

Correlation between Foreign Language Classroom Anxiety and Foreign Language Achievement of Freshman and Teaching Enlightenment: A Case Study of Chinese Medical Students

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Abstract. Anxiety in foreign language study is a kind of situational anxiety, which is called foreign language classroom anxiety (FLCA). It can be classified into three dimensions: communication anxiety, negative evaluation anxiety and test anxiety. In this paper, the Horwitz Foreign Language Classroom Anxiety Scale (FLCAS) was conducted on 273 freshmen majoring in medicine in medical colleges by random sampling. The results indicated that there is a significant positive correlation between students' communication anxiety, negative evaluation anxiety and English achievement. When students' communicative and negative evaluation anxiety level is increasing, their English learning achievement will also show an upward trend. On the contrary, students' test anxiety and English learning achievement has significant negative correlation. When students' test anxiety level continues to increase, their corresponding English achievement will show a downward trend. And it was found that communication anxiety accounted for the highest proportion among the three dimensions. Accordingly, this paper proposes some teaching Enlightenments aimed at relieving medical students' anxiety in college English class. This study conducted a preliminary study of specific anxieties present in a foreign language learning classroom. The findings provide evidence to elucidate the characterization of anxiety and its effects.

Keywords: Foreign Language Classroom Anxiety; Freshman; Teaching Enlightenment.

1. Introduction

College English is a compulsory public basic course in Chinese universities. It focuses on English language knowledge and applied skills as well as intercultural communication to cultivate students' comprehensive English application ability. However, compared with high school English, which focuses on reading and writing, college English pays more attention to listening and speaking. So that many freshmen do not adapt to college English courses and even feel anxious. This situational anxiety in foreign language learning is called foreign language classroom anxiety (FLCA) [1]. At present, the relevant research on FLCA of college students at home and abroad have achieved relatively rich results.

Xu (2023) found that the score of FLCA of non-English majors could predict their foreign language achievement to a certain extent, that is, the more anxious they are, the less satisfactory their foreign language achievement will be [2]. Jin (2021), aiming at relieving and reducing FLCA, showed that the recall of language ability development significantly reduced the level of English anxiety of Chinese students [3]. As for medical students, Deng & Zhou (2018) showed that medical students' anxiety in foreign language class was moderate or above, and the score of lack of confidence was the highest among all dimensions. In addition, the anxiety level of medical students is generally high, significantly higher than that of non-medical undergraduates [4]. At the same time, relevant studies have shown that new teaching methods can effectively relieve anxiety. Huang found that under the flipped classroom teaching mode, flipped classroom can significantly reduce the overall classroom anxiety, improve their self-confidence [5].

This study takes freshmen majoring in medical as an example, by using mixed research methods, including questionnaire survey and semi-structured interview and using FLCAS designed by Horwitz et al., conducting a quantitative study on the results to discuss the relationship between their anxiety level and their foreign language achievements, analyzing the causes. The study hope to provide some

teaching enlightenments and help for Chinese freshmen to devote themselves to college English learning.

2. Method

2.1. Research Object

Taking Xi'an Medical University as an example, 273 undergraduates majoring in medicine of grade 2022 were randomly selected as the research objects, specializing in clinical, nursing, general medicine and rehabilitation therapy. Students' language achievements are evaluated based on the final college English exam in the second semester of the freshman year.

2.2. Research Method

This paper adopts mixed research methods, including questionnaire survey and semi-structured interview. The questionnaire can be divided into two parts, in the first part, FLCAS by Horwitz et al. was always selected [1]. This scale is consisting of 33 questions, a higher score indicates a higher level of anxiety about learning English. The second part is the basic information of the students, including gender, major, student origin and suggestions for college English courses.

2.3. Data Analysis Method

Spss software was used to compare and analyze the questionnaire data to improve the reliability and validity of the experiment. Descriptive statistical analysis, T-test and Pearson correlation analysis were used, $P < 0.05$ was considered statistically significant.

3. Results

3.1. Descriptive Statistics

Descriptive statistics are used for analyzing the anxiety and academic performance of the respondents in foreign language classrooms, and the results are shown in the Table 1. In this survey, the level of communication anxiety of students is relatively higher, with an average of 3.24, while the level of negative evaluation anxiety and test anxiety are relatively lower, with an average of 3.14 respectively. In addition, from the perspective of students' English learning performance, the average is 77.56, which is at a relatively good level overall.

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
College English Final Exam Results	273	10	100	77.56	8.02
Communication anxiety	273	1.64	5.00	3.24	.48
Negative evaluation anxiety	273	1.73	5.00	3.14	.48
Test anxiety	273	1.33	5.00	3.14	.59

3.2. Difference Analysis

Since variables such as gender, place of origin, and whether they are clinical majors are binary variables, this study uses the independent sample T-test method to analyze the differences in the anxiety scores of students of different genders, different places of origin, and different majors in foreign language classrooms, and get the results shown in Table 2-Table 4.

3.2.1 Impact of Genders on Anxiety

In terms of communication anxiety, the significant P value is 0.064 ($P > 0.05$), failing to pass the 5% significance level test. In the level of negative evaluation anxiety, the significant P value is 0.026 ($P < 0.05$), and the significant P value in test anxiety is 0.029 ($P < 0.05$), both passing the 5% significance level test. Consequently, there is no significant difference in the scores of communication

anxiety between boys and girls. Test anxiety and negative evaluation anxiety exist significant difference between boys and girls.

Table 2. FLCA form Different Genders

Variable	Gender	N	Mean	Std. Deviation	T value	p
Communication anxiety	Male	80	3.33	0.61	1.872	0.064
	Female	193	3.20	0.42		
Negative evaluation anxiety	Male	80	3.26	0.61	2.264	0.026
	Female	193	3.09	0.41		
Test anxiety	Male	80	3.28	0.73	2.215	0.029
	Female	193	3.08	0.51		

3.2.2 Impact of Majors on Anxiety

In terms of communication anxiety, the significant P value is 0.491 ($P > 0.05$). In test anxiety, the significant P value is 0.090 ($P > 0.05$), and the significant P value in negative evaluation anxiety is 0.290 ($P > 0.05$), which all fails to pass the 5% significant test, which means there is insignificant difference in the scores of these three dimensions of anxiety between clinical major and non-clinical major.

Table 3. FLCA from Different Majors

Variable	Major	N	Mean	Std. Deviation	T value	p
Communication anxiety	Clinical	105	3.21	0.50301	-0.690	0.491
	Non-clinical	168	3.26	0.47222		
Negative evaluation anxiety	Clinical	105	3.10	0.45843	-1.060	0.290
	Non-clinical	168	3.17	0.49809		
Test anxiety	Clinical	105	3.07	0.59628	-1.70	0.090
	Non-clinical	168	3.19	0.57858		

3.2.3 Impact of Life Circumstances on Anxiety

In terms of communication anxiety, the significance P value is 0.016 ($P < 0.05$), the significance P value in negative evaluation anxiety is 0.026 ($P < 0.05$), and in test anxiety, the significance P value is 0.013 ($P < 0.05$), all passing the 5% significance level. This result illustrated there is a obvious difference in the scores of these three dimensions of anxiety between town students and village students.

Table 4. FLCA between origins

Variable	Origins	N	Mean	Std. Deviation	T value	p
Communication anxiety	Town	116	3.16	0.45594	-2.426	0.016
	Village	157	3.30	0.49617		
Negative evaluation anxiety	Town	116	3.07	0.42939	-2.234	0.026
	Village	157	3.20	0.5139		
Test anxiety	Town	116	3.04	0.56321	-2.505	0.013
	Village	157	3.22	0.59522		

3.3. Correlation Analysis

In order to explore the correlation between students' FLCA and their English learning achievements, this paper uses the correlation analysis method to verify and obtain the results shown in Table 5.

It can be seen from the table that the correlation coefficient between students' communicative anxiety and English learning achievement is 0.726 ($P < 0.05$). Similarly, the correlation coefficient between students' negative evaluation anxiety and English learning achievement is 0.535 ($P < 0.05$), indicating that there is a significant positive correlation between the two variables. That is to say,

when the level of communication anxiety of students continues to increase, their corresponding English learning achievement will also show an upward trend. The correlation coefficient between students' test anxiety and English learning performance is -0.160 ($P < 0.05$), so that there is a significant negative correlation between the two variables. That is, when students' test anxiety levels continue to increase, their corresponding English learning performance will show a downward trend.

Table 5. Correlation analysis

Variable	Communication anxiety	Negative evaluation anxiety	Test anxiety	College English Final Exam Results
Communication anxiety	1	0.726**	0.535**	-0.160*
Negative evaluation anxiety	0.726**	1	0.688**	-0.207**
Test anxiety	0.535**	0.688**	1	-0.167**
College English Final Exam Results	-0.160*	-0.207**	-0.167**	1

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

4. Discussion

After the questionnaire survey, 8 representative subjects were chosen to conduct voluntary semi-structured interviews. Combined with the results of the questionnaire survey, we found that for non-English major medical students, here are 3 reasons for foreign language classroom anxiety as follows, and one relative suggestions are given to the causes of these anxieties.

4.1. Lack of Confidence

Through the above analysis, it can be found that communication anxiety occupies the highest proportion in foreign language classroom anxiety. As non-English major students usually have a weak English foundation, "the difference between foreign language and mother language, the sense of distance, and the sense of time and space lead to the increase of learners' anxiety and the weakening of self-confidence.[6]"Lack of confidence in English learning is one of the main reasons for classroom anxiety. At the same time, due to the influence of the English learning atmosphere in high schools of China, it seems like dumb English under exam-oriented education, and rural students have less listening and speaking opportunities than urban students, so their anxiety level is higher than urban students.

The typical behavior pattern of communicative fear is communicative avoidance or withdrawal [7]. Students' concern about their own ability and the competitive pressure in class are the main causes of communication fear. In the interview, some students also proposed that they want to improve their oral English ability. In view of this phenomenon, English teachers in medical colleges and universities should take measures to alleviate or solve the anxiety of medical students' oral English. First of all, carry out classroom activities to improve oral English, and create a relaxed and stress-free learning and practice atmosphere in classroom teaching. Such as English dubbing, recitation, singing English songs, English role-play, etc. Secondly, the use of advanced teaching methods at home and abroad, such as CLT, flipped classroom, etc. in classroom teaching to alleviate or relieve anxiety imagination; Finally, multimedia teaching equipment and original English TV serious are used in classroom teaching to create a real language environment for medical students, so as to accumulate professional medical knowledge and learn pure English pronunciation and intonation. For example, "Grey's Anatomy" and "Good Doctor" are all good teaching materials.

4.2. Threaten Self-esteem

Negative evaluation anxiety is a symptom of worrying about the evaluation of others, avoiding evaluation, and feeling that others do not approve of it [8]. Students' negative evaluation of teachers is prone to anxiety, which is related to their feeling that their self-esteem is threatened. Caring too much about one's own face and self-esteem is detrimental to foreign language learning. Most students have strong self-esteem and competitive heart, afraid of being laughed at if they answer wrong, afraid that a mistake will change the good impression of classmates and teachers.

Therefore, it is not difficult to understand the classroom question anxiety caused by asking teachers questions. Teachers should design questioning sessions according to students' learning level and personality characteristics. For example, after asking questions, teachers should give students more time to think and answer questions voluntarily. In today's foreign language classroom teaching, teachers should constantly build their own art of questioning, relieve students' classroom anxiety, make students change from afraid of teachers' questions to like teachers' questions, create a low-anxiety classroom environment, so that students can be relaxed into foreign language learning, and ultimately improve the foreign language teaching effect and students' learning effect.

4.3. Stress from Certificate Exams

For a long time, the passing of CET-4 and CET-6 has been overrated by colleges and universities and society. The passing rate has become an important reference basis, and whether the passing is related to whether the students can successfully graduate, which virtually forms a kind of pressure on the students[9]. In the face of stressful events such as exams, students with exam anxiety often adopt immature coping styles such as self-accusation, fantasy and withdrawal, and self-accusation coping styles are more prominent in female students and clinical students, and self-accusation will significantly increase anxiety level[10]. But in this study, the anxiety level of female students in the final college English exam is less than that of male students, mainly because there are more female nursing students in this study, so there is a certain different proportion between the genders. In the review of the final exam, girls are more practical and serious, to a certain extent, offset their own emotional fluctuations, easy to be affected by the external environment, so they relatively less anxious. In summary, while increasing the explanation of test-taking skills in the classroom, teachers should cultivate students' self-confidence more, mobilize students' enthusiasm for learning, reduce self-blame, so as to reduce students' exam anxiety level.

5. Conclusion

In this study, it is found that the anxiety and all dimensions of college English of medical college students are above the medium level, and the three dimensions of anxiety from high to low are communication anxiety, test anxiety and negative evaluation anxiety. Gender has significant differences in the two dimensions of test anxiety and negative evaluation anxiety, and whether they are clinical majors has no significant differences in each dimension. There are significant differences in three dimensions of origin, and the anxiety of rural students is higher than that of urban students in each dimension. The results also showed that there is a significant positive correlation between students' communication anxiety, negative evaluation anxiety and English achievement. When students' communicative and negative evaluation anxiety level is increasing, their English learning achievement will also show an upward trend. But there is a significant negative correlation between students' test anxiety and English learning achievement. When students' test anxiety level continues to increase, their corresponding English achievement will show a downward trend. Teachers should start from the causes of students' anxiety to explore ways and strategies to avoid, reduce and eliminate students' language anxiety. This study also has certain limitations, the subjects were only freshman medical students from one medical college. In order to improve the reliability and validity of the findings, more medical schools should be surveyed on a larger scale.

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