First, the negative effects on growth of motivation may be an artifact of the curriculum provided to the students. Specifically, the EFL writing programs followed by the present participants may have been inadequate to engage their interest and self-efficacy at various levels. Indeed, participants' interest decreased over the semester, as evidenced by the descriptive statistics and Table 2. Those who started to participate in the EFL writing class with a positive orientation were not necessarily satisfied with their learning at the end. Becoming less interested over the semester appeared to be a prevalent trend in the present classes, regardless of initial levels of motivation. Furthermore, participants' levels of motivation at the end of the semester in comparison to those at the beginning varied between self-efficacy and interest.

On the other hand, one may argue that the present findings show that EFL writing performance developed in accordance with class instruction but not in definite accordance with participants' *initial* motivation. Students' initial motivation has been found to vary as a function of their prior knowledge (Narciss & Huth, 2006) or prior experience (Schunk, 1991) in various domains. In the current study, those participants readily exposed to EFL may have tended initially to judge themselves as proficient English writers and as interested in learning and using English. However, their performance growth was sustained regardless of this initial motivation. Rather, their motivation at each time point in the semester was significantly determinant of their writing performance at that time. This implies that offering motivating activities ought to be adapted to the timeline of a course. Indeed, the participants' initial SE, II, and CI levels were significantly related to their EFL prior knowledge ($r=0.49$; $r=0.20$; $r=0.18$, respectively) but not to their final performance. This suggests that EFL students' initial motivation ought not to be viewed as an ongoing developmental strength throughout the semester. Students who are highly motivated by prior experience could begin a course with high levels of confidence and interest, which may influence performance positively initially. However, such motivation may not continue to be influential over the course of a semester.

Third, data collection restrictions may have limited the generalization of the present results to the overall target population. Measurement was conducted in the current study within a limited period of time, and

among students from only three schools. These sampling issues may have led to a less powerful analysis of data with low variability. Finally, there may have been gaps between participants' perceptions of what their responses should be and what the instruments actually aimed to measure. This limitation prevents a prediction of what would likely occur across the entire population of Korean college students over the extended course of their EFL writing development.

Interest was significantly related to participants' EFL writing performance at the beginning of the semester. This finding is somewhat consistent with those discussed in previous research with regard to general academic achievement. For instance, empirical research by Sorić and Palekčić (2009) into the role of interest indicated the positive effects of interest-based learning on academic achievement. However, upon closer examination, there are several minor differences between Sorić and Palekčić's (2009) and the present investigation in terms of study design. In Sorić and Palekčić's (2009) study, academic development was enhanced by applying an intervention specifically designed to encourage students' academic interest. In the current study, data on students' interest and EFL writing performance were collected in a relatively natural setting. Moreover, the outcome variables were different in the two studies. Sorić and Palekčić's (2009) study was based on the general grades reported by students, whereas the present study used EFL writing scores obtained from Korean EFL college students' actual writing performance.

Conclusion

The present study was based on longitudinal data collected at three time points over the course of a semester, and analyzed EFL writing performance, interest, and self-efficacy among 187 Korean college students. Their learner characteristics were explored, as was the interplay and development of these over time. Growth curve modeling allowed a more thorough description of the developmental changes of individual students (Hancock & Lawrence, 2006). With growth curve modeling in SEM, an examination of the effects of the three motivation orientations on initial performance scores and on performance growth rate indicated that all three had a statistically significant positive relationship with *initial* performance scores. However, effects on developmental *changes* in student performance were found only for the interest variables. More interestingly, the relationships between the two interest factor scores and performance change rates was negative, implying that the more interested in EFL writing participants were, the less their EFL writing developed over time. This result suggests that initial motivation is not necessarily meaningful in terms of greater performance development. This finding implies that EFL writing performance develops regardless of students' initial interest and self-efficacy. Teachers and students often believe that being motivated at the beginning of a semester is an effective way to enhance academic learning, and stakeholders therefore pay substantial attention to readying students in advance. However, the present findings appear to support the idea of ongoing motivation, which may hold greater importance for of EFL writing performance development than initial motivation through prior EFL exposure.

Furthermore, the degree of manifestation and growth of the three motivational factors studied here (SE, II, and CI) appeared to vary over time. Indeed, the two interest constructs (II and CI) decreased over time. Previous research on motivation development in academic domains (Alexander, 1998) has supported both individual and situational interest as core factors for long-term development. Recall that instrumental and integrative interest correspond to individual and situation interest. Greater efforts to increase individual interest together with situational interest seem to be required to facilitate EFL writing development among Korean college students.

Acknowledgements

I wish to thank Dr. Patricia A. Alexander and the DRLRL(Disciplined Reading Disciplined Learning Laboratory) members in developing ideas of the study.

The Author

Soo Eun Chae is an assistant professor at Gangneung-Wonju National University, South Korea. Her current research interests are language development, technology use in learning, and epistemic changes.

Division of Teacher Education
Gangneung-Wonju National University
7 Jukeon-gil, Gangneung-si, Gangwon-do, South Korea
Tel: +82-33-640-2564
Email: schae@gwnu.ac.kr

References

- Alexander, P. A. (1998). The nature of disciplinary and domain learning: The knowledge, interest, and strategic dimensions of learning from subject-matter text. In C. Hynd (Ed.), *Learning from text across conceptual domains* (pp. 263-287). Mahwah, NJ: Lawrence Erlbaum Associates.
- Alexander, P. A., & Winnie, P. H. (2006). *Handbook of educational psychology*. Lawrence Erlbaum Associates: Mahwah, New Jersey.
- Andrew, S. (1998). Self-efficacy as a predictor of academic performance in science. *Journal of Advanced Nursing*, 27(3), 596-603. doi:10.1046/j.1365-2648.1998.00550.x
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.
- Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Bandura, A. (1997). *Self-efficacy in changing society*. New York, NY: Cambridge University Press.
- Barratt, M. F., & Huba, M. E. (1994). Factors related to international undergraduate student adjustment in an American community. *College Student Journal*, 28(4), 422-436.
- Başaran, S., & Cabaroğlu N. (2014). The effect of language learning podcasts on English self-efficacy. *International Journal of Language Academy*, 2(2), 48-69.
- Bentler, P. M. (2005). *EQS 6 structural equations program manual*. Encino, CA: Multivariate Software (www.mvsoft.com).
- Chularut, P., & DeBacker, T. (2004). The influence of concept mapping on achievement, self-regulation, and self-efficacy in students of English as a Second Language. *Contemporary Educational Psychology*, 29(3), 248-263.
- Cubukcu, F. (2008). A study on the correlation between self-efficacy and foreign language learning anxiety. *Online Submission*, 4(1), 148-158.
- Dewey, J. (1903). *Interest as related to will*. Chicago, IL: The University of Chicago Press.
- Educational Testing Service (2009a). Independent writing rubrics [Scoring rubrics]. Retrieved January 8, 2010, from http://www.ets.org/Media/Tests/TOEFL/pdf/Writing_Rubrics.pdf

- Educational Testing Service (2009b). Writing topics. Retrieved January 8, 2010, from <http://www.ets.org/Media/Tests/TOEFL/pdf/989563wt.pdf>
- Erçetin, G. (2010). Effects of topic interest and prior knowledge on text recall and annotation use in reading a hypermedia text in the L2. *ReCALL: Journal of Eurocall*, 22(2), 228-246. doi:10.1017/S0958344010000091
- Fink, B. (1991). Interest development as structural change in person-object relationships. In L. Oppenheimer & J. Valsiner (Eds.), *The origins of action: Interdisciplinary and international perspectives* (pp. 175-204). New York, NY: Springer.
- Fox, E., & Alexander, P. (2004). Reading, interest, and the model of domain learning: A developmental model of interest, knowledge, and strategy use in text comprehension. *The Annual Meeting at the American Educational Research Association*.
- Gardner, R. C. (1988). Attitudes and motivation. *Annual Review of Applied Linguistics*, 9, 135-148. doi:10.1017/S0267190500000854
- Genç, G., Kuluşaklı, E., & Aydın, S. (2016). Exploring EFL learners' perceived self-efficacy and beliefs on English language learning. *Australian Journal of Teacher Education*, 41(2). <http://dx.doi.org/10.14221/ajte.2016v41n2.4>
- Hancock, G. R., & Lawrence, F. R. (2006). Using latent growth models to evaluate longitudinal change. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modeling: A second course*. Madison, WI: IAP, pp.171-196.
- Hidi, S., & Anderson, V. (1992). Situational interest and its impact on reading and expository writing. In A. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 215-238). Hillsdale, NJ: Lawrence Earlbaum Association, Inc.
- Hidi, S. (1990). Interest and its contribution as a mental resource for learning. *Review of Educational research*, 60(4), 549-571.
- Horwitz, E. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics*, 21, 112-126.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Iacus, S. M. (2011). Nearest neighbor hot-deck imputation using RRP dissimilarity matrix. Retrieved from <http://rss.acs.unt.edu/Rdoc/library/rrp/html/rrp.impute.html>
- Lee, Y.-W., Breland, H., & Muraki, E. (2004). *Comparability of TOEFL CBT writing prompts for different native language groups*. Princeton, NJ: Educational Testing Service.
- Leki, I. (2007). *Undergraduates in a second language: Challenges and complexities of academic literacy development*. New York, NY: Lauren Earlbaum Associates.
- Lin, S. P., & Betz, N. E. (2009). Factors related to the social self-efficacy of Chinese international students. *The Counseling Psychologist*, 37(3), 451-471.
- Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School Psychology Review*, 31(3), 313-327.
- Liu, M. (2006). Anxiety in Chinese EFL students at different proficiency levels. *System*, 34(3), 301-316.
- Liu, M., & Jackson, J. (2009). Reticence in Chinese EFL students at varied proficiency levels. *TEFL Canada Journal*, 26(2), 65-81.
- Meece, J. L., Wigfield, A., & Eccles, J. S. (1990). Predictors of math anxiety and its influence on young adolescents' course enrollment intentions and performance in mathematics. *Journal of Educational Psychology*, 82(1), 60.
- Mills, N., Pajares, F., & Herron, C. (2007). Self efficacy of college intermediate French students: Relation to achievement and motivation. *Language Learning*, 57(3), 417-442.

- Narciss, S., & Huth, K. (2006). Fostering achievement and motivation with bug-related tutoring feedback in a computer-based training for written subtraction. *Learning and Instruction, 16*(4), 310-322.
- Pajares, F., & Valiante, G. (1999). Grade level and gender differences in the writing self-beliefs of middle school students. *Contemporary Educational Psychology, 24*(4), 390-405.
- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly, 19*(2), 139-158.
- Phan, H. P. (2009). Relations between goals, self-efficacy, critical thinking and deep processing strategies: a path analysis. *Educational Psychology, 29*(7), 777-799.
- Renninger, A., Hidi, S., & Krapp, A. (Eds.) (2014). *The role of interest in learning and development*. Hillsdale, NJ: Psychology Press.
- Renninger, K. A., & Leckrone, T. G. (1991). Continuity in young children's actions: A consideration of interest and temperament. In L. Oppenheimer & J. Valsiner (Eds.), *The origins of action: Interdisciplinary and International Perspectives* (pp. 205-238). New York, NY: Springer.
- Rifai, N. A. (2010). Attitude, motivation, and difficulties involved in learning the English language and factors that affect motivation in learning it. *Procedia - Social and Behavioral Sciences, 2*(2), 5216-5227.
- Schraw, G., Potenza, M. T., & Nebelsick-Gullet, L. (1993). Constraints on the calibration of performance. *Contemporary Educational Psychology, 18*(4), 455-463.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist, 26*(3-4), 207-231.
- Sellers, V. D. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals, 33*(5), 512-520.
- Smith, H. M., & Betz, N. E. (2000). Development and validation of a scale of perceived social self-efficacy. *Journal of Career Assessment, 8*(3), 283-301.
- Sorić, I., & Palekčić, M. (2009). The role of students' interests in self-regulated learning: The relationship between students' interests, learning strategies and causal attributions. *European Journal of Psychology of Education, 24*(4), 545-565.
- Stapleton, P. (2001). Assessing critical thinking in the writing of Japanese university students: insights about assumptions and concept familiarity. *Written Communication, 18*(4), 506.
- Tran, L. (2007). Learners' motivation and identity in the Vietnamese EFL writing classroom. *English Teaching: Practice and Critique, 6*(1), 151-163.
- Wenden, A. (1987). How to be a successful learner: insights and prescriptions from L2 learners. In A. Wenden & J. Rubin (Eds.), *Learner strategies in language learning* (pp. 103-117). Hemel Hempstead, UK: Prentice Hall International.
- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal, 31*(4), 845-862.