

# The Effect of Foreign Language Learning Anxiety on Classroom Climate and Quiz Performance

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## Abstract

**This paper examines the effects of foreign language learning anxiety (FLA) on classroom climate and quiz performance. Foreign language learning anxiety is a generalized emotion that arises in the process of learning a second language and is fundamentally a fear of language learning. Through an empirical study, this paper analyzes the relationship between anxiety levels, perceived classroom climate, and quiz scores of 150 college students (including different genders and language levels). The results of the study found a relationship between anxiety and performance: there was a significant negative correlation between foreign language learning anxiety and test scores indicating that the higher the level of anxiety, the lower the performance. The negative correlation between anxiety and achievement was more significant for advanced learners and stronger than for beginners and intermediate learners. Also reflecting the relationship between classroom climate and achievement: there was a significant positive correlation between classroom climate and test scores, indicating that a positive classroom climate was associated with higher test scores. Positive classroom climate helps to reduce learning anxiety. Foreign language learning anxiety and classroom climate together had a significant on quiz performance. The study supports Krashen's affective filtering hypothesis that emotional factors such as anxiety can hinder effective language input and affect learning effectiveness. Therefore, in teaching and learning, educators should mold a positive classroom climate to enhance language learning effectiveness. Help students manage anxiety by organizing tutorials and mental health workshops. Improve classroom climate: Use cooperative learning and group discussion to enhance student interaction and create a supportive learning environment. Personalized learning support: providing personalized resources and support for students at different learning levels.**

## Keywords

**Learning Anxiety; Classroom Climate; Test Scores.**

## 1. Introduction

In today's globalized world, mastering one or more foreign languages is not just for test scores, but has become an important tool for personal development or professional success. However, for most ordinary people, foreign language learning is often accompanied by considerable psychological pressure, which may even evolve into anxiety, an emotional reaction that has a moniker and is widely known as "foreign language learning anxiety" in the academic world. It is a complex, multidimensional symptom (Young, 1991b). Scholars Horwitz[1], Horwitz and Cope first defined foreign language learning anxiety in 1986 as a specific type of anxiety related to language learning. This type of anxiety may not only hinder language acquisition, but may also affect the learner's overall ability in language expression and comprehension. Some students with high levels of anxiety in foreign language learning even have psychological disorders, similar to those who have the same experience in learning mathematics (Tobia,

1979).... Since 1970, the effects of anxiety in learning a second foreign language have been studied extensively. According to various studies on the China Knowledge Network, foreign language learning anxiety is closely related to learners' performance in a language program, and its effects are related to classroom participation, motivation[2], and ultimately achievement. In particular, classroom climate, as an important part of foreign language teaching, has a significant impact on learners' emotions and anxiety levels. For example, a classroom environment with a supportive and encouraging atmosphere can help reduce anxiety, whereas an overly harsh or viciously competitive environment may exacerbate learners' anxiety. In addition, foreign language learning achievement is a direct indicator of learning effectiveness, and learning achievement not only reflects the extent to which learners have mastered their knowledge, but also serves as an important feedback on the results of teaching and learning. Understanding how foreign language learning anxiety affects classroom climate and academic performance has important theoretical and practical implications for designing more effective teaching strategies and improving the language education environment.

The purpose of this paper is to explore the relationship between foreign language learning anxiety and classroom climate and test scores through empirical research, with a view to providing more targeted improvement suggestions for foreign language teaching, helping to reduce the anxiety level of learners, and improving the overall effectiveness of foreign language learning.

## 2. Literature Review

### 2.1. Definition of foreign language learning anxiety

Foreign language learning anxiety has been defined as a specific type of anxiety that occurs during the process of learning a second language, which stems mainly from a sense of fear about the language learning activity, including concerns about inadequate performance and lack of confidence in communicating in a foreign language. Horwitz, Horwitz, and Cope (1986), in their pioneering study[3], proposed the Foreign Language Classroom Anxiety Scale ( In their pioneering study, Horwitz, Horwitz, and Cope (1986) introduced the Foreign Language Classroom Anxiety Scale (FLCAS), which has become a commonly used assessment tool in subsequent studies. Anxiety usually manifests itself in the form of rapid heartbeat, nervousness, worry, and hesitation and hesitation in verbal expression. Anxiety is considered one of the most critical psychological variables, and language anxiety is a complex psychological phenomenon specific to language learning. The outwardly typical response to foreign language learning anxiety can be the general symptoms of anxiety: for example, “sweaty palms of the learner's hands[4]; pain in the abdomen; increased heart rate and pulse rate”, etc. “voice change; inability to produce the normal sounds and rhythms of the language; feeling of ‘freezing’ when standing up to answer a question; forgetting vocabulary that has only recently been learned; or even not being able to speak at all, just remaining silent”, and so on. Some of the extreme symptoms may be “skipping class; avoiding eye contact with the teacher; coming to class without studying” and so on. In general, students with learning anxiety tend to avoid more complex problems, while more relaxed students are more likely to be eager to learn. Therefore, language anxiety is negatively related to language course grades and teachers' ratings of student achievement.

### 2.2. Classroom climate

Classroom climate, especially teacher support and tolerance, strong peer interaction, and the design of classroom activities[5], is crucial to learners' affective experience and learning outcomes. According to Oxford (1999), a positive, inclusive and encouraging classroom climate can significantly reduce learning anxiety and increase language efficiency. On the contrary, a

highly competitive and critical environment may exacerbate learners' anxiety and thus hinder the language learning process.

### **2.3. Achievement Influence**

Learning achievement is a direct standard for testing the effectiveness of foreign language learning. The relationship between learning anxiety and academic performance has been a hot topic in psychology and education, and MacIntyre and Gardner (1991) have pointed out through a series of experimental studies that high levels of foreign language learning anxiety are significantly associated with low language learning performance. They argued that anxiety may interfere with normal cognitive processing functions, especially in language comprehension and output, thus directly affecting test scores.

### **2.4. Theoretical framework**

The interaction of foreign language learning anxiety with classroom climate and academic performance can be explained through Krashen's Input Hypothesis Theory. Krashen proposed the Affective Filter Hypothesis (AFH)[6], which suggests that when learners feel nervous or anxious, their affective filters are elevated, thus hindering the absorption of effective language input. In addition, Dörnyei and Ryan (2015) in their theoretical framework of motivation also emphasized the effect of learning environment on learners' motivation, further confirming the importance of classroom climate on foreign language learning achievement.

## **3. Research Methodology**

### **3.1. Sample Selection**

One hundred and fifty foreign language learners from a university were selected for this study. The participants were between 18 and 25 years old, including 80 females and 70 males, all of whom were enrolled in the university. The participants' backgrounds in foreign language learning varied, including beginner[7], intermediate, and advanced levels, with 50 participants at each level. This sample was chosen to explore the potential effects of different genders and language levels on learning anxiety, perceived classroom climate, and academic performance.

### **3.2. Data Collection Methods**

Data for the study were collected in two ways: first, learners' anxiety levels were assessed using the Foreign Language Classroom Anxiety Scale (FLCAS); second, students' perceptions of classroom climate were collected through a self-designed classroom climate assessment questionnaire. In addition, learners' foreign language test scores were obtained through final exam scores, which were provided by the teachers involved in the study to ensure the accuracy and reliability of the data.

### **3.3. Methods of Data Analysis**

The data will be analyzed through descriptive statistics to gain an initial understanding of the sample characteristics, including means and standard deviations of anxiety levels, perceptions of classroom climate, and quiz scores. The main methods of analysis include Pearson correlation analysis and multiple regression analysis. Pearson correlation analysis was used to explore the correlation between foreign language learning anxiety, perceived classroom climate, and quiz grades. Multiple regression analysis was used to further analyze the predictive power of foreign language learning anxiety and perceived classroom climate on test scores. All data analyses will be conducted using SPSS statistical software.

## 4. Findings of the Study

Descriptive statistics, Pearson's correlation analysis, and multiple regression analysis were used in this study to analyze the relationship between foreign language learning anxiety[8], classroom climate, and quiz grades. Data analysis showed that the average foreign language learning anxiety score of the sample was 3.2 (standard deviation 0.8), the average classroom climate score was 3.9 (standard deviation 0.6), and the average quiz score was 72 (standard deviation 12).

### 4.1. Results of Pearson correlation analysis

Through Pearson correlation analysis, we found that there is a significant negative correlation between foreign language learning anxiety and test scores ( $r = -0.61$ ,  $p < 0.01$ ), indicating that the higher the level of anxiety, the lower the learners' test scores. Meanwhile, there was a significant positive correlation between classroom climate and test scores ( $r = 0.54$ ,  $p < 0.01$ ), indicating that a positive classroom climate was associated with higher test scores. In addition[9], there is also a significant negative correlation between foreign language learning anxiety and classroom climate ( $r = -0.48$ ,  $p < 0.01$ ), which suggests that the more positive the classroom climate, the lower the learners' anxiety level.

### 4.2. Results of Multiple Regression Analysis

Multiple regression analysis further explored the effects of foreign language learning anxiety and classroom atmosphere on quiz performance. The results showed that these two variables together significantly predicted quiz performance ( $F(2, 147) = 36.71$ ,  $p < 0.001$ ), with the model explaining 42% of the total variance. Specifically, the negative effect of foreign language learning anxiety ( $\beta = -0.58$ ,  $p < 0.001$ ) and the positive effect of classroom climate ( $\beta = 0.32$ ,  $p < 0.01$ ) were both significant.

### 4.3. Results of Subgroup Analysis

In order to gain insight into the situation of students at different learning levels, subgroup analyses were conducted on beginner, intermediate, and advanced learners. The analysis showed that while all levels showed similar correlation trends, the negative correlation between anxiety and achievement was more significant for advanced learners ( $r = -0.69$ ,  $p < 0.01$ ) than for beginner learners ( $r = -0.53$ ,  $p < 0.01$ ) and intermediate learners ( $r = -0.57$ ,  $p < 0.01$ ).

## 5. Discussion

### 5.1. Comparison of results

The results of the present study are consistent with an earlier study by Horwitz et al. confirming a significant negative correlation between foreign language learning anxiety and students' language learning achievement. In addition, our study further reveals a positive correlation between classroom climate and academic performance, echoing Oxford's (1999) study, which noted that a positive classroom climate significantly enhances learning efficiency and achievement. These findings emphasize the importance of creating a supportive and encouraging learning environment in educational practice.

### 5.2. Theoretical and Practical Implications

Theoretically, the results of this study support Krashen's affective filtering hypothesis, which states that emotional factors (e.g., anxiety) can influence language learners' information processing and acquisition efficiency. Indeed, this emphasizes the need for educators to pay attention to learners' affective states and how these states can be modulated through classroom climate when designing and implementing language teaching strategies.

Furthermore, these findings have direct implications for foreign language teaching practices. Teachers should realize that reducing students' learning anxiety and shaping a positive classroom climate not only improves learners' affective experience, but also actually enhances learning outcomes. For example, a more open and supportive learning environment can be created by increasing cooperative group activities and encouraging students to express and share their learning experiences.

### 5.3. Limitations and Future Research Directions

Although this study provided meaningful insights, there are some limitations. First, the generalizability of the results may be limited by the fact that the sample was limited to students at one university. Future research could be extended to different types of educational institutions and cultural contexts to enhance the extrapolation of the results. Second, this study relied primarily on self-reported questionnaire data, which may have been influenced by social desirability effects. Future studies could consider using more objective measurement tools such as behavioral observations and physiological indicators to obtain a more comprehensive assessment of anxiety and classroom climate.

## 6. Conclusion and Recommendations

### 6.1. Conclusion

This study clearly demonstrated a significant negative correlation between foreign language learning anxiety and students' test scores, and a significant positive correlation between positive classroom climate and students' test scores. These findings validate the significant influence of affective factors, especially anxiety and classroom environment, on learning outcomes. In addition, through subgroup analyses, we further confirmed that these relationships existed consistently across students at different learning levels.

Shortcomings and Limitations

### 6.2. Sample Representativeness Limitations:

The sample in this study was from only one university, which may not be fully representative of student populations from different educational backgrounds. Future studies should consider including students from different regions and types of educational institutions to enhance the generalizability and extrapolation of findings.

#### 6.2.1. Limitations of data collection methods:

This study relied heavily on self-reported questionnaire data, which may have been influenced by participant honesty and self-report bias. The social desirability effect may have led students to overly positively or negatively assess their anxiety and classroom climate perceptions when completing the questionnaire.

The questionnaire methodology also lacked support from observational and physiological data that may have provided a more comprehensive assessment of anxiety and mood states.

#### 6.2.2. Research design limitations:

The research design was a cross-sectional study with data collected at only one point in time, making it difficult to determine causality. Future research could use a longitudinal study design to track changes in students' anxiety and achievement development to more accurately determine how anxiety affects learning outcomes over time.

#### 6.2.3. The singularity of anxiety measures:

The Foreign Language Classroom Anxiety Scale (FLCAS) used in this study, although widely used, may not be sufficient to cover all dimensions of anxiety, such as test anxiety,



communicative anxiety, etc. Future studies should consider using multidimensional anxiety assessment tools to obtain a more comprehensive understanding of anxiety characteristics.

### 6.3. Recommendations

Based on the above findings and identified shortcomings, the following recommendations are made:

#### 6.3.1. Reduce learning anxiety:

Organize regular counseling and mental health workshops to help students identify and manage anxiety, especially through psychological interventions such as cognitive behavioral therapy.

#### 6.3.2. Improve classroom climate:

Encourage teachers to use cooperative learning and group discussion methods to enhance positive interactions among students and create a more open and supportive learning environment.

#### 6.3.3. Personalized learning support:

Provide personalized learning resources and tutoring for students at different learning levels to ensure that each student learns at a pace and style that is appropriate for him/her, with additional support especially for low achievers and high anxiety students.

#### 6.3.4. Future studies

Future research should consider including a wider sample and using diverse data collection tools to further explore and validate the findings of this study and enhance the generalizability and application of these conclusions.

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