

FACTORS ASSOCIATED WITH ENGLISH AS A FOREIGN LANGUAGE UNIVERSITY STUDENTS WRITING ANXIETY

Hui-Fang Shang, Professor

Department of Applied English, I-Shou University, Kaohsiung, Taiwan

ABSTRACT: *Researchers have attempted to identify and define the construct of anxiety in foreign language classrooms for many years since English as foreign language (EFL) students are often apprehensive about their ability to successfully communicate in written form. The purpose of this study was to investigate the possible relationships between foreign language writing anxiety, gender, year of writing experience, writing self-efficacy, and actual writing competence by conducting a chi-square test, a two-way ANOVA, and MANOVA. A total of 146 juniors majoring in English at a private university in Taiwan voluntarily participated in the research. The results show that students generally appear to be anxious when writing in English; anxiety is quite pervasive in EFL writing classrooms no matter how many years students have learned English writing in the past. Male students who feel more anxious score higher on the writing test than female students. Low anxious students self-estimate to have higher writing efficacy and actual writing competence than high apprehensive students. Pedagogical implications for teachers to recognize the existence of students' writing anxiety are presented so as to make a writing class less stressful.*

KEYWORDS: Writing Anxiety; Writing Competence; Writing Self-Efficacy

INTRODUCTION

A high command of English writing ability and skills is critical to enhance university students' writing performance and academic success. Despite its importance, a large number of students in Taiwan consider English writing as arduous, challenging, and frustrating because their writing is generally poor in terms of content, organization, vocabulary, and language use (Liao & Wong, 2008). Taiwanese students often write only for exams. Such a link between writing and exams may make them feel frightened when it comes to writing. Writing in a foreign language is an acknowledged difficulty for a majority of EFL students because writing is an affective as well as cognitive activity (Cheng, 2002; Lee, 2005). With more cognitive psychologists (Bandura, 1977; Hayes, 1996; Hayes & Flower, 1980) in the field of writing research recognizes the importance of affect and self-efficacy in the writing process, writers' affective responses, particularly writing anxiety, have been receiving much attention (Cheng, 2002). The effects of anxiety on foreign language learning have been explored since the 1970s (Liu, 2006), and researchers have attempted to identify and define the construct of anxiety in foreign language classrooms for many years since students are often apprehensive about their ability to successfully communicate in written form (Schmidt, 2004). Horwitz et al. (1986) and MacIntyre and Gardner (1991a) claimed that foreign language anxiety is a unique type of anxiety specific to foreign language learning. Students with high levels of foreign language anxiety may engage in negative self-talk or even have a

mental block, which affects their ability to process information in foreign language contexts (Liu, 2006; MacIntyre & Gardner, 1991a). High anxious learners score lower on standardized tests of writing (Daly, 1985) and write essays that receive lower evaluations (Lee & Krashen, 2002). Numerous studies also show the negative relationship and effects of facilitative anxiety on writing performance. For example, Horwitz et al. (1986) stated that three sources of foreign language anxiety -- communication anxiety, test anxiety, and fear of negative evaluation -- may adversely influence FL writing. Clément et al. (1994) and Tsai (2008) further reported that self-confidence leads to achievement in English writing. However, affective factors may bias the self-assessment of language proficiency (MacIntyre et al, 1997). Several psychological models of motivation suggest that self-assessment mediates between actual competence and eventual achievement. Bandura (1988) has emphasized that self-perceptions of competence determine the amount of effort expended in pursuing a goal. If expectations are high, then one will expend greater effort, with greater likelihood of success. On the other hand, if expectations are low, one expends less effort, with less success.

Though researchers have attempted to investigate the relationship and effect between anxiety and foreign language achievement, a great deal of researches have focused on anxiety in the fields of speaking, listening, and reading skills (Horwitz et al., 1986; Lee & Krashen, 2002; Liu, 2006; MacIntyre et al, 1997; Mattern & Shaw, 2010; Mills, Pajares, & Herron, 2006; Yashima, 2002), prediction in regression analyses for anxiety and writing achievement (Cheng, 2002; Jones, 2008; Lee & Krashen, 2002; Mattern & Shaw, 2010; Matsuda & Gobel, 2004), as well as scale development and validation in exploratory factor analyses for anxiety and writing performance (Cheng, 2004; Lee, 2005; Schmidt, 2004). Despite studies on EFL writing anxiety have revealed equivocal results regarding the relationships of writing anxiety to EFL writing performance (Wu, 1992), concern for levels of anxiety, gender difference, years of writing experience, writing self-efficacy, and actual writing competence is still underdeveloped in the Taiwanese learning context, so much work is needed to achieve a better understanding of EFL writing anxiety. Since evidence of how those variables that would possibly link between levels of anxiety and writing competence has been scarce, the purpose of this exploratory study investigates the relationship between years of English writing experience and different levels of writing anxiety. The interaction effect between gender and anxiety levels on writing capacity is also examined. Furthermore, students' writing anxiety levels and the variables of writing preference, writing self-efficacy, and actual writing competence are sought to explore whether there is any significant difference among them.

LITERATURE REVIEW

One of the earliest and most prominent scholars to investigate second/foreign language anxiety is Horwitz who claimed that language-anxious students often study more than low-anxious students; however, their level of achievement does not reflect that effort (Horwitz et al., 1986). Horwitz et al. stated that there are three components of foreign language anxiety: communication anxiety, test anxiety, and fear of negative evaluation. Students feel apprehensive about writing, especially when written assignments contribute substantially to the course final grade (Schmidt, 2004). Those with writing anxiety may experience higher anxiety when asked to write, and this anxiety is evident in their behaviors, attitudes, and written work. In terms of written work, those with writing anxiety tend to have more difficulty in creating ideas for writing, produce shorter words, and experience difficulty with

grammatical usage and mechanics (Reeves, 1997; Shang, 2012). Undoubtedly, writing anxiety can be a deterrent to learning. To test this theory, Horwitz et al conducted a study with 75 English learners of Spanish at an American university in their regular language class. The study revealed that significant foreign language anxiety was experienced by many students which adversely affected their performance in that language. This finding is supported by Aida's (1994) and Kitano's (2001) studies, indicating that a fair amount of anxiety existed in the Japanese classroom and that foreign language anxiety were inversely correlated with language performance. Kitano further concluded that students' anxiety levels were significantly and positively correlated with their decreased perception of their own ability in the target language.

Although EFL learners often assess their own learning ability, considerable research has suggested that errors in self-assessment do occur; EFL students sometimes underestimate or overestimate their language ability (MacIntyre et al., 1997). Part of the reason is that the affective factor of language anxiety may particularly bias the self-perceptions of second/foreign language competence (Dörnyei, 1995; MacIntyre et al., 1997; Ready-Morfitt, 1991). As mentioned earlier by Bandura (1988), perceptions of self-efficacy determine the amount of effort expended in pursuing a goal. In other words, students' beliefs in their capabilities play a crucial role in their ability to learn how to write (Jones, 2008). When EFL learners have low self-efficacy of writing competence, they expend less effort, with less success.

Apparently, self-efficacy not only indicates students' actual proficiency, but also probably assesses some affective construct, such as language anxiety (MacIntyre et al., 1997). Previous research has shown strong relationships between language anxiety and both subjective and objective indices of proficiency. For example, MacIntyre (1994) found a stronger relationship between language anxiety and subjective self-perceptions of proficiency than between language anxiety and objective proficiency measures. Clément et al (1994) has also shown that perceived competence and anxiety are more closely related than are self-ratings of competence and objective achievement. These findings suggest that the mismatch between the subjective perception of competence and the actual competence results from "error" in predicting one's language ability. This error may more commonly happen to highly anxious learners who have little faith in the ability to enhance their performance (MacIntyre et al., 1997). Shang (2012) examined 146 Taiwanese EFL writers via multiple comparisons among the three anxiety levels on writing self-efficacy. Results showed a negative correlation which is consistent with the previous research findings: that is, the more anxiety in writing the students are, the less writing proficiency they perceive (Clément et al., 1994; Liu, 2006; Tsai, 2008). Students at a higher anxiety level are to be less confident when writing in class. Many students' anxiety levels increase when they particularly receive negative evaluations from teachers. As discussed earlier, more anxious students tend to demonstrate low self-efficacy and show less confidence in writing so as to perceive themselves a lower English writing proficiency (Jones, 2008; Shang, 2012).

Accumulating evidence has also indicated that anxiety leads to lower writing performance. For example, Lee (2002) and Lee and Krashen (1997), using Taiwanese university students as subjects, found a modest but consistent relationship between writing anxiety and actual EFL writing performance. Daly's (1985) research has shown that high apprehensives scored lower on standardized tests of writing and wrote essays that received lower evaluations. Cheng et al.

(1999) conducted a study with university-level English majors in Taiwan to complete a version of Daly and Miller's (1975) *Writing Anxiety Scale*. The researchers reported that fear of evaluation was modestly associated with grades in English writing class. Shang's (2012) study also revealed that students became nervous when asked to write an English composition in class because they feared for making mistakes in language forms (e.g., grammar and vocabulary). While a large body of research (Aida, 1994; MacIntyre & Gardner, 1991a) shows a negative relationship between anxiety and actual proficiency, Fowler and Kroll (1980) found no relationship between writing anxiety and grades in a college writing class.

Except the inconsistent results regarding the relationship between anxiety and actual achievement, gender-related anxiety research has yielded conflicting results. For example, Mejjias et al. (1991) found higher anxiety among Hispanic males than females. Spielberger (1983) investigated anxiety in different conditions and discovered that "females are more emotionally stable than males in their reactions to highly stressful or relaxing circumstances" (p. 19). Kitano (2001) examined the anxiety of college learners of Japanese and reported a relationship between anxiety and self-efficacy in male students; however, such a correlation was not observed among female students. Machida (2001) investigated FL Japanese language class anxiety based on gender and her study found that female learners were more anxious than male learners. In Aida's (1994) study, female students were found to score on the anxiety scale higher than did males.

As found in previous studies (Horwitz et al., 1986; Liu, 2006; Shang, 2012), many students appear to be anxious when writing in class; anxiety is quite pervasive in EFL writing classrooms and can affect learners' writing achievement. By studying the relationship between anxiety factor and students' actual achievement, Sparts, Ganschow, and Javorsky (2000) nevertheless argued that it is learners' linguistic deficit that results in poor performance, which in turn provokes their anxiety. Anxiety, after all, "is not a unitary, unidimensional phenomenon but involves various response dimensions" (Cheng, 2004, p. 318). Although previous studies show consistently negative but small correlations between writing anxiety on perceived proficiency and actual writing competence, it is essential to further investigate the above-mentioned factors and the other possible factors which may be associated with EFL university students' writing anxiety. In light of the factors discussed above, the purpose of this study was to investigate the possible relationships between foreign language writing anxiety, gender, years of writing experience, writing self-efficacy, and actual writing competence.

METHODOLOGY

Subjects

A total of 146 juniors (42 males and 104 females) majoring in English at a private university in Taiwan voluntarily participated in the research. The subjects' proficiency in English ranged from intermediate to high intermediate. A demographic questionnaire was administered to gather information about the subjects' backgrounds. Results from the questionnaires showed that subjects of this study ranged in ages from 18 to 25 years old, with an average of 20.4 years old. One hundred and twelve (76.7%) students have received at least seven years of formal English writing instruction at school. Though the majority of students (88.4%) like or somewhat like writing in English, they consider themselves fair to poor writers (90.4%). More detailed demographic characteristics of the subjects are provided in Table 1.

Table 1 *Sample Characteristics (N = 146)*

Characteristic	N	%
Years of learning English writing		
1-3 years	12	8.22
4-6 years	22	15.07
7-10 years	78	53.42
More than 10 years	34	23.29
Self-evaluate English writing ability		
Excellent	0	0
Good	14	9.59
Fair	79	54.11
Not good	44	30.14
Poor	9	6.16

Instrumentation

Three instruments were used in this study: Writing anxiety scales, writing self-efficacy, and a composition test. The instruments were designed to elicit subjects' self-ratings in terms of writing anxiety, perceived writing competence, and actual writing proficiency.

Writing anxiety. A writing anxiety scale, which was developed earlier in a pilot run, was adapted 13 items from Tsai's (2008) English writing anxiety questionnaire. Internal consistency coefficient (α) of this scale was .844. The anxiety scale consisted of four major sources of English writing anxiety: fear of writing tests (items 1-3), anxiety about making mistakes (items 4-5), fear of negative evaluation (items 6-9), and low confidence in English writing (items 10-13). Subjects were asked to rate certain statements on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All negatively worded items were reverse scored, so that high scores on any of the four anxiety constructs represented high levels of anxiety.

The descriptive statistics regarding the means and standard deviations of the four anxiety sources show that students felt anxious about making mistakes in writing ($M = 3.49$, $SD = 1.10$), followed by receiving negative evaluation from teachers ($M = 3.48$, $SD = 1.08$), followed by having writing tests ($M = 3.35$, $SD = 1.29$), and then followed by having low confidence in English writing ($M = 3.19$, $SD = 1.43$). The overall mean score of the four anxiety sources was 3.38. These findings indicate that students generally felt anxious in English writing; they were particularly apprehensive of making mistakes in language forms.

Writing self-efficacy. Self-perceptions of English writing competence were adopted to evaluate subjects' beliefs about EFL writing outcome. Researchers have argued that evaluating self-perceptions of competence is an efficient mechanism for placing students at appropriate levels, saving both the time and the expense of formal testing (MacIntyre et al., 1997; Ready-Morfitt, 1991). Writing self-efficacy is also useful for informally assessing mastery of particular skills (Yli-Renko, 1988). In this study, subjects evaluated their own writing proficiency on a 5-point scale, from (5) excellent, (4) good, (3) fair, (2) not good, and (1) poor.

A composition test. In order to classify the subjects' actual writing proficiency levels, each subject was asked to write an English composition in the spring semester of 2011. The topic of the composition is "What are the Factors to Affect Your Writing Performance." The duration of the writing task was 30 minutes in total, with the request of 300 words at least. A pilot test was done by the first three subjects before conducting this research in order to ensure that all of the subjects would not have difficulties in finishing the test under time pressure. Subjects then sent their writing to the researcher via e-mail after finishing the composition, and the researcher copied each subject's writing and pasted it to a software called *CorrectEnglish* for scoring and categorizing.

The software *CorrectEnglish* (Summit IntelliMetric, 2008) was used as an instrument to classify the subjects' writing proficiency into three discriminative levels based on the *Flesch-Kincaid Grade Level*. Flesch-Kincaid grade level is a valid and reliable language readability formula to test the readability of written texts. The Flesch-Kincaid grade level is calculated by using the formula: $(0.39 \times \text{average sentence length}) + (11.8 \times \text{average number of syllables per word}) - 15.59$ (Darus, Ismail, & Ismail, 2008). According to previous studies (Cleaveland & Larkins, 2004; Darus et al., 2008; Perin et al., 2003; Shang, 2007), lower scores characterize text that is more difficult to read and roughly corresponds to lower writing ability, lower literacy level, as well as poor writing quality. The writing score interface of *CorrectEnglish* is shown in Figure 1.

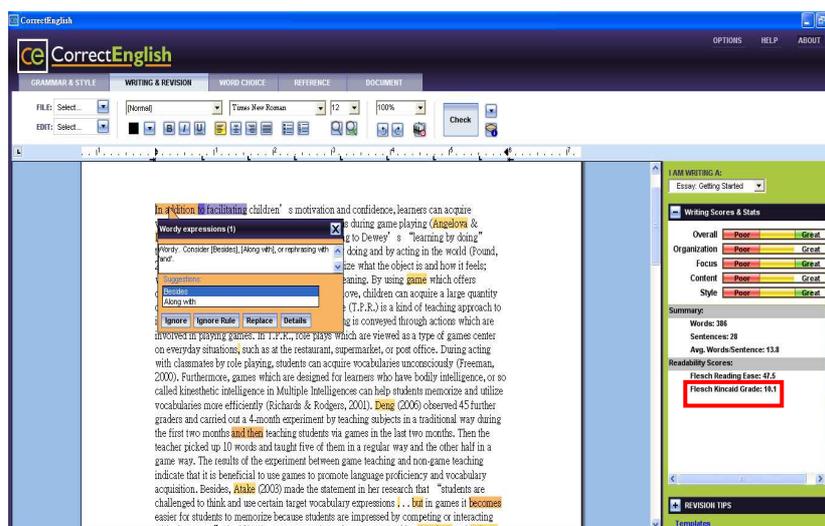


Figure 1. The Writing Score Interface of *Correct English*

Data Collection Procedure

The subjects were all taking an English writing course at the time of participating in this investigation in the spring semester of 2011. Upon arrival at the classroom, students read a consent form, indicating that they did not have to participate and could choose not to answer any question if they wished. Then the questionnaire consisting of subjects' self-evaluated writing competence and writing anxiety measures was distributed to the subjects who agreed to participate in the study and they completed the questionnaire within 10 minutes immediately after finishing their compositions. The questionnaire was then collected by the researcher for further data analysis.

Data Analysis

The results of the questionnaire survey were computed using SPSS (17.0 version) in terms of

descriptive statistics to investigate the subjects' anxiety levels. A chi-square test was used to estimate the relationship between years of learning English and anxiety levels. A two-way ANOVA was further conducted to explore the interaction effect between gender difference and anxiety levels on students' actual writing competence. Significant differences between variables of anxiety levels on students' perceived writing capability and actual writing competence and their interactions were explored using MANOVA. An α level of .05 was set for all statistical procedures. Based on the purpose of the present study, three research questions were explored in the following:

1. What is the relationship between year of English writing experience and writing anxiety levels?
2. What effect does gender and anxiety levels have on students' actual writing competence?
3. What is the difference existing between anxiety levels on the variables of writing self-efficacy and actual writing competence?

RESULTS

The Relationship between Year of English Writing Experience and Anxiety Levels

The chi-square () test measures the alignment between two sets of frequency measures. In other words, the chi-square test provides a method for testing the association between the row and column variables in a two-way table. As shown in Table 2, no significant relationship was observed between years of learning writing and levels of anxiety (contingency coefficient = .272). It is, nevertheless, obvious to notice that the high anxious learners outnumber the low anxious learners no matter how many years they have learned English writing in the past. It is, therefore, concluded that students generally appear to be anxious when writing in English; anxiety is quite pervasive in EFL writing classrooms regardless of how long students learn to write.

Table 2 Results of Chi Square Analysis for Year of Learning Writing and Level of Anxiety

Year of learning writing		Level of Anxiety			Total
		High	Moderate	Low	
1-3 years	Observed	1	5	6	12
	Expected	3.70	4.93	3.37	
4-6 years	Observed	8	11	3	22
	Expected	6.78	9.04	6.18	
7-10 years	Observed	26	32	20	78
	Expected	24.04	32.05	21.90	
More than 10 years	Observed	10	12	12	34
	Expected	10.48	13.97	9.55	
Total		45	60	41	146

Note: Expected data = (row total * col total)/overall total

The Effect of Gender and Anxiety Levels on Actual Writing Competence

A two-way ANOVA was conducted to explore the interaction effect between gender and anxiety levels on students' writing score. As shown in Table 3, male students ($M = 6.40$, $SD = 2.12$) were found to score on the anxiety scale higher than did females ($M = 6.13$, $SD = 2.08$), and male students' writing score ($M = 6.46$, $SD = .32$) was higher than the female's ($M = 6.14$,

SD = .21). Nevertheless, no significant interaction effect was found ($p = .061$) between gender and level of anxiety on students' writing score. It is clear to find out that male students who felt more anxious scored higher on the writing test than female students.

Table 3 *Results of Two-Way ANOVA Analysis between Gender and Anxiety Level on Writing Score*

Gender	Anxiety level	Mean	SD	N
Male	High	7.43	3.09	12
	Moderate	6.11	1.50	17
	Low	5.85	1.45	13
	Total	6.40	2.12	40
Female	High	5.79	1.66	33
	Moderate	6.20	2.51	43
	Low	6.43	1.75	28
	Total	6.13	2.08	104
Total	High	6.22	2.22	45
	Moderate	6.18	2.26	60
	Low	6.24	1.67	41
	Total	6.21	2.09	146

The Difference between Anxiety Levels on Self-efficacy and Actual Writing Competence

A multiple analysis of variance (MANOVA) was performed to investigate if there was any significant effect for the independent variable of anxiety level on the dependent variables which are writing self-efficacy and actual writing competence. Results in Table 4 demonstrate that low anxiety group self-estimated to have higher writing efficacy and actual writing competence than high anxiety group; however, there was no statistically significant difference among those two dependent variables (Wilks' lambda = .918, $F = 2.046$, $p = .06$). After making a post hoc test analysis, a significant difference was found between the anxiety level and perceived writing efficacy ($p = .004$). This may be explained by the fact that low anxiety group ($M = 2.76$, $SD = .92$) perceived to have a better writing ability than high anxiety group ($M = 2.38$, $SD = .58$).

Table 4 *Results of a MANOVA Analysis between Anxiety Level on self-efficacy and Actual Writing Competence*

	Anxiety level	Mean	SD	N
Writing Self-efficacy	High	2.38	.58	45
	Moderate	2.83	.64	60
	Low	2.76	.92	41
	Total	2.67	.73	146
Actual competence	High	6.22	2.22	45
	Moderate	6.18	2.26	60
	Low	6.24	1.67	41
	Total	6.21	2.09	146

DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the possible relationships between foreign language writing anxiety, gender, years of writing experience, writing self-efficacy, and actual writing competence. Several key findings emerged from this research. First of all, students become nervous when asked to write an English composition in class, partially because they fear for making mistakes in writing, receiving negative evaluation from teachers, having writing tests, and having low confidence in English writing regardless of how long one learns to write. This finding is consistent with previous studies (Horwitz et al., 1986; Liu, 2006; Schmidt, 2004; Shang, 2012), indicating that many students appear to be anxious when writing in class; anxiety is quite pervasive in EFL writing classrooms no matter how many years students have learned English writing in the past. It is, therefore, essential, to create a writing context which is anxiety-free to encourage students' willingness and self-efficacy in writing.

As for the relationship between gender and level of anxiety on students' actual writing competence, the finding shows a conflicting result: that is, male students who feel more apprehensive score higher on the writing test than female students. Although there is no statistically significant interaction effect between the two variables on students' writing achievement, it seems to make sense that once male students feel high anxiety in English writing, they will probably spend more effort in writing to lead to better achievement. Such a result is partially consistent with Spielberger's (1983) finding, discovering that females are more emotionally stable than males in their reactions to highly stressful circumstances; yet this result is inconsistent with previous research (Horwitz et al., 1986), showing that language-anxious students often study more than low-anxious students; however, their level of achievement does not reflect that effort.

With regard to the relationship between anxiety levels on the variables of writing self-efficacy and actual writing competence, the results indicate that low anxious students express higher self-perception of writing competence and better writing achievement than high anxious students, although only a significant difference is found between the anxiety level and perceived writing efficacy. This may be explained by the fact that low anxious students perceive to have a better writing ability than high anxious students; the less anxious students seem to be, the more proficient in English writing. Students at a lower anxiety level are to be more confident when writing in class. As discussed earlier, less anxious students tend to demonstrate high self-efficacy and show more confidence in writing so as to perceive themselves a higher English writing proficiency (Jones, 2008). In this context, one can best view the link between writing anxiety and writing self-efficacy as reciprocal (MacIntyre, 1994).

Since the existence of anxiety plays an important role for self-assessment, giving students a sense of self-confidence should become a primary objective in the writing classroom. By encouraging students to assess their performance in a more positive light, teachers should encourage students to concentrate on their ability to accomplish the writing tasks at hand, a strategy effective in reducing test anxiety (Sarason, 1980). A look at the questions in the writing anxiety questionnaire reveals students' fear of evaluation when writing in academic situations. This suggests that students' anxiety levels may increase when they particularly receive negative evaluations from teachers. To decrease students' fear of evaluation, teachers

should use various activities such as pair revision and small group work to make students feel more comfortable in writing. When students are in a low apprehensive and less threatening environment, they may have high self-efficacy, which leads to feelings of writing achievement (Cheng, 2002). Instructors may need to offer more encouragement and positive feedback, and even from time to time allow writing without evaluation. In short, as EFL writing teachers, it is essential to recognize the existence of students' writing anxiety, know the sources of anxiety, and then present effective strategies to reduce anxiety so as to enhance university students' English writing competence.

REFERENCES

- Aida, Y. (1994). Examination of Horwitz, Horwitz, and Cope's construct of foreign language anxiety: The case of students of Japanese. *The Modern Language Journal*, 78, 155-168.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1988). Self-efficacy conception of anxiety. *Anxiety Research*, 1, 77-98.
- Cheng, Y. S. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annals*, 35(5), 647-656.
- Cheng, Y. S., Horwitz, E., & Schallert, D. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*, 49(3), 417-446.
- Cleaveland, M. C., & Larkins, E. R. (2004). Web-based practice and feedback improve tax students' written communication skills. *Journal of Accounting Education*, 22, 211-228.
- Clément, R., Dörnyei, Z., & Noels, K. A. (1994). Motivation, self-confidence, and group cohesion in the foreign language classroom. *Language Learning*, 44(3), 417-448.
- Daly, J. A. (1985). Writing apprehension. In M. Rose (Ed.). *When a writer can't write* (pp. 43-82). New York: Guilford.
- Daly, J. A., & Miller, M. D. (1975). The empirical development of an instrument of writing apprehension. *Research in the Teaching of English*, 9(3), 242-249.
- Darus, S., Ismail, K., & Ismail, M. B. M. (2008). Effects of word processing on Arab postgraduate students' essays in EFL. *European Journal of Social Sciences*, 7(2), 63-77.
- Dörnyei, Z. (1995). On the teachability of communication strategies. *TESOL Quarterly*, 29, 55-84.
- Fowler, B., & Kroll, B. M. (1980). Relationship of apprehension about writing to performance as measured by grades in a college course on composition. *Psychological Reports*, 46, 583-586.
- Hayes, J. R. (1996). A new model of cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing* (pp. 1-30). Hillsdale, NJ: Erlbaum.
- Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3-30). Hillsdale, NJ: Lawrence Erlbaum.
- Horwitz, E. K., Horwitz, M. B., Cope, J. A. (1986). Foreign language classroom anxiety. *Modern Language Journal*, 70, 125-132.
- Jones, E. (2008). Predicting performance in first-semester college basic writers: Revisiting the role of self-beliefs. *Contemporary Educational Psychology*, 33, 209-238.
- Kitano, K. (2001). Anxiety in the college Japanese language classroom. *The Modern Language Journal*, 85, 549-566.
- Lee, S. Y. (2002). The influence of cognitive/affective factors on literacy transfer. *Studies in English Language and Literature*, 8(10), 17-32.

- Lee, S. Y. (2005). Facilitating and inhibiting factors in English as a foreign language writing performance: A model testing with structural equation modeling. *Language Learning*, 55(2), 335-374.
- Lee, S. Y., & Krashen, S. (1997). Writing apprehension in Chinese as a first language. *Review of Applied Linguistics*, 115-116, 27-35.
- Lee, S. Y., & Krashen, S. (2002). Predictors of success in writing in English as a foreign language: Reading, revision behavior, apprehension, and writing. *College Student Journal*, 36(4), 532-543.
- Liao, M. T., & Wong, C. T. (2008). Effects of dialogue journals on L2 students' writing fluency, reflection, anxiety, and motivation. *Reflections on English Language Teaching*, 9(2), 139-170.
- Liu, M. (2006). Anxiety in Chinese EFL students at different proficiency levels. *System*, 34, 301-316.
- Machida, S. (2001). Anxiety in Japanese-language class oral examinations. *Sekai Nihongo Kyoiku*, 11, 115-138.
- MacIntyre, P. D. (1994). Toward a social psychological model of strategy use. *Foreign Language Annals*, 27, 185-195.
- MacIntyre, P. D., & Gardner, J. C. (1991a). Language anxiety: Its relation to other anxieties and to processing in native and second languages. *Language Learning*, 41, 513-534.
- MacIntyre, P. D., Noels, K. A., & Clément, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning*, 47(2), 265-287.
- Matsuda, S., & Gobel, P. (2004). Anxiety and predictors of performance in the foreign language classroom. *System*, 32, 21-36.
- Mattern, K. D., & Shaw, E. J. (2010). A look beyond cognitive predictors of academic success: Understanding the relationship between academic self-beliefs and outcomes. *Journal of College Student Development*, 51(6), 665-678.
- Mejias, H., Applebaum, R. L., Applebaum, S. J., & Trotter, R. T. (1991). Oral communication apprehension and Hispanics: An exploration of oral communication apprehension among Mexican American students in Texas. In Horwitz, E. K., & Young, D. J. (Eds.), *Language anxiety: From theory and research to classroom implications* (pp. 87-97). NJ: Prentice-Hall, Englewood Cliffs.
- Mills, N., Pajares, F., & Herron, C. (2006). A reevaluation of the role of anxiety: Self-efficacy, anxiety, and their relation to reading and listening proficiency. *Foreign Language Annals*, 39(2), 276-295.
- Perin, D., Keselman, A., & Monopoli, M. (2003). The academic writing of community college remedial students: Text and learner variables. *Higher Education*, 45(1), 19-42.
- Ready-Morfitt, D. (1991). *The role and limitations of self-assessment in testing and research*. Unpublished manuscript, University of Ottawa, Ottawa, Canada.
- Reeves, L. L. (1997). Minimizing writing apprehension in the learner-centered classroom. *English Journal*, 86(6), 38-45.
- Sarason, I. G. (1980). *Test anxiety: Theory, research and applications*. Hillsdale, NJ: Lawrence Erlbaum.
- Schmidt, L. A. (2004). Psychometric evaluation of the writing-to-learn attitude survey. *Journal of Nursing Education*, 43, 458-465.
- Shang, H. F. (2007). An exploratory study of e-mail application on FL writing performance. *Computer Assisted Language Learning*, 20 (1), 79-96.

- Shang, H. F. (2012, August). The relationship between writing anxiety and EFL university students' writing proficiency. Manuscript presented in *the 19th International Conference on Learning*, London, UK.
- Sparks, R. L., Ganschow, L., & Javorsky, J. (2000). A response to Saito, Horwitz, and Garza. *The Modern Language Journal*, 84(2), 251-255.
- Spielberger, C. D. (1983). *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Summit IntelliMetric. (2008). *CorrectEnglish*. Retrieved December 7, 2010, from <http://www.correctenglish.com/personal/>
- Tsai, H. M. (2008). The development of an English writing anxiety scale for institute of technology English majors. *Journal of Education & Psychology*, 31(3), 81-107.
- Wu, Y. (1992). *First and second language writing relationship: Chinese and English*. Doctoral dissertation, Texas A & M University, College Station.
- Yashima, T. (2002). Willingness to communicate in a second language. The Japanese EFL context. *Modern Language Journal*, 86(1), 54-66.
- Yli-Renko, K. (1988). *Assessing foreign language training needs of adults: A case study from Finland*. Helsinki: Helsinki University, Department of Education.

This research is supported by National Science Council in Taiwan(NSC102-2410-H-214-016)