Foreign language anxiety and English achievement in Taiwanese undergraduate English-major students: an empirical study

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Abstract

This paper investigated the effect of foreign language anxiety on Taiwanese university students’ English achievement. To understand the perplexing nature of foreign language anxiety which Taiwanese students may have, this study aims to contribute to the limited literature examining the psychological reactions to language anxiety in Taiwanese undergraduate English-major students. This study employed a survey design that involved the collection of quantitative data to answer the research question. A total of 101 undergraduate English-major students participated in this study. Results of the present study suggested that Group A students (the students whose English achievement fall in the top 1/3 of all participants) experienced lower levels of foreign language anxiety than Group B students (the students whose English achievement fall in the middle 1/3 of all participants) and Group C students (the students whose English achievement fall in the bottom 1/3 of all participants), while Group B students had less foreign language anxiety than Group C students. The results highlighted that foreign language anxiety is an important predictor of university English-major students’ English achievement. This study also presented an insight for foreign language educators to further understand students and help them through their anxiety. It is hoped that increasing and extensive knowledge of foreign language anxiety will help both university EFL instructors and EFL learners. Ultimately, the empirical findings of the current study will have a beneficial impact on the students affected by foreign language anxiety.

Key words: anxiety, foreign language learning, English achievement, undergraduate students

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Introduction

Foreign language anxiety has been of interest to language educators for decades (Bailey, 1983). The psychological construct of foreign language anxiety is multidimensional (Horwitz, Horwitz, & Cope, 1986; Young, 1992). Some researchers argued that foreign language anxiety might contribute to the feelings of tension, apprehension, nervousness, and worry (Arnold & Brown, 1999; Gardener & MacIntyre, 1993; Oxford, 1999), while other scholars believed some anxiety may actually enhance foreign language performance (Chastain, 1975; Scott, 1986; Steinberg, 1982) or found no relationship between anxiety and language proficiency performance (Young, 1990).

It is clear from the previous research that the relationship between anxiety and foreign language learning was complex and presented some conflicting evidence. In order to understand how Taiwanese undergraduate English-major students perceive foreign language anxiety, and how it is related to their English achievement, the literature regarding foreign language anxiety was reviewed in the following section.

Foreign language anxiety is a very important affective variable in the research of foreign language education. Most of the studies investigating Taiwanese students’ foreign language anxiety tested predominately elementary school students and secondary school students (for example: Chen, 2002; Chen, 2004, Wu, 2005). It appears that not many researchers focused on undergraduate English major students. This specific group has largely been ignored. Therefore, there is a need to further understand the complicated nature of foreign language anxiety in this specific group. We believe that a study like this is expected to serve as a helpful reference to EFL instructors, educators, and policy makers in the future.

In response to the perplexing nature of foreign language anxiety which Taiwanese students may have, this study aims to contribute to the limited literature examining the psychological reactions to language anxiety in Taiwanese undergraduate English-major students. This study will also present an insight for foreign language educators to further understand the students and help them through their anxiety.

WHAT IS FOREIGN LANGUAGE ANXIETY?

Foreign language anxiety refers to the anxiety that learners may have when they learn a foreign language. The psychological construct of language anxiety is a complex matter within the context of foreign language teaching (Onwuegbuzie, Bailey, Christine, & Daley, 1999); therefore it has been dealt with cautiously.

Gardener and MacIntyre (1993) viewed foreign language anxiety as “the apprehension experienced when a situation requires the use of a foreign language with which the individual is not fully proficient” (p.5). When it comes to the anxiety of using a foreign language in classrooms, Horwitz et al. (1986) further explained foreign language anxiety is “a distinct complex of self-perceptions, beliefs, feelings, and behaviours
related to classroom language learning arising from the uniqueness of the language learning process” (p.128).

When language learners become highly anxious, acquisition of a foreign language is unlikely to be successful. Oxford (1999) indicated that anxiety damages language learners’ achievement “indirectly through worry and self-doubt and directly by reducing participation and creating overt avoidance of the language” (p.60). Likewise, Arnold and Brown (1999) contended that anxiety has down-spiralling effects when it occurs in the classroom. What they implied is a vicious circle occurring continuously between learners’ negative feelings and undesirable performance. Similarly, Kondo and Yong (2004) argued that foreign language anxiety could have a negative impact on learners’ performance. Further, Gregersen (2005) maintained that anxious learners often find it difficult to respond effectively to their own mistakes. A few researchers (Casado & Dereshiswsky, 2004; Chen & Chang, 2004; Horwitz, 1991) reported anxious learners have difficulty understanding oral instructions and have problems such as reduced word production when they feel anxious.

It appears that anxiety debilitates foreign language learners’ learning or performance in general. Nevertheless, a few studies suggested otherwise and discovered anxiety could serve as alertness to promote foreign language learning. For example, Alpert and Haber (1960) determined that anxiety could have a beneficial or facilitative effect on student performance. Chastain (1975) conducted a study in Spanish, German, and French classes, and found a positive relationship between anxiety and students’ scores. This study concluded that a proper amount of anxiety could facilitate foreign language learning, even though too much anxiety may cause harm. Recently, Mills, Pajares and Herron (2006) used a group of US undergraduate students as their sample, and discovered the students’ French listening anxiety was positively related to their French listening proficiency. Likewise, Bailey (1983) suggested anxiety has either a negative or a fostering effect, and found that the two-sided effects of anxiety can occur alternately and interchangeably. Bailey (1983) argued that anxiety has motivated herself to study harder, even though sometimes too much anxiety hindered her language learning. In much the same way, Young (1986) maintained that while debilitating anxiety may result in poor performance in foreign language learning, facilitating anxiety can actually lead to an improved performance.

RESEARCH QUESTIONS

In order to address this complex issue, this study invited a sample of 101 undergraduate students from the Department of Applied English, Shih-Chien University (Kaohsiung Campus) to participate in this study. These students’ first languages are either Taiwanese or Mandarin. English is a foreign language to them. We tested their responses to the Foreign Language Classroom Anxiety Scale (FLACS) in order to answer the following questions:

1. How do the English-major undergraduate
students perceive anxiety in a foreign language classroom?
2. Is there a relationship between levels of English language anxiety and the participants’ English courses’ achievement?
3. Is there a statistical difference in foreign language anxiety between males and females?

**METHODOLOGY**

**4.1 Participants**

The participants in this study were recruited from the Department of Applied English, Shih-Chien University (Kaohsiung Campus) in Taiwan. A total of 101 students volunteered for this study. Within the sample, 30.7% (N = 101) of the participants were male and 69.3% (N = 101) of the participants were female (See Table 1). They all attended standardised English class in primary and secondary schools before entering university. On average, the students had 10 years of English learning experience from primary, secondary schools, and the university. In other words, the participants were taught in the context of learning English as a foreign language. Thus, they all have a similar background in learning English. In addition, the university to which the participants were affiliated is an ordinary university, not a technology university. The students’ main focus is on applied English.

Ethical issues on this study were carefully handled, and the participants’ identification and all information they provided were strictly protected. Furthermore, the purpose of this study and any information concerning confidentiality were clearly explained to the participants. When it comes to language research, the authors of the current study bear in mind that “No harm should come to the respondents as a result of their participation in the research” (Dornyei, 2003, p.91).

**4.2 Instruments**

Two instruments were used in this study for data collection. The Foreign Language Classroom Anxiety Scale or called FLCAS (Horwitz, Horwitz, & Cope, 1986) was used to measure the participants’ English language anxiety. This scale includes questions like, “I tremble because of fear when I know that I’m going to be called on in English class”, and “It frightens me when I don’t understand what the teacher is saying in English”, etc. In this study, the wording “foreign language” was replaced by the word, “English.” This scale comprises 33 items. Each item is accompanied by a 5-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree. Anxiety scores lower than 3.0 would indicate some level of anxiety for Items 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 29, 30, 31, and 33. Anxiety scores higher than 3.0 would indicate some level of anxiety for Items 2, 5, 8, 11, 14, 18, 22, 28, and 32 (see Appendix).

This scale was chosen for this study because of its effectiveness in identifying respondents’ perception of foreign language anxiety. Preliminary evidence (Horwitz et al., 1986) indicated adequate test-retest reliability over a period of 8 weeks, yielding $r = .83$ ($p < .001$), and acceptable internal consistency .93 ($N = 75$).
Saito, Horwitz, and Garza (1999) also reported this instrument has a reliability coefficient of .94 (Cronbach alpha, \( N = 383 \)).

Students’ English achievement was assessed by using self-reported data based on their academic results of the English courses in the spring semester of 2009. In the self reports, participants were asked to rate their English achievement according to the actual results they have obtained in all English courses in the spring semester of 2009. Participants rated themselves as “low achievers” if their spring-semester results of the English courses fell in the bottom 33%, or “high achievers” if their results were in the top 33%. The students whose results fell in between rated themselves as “average achievers”. Self reports (Pappamihiel, 2002) and course grades (Aida, 1994; Horwitz, 1986; Saito & Samimy, 1996) have been used in previous research as assessment tools of foreign language proficiency. Students’ actual scores and rankings have also been obtained from the university’s Office of Academic Affairs for students’ reference when they answered the questionnaires.

The last section of the questionnaires asked the participants to provide background information about their years of university and gender.

4.3 Procedures

Volunteers were recruited in the fall semester of 2009. Fliers containing the relevant information regarding this research were made available to the students of the Applied English Department. Those who wished to participate in this research contacted the authors. To encourage students’ participation rate, they were told this research was important and would provide insights and guidelines for teaching approach and curriculum planning in the future. Students then completed a questionnaire containing their background information, and the measures of English anxiety and their reports on their English achievement. In response to the statements on the FLCAS, students were asked to think about their experiences in their English courses in the spring semester of 2009. Therefore, students’ FLCAS scores reflected their anxiety in last semester’s classrooms. In order to encourage honest answers, students were ensured that they were not required to provide their names and a coding system was utilised on their particular questionnaires. In this way, data did not contain any identifiable names. A number of codes were used throughout data collection, analysis, and interpretation. Any identifying information was kept separate and confidential.

4.4 Data Analysis

A few procedures were used to analyse statistical data. Both descriptive and inferential statistics were performed. The first research question was answered by calculating the mean scores of FLACS in the sample, and comparing this mean score with the samples of the previous studies which also used FLCAS to measure anxiety. The scores of FLACS range from 33 to 165. The mean score 99 was used as a cut-off point. Scores lower than 99 were considered below average in their perceived anxiety. Scores over 99 were considered above average in their
perceived anxiety.

To answer the second question, the single-factor between-subjects ANOVA was employed to examine the differences in participants’ English language anxiety among students with different levels of English achievement. This technique was used because it compares mean differences between two or more groups on a single independent variable (Field, 2002). The post hoc comparisons were also used here to further identify the relationship between foreign language anxiety and the sub-groups of English achievement. Comparison of the means of the English language anxiety on the three sub-groups was made to reveal the trend.

To answer the third research question, an independent-samples t test with associated assumption test was employed to analyse the relationship between gender and foreign language classroom anxiety. This technique was used here because it allowed the comparison of the mean scores of two different groups (Pallant, 2001).

RESULTS

A total of 101 undergraduate English-major students participated in this study. Within the sample, 30.7% (N = 31) were male and 69.3% (N = 70) were female (See Table 1). The reason why there were much more female participants than male participants is that English departments in Taiwan’s universities have traditionally attracted more female students than male students.

Among the participants, 43.6% (N = 44) were sophomores, 37.6% (N = 38) were juniors, and 18.8 (N = 19) were seniors (See Table 1). Freshmen were excluded from this study because they did not have academic results available in the spring semester of 2009. (They started their university studies from the fall semester of 2009.)

The descriptive statistics were conducted to determine if the assumption of normality was met prior to further analyses. The distribution of English language anxiety was analysed using the mean, standard deviation, skewness, and kurtosis values. The values of skewness and kurtosis of the current sample were 0.15 and 1.24 respectively, which implied this variable was normally distributed and were considered to fall under normal distribution (Bachman, 2004). With regards to the value of the mean, the sample had a mean of 98.05, indicating the students’ perceived anxiety in their English language classrooms was slightly below average. However, this score was very close to the medium score of 99. When we compared the sample’s scores with the other studies which also used FLCAS to measure foreign language anxieties, we found that the current sample has similar results to those found in previous studies (e.g., Aida, 1994; Horwitz, 1986; Lee, 2002). This finding might suggest that the current sample revealed similar anxiety levels to what their previous counterparts had reported.

5.1 Is there a relationship between levels of English language anxiety and the participants’ English language performance?

To test whether any significant difference existed between the participants’ English anxiety
and their English achievement, a single-factor between-subjects ANOVA was used. A significant overall difference was found among the three groups of English achievement on their English language anxiety, $F(2, 98) = 81.96, p < .001, \eta^2 = .63$. Subsequent post-hoc tests using Tukey’s HSD procedure ($\alpha = .05$) revealed significant differences at $p < .001$ between all possible pairwise comparisons among the English achievement groups.

When comparing the means of the English language anxiety on the three groups, it was found that Group A students reported lower levels of English language anxiety than Group B students and Group C students. Likewise, Group B students reported lower levels of English language anxiety than Group C students. In conclusion, the group of low English achievement (Group C) reported the highest level of English language anxiety, while the group of high English achievement (Group A) reported the lowest level of English language anxiety (See Table 2).

5.2 Is there a statistical difference in foreign language anxiety between males and females?

To investigate whether a significant difference existed between males and females in their levels of foreign language anxiety, an independent-samples $t$ test with associated assumption test was carried out. A Levene test found that the assumption of homogeneity of variance was met, $p = .84$. Therefore a two-tailed independent-samples $t$ test based on equal variances was carried out. No significant gender difference in foreign language anxiety was found, $t(99) = .28, p = .78, d = 0.06$. This result showed similarity to the studies of Aida (1994) and Chang (1996), who also uncovered no significant difference in foreign language anxiety between males and females.

**DISCUSSION AND IMPLICATIONS**

The result obtained in this study supports a few previous studies (for example, Oxford, 1999; Arnold & Brown, 1999; Kondo & Ling, 2004) in ascertaining a negative relationship between language anxiety and achievement. In the context of Taiwan’s foreign language anxiety research, our study also shared similar findings to a few Taiwanese scholars (for example, Chen, 2002; Cheng, 2005; Wu, 2005) in reporting a negative relationship between foreign language anxiety and English achievement. The fact that anxiety variable and English achievement variable are negatively related shows that debilitating anxiety appeared in our sample. As Larsen-Freeman and Long (1991) pointed out, negative relationships indicate the fact that anxiety impairs performance. Hence the significance of our finding is that we reconfirmed high anxious learners tend to perform relatively and significantly less successfully in their English achievement than students experiencing lower anxiety levels.

A number of implications result from this study. First of all, the current study showed that foreign language anxiety is an important issue within the context of foreign language learning. The research results indicated that the participants’ foreign language anxiety affected their English
Foreign Language Anxiety and English Achievement in Taiwanese Undergraduate English-major Students: An Empirical Study

It is clear that foreign language anxiety existed in the classroom, and could become a learning obstacle for English-major students. As a result, students may not be able to learn efficiently and may even shy away from learning. Hence, students should not let this anxiety hold them back from participating in English learning activities in class. Furthermore, it should not prevent them from their English learning.

It is also worth mentioning that Group A students, even though they had better English achievement, also reported a mild level of foreign language anxiety. It is believed that Groups A students were more able to reduce the perception of foreign language demands as anxiety. Such cognitive resilience may act to turn anxiety into an alertness, which in turn could have a beneficial or facilitative effect on their English performance.

Foreign language anxiety should be considered an important factor for English learning. The way that teachers conduct classes can also be an important factor related to learners’ foreign language anxiety (Worde, 1998). For teachers, they should try to create a comfortable learning environment in the classroom for students. It is important to have a comfortable atmosphere so that students would feel less anxious in their learning. Anxiety-provoking activities and behaviours should be avoided. Students’ feelings in the classroom should also be cared about. To reduce foreign language anxiety, teachers play a significant role. A teacher should be mindful about the interaction with the students. They can also provide students with appropriate coping skills such as positive thinking (Kao, 2010) to deal with foreign language anxiety. Positive thinking involves active cognitive and behavioural attempts to manage language anxiety. This may include a “meaning-based” thinking process (Lazarus & Folkman, 1984), in which individuals actively seek positive meaning in foreign language learning (Kao, 2010). It is important that teachers help students recognise their fears of English and help them learn how to cope. In addition, teachers can help students build up their confidence in English learning to enhance their English achievement.

To reduce students’ anxiety in learning, Richards and Rodgers (1986) suggested teachers design comprehensive, interesting, and meaningful activities. Similarly, Krashen and Terrell (1983) advocated natural approaches, in which students emotions were taken into consideration in teachers’ teaching. Krashen and Terrell (1983) also suggested that communicative activities could help students minimise their anxiety and stress in class.

FUTURE RESEARCH

While anxiety can potentially motivate students to study harder (Bailey, 1983), however in
our sample we did not find highly anxious students produce good English achievement. Instead, as our research results have shown, anxiety is related to poor English performance. Despite the negative relationships between foreign language anxiety and English achievement found in the current study, however, why anxiety did not motivate students to study harder and consequently yield good English results remains unclear. Thus, future studies in this area should focus on examining in detail the nature of facilitating anxiety, and its impact on students’ foreign language performance. In addition, future research of whether students with low English achievement would avoid learning English is also needed.

Since the results of this study emphasized the need for EFL instructors to develop a range of support to help students reduce anxiety, further research must be conducted to help EFL instructors clarify whether different types of anxiety exist between students with lower English achievement and students with higher English achievement. Particular interest can be placed on anxiety variables, to facilitate the understanding of whether different types of foreign language anxiety exist in students with different English levels.

It is also recommended that future researchers investigate if non-English-major students report similar results to the current sample. The data can be strengthened through including non-English-major students in the sample by examining or observing their behaviours or reactions to foreign language anxiety. This type of comparison between English-major students and non-English-major students will provide more information and consequently improve the understanding of university students’ foreign language anxiety.

Other important variables, such as types of class and four language skills, may contribute to differences in foreign language anxiety, and should be examined systematically in future investigations.

Lastly, one major future research question would be whether there is any relationship between foreign language learning anxiety and curriculum design and EFL instructors’ teaching styles. The inclusion of these two variables (curriculum design and instructors’ teaching styles) would be a pertinent research undertaking.

**CONCLUSION**

There has been a paucity of available knowledge regarding the relationship between foreign language anxiety and Taiwan’s undergraduate English-major students. The primary purpose of this study has been to contribute to research of the same line. The present study was one of the first empirical studies using Taiwan’s undergraduate English-major students to investigate the relationship between foreign language anxiety and foreign language achievement. The findings of this study are important for researchers, university teaching staff, and the students themselves. It is hoped that increasing and extensive knowledge about the dynamics of foreign language anxiety will guide foreign language educators and researchers. Thus, these people will be in a better position to help reduce anxiety in the English classroom that will better benefit the students’ English language
learning.

REFERENCES


**APPENDIX**

*Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, Horwitz & Cope, 1986)*

1. I never feel quite sure of myself when I am speaking in my English class.
2. I don’t worry about making mistakes in English class.
3. I tremble when I know that I’m going to be called on in English class.
4. It frightens me when I don’t understand what the teacher is saying in the English class.
5. It won’t bother me at all to take more English classes.
6. During English classes, I find myself thinking about things that have nothing to do with the course.
7. I keep thinking that the other students are better at English than me.
8. I am usually at ease during tests in my class.
9. I start to panic when I have to speak without preparation in English class.
10. I worry about the consequences of failing my English class.
11. I don’t understand why some people get so upset over English class.
12. In English class, I can get so nervous that I forget things I know.
13. It embarrasses me to volunteer answers in my English class.
14. I would not be nervous speaking English with native speakers.
15. I get upset when I don’t understand what the teacher is correcting.
16. Even if I am well prepared for English class, I feel anxious about it.
17. I often feel like not going to my English class.
18. I feel confident when I speak in English class.
19. I am afraid that my English teacher is ready to correct every mistake I make.
20. I can feel my heart pounding when I’m going to be called on in English class.
21. The more I study for an English test, the
more confused I get.
22. I don’t feel pressure to prepare very well for English class.
23. I always feel that the other students speak English better than I do.
24. I feel very self-conscious about speaking English in front of other students.
25. English class moves so quickly that I worry about getting left behind.
26. I feel more tense and nervous in my English class than in my other classes.
27. I get nervous and confused when I am speaking in my English class.
28. When I’m on my way to English class, I feel very sure and relaxed.
29. I get nervous when I don’t understand every word the English teacher says.
30. I feel overwhelmed by the number of rules I have to learn to speak English.
31. I am afraid that the other students will laugh at me when I speak English.
32. I would probably feel comfortable around native speakers of English.
33. I get nervous when the English teacher asks questions which I haven’t prepared in advance.

TABLES

Table 1. Participants in this Study

<table>
<thead>
<tr>
<th>Gender</th>
<th>Year</th>
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<td>14</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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</table>

Table 2. Means and Standard Deviations of English Language Anxiety for Different English Achievement Groups

<table>
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<th>English Language Anxiety</th>
<th>Mean</th>
<th>Standard Deviation</th>
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</thead>
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<tr>
<td>Group A students</td>
<td>84.32</td>
<td>10.96</td>
<td></td>
</tr>
<tr>
<td>Group B students</td>
<td>99.84</td>
<td>5.61</td>
<td></td>
</tr>
<tr>
<td>Group C students</td>
<td>115.58</td>
<td>11.93</td>
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</table>
Abstract

This study explores the impact of foreign language anxiety on English achievement in Taiwanese undergraduate English-major students. To understand the complex nature of foreign language anxiety, this study examines the psychological reactions of English-major students at National Cheng Kung University in Taiwan. The study used a questionnaire design to collect quantitative data to answer the research questions. A total of 101 students from the English Department participated in the study. The results showed that the group with high English achievement experienced lower foreign language anxiety than the group with moderate and low English achievement. The group with moderate English achievement also experienced lower foreign language anxiety than the group with low English achievement.

Teaching implications?

In the teaching aspect, teachers can give students more time to think, prepare beforehand, and provide appropriate feedback, and maintain a relaxed, friendly, and humorous atmosphere. This study helps foreign language educators understand students better and help them recognize foreign language anxiety. It is expected to gain a better understanding of foreign language anxiety and assist students affected by foreign language anxiety.