

A Study of English Language Classroom Anxiety and Its Predictive Effects on Students' English Achievement

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Abstract

In the process of foreign language learning, emotional factor-anxiety, has far-reaching impact on learning results. Anxiety is often regarded as a negative emotional factor in foreign language learning, which may hinder the development of language absorption and application ability. This study investigates the relationship between English classroom anxiety and English achievement among 30 English majors at Nankai University, class of 2022. Utilizing a self-administered questionnaire adapted from the Foreign Language Classroom Anxiety Scale (FLCAS) and analyzing data through correlation and regression analyses, the study reveals a significant negative correlation between students' self-assessed English performance and their levels of anxiety. The findings demonstrate that increased anxiety is predictive of lower English achievement, underscoring the impact of affective factors on language acquisition.

Keywords

English classroom anxiety, English achievement, correlation, regression

1. Introduction

Foreign language classroom anxiety is one of the core issues in the field of language acquisition research, and it refers to the scenario-specific anxiety experienced by learners during foreign language learning (Horwitz, 2001). This anxiety involves not only concerns about language proficiency but also fear of social impressions and negative evaluations (MacIntyre & Gardner, 1991). Research has shown that there is a significant negative correlation between foreign language anxiety and learners' academic performance (Liu, 2006b; Yan & Horwitz, 2008). Specifically, high levels of foreign language anxiety lead to a decline in students' performance in terms of memory, attention, and motivation (Horwitz et al., 1986), which in turn affects their language acquisition efficiency.

Researchers have proposed different theoretical frameworks for exploring the effects of anxiety in the foreign language classroom. For example, Krashen's (1981) Affective Filter Hypothesis (AFH) emphasizes that learners' affective states, including anxiety, self-esteem, motivation, and attitudes, have a significant impact on the efficiency of language learning. Specifically, the Affective Filter Hypothesis proposes the concept of an "affective filter", which is a psychological filter. When a learner is stressed or anxious, this filter rises, preventing linguistic input from becoming learnable and thus affecting the effectiveness of language acquisition (Krashen, 1981). Skehan (1989) further states that emotional states can directly affect a learner's

cognitive processing ability, which in turn affects the speed and quality of language acquisition. In addition, MacIntyre and Gregersen (2012) explored how positive emotions can facilitate language learning, while Dörnyei and Ushioda's (2009) motivational self-systems theory links motivation to self-concept, emphasizing the ideal self and the ability to cope with external pressures (Dörnyei, 2005).

In the context of foreign language teaching in China, Liu's (2006a) study revealed a quasi-causal relationship between college students' English classroom anxiety and their English learning performance. The results of her cross-lagged study showed that English classroom anxiety at the beginning of the semester significantly and negatively predicted English academic performance at the end of the semester, whereas English grades at the beginning of the semester did not significantly predict classroom anxiety at the end of the semester. This finding further confirms the negative impact of foreign language anxiety on foreign language learning achievement and provides important insights into foreign language teaching practices (Arnold, 1999).

In summary, extensive theoretical research and empirical data have shown that there is a strong link between psychological anxiety in foreign language learning and academic performance and that anxiety in the foreign language classroom has a profound effect on learners' language learning (Ellis, 2006). This study aims to verify the effect of foreign language learning anxiety on academic performance by exploring the correlation between foreign language classroom anxiety and academic performance and conducting regression analysis.

2. Methodology

2.1 Subjects of the Study

The subjects of this study are all students majoring in English in the class of 2022 at Nankai University, totaling 30 students. All participants passed the English Major IV examination.

2.2 Research Instrument

The research instrument which was a self-administered questionnaire adapted from the Foreign Language Classroom Anxiety Scale (FLCAS) designed by Horwitz et al. (1986). The questionnaire consists of two subscales: Foreign Language Classroom Anxiety (FLCAS) and English Achievement (EA). The English Classroom Anxiety subscale contains a number of items designed to assess students' feelings of anxiety, such as nervousness, fear of speaking, and fear of making mistakes in the English classroom, while the English Achievement subscale asks students to self-assess their English listening, speaking, reading, and writing skills, as well as their performance on a recent English test. The questionnaire was scored on a 5-point Likert scale to ensure quantification and comparison of data.

2.3 Data Collection

The questionnaire was sent to students after their English IV results are released. The language of the questionnaire was Chinese to ensure that all students could understand the questionnaire. Students were asked to complete the questionnaires during class, with each completion time limited to 10 minutes. In the end, 30 valid questionnaires were collected. The researcher also collected data on the participants' English major grade 4 scores from the current semester for control analyses; however, the relevant grade data were not disclosed in light of privacy protection concerns.

2.4 Data Analysis

The statistical analysis of the data was conducted using SPSS software. First, students' basic information and questionnaire scores were analyzed through descriptive statistics. Then, Pearson's correlation coefficient (Pearson's correlation) was used to analyze the correlation between the dimensions of English classroom anxiety and English grades. Finally, multiple linear regression analysis (MLRA) was used to explore the predictive effect of English classroom anxiety on English achievement. In the regression analysis, English achievement was used as the dependent variable and the dimensions of English classroom anxiety were used as the independent variables.

3. Results

3.1 Correlation Analysis of Foreign Language Classroom Anxiety and English Achievement

In this study, we first conducted a questionnaire survey on 30 English majors in the class of 2022 at Nankai University, aiming to explore the correlation between foreign language classroom anxiety and English performance. By analyzing the questionnaire data, we found a series of significant correlation coefficients which reveal a negative relationship between the dimensions of anxiety and English grades (see Table 1).

Table 1 shows the Pearson's correlation coefficients between the dimensions of anxiety in the English classroom and English achievement. The results showed that all anxiety dimensions showed significant negative correlations with English performance ($p < 0.05$ or $p < 0.01$), with the lowest correlation coefficient between “I am afraid to speak in English class” and English performance ($r = -0.669$, $p < 0.01$), indicating that this anxiety dimension had the most significant effect on English performance. In addition, the correlation coefficient between “I worry that my English writing skills are inadequate” and English performance was $r = -0.753$, $p < 0.01$, which was the strongest correlation among all anxiety dimensions and English performance.

Table 1: Correlation analysis of English classroom anxiety and English achievement

	4、 Foreign Language Classroom Anxiety—I usually feel nervous in English class.	4、 I'm afraid to speak in English class.	4、 I'm worried about making mistakes in English class.	4、 I'm afraid of being asked questions in English class.	4、 I'm worried that my English pronunciation isn't good enough.	4、 I'm afraid that I won't be able to understand my teacher or classmates in English class.	4、 I'm worried about my lack of English writing skills	4、 I'm afraid to participate in group discussions in English class
5、 English Achievement—How good do you think your English listening comprehension skills are?	-0.570**	-0.561**	-0.686***	-0.564**	-0.538**	-0.510**	-0.616***	-0.625***
5、 How well do you think you can express yourself in spoken English?	-0.549**	-0.624***	-0.658***	-0.570**	-0.604***	-0.637***	-0.666***	-0.669***
5、 How well do you think you can read in English?	-0.470**	-0.449*	-0.584***	-0.496**	-0.286	-0.297	-0.454*	-0.507**
5、 How well do you think you can write in English?	-0.425*	-0.437*	-0.525**	-0.465**	-0.305	-0.553**	-0.753***	-0.589***
5、 How do you feel about the scores you received on your recent English test?	-0.592***	-0.507**	-0.602***	-0.463**	-0.305	-0.380*	-0.391*	-0.462*
5、 How well do you think you are doing in English class?	-0.617***	-0.632***	-0.692***	-0.589***	-0.508**	-0.557**	-0.630***	-0.545**
5、 How fast do you think you are progressing in your English studies?	-0.397*	-0.415*	-0.454*	-0.338	-0.405*	-0.501**	-0.570**	-0.371*
5、 How confident are you in your English language skills?	-0.487**	-0.523**	-0.606***	-0.538**	-0.424*	-0.465**	-0.545**	-0.630***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

3.2 Regression Analysis

Further regression analyses provided evidence of the statistical significance of the effect of anxiety in the foreign language classroom on English achievement. The model was significant overall ($F(8,21) = 4.581$, $p = 0.002$), explaining 53.6% of the variance ($R^2 = 0.636$), with an adjusted R^2 of 0.497. Regression analyses revealed that Foreign Language Classroom Anxiety (FLCA) had a significant negative predictive effect on English achievement ($\beta = 0.182$, $p < 0.05$), indicating that as the level of anxiety increases, there is a tendency for students' English achievement to decrease.

The covariance diagnostic results showed that the VIF values of all variables were below 10, indicating that there was no serious problem of multicollinearity in the model. The tolerance (Tolerance) values were all higher than 0.1, further confirming the results of the covariance diagnosis.

4. Conclusion

4.1 The Effect of English Classroom Anxiety on English Achievement

This study explored the relationship between English classroom anxiety and English achievement among English majors in the class of 2022 at Nankai University through correlation and regression analyses. The results of the study showed that there was a significant negative correlation between students' English

classroom anxiety and their English grades, which is consistent with the results of previous studies (Horwitz, 2001; Liu, 2006b). As noted by Horwitz (2001), there is a negative correlation between foreign language learning anxiety and foreign language achievement. This negative correlation may stem from the depletion of cognitive resources by anxiety (Dewaele & MacIntyre, 2014), leading to a decline in students' performance in language learning (Oxford, 2016; Pekrun et al., 2005). Feelings of anxiety may lead students to be more hesitant and self-censoring in their language output, thus affecting their language fluency and accuracy.

In addition, regression analysis further confirmed the negative predictive effect of English classroom anxiety on English performance. It was found that students' anxiety levels predicted students' performance in the Specialized Test to a certain extent, indicating that students with higher anxiety levels had a higher probability of failing to perform well in the test or failing to reach their expected level. This finding emphasizes the importance of identifying and reducing students' anxiety in English language teaching in order to improve learning outcomes. By reducing students' anxiety levels, teachers can create an environment that is more conducive to learning, which in turn promotes the development of students' language skills.

4.2 Limitations of the Study

Although this study provides empirical data on the relationship between foreign language classroom anxiety and English performance, there are still some limitations:

First, the study sample was limited to 30 students majoring in English in the class of 2022 at Nankai University, which limits the generalizability and extrapolation of the findings. Future research could consider expanding the sample size to enhance the representativeness and reliability of the findings. Second, the data collection in this study was limited to a single major exam, which failed to track student changes over time. Future studies could use longer-term tracking to more fully understand the dynamic relationship between anxiety and learning outcomes. Additionally, this study used only one method of data collection, the questionnaire, which may be subject to measurement bias. Although correlation and regression analyses provided preliminary evidence of the relationship between anxiety and achievement, the design of this study did not strictly conform to a cross-temporal lag design. Future studies could combine interviews, observations, and other methods and utilize multiple analytical tools to enhance the multidimensionality and depth of the data. In addition, considering the impact of cultural differences on foreign language learning anxiety, a cross-cultural comparative study would help to understand this phenomenon more comprehensively.

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Conflicts of Interest

The authors declare no conflict of interest.

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