

Research on Test Anxiety in CET-4 of Non-English Major Freshmen

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Abstract

Test anxiety, which means individuals show excessive worry, nervousness and anxiety in examination contexts, is becoming a more and more common phenomenon. A moderate level of test anxiety will motivate students while a too high or too low level of test anxiety will influence students' academic performance and their cognitive abilities. Most present researches are focused on secondary school students or on the final exam of a specific school. Few researches on college students and standard tests can be found. Therefore, the researcher took 255 non-English major freshmen as samples to investigate their test anxiety level, their attitudes towards different test tasks (ATDTT) in CET-4 and the correlation between them. The results of the research are as follows: Firstly, the non-English major freshmen are at the lower of a moderate test anxiety level in CET-4 and there is no significant gender difference. Secondly, among the four sections in CET-4, students are most positive in writing, less positive in translation and reading, and the least positive in listening. Thirdly, students' ATDTT in CET-4 are negatively correlated with total test anxiety, cognitive anxiety and emotional anxiety. The researcher hopes this research can offer some help to teachers and students in need.

Keywords

Test Anxiety, CET-4, Students' ATDTT in CET-4

1. Introduction

With the rapid economic development and fierce talent competition, test has been a means of measurement. Students take tests to judge whether they have acquired a certain knowledge. Teachers' teaching abilities can be proved through tests. Graduates can take tests to get into government system or education system and employers can choose the ideal candidates they want through tests. Test

is related with our daily life, especially during the period of being a student. Students need to take examinations for different courses from primary school to college, among which English examinations are the most difficult and frequent, because students do not have a good language environment. When people pay too much attention to a certain test or they feel the outcome might be out of their expectations, they may suffer from anxiety. In the Senior High School Entrance Examination and National College Entrance Examination, English takes up a large proportion, so students may be more or less anxious when taking an English test.

It is reported that 10% to 40% of the students have different levels of test anxiety. Gaoxin [1] reported that excessive test anxiety can influence their academic performance and may even affect mental health. At present, researches on English test anxiety of middle school students or test of a semester can be found, but few researches on college students' test anxiety of a standard examination, such as CET-4 or CET-6 can be found. Therefore, this research takes non-English major freshmen as the subjects and tries to explore the current situation of test anxiety of non-English major freshmen in CET-4, their ATDTT in CET-4 and the correlation between them.

2. Literature Review

2.1. CET-4

CET-4 is short for College English Test Band Four. It is held twice a year, on one of the Saturdays in June and December respectively, CET-4 in the morning and CET-6 in the afternoon. CET-4 and CET-6 are mainly for non-English majors. There are four parts in the written test paper, writing, listening, reading and translation. The total score is 710. There is no authorized pass line, but only students who have got no less than 425 in CET-4 can apply for CET-6.

Schools and teachers lay great emphasis on College English Test. Teachers will focus on different skills in class to help students pass the exam. Schools will give priority for awards to students who have passed CET-4. Some schools even attach diploma with CET-4. Meanwhile, most companies and businesses require employees to have passed CET-4. Students themselves also attach great importance to it. Besides taking English classes at school, some students will take extra online and offline CET-4 training courses or practice CET-4 model tests after class just to increase the chances of passing the test. Thus it is clear that passing CET-4 is relevant with students' life and employment and is critical for college students. The more important the students think CET-4 is, the more anxious they will be when taking the test.

2.2. Test Anxiety

Test anxiety, also known as evaluation anxiety, is a negative emotion which can bring about such feelings as nervousness, fright and depression. Liebert and Morries [2] believed that test anxiety can be defined as cognitive worry and emotionality. It means a certain level of physiological awakening and leads to some

typical responses in a test context. Xiong Jiangling [3] believed subjective and objective factors in a certain test context can cause test anxiety, such as the student's personal expectation, the fear of failure in the test or the pressure from family, school. There has not been an agreed definition of test anxiety. Different researchers have different understandings. However, quite a lot of researchers agreed with Spielberger. Spielberger [4] thought test anxiety is a kind of personal anxiety in a specific context. This definition, together with the definition put forward by Liebert and Morries [2] is employed in this research.

2.3. Researches on Test Anxiety

2.3.1. Researches on Test Anxiety in Foreign Countries

Researches in foreign countries could be traced back to 1914 when the first survey report on test anxiety was published. Later researches are done from the following four aspects: the theories, components, measures of test anxiety, the correlation between students' test anxiety level and their academic performance.

Influential theories of test anxiety include Cognitive-Interference Model [5], Skill-Deficit Model [6] and Self-Referent Executive Functions Model [7].

Wine [5] believed cognitive deficits affect test scores because attention will be easily disturbed during the test and thus affecting the individual's cognitive ability and the test scores. Therefore, students with low test anxiety will be more focused on task-relevant information and respond better to task-relevant activities and get a higher score while students with a high test anxiety will focus on task-irrelevant information and activities and will get a lower score. Different from Cognitive-Interference Model, Covington and Omelich [6] indicated individuals get a poor academic performance due to their deficits in cognitive abilities or structures. Students with high test anxiety cannot fully understand and process the test papers and get lower scores because they have various deficits and lack relevant test-taking skills. Lacking of test-taking skills, students repeatedly get low scores in tests, leading to decreased self-confidence and self-esteem and then increase their test anxiety.

Researches on the components of test anxiety mainly fall into three types: single-component view, dual-component view and three-component view.

Sarason and Mandler [8], Wolpe [9], Hembree [10] thought test anxiety is an emotional phenomenon while Wine [5] proposed test anxiety is a cognitive phenomenon. Representatives of two-component view are Liebert and Morries [2] and Spielberger [4]. They thought test anxiety was an emotional phenomenon as well as a cognitive phenomenon. It includes emotional and cognitive responses and they are equal, independent and coexisting. Frideman and Bendas-Jacob [11] were proponents of three-component view and proposed tension belongs to emotional phenomenon while the social devaluation and cognitive impairment belong to cognitive phenomenon.

Researches on the measure of test anxiety change with those on the components of test anxiety. There are three different dimensional scales: single-dimensional, dual-dimensional and multi-dimensional scale.

Sarason and Mandler [8] designed the first widely used scale, Test Anxiety Questionnaire (TAQ), to measure inner-individual differences in test anxiety. The other popular scale at that time was the Test Anxiety Scale for Children (TASC), which was jointly developed by Sarason, Davidson, Lighthall, Waite and Ruebush [12]. However, Sarason [13] compiled the Test Anxiety Scale (TAS) by himself. After being revised several times, it was finally formed in 1978. The scales of test anxiety changed from unidimensional to a dual dimensional with the changes of researches on components of test anxiety. Spielberger [14] compiled the Test Anxiety Inventory (TAI), which includes two subscales of worry and emotion. Later researchers thought the components were more complex and diverse, so more scales of multi-dimensional structure were developed. Sarason [15] designed the Reactions to Tests (RTT) scale, which consisted of 40 items to measure four aspects of test anxiety. Cassady and Johnson [16] developed the Cognitive Test Anxiety (CTA) scale. It focuses on both the test and the cognitive changes in different stages of the test. The measures of test anxiety are constantly changing with the development of components of test anxiety. Recent test anxiety scale is more detailed and multi-dimensional, but it is not easy to implement and analyze and it is not widely used. The results of TAS and TAI are correlated with those of other widely used scales, so they are the most influential and efficient scales. TAI scale is also employed in this study.

The correlation between students' test anxiety level and their academic performance can be described as: no significant correlation, a negative correlation and a complex correlation.

Alemi and Birjandi [17] discovered students' test anxiety and their test performance are not statistically correlated. With the help of foreign language anxiety scale and test anxiety inventory, Masoomah [18] conducted a language test and discovered a negative correlation. Esim Gursoy and Tuba Arman [19] collected samples from the ninth and tenth grade in a Turkey vocational school and achieved the same conclusion. The result corroborates the findings from other studies [20] [21]. The higher scores the students have in test anxiety, the lower scores they will get in a test. A too high or too low test anxiety level will influence students' performance in a test. A moderate level is the most suitable. It is generally believed that a moderate level of anxiety will be useful to make people be hardworking and responsible and helpful to live a more successful life.

2.3.2. Researches on Test Anxiety at Home

Relevant researches in our country could be traced back to the 1980s when Ling Wenquan conducted the first research on test anxiety. By now there have been numerous relevant studies and they can be divided into four categories: the status quo, factors, causes and countermeasures of test anxiety, and the correlation between test scores and test anxiety.

Due to great pressure, more and more students have suffered from mental illnesses. Therefore, researchers have paid more attention to the study on students' test anxiety. We can find the most researches on test anxiety of middle school

students, some on college students and very few on primary school students.

Wang Xiaohong [22] studied 799 senior school students to explore their English test anxiety and discovered there is no significant gender difference. Wang Qinglin [23] investigated TEM-8 test anxiety of English majors in universities and discovered students' TEM-8 test anxiety and their English proficiency was not significantly correlated. Test anxiety is common among students in different stages. Study on test anxiety in a specific school can provide teachers with a better understanding of it and may put forward some proposals to help students reduce test anxiety.

Such factors as test scores, test tasks, test evaluation and learning strategies can all influence students' test anxiety levels. Tian Bao [24] studied the relationship between students' test anxiety and their test scores and found there is a dynamic relationship between them. Sometimes test anxiety can promote students' performance instead of inhibiting it. Yang Libin, *et al.* [25] found both internal, such as learner's personal experience, health conditions and personality, and external factors, such as family, school regulations and classmates, will all affect the test anxiety. Chen Chen [26] considered factors of examination skills and learning motivation as direct factors while factors of family and school as indirect factors. Students' care about other's evaluation, too high expectations from family and teacher's outdated teaching methods are the main factors to cause students' English test anxiety.

Both macro-level and micro-level factors can cause test anxiety, some specific countermeasures can be taken to reduce test anxiety. Wang Xiaoxia [27] studied 375 senior high school students and put forward relative method to intervene different factors to reduce students' test anxiety. Different forms of group cooperation can also be conducted to alleviate test anxiety. Xiao Rui [28] found intervention based on group psychological counseling is effective through an intervention study. Li Zichun [29] conducted a study on Grade Three senior school students and explored the causes and relevant countermeasures. In response to concrete reasons, corresponding measures, such as adjusting feelings, reasonable expectations and harmonious teacher-student relationship, are put forward to reduce test anxiety. However, not only the teachers, schools, family, but also the students should take actions to reduce their anxiety.

Many researchers stated the correlation between test scores and test anxiety is negative. Zhang Xiacong and Zhou Renlai [30] studied 174 college students and concluded there is a positive correlation between working memory capacity and academic performance. That is, a larger memory capacity, a better academic performance. Jin Zhihui [31] discovered test anxiety is negatively and significantly correlated with test scores after studying 196 ninth grade students. That means the lower score the students have in test anxiety, the better performance they get in a test.

2.3.3. Researches on College Students' Test Anxiety in CET-4

There is no such test as College English Test in foreign countries, thus there

would be no relevant studies on it. As a standard test to objectively evaluate students' English proficiency, CET-4 has won popularity among students. Recent researches on the status, the causes and countermeasures and influencing factors can be found.

Zeng Xiangfa [32] studied medical students' test anxiety in CET-4 and found most medical students have a certain level of test anxiety in CET-4. Wang Lanjing [33] proved group psychological counseling can help to reduce college students' anxiety level in CET-4 and CET-6. Li Yu [34] studied 213 non-English major college students to learn their test anxiety in CET-4 and CET-6 through questionnaires and interviews and found students from different grades have different test anxiety levels, freshmen being the highest, a downward trend in sophomores and juniors, senior students returning to a higher level.

Since college students have taken numerous tests from primary school to college, it is commonly believed they should not be anxious about tests. However, schools and society have added too much additional value to it, there will be hot discussions after the test. All these make students feel anxious about CET-4.

3. Research Design

3.1. Research Questions

The researcher conducted the study to explore the current situation of students' test anxiety level and their ATDIT in CET-4 by analyzing the results of a questionnaire. Research questions are listed as follows:

- 1) What is the current situation and gender difference of test anxiety of non-English major freshmen in CET-4?
- 2) What are the students' ATDIT in CET-4?
- 3) What is the correlation between students' ATDIT in CET-4 and their test anxiety?

3.2. Research Samples

268 non-English majors from Zhejiang Yuexiu University are chosen to be the research subjects. These students are freshmen from majors of Japanese, French, E-commerce, Digital Media Technology and so on. The corpora include 65 male students and 203 female students. The researcher got 255 valid samples for the questionnaire, 61 male students and 194 female students.

3.3. Research Instrument

3.3.1. Questionnaire

The questionnaire consists of three parts: students' information, students' test anxiety level and students' ATDIT in CET-4.

- 1) Students' Information

There are 2 items in the first part, including gender and major.

- 2) Modified TAI

Test Anxiety Inventory (TAI) is used as the second part of the questionnaire

to measure students' anxiety level in CET-4. TAI is translated into Chinese and "test" in the scale is modified to "CET-4 test" to help students better understand the questionnaire and better answer the research questions. TAI includes 20 items. There are 8 items for "Worry" and "Emotion" subscales separately and the other 4 items are for General anxiety. A pretest of 45 freshmen was conducted by the researcher to test the reliability.

As is shown in **Figure 1**, it can be seen that the scores of Cronbach's Alpha of "Worry", "Emotion", "General Anxiety" and TAI scale are all higher than 0.9. It indicates it is suitable and reliable to use the modified Chinese version of the TAI scale to measure students' level of test anxiety in CET-4. The information of the modified TAI scale can be seen in the following **Figure 2**.

The research subjects are required to choose the correct frequency adverb to describe their experience of specific symptoms of test anxiety based on a 4-Likert scale. The corresponding score and the meaning of each option are shown in **Figure 3**.

| Scale | Item | Cronbach's Alpha |
|-----------------|------|------------------|
| Worry | 8 | 0.946 |
| Emotion | 8 | 0.934 |
| General Anxiety | 4 | 0.948 |
| TAI | 20 | 0.961 |

Figure 1. Reliability analysis for TAI.

| | Dimension | Items |
|--------------------|-----------------|-----------------------------|
| Test Anxiety Scale | Worry Anxiety | 3, 4, 5, 6, 7, 12, 17, 20 |
| | Emotion Anxiety | 2, 8, 9, 10, 11, 13, 16, 18 |
| | General Anxiety | 1, 14, 15, 19 |

Figure 2. Items of each dimension on the TAI.

| score | options | meaning |
|-------|---------|-----------|
| 1 | A | Never |
| 2 | B | Sometimes |
| 3 | C | Usually |
| 4 | D | Always |

Figure 3. Corresponding score and the meaning of each option.

There is a negative description item in the scale, it should be scored reversely. Therefore, the total score is between 20 to 80 scores. The higher the total score is, the more anxious the student is. According to the scores they get in the questionnaire, students' test anxiety levels are divided into three types: low test anxiety level (20 - 35 scores), moderate test anxiety level (35 - 50 scores), high test anxiety level (50 - 80 scores) [35].

3) Modified ATT

The Attitudes towards Test Tasks (ATT) scale, which was designed by Jones Madsen, is used as the third part of the questionnaire. There are 3 questions and 5 options to each question in the original ATT. The 3 questions are about the difficulty level, students' preference and students' feeling about the test. To help students better understand the questionnaire and better investigate students' ATDTT in CET-4, ATT is translated into Chinese and the 3 questions are changed to 12 items because there are 4 different sections in the test. Information of ATT is shown in **Figure 4**.

According to **Figure 4**, there are 3 items for each section and 5 options for each item. The information of the each option and the specific score are shown in the following **Figure 5**.

| Test Sections | Writing | Listening | Reading | Translation |
|---------------|---------|-----------|---------|-------------|
| Items | 1, 2, 3 | 4, 5, 6 | 7,8, 9 | 10, 11,12 |

Figure 4. Information of ATT.

| Categories of Items | Items | Meaning of the Options | | | | |
|---------------------------------------|-------------|------------------------|-----------|---------|---------|---------------|
| | | Very Difficult | Difficult | Neutral | Easy | Very Easy |
| The level of Difficulty of This Part | 1, 4, 7, 10 | Very Difficult | Difficult | Neutral | Easy | Very Easy |
| The Degree of Preference on This Part | 2, 5, 8, 11 | Strongly Dislike | Dislike | Neutral | Like | Strongly Like |
| The Feeling When Doing This Part | 3, 6, 9, 12 | Very Nervous | Nervous | Neutral | Relaxed | Very Relaxed |
| Options and Scores | | A / 1 | B / 2 | C / 3 | D / 4 | E / 5 |

Figure 5. Information of each option and the specific score of ATT.

From **Figure 5**, it can be concluded that the total score is between 12 to 60 scores. If a student gets a higher total score, it means he shows more preference for this section. A pretest of 45 freshmen was conducted by the researcher to test the reliability of the questionnaire.

As is shown in **Figure 6**, it can be seen that the score of Cronbach's Alpha of ATT is over 0.8. It indicates it is suitable and reliable to use the modified Chinese version of the ATT scale to measure students' ATDIT in CET-4.

3.3.2. Data Collection

The researcher conducted the questionnaire through Wenjuanxing. The questionnaire was distributed to the freshmen with the help of the colleagues. Students were told they only needed to finish it according to their own situation and there was no correct answer for any of the items in it. Finally, 268 samples were collected. Among them, 13 were invalid because they did not finish the questionnaire as required. Therefore, the researcher got 255 valid questionnaire samples. The effective rate of the questionnaire is 95.15%.

3.3.3. Data Analysis

255 valid questionnaires were collected and the data were downloaded from Wenjuanxing. Both excel and the statistical instrument SPSS. 26 are employed to process and analyze the data from different perspectives.

The researcher employed the mean score got from TAI to analyze the current situation of students' test anxiety level in CET-4, the frequency analysis to reflect the distribution of students' test anxiety in CET-4 and the independent sample T-test to analyze the gender difference. Descriptive analysis is used to present students' ATDIT in CET-4. Ultimately, the researcher used the correlation analysis to analyze the correlation between them.

4. Results and Discussion

4.1. Students' Test Anxiety in CET-4

The current situation of students' test anxiety in CET-4 is analyzed through descriptive analysis. Students' different test anxiety levels are discussed and finally the gender difference in test anxiety in CET-4 is analyzed through independent sample T-test.

4.1.1. Current Situation of Students' Test Anxiety in CET-4

Students' scores of TAI scale are used to determine students' test anxiety in CET-4. According to the scores they get in the questionnaire, students whose scores belong to the range of 20 to 35 are considered as low test anxiety level, the

| Scale | Cronbach's Alpha |
|-------|------------------|
| ATT | 0.853 |

Figure 6. Reliability analysis for ATT.

range of 35 to 50 are moderate test anxiety level and the range of 50 to 80 are high test anxiety level. SPSS.26 is employed to analyze students' scores of TAI scale. The information of students' scores of TAI scale is shown in **Figure 7**.

From **Figure 7**, it is clear to see the lowest score of TAI is 20, which belongs to the low test anxiety level. The highest score is 78, which belongs to the high test anxiety level. The range of these two is 58 points. The mean score is 39.45, so it is at the lower of a moderate test anxiety level.

Scores of the two subscales can also be derived from the **Figure 7**. The range of the scores of the Worry subscale and Emotion subscale is from 8 to 32 points, which means some students will always feel worried and nervous about CET-4 while some others will never feel worried or nervous about CET-4. It is also clear to see that the mean score of Emotion subscale is higher than that of Worry subscale, which means the frequency of students' nervousness about CET-4 is more than that of worry. The reason might be that students know there are several chances for them to take part in CET-4, so there is no need to worry.

4.1.2. Distribution of Students' Test Anxiety in CET-4

The researcher employed frequency analysis to explore the distribution of students' test anxiety of CET-4. The results of the distribution are shown in **Figure 8**.

From **Figure 8**, we can see only 38 students are at the high test anxiety level, 86 students are at the moderate test anxiety level and 131 students are at the low test anxiety level. It means there are more than 50% of the students who won't feel worried or nervous, about one-third of the students frequently feel worried or nervous, about 15% of students will be distracted and feel nervous and worried in a CET-4 test context. In addition, students with high test anxiety level

| Scores | N | Range | Minimum | Maximum | Mean | S.D |
|-----------------|-----|-------|---------|---------|-------|-------|
| TAI | 255 | 58 | 20 | 78 | 39.45 | 12.16 |
| Worry | 255 | 24 | 8 | 32 | 16.58 | 5.32 |
| Emotion | 255 | 24 | 8 | 32 | 17.62 | 5.14 |
| General Anxiety | 255 | 10 | 4 | 14 | 5.25 | 7.16 |

Figure 7. Current situation of students' scores of TAI scale.

| Test Anxiety Level | Frequency | Percentage |
|-----------------------------|-----------|------------|
| Low Test Anxiety Level | 131 | 51.37% |
| Moderate Test Anxiety Level | 86 | 33.73% |
| High Test Anxiety Level | 38 | 14.90% |
| Total | 255 | 100 |

Figure 8. Distribution of students' test anxiety in CET-4.

might also feel worried about the result and fail to cope with their nervousness, thus leading to the failure of the test. Therefore, teachers should attach more importance to those students with high test anxiety levels during daily teaching.

4.1.3. Gender Difference of Students' Test Anxiety in CET-4

There are 61 valid male subjects and 194 valid female subjects in this study. SPSS.26 is also employed to do contrastive analysis of the collected data to explore the gender difference of students' test anxiety in CET-4. The researcher divided the collected data into male group and female group, both of which are independent and consistent with the normal distribution. Therefore, the researcher took gender as the grouping variable and the scores of TAI scale as variable to do independent sample T-test. The results of male and female students' test anxiety are shown in **Figure 9**.

From **Figure 9**, it is easy to get the mean scores of male students and female students, which are 39.96 and 39.29 respectively. Both of them are at the moderate test anxiety level. As to the fluctuation, the standard deviation of female students is 11.75 and 12.36 for male students. The standard deviation score of male students is slightly higher. It means male students' anxiety levels fluctuate more greatly than those of female students. The detailed information of the independent sample T-test is shown in **Figure 10**.

From **Figure 10**, it is clear to see after Levene's test for equality of variance, $F = 0.115$ and $\text{Sig} = 0.723$, which is greater than 0.05. That is to say, the variances of the female students' data and male students' data are equal. According to the T-test, $t = 0.892$, $df = 273$ and the P value = 0.357. It is greater than 0.05. The hypothesis that there is no significant gender difference should be right.

The researcher's conclusion that there is no significant gender difference is quite different from other researchers. Researchers [19] [36] found that female students tend to have a higher test anxiety level. The difference may be caused by the difference of tests and deficiency of samples. Other researchers analyzed students' test anxiety in ordinary test papers while in this study students' test anxiety in standard test papers is studied.

4.2. Students' ATD TT in CET-4

A revised ATT scale is taken as the last part of the questionnaire. It is employed to investigate students' ATD TT in CET-4. If a student gets a higher score in a particular section, that means he shows more preference for this section. The students' attitudes are determined by the mean score of each item of the test section. The rules can be seen from **Figure 11**.

Students' ATD TT in CET-4 can be analyzed through the mean score of each item. The higher the score is, the more positive the students show in doing this section. On the contrary, the lower the score is, the more negative the students show in doing this section. The detailed results are shown in **Figure 12**.

| | Gender | N | Percentage | Mean | S.D |
|----------------------------|--------|-----|------------|-------|-------|
| The Scores of TAI Scale | Male | 61 | 23.92% | 39.96 | 12.36 |
| | Female | 194 | 76.08% | 39.29 | 11.75 |

Figure 9. Male and female students' test anxiety in CET-4.

| Levene's Test for Equality of Variance | | T-test for Equality of Means | | |
|--|-------|------------------------------|-----|-----------------|
| F | Sig. | t | df | Sig. (2-tailed) |
| 0.115 | 0.723 | 0.892 | 273 | 0.357 |

Figure 10. Independent sample T-Test of male and female students' test anxiety in CET-4.

| Attitudes | Positive | | Neutral | Negative | |
|-------------------------|----------|---|---------|----------|---|
| Mean Score of Each Item | 5 | 4 | 3 | 2 | 1 |

Figure 11. Rules of judging students' ATDTT in CET-4.

| Students' ATDTT in CET-4 | N | Mean | S.D | Mean of Each Item |
|--------------------------|-----|------|------|-------------------|
| Writing | 255 | 8.45 | 2.12 | 2.82 |
| Listening | 255 | 5.85 | 1.93 | 1.95 |
| Reading | 255 | 7.61 | 2.25 | 2.54 |
| Translation | 255 | 7.44 | 2.21 | 2.48 |

Figure 12. The descriptive analysis of students' ATDTT in CET-4.

According to **Figure 12**, it is clear to see the mean score of each item in listening section is 1.95, that means the attitude towards listening section is negative, which indicates students dislike listening and think it is difficult and may feel worried or nervous when doing the listening section. The mean scores of each item in writing, reading and translation sections are 2.82, 2.54 and 2.48 respectively. That means students' attitudes towards writing, reading and translation sections are more neutral, which indicates students neither like nor hate these sections and the difficulty level of each section is also neutral and they feel neither relaxed nor nervous when completing these sections. Among the four sections in CET-4, students are most positive in writing, less positive in reading and translation, and the least positive in listening.

4.3. The Relationship between Students' ATDTT in CET-4 and Test Anxiety

The ATT scale and TAI scale are used to measure students' ATDTT and test an-

xiety in CET-4 separately. The researcher analyzed students' cognitive anxiety and emotional anxiety according to the scores they get in the Worry and Emotion subscales. Therefore, the correlation analysis could be done in three aspects: students' ATDTT in CET-4 and their total test anxiety, cognitive anxiety and emotional anxiety.

4.3.1. Correlation Analysis between Students' ATDTT in CET-4 and Their Total Test Anxiety

The scores of ATT and TAI scales are taken as the two variables. They are inputted into SPSS.26 to be analyzed. The results are presented in **Figure 13**.

From **Figure 13**, it is clear to see students' ATDTT in CET-4 and their test anxiety in CET-4 are highly related. The Pearson correlation = -0.352 , the P value = 0.000 . That is to say, there is a significant negation between students' ATDTT in CET-4 and test anxiety. In other words, the less positive towards test sections the students are, the more anxious they feel while taking CET-4.

The four test sections, writing, listening, reading and translation, are taken as variables. The researcher also conducted the correlation analysis to explore the influence of students' ATDTT on their test anxiety.

According to **Figure 14**, it is easy to find students' ATDTT in CET-4 and their test anxiety are all negatively and significantly correlated. The correlated coefficients are -0.258^{**} , -0.290^{**} , -0.271^{**} and -0.262^{**} separately. That indicates students' test anxiety in CET-4 is influenced greatest by listening, followed by reading and translation, and least by writing. The reason may be that the listening section is done just after the writing section and it is very clear to know

| Correlations | | | |
|---|------------------------|-----------------------------|---------------------------------------|
| | | Students' ATDTT in CET-4 | Students' Test Anxiety in CET-4 |
| Students' ATDTT in CET-4 | Pearson Correlation | 1 | -0.352^{**} |
| | Sig. (2-tailed) | | 0.000 |
| | N | 255 | 255 |
| Students' Test Anxiety in CET-4 | Pearson Correlation | -0.352^{**} | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 255 | 255 |
| **Correlation is significant at 0.01 level (2-tailed) | | | |

Figure 13. Correlation analysis of two variables.

| Students' ATD TT in CET-4 | Students' Test Anxiety in CET-4 | |
|---|---------------------------------|-----------------|
| | Pearson Correlation | Sig. (2-tailed) |
| Writing | -0.258** | 0.000 |
| Listening | -0.290** | 0.000 |
| Reading | -0.271** | 0.000 |
| Translation | -0.262** | 0.000 |
| **Correlation is significant at 0.01 level (2-tailed) | | |

Figure 14. Correlations between Students' ATD TT in CET-4 and their test anxiety.

whether they understand the audio and whether they can get the question right. Therefore, teachers can recommend some English movies or apps for students to practice their listening if they want to help students reduce their test anxiety.

4.3.2. Correlation Analysis between Students' ATD TT in CET-4 and Their Cognitive Anxiety

The scores of ATT and Worry subscales are taken as the two variables. They are inputted into SPSS.26 to be analyzed.

From **Figure 15**, it is clear to see the Pearson correlation = -0.323 , the P value = 0.000. That is to say, students' ATD TT in CET-4 are negatively and significantly correlated to their cognitive anxiety. In other words, the less positive towards test sections the students are, the more worry and concern they have while taking CET-4.

Similar to the analysis between students' attitudes and their total test anxiety, the four test sections, writing, listening, reading and translation, are also taken as variables to explore the influence of students' ATD TT on their cognitive anxiety.

From **Figure 16**, it is easy to find students' ATD TT in CET-4 correlate inversely with their cognitive anxiety in CET-4 at 0.01 level. The detailed correlated coefficients are -0.249^{**} , -0.265^{**} , -0.283^{**} and -0.253^{**} respectively. That indicates students' cognitive anxiety in CET-4 is influenced greatest by reading, followed by listening and translation, and least by writing. Therefore, teachers should assign more reading homework to students if they want to help students reduce their cognitive anxiety.

4.3.3. Correlation Analysis between Students' ATD TT in CET-4 and Their Emotional Anxiety

The scores of ATT and Emotion subscales are taken as the two variables. They are inputted into SPSS.26 to be analyzed.

From **Figure 17**, it is clear to see the Pearson correlation = -0.319 , the P value = 0.000. That is to say, students' ATD TT in CET-4 are negatively and significantly correlated to their emotional anxiety. In other words, the less positive towards test sections the students are, the more nervous they are while taking CET-4.

| Correlations | | | |
|---|---------------------|---------------------------|--------------------------------------|
| | | Students' ATD TT in CET-4 | Students' Cognitive Anxiety in CET-4 |
| Students' ATD TT in CET-4 | Pearson Correlation | 1 | -0.323** |
| | Sig. (2-tailed) | | 0.000 |
| | N | 255 | 255 |
| Students' Cognitive Anxiety in CET-4 | Pearson Correlation | -0.323** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 255 | 255 |
| **Correlation is significant at 0.01 level (2-tailed) | | | |

Figure 15. Correlation analysis of two variables.

| Students' ATD TT in CET-4 | Students' Cognitive Anxiety in CET-4 | |
|---|--------------------------------------|-----------------|
| | Pearson Correlation | Sig. (2-tailed) |
| Writing | -0.249** | 0.000 |
| Listening | -0.265** | 0.000 |
| Reading | -0.283** | 0.000 |
| Translation | -0.253** | 0.000 |
| **Correlation is significant at 0.01 level (2-tailed) | | |

Figure 16. Correlations between students' ATD TT in CET-4 and their cognitive anxiety.

The four test sections, writing, listening, reading and translation, are taken as variables. The researcher also conducted the correlation analysis to explore the influence of students' ATD TT on their emotional anxiety.

From **Figure 18**, it is easy to find the correlated coefficients are -0.233^{**} , -0.256^{**} , -0.251^{**} and -0.278^{**} respectively. That indicates students' emotional anxiety in CET-4 is influenced greatest by translation, followed by listening and reading, and least by writing. Therefore, teachers should motivate students to learn more translation skills if they want to help students reduce their emotional anxiety.

| Correlations | | | |
|---|---------------------|--------------------------|--------------------------------------|
| | | Students' ATDTT in CET-4 | Students' Emotional Anxiety in CET-4 |
| Students' ATDTT in CET-4 | Pearson Correlation | 1 | -0.319** |
| | Sig. (2-tailed) | | 0.000 |
| | N | 255 | 255 |
| Students' Emotional Anxiety in CET-4 | Pearson Correlation | -0.319** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 255 | 255 |
| **Correlation is significant at 0.01 level (2-tailed) | | | |

Figure 17. Correlation analysis of two variables.

| Students' ATDTT in CET-4 | Students' Emotional Anxiety in CET-4 | |
|---|--------------------------------------|-----------------|
| | Pearson Correlation | Sig. (2-tailed) |
| Writing | -0.233** | 0.000 |
| Listening | -0.256** | 0.000 |
| Reading | -0.251** | 0.000 |
| Translation | -0.278** | 0.000 |
| **Correlation is significant at 0.01 level (2-tailed) | | |

Figure 18. Correlations between students' ATDTT in CET-4 and their emotional anxiety.

In general, it can be concluded from the above analysis that students' ATDTT in CET-4 are all significantly and negatively correlated with their total test anxiety, cognitive anxiety and emotional anxiety. It can also be found that students' ATDTT in CET-4 have different influences. Students' total test anxiety is influenced greatest by their attitudes towards listening and their cognitive anxiety is influenced greatest by reading attitudes while their emotional anxiety is influenced greatest by translation attitudes. Students' attitudes towards writing have the least influence on their total anxiety, cognitive anxiety and emotional anxiety.

5. Conclusion

5.1. Major Findings

This study aims to analyze the test anxiety level of non-English major freshmen in CET-4, students' ATDTT in CET-4 and the correlation between them. According to the data collected and analyzed, 3 major findings can be found.

Firstly, it can be concluded that non-English major freshmen are at the lower of a moderate test anxiety level in CET-4. Their emotional anxiety is slightly higher than their cognitive anxiety, but there is no significant difference. The test anxiety of both male and female students is at the moderate level and there is no significant gender difference in students' test anxiety in CET-4.

Secondly, students' attitudes towards listening section are negative. That means when completing listening task in CET-4, students dislike this section and think the difficulty level is high and may feel worried or nervous. Students' attitudes towards writing, reading and translation sections are more neutral. That indicates students neither like nor hate these sections and the difficulty level of each section is also neutral and they feel neither relaxed nor nervous when completing these sections. Among the four sections in CET-4, students are most positive in writing, less positive in translation and reading, and the least positive in listening.

Thirdly, the conclusion that there is a negative correlation between students' ATDTT in CET-4 and their total test anxiety, cognitive anxiety and emotional anxiety can be drawn. Students' attitudes towards listening, reading and translation have the greatest influence on their total test anxiety, cognitive anxiety and emotional anxiety in CET-4 respectively. Their attitudes towards writing have the least influence on all the three kinds of test anxiety.

5.2. Limitations

Great efforts have been made to collect and analyze the data from students' questionnaires. The statistical instrument SPSS.26 has been employed to get objective results in terms of students' test anxiety, their attitudes and the correlation between them. However, limitations cannot be avoided.

Firstly, one of the limitations is the choice of samples. Though there are enough samples in this study, the samples are from the same school and the same grade. Therefore, the research results are limited in grade and region. They cannot reflect the test anxiety in CET-4 of all non-English majors.

Secondly, the questionnaire was employed as the only research instrument in this study, which is relatively single. Because all the questionnaires are collected online and anonymously, it is not easy to find the exact students with high test anxiety and low test anxiety. Thus, further interview cannot be conducted to know the reasons for high and low test anxiety.

5.3. Suggestions for Future Study

Some feasible suggestions to approach the above limitations can be given for future study. Firstly, a larger size of samples can be employed, including samples

from different majors, different grades or even different schools. Secondly, researchers can also take students' scores in CET-4 test as a variable to explore the correlation between students' test anxiety in CET-4 and their academic performance in CET-4. Lastly, interviews with teachers and students could be conducted to help future researchers to better know the reasons for students' test anxiety in CET-4.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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