# COMPREHENSIVE ANALYSIS OF ENGLISH LEARNING ANXIETY AND THE ACADEMIC SELF-EFFICACY AMONG COLLEGE STUDENTS

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## SUMMARY

**Introduction:** *With the development of the social economy, the success of reform and opening up, and the acceleration of global integration, foreign languages and computer technology have become necessary skills for high-quality talents in the 21st century. While college students are learning and using English, it is more likely to cause anxiety than other subjects because of its particularity.*

**Subjects and methods:** *In this study, 38 college students from a university in Guangxi Province, China were selected as the research objects. SPSS27.0 was used for frequency analysis, correlation analysis, and independent sample t-test. We aim to study the relationship between academic self-efficacy and English learning anxiety and thus explore related influencing factors.*

**Results:** *Spearman's correlation coefficient between academic self-efficacy and English learning anxiety is -0.847, and there is a significant difference between students of different genders in academic self-efficacy (t = -2.182, P < 0.05). Male students have higher academic self-efficacy than female students. There was no statistical difference in English learning anxiety among different genders (t = -2.009, P > 0.05).*

**Conclusions:** *There is a negative correlation between academic self-efficacy and English learning anxiety. Individuals with higher academic self-efficacy would experience less English learning anxiety. And, there is a gender difference in academic self-efficacy among college students. Male students had higher academic self-efficacy than female students, and the difference is statistically significant. Also, there is a gender difference in English learning anxiety among college students. The anxiety index of females is lower than that of males, and the difference is not statistically significant.*

**Key words:** *English learning anxiety - college students - academic self-efficacy - education*

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## INTRODUCTION

Anxiety belongs to the category of psychology and is a special representation of inner psychology. It is specifically manifested as that when an individual is unable to achieve the established goal and overcome the obstacles and threats encountered, the self-esteem or confidence would be damaged and this may lead to tension and fear (Schaefer et al. 2007). Proper anxiety can correct students' learning attitude to a certain extent, and make their thinking more active which plays an auxiliary role in English learning. However, with excessive anxiety, students may experience physiological phenomena such as sweaty palms, accelerated heartbeat, pulse, nervousness, etc. in the process of English learning. Further, they cannot accurately express the pronunciation and rhythm of the English language and even forget vocabularies, which severely inhibits the learning effect (Nunez-Pena & Bono 2019). The survey shows that 61% of students have no confidence in their spoken English, and they often feel anxious when they don't know how to express their ideas clearly in English. 43% of the students fear that they may make mistakes while speaking English in public and their self-esteem might get hurt. They dislike the oral English communication organized by teachers in class. The lack of self-confidence and the pressure caused by frustration in the learning process may lead to different degrees of learning anxiety (Wang & Liao 2012). In addition, an oppressive classroom atmosphere also harms students' English learning results.

If the learning environment is tedious and the class is monotonous, students may experience great pressure. Under such pressure, their learning potential cannot be stimulated, and their interest in learning may be hit to a certain extent, leading to serious anxiety, thus reducing learning efficiency (Shangraw et al. 2021).

The concept of self-efficacy was proposed by Bandura, a famous American psychologist, in his book *Social Foundations of Thought and Action: A Social Cognitive Theory* in the 1970s. Bandura argues that in addition to the outcome expectation, there is also the efficacy expectation. Outcome expectation refers to the prediction that a certain behavior would lead to a certain result. If an individual predicts that a certain behavior would lead to a certain result, then this behavior may be activated and selected (Kim et al. 2019). Efficacy expectation refers to the prediction or judgment of an individual ability to carry out a certain behavior. This is a prediction of behavioral competencies. It indicates whether an individual is confident that he or she can successfully perform an action that leads to a certain outcome. When a man is confident that he or she is capable of performing an activity, he or she would have a high sense of self-efficacy to carry out that activity (Grenner et al. 2021). Developed from Bandura's self-efficacy theory, academic self-efficacy refers to the confidence and attitude of students towards their ability to achieve academic success, as well as their belief in completing academic tasks and successfully learning knowledge (Talsma et al. 2019).

Studies have shown that individual academic self-

efficacy has varying degrees of influence on learning motivation, learning behavior, learning status, and academic achievement. It is an important condition for achieving good results (Downing et al. 2020). However, there are few studies on the relationship between academic self-efficacy and English learning anxiety. Thus, based on the current situation, this study explores the correlation between the two, and also tries to provide a reference for alleviating the English learning anxiety of college students.

# SUBJECTS AND METHODS

In this study, 38 college students from a university in Guangxi Province, China were selected as the research objects, including 19 males and 19 females. All participants were informed and consented to the research background, research protocol, questionnaire content, and other information.

This study uses SPSS27.0 to conduct frequency analysis, correlation analysis, and independent sample T-test, to analyze the relationship between academic self-efficacy and English learning anxiety and explore the relevant influencing factors.

## Academic self-efficacy scale

This study adopts the academic self-efficacy scale developed by Liang Yusong. The scale includes two dimensions, self-efficacy of learning ability and self-efficacy of learning behavior, with 22 items in total. Each item is evaluated by a 5-point scale, with 5 points for strongly agree, 4 points for agree, 3 points for general, 2 points for disagree, and 1 point for strongly disagree. The total score was 110, and a higher score indicates better academic self-efficacy. The overall Cronbach's α coefficient of the scale is 0.76, with reasonable internal consistency (Kong et al. 2021).

## English language learning anxiety scale

In the field of psychology, Horwitz et al. defined foreign language anxiety for the first time from a situational perspective as the unique psychology of self-perception, belief, feeling, and behavior related to classroom language learning generated by the uniqueness of foreign language learning. Horwitz et al. developed the Foreign Language Class Anxiety Scale (FLCAS), which is specifically designed to measure the breadth and depth of anxiety in foreign language learning situations (Kutuk et al. 2020). The English Learning Anxiety Scale (ELLAS) used in this study was self-made and compiled from the FLCAS scale. The ELLAS scale contains 27 questions, and each question is divided into 4 dimensions: fear of negative evaluation, exam anxiety, lack of learning confidence, and English classroom anxiety. The Likert five-level scale is used for scoring statistics, which is consistent with the scoring model of the above-mentioned academic self-efficacy scale. Higher scores indicate higher anxiety levels of students in English classroom learning (Some questions are reversely designed and have been reversed in data statistics).

## Reliability and validity test

The reliability of the scale refers to the consistency or stability of the survey results of the scale. The more consistent the results of two or more scale surveys are, the more reliable the scale is. In this paper. Cronbach's α coefficient is used to test the reliability of the ELLAS scale by SPSS27.0. With a sample size of 512, the α value is 0.831, which is between 0.8-0.9, indicating that the reliability analysis results could pass the consistency test and the scale is of great reliability.

The validity of the scale reflects the accuracy and effectiveness of the design, which means the scale can reflect the purpose of the survey to a greater extent. The validity of the ELLAS scale should be tested, and the KMO value and the significance of Bartlett's sphericity test should be comprehensively analyzed. If the KMO value is higher than 0.8, it indicates high validity. If the value is between 0.7-0.8, it indicates that the validity is good. If the value is between 0.6-0.7, it indicates acceptable validity. If the value is less than 0.6, it indicates poor validity. With a sample size of 512, the measured KMO value of the scale is 0.718, which is greater than 0.5. The significance of Bartlett's sphericity test is 0.000, and the result of the sphericity test is significant, indicating good validity of the scale and strong correlation among items (Oosterwijk et al. 2019).

# RESULTS

The ASES scores and ELLAS scores of 38 subjects were input into statistical software SPSS27.0, and the bivariate correlation test was conducted on the data on academic self-efficacy and English learning anxiety. The Spearman correlation coefficient obtained between the two is -0.847 ($P < 0.001$). It indicates that there is a significant negative correlation between academic self-efficacy and English learning anxiety. Individuals with higher academic self-efficacy have lower levels of English learning anxiety.

With gender factor as the grouping variable and ASES score and ELLAS score as test variables, SPSS27.0 is used to conduct an independent sample *t*-test. Statistical results of data are shown in Table 1, and data distribution is shown in Figure 1 and Figure 2. The *t*-test results of academic self-efficacy and English learning anxiety are shown in Table 2.

As can be seen from the above chart, the academic self-efficacy of students of different genders is significantly different ($t = -2.182$, $P < 0.05$). The academic self-efficacy of males is higher than that of females, and the mean difference between the two is 10.52. One of the reasons for the above results may be the personality differences between male and female students. Generally speaking, male students are more confident, optimistic, and independent. While females are more dependent and tend to ask for help when they encounter problems. They relatively lack self-confidence. Also, it may be related to the difference in their ways of thinking

and the expected goal of learning results between male and female students. Male students pay more attention to knowledge extension and the learning process. While female students pay more attention to academic performance, so they are more susceptible to the opinions of others, resulting in lower academic self-efficacy than male students (Saeed & Ahmad 2020).

From the above data, it also can be seen that the English learning anxiety index of females is lower than that of males with an average difference of 9.58, but there is no statistical difference in English learning anxiety between the two ($t = -2.009$, $P > 0.05$). Traditionally, female students are considered superior to male students in language learning. Once their ability is confirmed, female students would be calmer to deal with their predicament in English learning. This may be the reason for the difference in English learning anxiety between male and female students.

**Table 1.** Data statistics

|  | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| ASES | Female | 19 | 65.8421 | 13.12446 | 3.01096 |
|  | Male | 19 | 76.3684 | 16.43239 | 3.76985 |
| ELLAS | Female | 19 | 71.3684 | 12.37475 | 2.83896 |
|  | Male | 19 | 80.9474 | 16.70154 | 3.8316 |
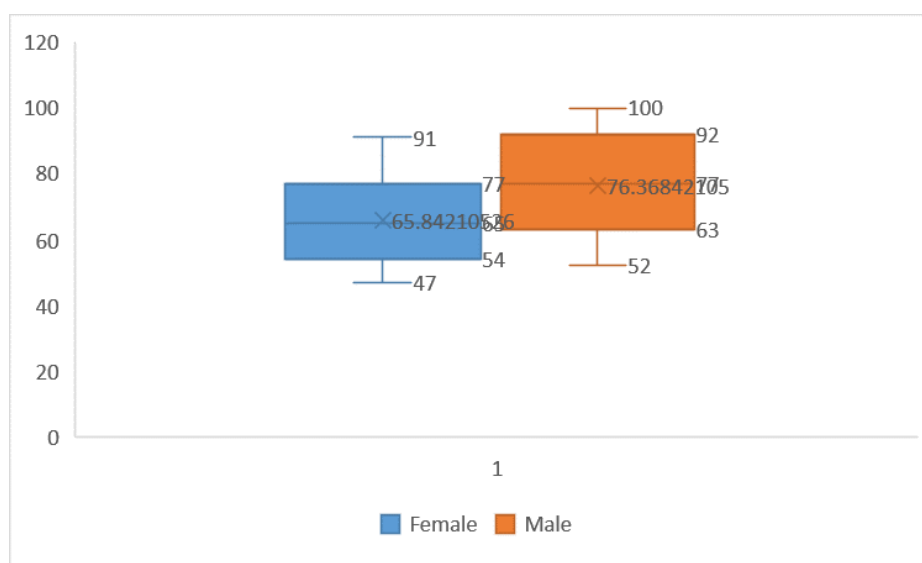


**Figure 1.** Box diagram of academic self-efficacy
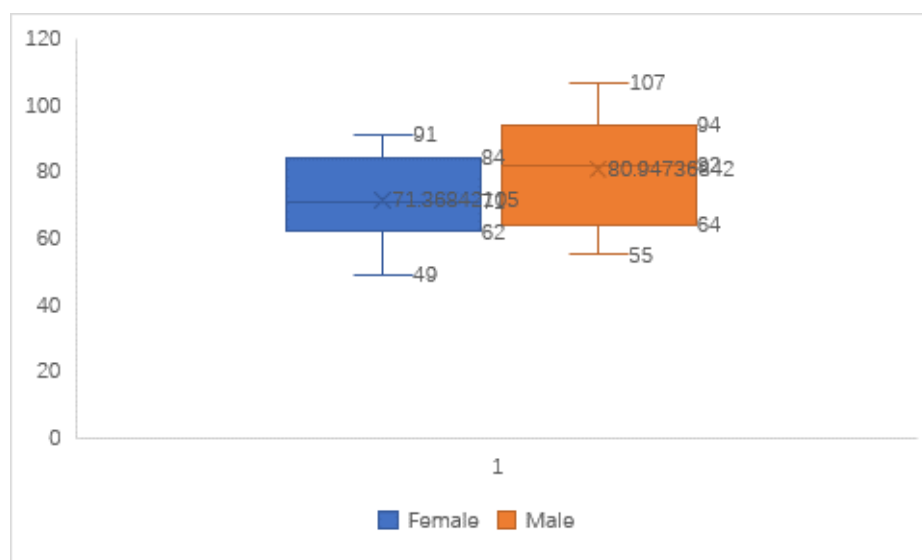


**Figure 2.** Box diagram of English learning anxiety

**Table 2.** Independent sample *t*-test

| | | F | t | df | P | M | 95% CI | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| ASES | Equal variances assumed | 1.276 | -2.182 | 36 | 0.036 | -10.52632 | -20.3112 | -0.74139 |
| | Equal variances not assumed | | -2.182 | 34.323 | 0.036 | -10.52632 | -20.3279 | -0.72476 |
| ELLAS | Equal variances assumed | 2.321 | -2.009 | 36 | 0.052 | -9.57895 | -19.2504 | 0.0925 |
| | Equal variances not assumed | | -2.009 | 33.186 | 0.053 | -9.57895 | -19.2789 | 0.12105 |

## DISCUSSION

In the process of English learning, the anxiety of learners has a negative impact on the final effect of learning to a certain extent, and the improvement of academic self-efficacy has a positive impact on the learning effect. Reducing English anxiety and improving academic self-efficacy require the joint efforts of teachers and students (Popa-Velea et al. 2021).

Teachers need to create a relaxed classroom atmosphere. In the course introduction, teachers should try to choose interesting topics close to students. This may lead them naturally into the classroom learning situation. In class, more interactive communication would be helpful for students to relax. It is also of benefit to change teachers' way of asking questions and encourage students to speak instead of answering passively. Also, teachers should innovate teaching modes to increase the opportunities of students for listening, speaking, and communication. Moreover, teachers need to guide students to cultivate correct English learning motivation and establish a proper learning outlook and test-oriented thinking (Cayir & Ulupinar 2021). In this way, the motivation for English learning of students would become correct and strong, and their anxiety would be greatly reduced. Therefore, their academic self-efficacy shall be improved, and they can also cultivate and improve their practical skills of English (Soland 2019). Besides, regarding the design of teaching content and the organization of classroom teaching, teachers should be objective and fully consider the needs of students. According to the difficulty of the course content, teachers should adopt different teaching methods. Students can discuss the difficult content in groups, and teachers then summarize and sublimate based on the discussion. Such an active and positive learning atmosphere is beneficial for students to study in a relaxed state, and can also effectively reduce their anxiety (DaLomba et al. 2021).

While students should improve their courage to participate in classroom teaching by clarifying the basic goal of learning. Some students may have a poor English foundation, so it is difficult to participate in the early stage. But with further learning, this situation would gradually change, and students' English learning performance would be improved accordingly (Sandilos et al. 2020). Also, students need to improve their learning strategies under the guidance of teachers, adjust and set their own learning goals and test goals, develop practical learning plans, and learn to use listening, reading, vocabulary, and writing strategies. When students adopt the above learning strategies, there would be no worries about their studies and exams, and their anxiety level shall be reduced. With academic progress, their self-efficiency shall also be improved (Karbakhsh & Safa 2020).

## CONCLUSIONS

This study explores the relationship between academic self-efficacy and English learning anxiety and also some related influencing factors. It is found that there is a significant negative correlation between academic self-efficacy and English learning anxiety. Individuals with higher academic self-efficacy experience less English learning anxiety. Further, there is a gender difference in academic self-efficacy among college students. The academic self-efficacy of males is higher than that of females. The mean difference between the two is 10.52, and the difference is statistically significant. There was also a gender difference in English learning anxiety among college students. The anxiety index of females was lower than that of males, with an average difference of 9.58, but the difference was not statistically significant.

Meanwhile, the shortcomings of this study cannot be ignored. On the one hand, due to the limited conditions, there was a quite small number of subjects and data collection. We can see the *P*-value of the gender test on the anxiety index is 0.052. Although it is greater than 0.05, the difference is extremely small. This is the disadvantage of small samples. If there are more subjects and data collected, clearer and more representative experimental results may be obtained. On the other hand, according to the current situation of education in China and based on some field interviews, it is found that students of liberal arts generally have a better English foundation than students of science as they spend more time reading books in foreign languages. Students of liberal arts experience less anxiety caused by unfamiliar English vocabularies and articles, as most of them think that they can overcome this difficulty through repeated and thorough reading. Among the experiment subjects of this study, the ratio of liberal arts students to science students is about 3:1, which is not balanced. New research results may be obtained by

controlling the variables respectively.

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# REVIEW ON THE MECHANISM OF PHYSICAL EXERCISE IMPROVING SENILE DEPRESSION

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## SUMMARY

*Introduction*: Senile depression may lead to the decline of quality of life and increase the risk of cardiovascular disease. At the same time, relevant studies have shown that physical exercise can improve the severity of psychological diseases, so this attempt to analyze the effect and mechanism of physical exercise on improving senile depression.

*Subjects and methods:* 100 elderly people over 50 years old and suffering from depression were selected from China as the research objects, and they were evenly divided into experimental group and control group, with 50 people in each group. In the experiment, the personnel in the experimental group are required to choose one of their favorite sports from running, Taijiquan, basketball, aerobics and other sports, and then carry out the selected sports at least three times a week, each time for no less than 30 minutes. The control group did not receive physical exercise intervention, and the experiment lasted for 6 months. SDS (Self-rating Depression Scale) test should be carried out before and after the sports intervention experiment.

*Results:* There was no significant difference in SDS scores between the two groups before the experiment, but after the experiment, there was significant difference in SDS scores between the experimental group and the control group, and the average score of the experimental group was 52.5, which was 13.2% lower than that of the control group.

*Conclusions:* Physical exercise can indeed play a role in the treatment of senile depression. After consulting the members of the expert group, it is found that the mechanism of this result is that in the process of physical exercise, the patient's body can produce hormones that make the mood and spirit in long-term excitement and satisfaction, and the exercise will divert the patient's attention and give the spirit consumed by the disease a short rest.

*Key words:* physical exercise - senile depression - expert inquiry method - SDS

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## INTRODUCTION

In short, senile depression is the depression of the elderly, which has many characteristics of aging (Papakostas et al. 2020). Senile depression is often manifested as mild depression clinically, but the harm of the disease cannot be ignored. If it is not diagnosed and treated in time, it will lead to the decline of quality of life and increase the risk of psychosomatic diseases (such as cardio cerebrovascular diseases) and death (Lee 2019). There are many types of clinical symptoms of senile depression, and there are some differences with patients with depression of other ages. The former has more cognitive impairment and physical discomfort. The common clinical symptoms of senile depression are described in detail below. Depression is the main symptom of depression patients of all ages. It is characterized by long-term and lasting depression. Patients are often depressed, depressed and live like years, and lose a good impression of their previous personal interests and hobbies. They think that life is boring, boring, boring, unable to lift up their spirit and unhappy. Some patients will also feel desperate, helpless and useless. A considerable number of elderly patients with depression also suffer from anxiety and agitation, tension, worry and restlessness. These somatic anxieties sometimes even mask the symptoms of depression (Duan et al. 2021). The second major clinical manifestation of senile depression is slow thinking, slow thinking Association and slow response. Conscious

brain function is significantly degraded than that when young. In addition, most patients with senile depression have a certain degree of impairment of cognitive function (such as memory, logical analysis, calculation, understanding ability, etc.), showing a relatively obvious decline in memory, which needs to be distinguished from senile dementia, but most of the dementia cannot be recovered clinically, while depression can be improved or even cured with the improvement of emotional symptoms. Decreased will activity is also a clinical manifestation of major senile depression. Patients move slowly, live lazily, don't want to speak (less speech, low intonation, slow speed), don't want to take any action, and even don't want to communicate with people around them. Always feel lack of energy or serious dispersion, general fatigue, and even unable to take good care of themselves in daily life. Some patients have decreased or lost their enthusiasm for life, are more and more reluctant to participate in social activities, and even completely eliminate all social activities and alienate relatives and friends. Suicidal concept and behavior, patients with severe depression are often accompanied by negative suicidal concept and behavior. The risk of suicide in elderly patients with depression is much higher than that in other age groups, especially in patients with depression and physical diseases. Physical symptoms, which are more common in elderly patients with depression, are mainly manifested as: pain syndrome, such as low back pain, headache, neck pain, abdominal pain and chronic pain of the whole body.