

English Learning Anxiety and Its Effect on the Academic Performance of Chinese University Students

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Abstract:

Anxiety is widely regarded as a significant factor in foreign language learning. To explore the anxiety levels of Chinese university students in university stage's English learning, this study investigated 41 students from a university in Shanghai, China and employed SPSS 24.0 to conduct a quantitative research. The results found that students generally hold a relatively high level of anxiety in English learning ($r=-0.483$, $p<0.01$). Using the Foreign Language Classroom Anxiety Scale (FLCA), the study identified four key types of anxiety and each variable negatively influences communicative performance. Among these four dimensions, Communicative Anxiety had the most negative effect ($r=-0.500$, $p<0.01$), especially when speaking a foreign language in classroom settings. Further analysis of specific questions, such as discomfort in speaking before peers (Q24), reveals substantial score disparities between high- and low-anxiety groups, with differences exceeding 80 points. Furthermore, the paper discusses potential underlying causes of these findings and provides practical suggestions for educators to relieve students' anxiety, thereby fostering a more beneficial learning environment.

Keywords: English Learning; Foreign Language Learning; Language Learning Anxiety

1. Introduction

As a crucial factor in language acquisition, language is deeply affected by foreign language pressure, hindering language performance and elevating state anxiety [1]. MacIntyre and Gardner pointed out that Language anxiety can be expressed as the tension and apprehension, especially connected with second language contexts, including speaking, listening, and

learning [2]. According to their results, compared with those who were more relaxed, anxious students have more difficulty demonstrating the knowledge that they do possess. General Anxiety, including Trait Anxiety, State Anxiety, and Test Anxiety, showed no significant correlation with language learning performance [1].

Horwitz and his research team first introduced and systematically developed the notion of FLCA and

regarded it as a specific anxiety reaction related to language learning environments, characterized by emotional feelings such as tension, worry, and fear, accompanied by physical symptoms such as sweating, rapid heartbeat. In the classroom, students often feel anxious due to fear of making mistakes, being evaluated by teachers or peers, or failing to comprehend the target language, leading to behaviors like “mental blocks” and avoidance of speaking. Furthermore, some students hold wrong beliefs about language learning, such as “one must be perfect before speaking,” which further enhances anxiety. To quantify foreign language anxiety, Horwitz developed the Foreign Language Classroom Anxiety Scale (FLCAS), comprising 33 items that cover communication apprehension, test anxiety, and fear of negative evaluation [3].

Language learning anxiety has typically been examined through three main approaches: trait, state, and situation-specific perspectives. Nevertheless, MacIntyre and Gardner argue that these frameworks fail to adequately define foreign language anxiety or comprehensively illustrate its impact on language acquisition, which has shifted scholarly attention toward the situation-specific viewpoint

[4]. As a result, they suggested that future research could focus more on the relationship between anxiety and specific language skills.

Therefore, the paper aims to investigate is whether there is an association between English language anxiety and academic performance among Chinese university students, with further analysis focusing on four anxiety dimensions: Communicative Anxiety (hereinafter the text referred to as CA); Fear of Negative Evaluation (hereinafter the text referred to as FoNE); Test Anxiety(hereinafter the text referred to as TA); Anxiety of English Classes(hereinafter the text referred to as AoEC).

2. Research Methods

2.1 Materials

The questionnaire used in this research is the FLCA scale, consisting of the following four parts: CA, FoNE, TA, AoEC. Table 1 below lists the question numbers for each anxiety type.

Table 1. Foreign Language Anxiety Dimensions and Corresponding Question Numbers

Anxiety Variables	Question Number
CA	1, 9, 14, 18, 24, 27, 29, 32
FoNE	3, 7, 13, 15, 20, 23, 25, 31, 33
TA	2, 8, 10, 19, 21
AoEc	4, 5, 6, 11, 12, 16, 17, 22, 26, 28, 30

2.2 Participants

This study recruited 43 students from a certain university in Shanghai to complete the questionnaire. All 43 questionnaires were collected, with 41 valid for analysis. The participants consisted of 9 English majors and 32 non-English majors, including 19 males and 22 females.

2.3 Research Process

Adopting a quantitative research approach, this study conducted data collection through Wenjuanxing (www.wjx.cn), a specialized online survey platform, using a 5-point Likert scale for assessment.

By employing SPSS 24.0, the research process first used descriptive statistics to analyze the distribution characteristics of four anxiety dimensions. Subsequently, Pearson Correlation (hereinafter the text referred to as Pc) analysis was conducted to investigate the associations between both overall anxiety levels and four specific anxiety dimensions with CET4 scores. The correlation analysis of

each question in the communicative anxiety scale was to find the impact mechanisms of communicative anxiety. Finally, one-way ANOVA with LSD post-hoc tests was implemented to compare CET4 score differences among groups with varying degrees of anxiety, focusing on the most representative communicative anxiety items.

3. Result

3.1 Descriptive Statistics of Tertiary Education 'Students' English Learning Anxiety

Table 2 revealed that the communication anxiety dimension showed the highest mean score of 3.12 (SD=1.13) than other three dimensions; fear of negative evaluation averaged 3.07 (SD=1.18); test anxiety averaged 2.98 (SD=1.18); while classroom environment anxiety showed the lowest mean score of 2.67 (SD=1.27). The standard deviations across all dimensions indicated a certain degree of dispersion in participants' scores for each anxiety di-

mension.

Table 2. Descriptive Statistics of FLCAS Dimensions

Anxiety Types	Mean	Standard Deviation
CA	3.1189	1.1291
FoNE	3.0732	1.1782
TA	2.9756	1.1808
AoEC	2.6674	1.2706
Average	2.9342	1.1394

3.2 Associations Between Anxiety and English Score

Table 3 shows that the average CET4 score was 589.54 (SD=51.82), while the average anxiety level was 2.93 (SD=1.14). Pc analysis from Table 4 revealed a statistical-

ly significant negative correlation between CET4 scores and anxiety levels ($r=-0.483$, $p<0.01$), suggesting that students with higher test scores tended to report lower anxiety levels, whereas those with lower scores reported higher anxiety levels.

Table 3. Descriptive Statistics of CET4 Scores and Anxiety Levels

	Mean	Standard Deviation
CET4 Score	589.54	51.824
Average	2.9342	1.1393

Table 4. Pc between CET4 Scores and Anxiety Levels

		CET4 Score	Anxiety
CET4 Score	r	1	-.483**
	p		.001
Anxiety	r	-.483**	1
	p	.001	

Note. ** $p < .01$ (two-tailed test (hereafter TT)).

Table 5 further presents the results of a Pc analysis examining the relationship between four variables (CA, FoNE, TA, AoEC). and CET4 scores. The findings reveal statistically significant negative correlations for all variables (ranging from -0.408 to -0.500, $p < .01$), indicating that higher levels of anxiety are associated with lower CET4 performance. CA shows the strongest negative correlation ($r=-0.500$, $p = .001$), followed by AoEC ($r=-0.470$,

$p = .002$) and FoNE ($r=-0.438$, $p = .004$), while TA has a slightly weaker but still significant association ($r=-0.408$, $p = .008$). These results suggest that reducing language-related anxiety, particularly in communication and classroom settings, may improve English test performance. The use of two-tailed testing and the clear significance thresholds (** $p < .01$) enhances the reliability of these findings.

Table 5. Pc Between Four Language Anxiety Factors and CET4 Performance

Anxiety Variables		CET4 Score
CA	r	-.500**
	p	.001
FoNE	r	-.438**
	p	.004

TA	<i>r</i>	-.408**
	<i>p</i>	008
AoEC	<i>r</i>	-.470**
	<i>p</i>	002

Note. ** $p < .01$ (TT).

3.3 How Communicative Anxiety Affects CET4 Results: Evidence from Correlation and ANOVA

From Table 5, communicative anxiety is found to be the

most significant negative impact on scores. To further analyze this situation, Table 6 examines the correlation between the 8 anxiety-related questions and the test scores.

Table 6. Pc Analysis Between Eight Questions of Communicative Anxiety and CET4 Scores

CA Questions		CET4 Score
Q1	<i>r</i>	-.432**
	<i>p</i>	005
Q9	<i>r</i>	-.370*
	<i>p</i>	017
Q14	<i>r</i>	-.268
	<i>p</i>	090
Q18	<i>r</i>	-.388*
	<i>p</i>	012
Q24	<i>r</i>	-.541**
	<i>p</i>	000
Q27	<i>r</i>	-.460**
	<i>p</i>	003
Q29	<i>r</i>	-.425**
	<i>p</i>	006
Q32	<i>r</i>	-.452**
	<i>p</i>	003

Note. ** $p < .01$ (TT).

The data in Table 6 illustrate that all eight CA questions show negative correlations with CET4 scores. The strongest and most statistically significant relationships were found for Q24 ($r = -0.541$, $p < 0.01$), Q27 ($r = -0.460$, $p < 0.01$), Q1 ($r = -0.432$, $p < 0.01$), and Q32 ($r = -0.452$,

$p < 0.01$), suggesting that these anxiety factors have particularly remarkable negative impacts on test scores. Q9 ($r = -0.370$, $p < 0.05$) and Q18 ($r = -0.388$, $p < 0.05$) showed significant but weaker correlations, while Q14 ($r = -0.268$, $p > 0.05$) did not reach statistical significance.

Table 7. ANOVA with LSD Post-hoc Tests for CET4 Scores by Q24 Anxiety Levels

Q24	Q24	Mean Difference (I-J)	Std. Error	Significance
Strongly Disagree	Disagree	1.100	21.286	.959
	Neutral	42.375	22.438	0.067
	Agree	45.444*	21.806	.044
	Strongly Agree	81.667**	24.236	.002

Disagree	Strongly Disagree	-1.100	21.286	959
	Neutral	41.275	21.286	060
	Agree	44.344*	20.619	038
	Strongly Agree	80.567**	23.174	001
Neutral	Strongly Disagree	-42.375	22.438	067
	Disagree	-41.275	21.286	060
	Agree	3.069	21.806	889
	Strongly Agree	39.292	24.236	114
Agree	Strongly Disagree	-45.444*	21.806	044
	Disagree	-44.344*	20.619	038
	Neutral	-3.069	21.806	889
	Stringly Agree	36.222	23.652	134
Strongly Agree	Strongly Disagree	-81.667**	24.236	002
	Disagree	-80.567**	23.174	001
	Neutral	-39.292	24.236	114
	Agree	-36.222	23.652	134

Note. * $p < .05$; ** $p < .01$

Table 7, an ANOVA analysis, further examines the differences in CET4 scores across five different levels of agreement with Q24 (“Speaking a foreign language in front of classmates makes me very uncomfortable”). The LSD post-hoc tests reveal statistically significant differences between these five groups. Specifically, students who chose “strongly agree” scored extremely lower (by 81.667 points, $p=0.002$) than those who “strongly disagree”, and similarly lower (by 80.567 points, $p=0.001$) compared to the “disagree” group. The “agree” group also scored remarkably lower than both the “strongly disagree” (by 45.444 points, $p=0.044$) and “disagree” (by 44.344 points, $p=0.038$) groups. However, no significant differences were found between the “neutral” group and any other groups, or between the “agree” and “strongly agree” groups. These results reinforce the negative relationship between communicative anxiety (as measured by Q24) and CET4 performance, demonstrating that higher levels of discomfort with speaking a foreign language in front of peers are associated with substantially lower test scores.

4. Discussion

4.1 Inverse Relationship Between Linguistic Anxiety and L2 Achievement

If Results show anxiety levels and CET4 scores maintain a negative association between participants, with higher anxiety associated with lower test performance ($r=-0.483$, $p < .01$). This finding is consistent with those established results such as Horwitz, Horwitz, MacIntyre and Gardner,

Zhao and Pappamihel, particularly MacIntyre and Gardner’s argument that anxiety interferes with cognitive processes such as memory searching and attention, ultimately hindering language performance [2-7]. When learners feel highly anxious, their working memory ability may be influenced, making it more difficult to recall vocabulary, process grammatical structures, or comprehend listening passages within a limited time. This cognitive bottleneck could explain why anxious students, despite possessing adequate knowledge, struggle to demonstrate their abilities during high-stakes assessments like the CET4. Moreover, the consistency of this negative relationship across all four anxiety dimensions—communicative anxiety, fear of negative evaluation, test anxiety, and classroom environment anxiety—suggests that anxiety operates as a universal hindrance in language learning instead of being limited into specific situations. The prior study showcases that general anxiety (e.g., trait or state anxiety) did not have strong relations with performance, which further stresses the unique role of specific language anxiety in academic outcomes. This finding highlights that targeted intervention measures are needed to address the inherent emotional challenges in foreign language learning, rather than viewing anxiety as a broad psychological trait.

4.2 Communicative Anxiety as the Strongest Predictor

Among the four anxiety dimensions examined, communicative anxiety served as the most influential to students’ English scores, exhibiting the highest mean score (3.12)

and the strongest negative correlation with CET4 results ($r = -0.500$, $p < .01$). This finding becomes significantly outstanding when analyzing particular items. For instance, in Q24, there were a huge gap of 81.67 between students who strongly agreed and those who strongly disagreed. This huge gap illustrates that the fear of speaking in social learning environment is not only a minor stress, but a critical hindrance impacting academic performances.

The significance of communicative anxiety may be derived from both psychological and cultural factors. Psychologically, the pressure of reacting in-time, where errors can be detected immediately, leads to a horror of embarrassment, causing avoidance behaviors [3]. Culturally, Chinese education tradition always stresses correctness and teacher-centered teaching methods. As a result, students tend to give more importance to accuracy rather than fluency, which intensifies their discomfort in improvisational oral tasks. In addition, the collective nature of the East Asian class, where peers' opinions are of great importance, may also boost students' fear of negative evaluation in oral exercises.

Given these insights, for teachers, pedagogical strategies should prioritize desensitizing students to communicative stress [8]. For instance, by forming structured and low-pressure speaking activities—such as group discussions, role plays, or digital recordings with delayed feedback—could help students gradually build up confidence without the immediate judgment [9]. Furthermore, teachers can provide topics and key words first, and then gradually reduce support [10]. Addressing communicative anxiety is not only for improving test scores but also equipping students with the psychological resilience needed for real world language use.

5. Conclusion

The research shares the same results with former researches, and emphasizes how anxiety have a negative impact on cognitive processes such as attention and memory search. From the cultural aspect, the Chinese education system may increase this anxiety, especially the oral communicative anxiety, by laying emphasis on accuracy and peer

judgement. To relieve these negative effects, educators should employ the strategies of reducing communicative pressure, such as low-anxiety speaking activities and hierarchical tasks.

Future research can employ vertical intervention to ease anxiety, and study on how motivation interacts with anxiety, thus affecting academic performance. By comprehensively facing with anxiety issue, educators can shape a more supportive environment, which not only boosts students' performances, and enhances their confidence in practical verbal skills.

References

- [1] MacIntyre, P. D., & Gardner, R. C. Anxiety and second-language learning: Toward a theoretical clarification. *Language Learning*, 1989, 39(2), 251–275.
- [2] MacIntyre, P. D., & Gardner, R. C. The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 1994, 44(2), 283–305.
- [3] Horwitz, E.K., Horwitz, M. B., & Cope, J. Foreign language classroom anxiety. *The Modern Language Journal*, 1986), 70(2), 125-132.
- [4] MacIntyre, P. D., & Gardner, R. C. Methods and results in the study of anxiety and language learning: A review of the literature. *Language Learning*, 1991, 41(1), 85–117.
- [5] Horwitz, E. K. Language anxiety and achievement. *Annual Review of Applied Linguistics*, 2001, 21, 112–126.
- [6] Na, Zhao. A study of high school students' English learning anxiety. *Asian EFL Journal*, 2007, 9(3), 22-34.
- [7] Pappamihiel, N. E. English as a second language students and English language anxiety: Issues in the mainstream classroom. *Research in the Teaching of English*, 2002, 36(3), 327-355.
- [8] Young, D.J. An Investigation of Students' Perspectives on Anxiety and Speaking. *Foreign Language Annals*, 1990, 23: 539-553.
- [9] Lei, X. A survey of undergraduate English classroom anxiety and its implications for English teaching. *Foreign Language and Literature*, 2004, (01), 46-51.
- [10] Guo, Y., & Xu, J. A multidimensional study of English learning anxiety among non-English major college students. *Foreign Language World*, 2014, (04), 2-11.