

The Effects of Foreign Language Anxiety, Shame and Pleasure on Chinese High School Learners' English Learning Motivation and Academic Grades

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Abstract. The field of education is now being more attentive to the emotions of learners when studying foreign languages, more emotions besides anxiety, boredom, and enjoyment have been gradually discovered by researchers. The focus of this study is on the impact of anxiety, shame, and pleasure on student motivation and academic grades (AG) in Chinese high schools, and aims to help educators guide students to acquire second language from the psychological aspect. A mixture of methods was employed to obtain data from 105 students at a Chinese high school via questionnaires and AG records. The findings reveal that foreign language anxiety and shame is significantly negatively linked to students' English learning motivation (ELM) and AG. In contrast, foreign language pleasure positively influences motivation and academic outcomes. The study suggests that educators should focus on students' learning emotions towards English subjects more, and use interesting classroom activities and other measures to minimize negative emotions and increase positive emotions. In this way, those approaches can promote the generation of students' ELM and the improvement of academic performance.

Keywords: Anxiety, shame, pleasure, English learning motivation, academic grades

1. Introduction

In the research on second language acquisition (SLA), researchers are increasingly focusing on the important role of psychology. In recent years, the emotion and motivation of learning English have attracted a lot of attention. In China, with the continuous reform of basic education in recent years, English education practitioners in primary and secondary schools have shifted their focus to the psychological development of students. This shift, often referred to as the "affective turn," has highlighted that language learners' engagement and gain success in learning are shaped by emotions, attitudes, and motivation.

Research on foreign language anxiety (FLA) has been around since the 1970s, and numerous studies have shown that it affects learners' willingness to communicate, participation in class, and overall language proficiency. Recent research has highlighted the importance of positive emotions, like enjoyment and pleasure, which can boost learners' engagement and motivation. For example, studies have shown that students who find greater enjoyment in the classroom are more inclined to

cultivate positive attitudes towards language learning and achieve better outcomes, for example: getting higher grades and improving their English skills [1].

As another important component in psychology, motivation has always been an important part of research in SLA. Intrinsic motivation is driven by personal interest and enjoyment, while external rewards or pressures drive extrinsic motivation [2]. Self-determination theory (SDT) offers an effective approach to examine how various forms of motivation impact language learning outcomes. Research has consistently shown that autonomous motivation, which aligns with intrinsic motivation, is positively correlated with language learning engagement and achievement. In contrast, controlled motivation, which is more extrinsic in nature, may have mixed effects on learning outcomes.

The foundation of future language skills and attitudes is laid down during high school, which is a crucial period in students' language learning journey. Chinese students often face unique challenges in English learning, including high-stakes exams, large class sizes, and cultural differences in teaching and learning practices. Understanding how emotions and motivation interact in this specific context can deliver meaningful perspectives for educators to design more impactful educational techniques and support systems that address learners' emotional needs and strengthen their incentive to acquire English. Finally, these changes made by educators can improve students' grades, so as to generate more positive emotions to stimulate learning motivation, forming a virtuous circle.

2. Literature review

With the development of the field of applied linguistics over recent years, many researchers have pay attention to the combination of psychology and pedagogy. Despite this, the bulk of existing explorations have primarily engaged in discussing the connections among between FLA, foreign language boredom (FLB) foreign language enjoyment (FLE) and teacher teaching and student learning. In general, FLE is able to positively guide learning behavior, while FLA and FLB are the opposite [3]. There is a negative correlation between FLE and FLA, as it with FLB, while there is a strong positive correlation between FLA and FLB [4]. However, other foreign language learning emotions, including self-conscious emotions like shame, guilt, embarrassment, and pride and basic emotions (anger, fear, sadness, pleasure, disgust, and surprise) [5] are lack of exploration. Therefore, this research paper will start from FLA, foreign language shame (FLS) and foreign language pleasure (FLP) to explore the learning motivation of students under their influence.

2.1. Emotions in foreign language learning

2.1.1. Foreign Language Classroom Anxiety (FLCA)

Since the 1970s, anxiety has been viewed as an essential component throughout the progression of foreign language learning (FLL) because of its prominent emotional factor [6]. It does not just affect the learning of SLA, and sometimes it even affects the learning of L1. Horwitz et al. assert that FLA is a distinct grouping of personal perceptions, beliefs, emotions, and behaviors that emerge within the situation of classroom language development because of the distinctive characteristics of the language learning process [7]. So they used 33-item Foreign Language Classroom Anxiety Scale (FLCAS) and data obtained indicate the close relationship between FLA in classrooms and student behavior. At the same time, it is pointed out that teachers can carry out encouraging teaching and provide assistance to students in order to reduce their FLCA [7]. With the gradual deepening of this field, this study utilizes the 8-item S-FLCAS developed by Botes et al. [8].

2.1.2. Foreign Language Classroom Shame (FLCS)

In the field of psychology, there is some research on shame. A distinct sense of unease, along with a broad sensation of insufficiency and imperfection, is what psychologist Lewis Michael came up with as his definition of shame in 1992 [9]. Shame can be broadly divided into two categories. The first is that someone feels ashamed whenever and wherever they are. The second involves experiencing shame in particular situations. This means that this is not a physiological response, but rather a person's own attributes and characteristics. It is relatively stable and difficult to change. The second type is to feel ashamed in a specific situation, which is very different from the first type. It is ephemeral and very flexible. The inclusion of shame into the field of applied linguistics is based on the second situation, while FLCS makes the situation more specific. While, until now, there has not been much research on combining shame with language learning behavior. Since the Foreign Language Classroom Shame Scale (FLCSS) has not yet been explicitly proposed by scholars, at the same time, Wurmser who suggested “Shame anxiety”, explained the twisting of shame and anxiety that anxiety is an important part of shame [10]. So the FLCSS this research use is adapted from the FLCAS [7, 11].

2.1.3. Foreign Language Classroom Pleasure (FLCP)

It is not difficult to find that the study of SLA has undergone tremendous changes in recent years. More and more scholars are redirecting their concentration from unfavorable to favorable emotions. American psychologist Fredrickson proposed the expand-and-construct theory of positive emotions, arguing that particular specific positive emotions, like delight, engagement, fulfillment, self-esteem, and affection have distinct phenomenological characteristics [12]. However, each of them possesses the ability to expand individuals' immediate range of thoughts and actions, as well as to enhance their lasting personal assets. These resources include bodily and cognitive assets together with social and psychological ones [13].

While most of the current research on positive emotions focuses on FLE, more untouched emotions like self-confidence, pleasure, and a sense of accomplishment are lacking in the field of applied linguistics [4, 14]. Dewaele and MacIntyre, two of the first scholars to study FLE, developed FLCES. The scale contains 21 items, mainly including learners' individual learning experience, peer factors, and teacher factors. In 2017, the scale was reduced to 10 items through a survey of foreign language learners by Dewaele and MacIntyre in London. Three new dimensions of foreign language pleasure emotions were also determined, namely, social foreign language pleasure emotions, personal foreign language pleasure emotions, and the positive atmosphere created by peers and teachers. This scale provides an important reference for Jin & Zhang to adapt this scale on the basis of combining the Chinese contexts and rename it as the Foreign Language Classroom Pleasure Scale (FLCPS), which serves as the foundation for an important research tool in this paper [1, 15].

2.2. English Learning Motivation (ELM)

The understanding of motivation held by social psychologists and applied linguists has been shaped by Gardner et al.'s socio-educational model. The three components that make it up are degree of motivation, enthusiasm for learning the target language, and attitudes toward the target language [16].

Although motivation and language learning emotions differ in nature, they are inherently linked. Motivation and ELM seem to be a two-way connection, and there is significant variability [17].

Previous research shows that motivation often causes various negative and positive emotional responses, including anxiety and enjoyment [17]. On the flip side, a rising volume of SLA research argue that emotions likewise influence learner motivation to a large extent [18, 19]. These studies have made it clearer that negative emotions often weaken motivation and exert adverse impacts on linguistics desires. On the contrary, positive emotions have an inherent motivational effect, which is stronger than negative emotions and learners' motivation. Because these emotions are directly positively related to learners' attitudes, behaviors, and foreign language motivational processes [20].

In addition, this study also included students' English learning results. Previous research has indicated that academic grades (AG) is strongly linked to ELM [21]. This study will use data to illustrate the impact of motivation on achievement among Chinese high school students.

3. Research questions

When existing studies are combined with local realities, the results of the studies are variable. Therefore this study addresses the listed questions:

- (1)What is the overall characterization of the learners FLA, FLS and FLP?
- (2)How are the students anxiety, shame, and pleasure correlated with their ELM and AG?
- (3)What are the effects of the FLA, FLS, and FLP on Chinese senior high school students ELM and AG?

4. Research methods

4.1. Participants

The basic situation of students in this survey in regards to their desire to learn English is depicted in Table 1: concerning class distribution, there are two classes, namely 2405 and 2402, and there are 53 students in 2405 class, accounting for 50.5%; There are 52 students in the 2402 class, accounting for 49.5%. The 105 Chinese high school students in this questionnaire survey are all from the first year of Yulin No.1 Middle School, Guangxi Zhuang Autonomous Region, China. The proportions of the two classes were very close and almost equal, indicating that in this survey, the number of participants in the two classes was not significantly different. In terms of gender distribution, Table 1 shows that 61 were males, accounting for 58.1%; There were 44 women, accounting for 41.9%. This shows that the number of male students in this survey is relatively higher than that belonging to the female, and there is a certain difference in the gender ratio.

Overall, judging from the data presented in the current table alone, male students outnumber female students, and the two classes have an approximately equal number of participants.

Table 1: Demographic characteristics of the respondents (n=105)

Definition	Items	Frequency	Percent□%□
Class	2405	53	50.5
	2402	52	49.5
Gender	Male	61	58.1
	Female	44	41.9

All students have been learning English since the third grade of primary school and have acquired the basic listening, speaking, reading and writing capabilities. They have a certain understanding of high school English and their own English learning. In this survey, all students who participated in the questionnaire had already received permission from their parents.

4.2. Measures

This study includes five areas: FLA, FLS, FLP, ELM and AG. In order to collect data on these aspects, four different scales combined with the Likert scale are used, with which data are measured. AG are from the school's March monthly exam.

S - FLCAS contains 8 items and is a simplified version of the 33-item SFLCAS, but with the same reliability and validity. The selection of this scale can reduce the time for students to complete and improve the efficiency of measurement. The FLCSS is rooted in the FLCAS created by Horwitz et al. and has 20 items, such as: nervous, not confident, embarrassed [9]. Based on Jin & Zhang, FLPS adapted the scale used in the cost study based on the actual situation of the respondents [16]. The original scale contained 21 items, and 11 items are used in this study. It mainly includes the learner's individual learning experience, teacher factors, and peer factors. The AMC has 8 items, which are mainly designed to measure students' English learning motivations.

In order to assist students to cultivate a more profound awareness of the questions and enhance the accuracy of the measurement, all the questions in this questionnaire are translated from English and Spanish to Chinese.

4.3. Procedures

Before the formal survey, 10 students were pre-tested to ensure that the questionnaire is both reliable and valid. The content of the questionnaire is adjusted as indicated by the results of the pre-test. After receiving permission from the class assistants of the two classes, different self-study time is used to distribute questionnaires to students. Overall, 105 questionnaires were distributed and regained. Finally, the questionnaire data were entered into the SPSS 27.0 for preliminary data examining, including the elimination of samples and outliers with too many missing values. Moreover, students have just completed the monthly exam one week before completing the questionnaire, and the English score in this monthly exam is used as a reference to this research.

5. Results

In order to accurately answer three questions explored in this study, SPSS 27.0 was used to statistically summarize the specific values and relationships of different data.

5.1. Descriptive analysis

Multiple variables related to FLL are represented by descriptive statistics in Table 2, which include the the lowest value, the highest value, the average, and the dispersion measure.

The least amount of FLA was 1.25 and the maximum value was 4.88, indicating that the scores of FLA fluctuated in a certain range. The mean value was 2.97, which was in the middle of the scale, indicating that the students' FLA was moderate overall. The standard deviation is 1, indicating that the dispersion of the data is relatively moderate, and there are some differences in FLA among students, but the difference is not particularly large.

The minimum value of FLS is 1.17 and the maximum value is 5, which fluctuates widely. The mean value was 2.79, which indicates that the students' foreign language shame was generally moderate. The standard deviation of 1.19 exceeded that of FLA, suggests that the variations in FLS among individuals were relatively greater.

The minimum value of FLP (English study) is 1.25 and the maximum value is 5, which has a wide range of values. The mean value was 3.23, which was higher than the mean of FLA and FLS, indicating that the pleasure experienced by students in English learning was relatively high. The standard deviation was 1.29, and the data were more discrete, indicating that there were obvious differences in the pleasure of learning English among students.

FLP (teachers support) has the lowest value of 1 and the highest value of 5, which has a certain range of values. The mean value is 2.96, which is in the middle of the range, reflecting a moderate level of pleasure that students get from teacher support. The standard deviation of 1.37 is the largest standard deviation among several variables, indicating that the individual differences of students in the variable of teacher support pleasure are large, which may be related to the teaching style of different teachers, the way they interact with students, and other factors.

FLP (peer support) has the smallest number of 1 and the largest number of 5, and the range of values is similar to that of other variables. The mean value of 3.26 was the higher of all variables, indicating that students had a relatively strong sense of pleasure from peer support. The standard deviation was 1.32, and the data dispersion degree was also large, indicating that the individual differences of students in peer support pleasure were significant, which may be affected by factors such as personality and relationship intimacy among students.

The minimum value of foreign language learning motivation is 1.58 and the maximum value is 4.92, with a certain variation range. The average value was 3.35, which was at the upper middle level, indicating that the overall motivation of students to learn foreign languages was strong. The standard deviation was 1.08, and the data dispersion was moderate, indicating that there were some differences in ELM among individuals, but the degree of difference was not particularly prominent.

Table 2: Descriptive overview of variables

	Min	Max	Average	Std. Deviation
FLA	1.25	4.88	2.97	1
FLS	1.17	5	2.79	1.19
FLP (English study)	1.25	5	3.23	1.29
FLP (teacher support)	1	5	2.96	1.37
FLP (peer support)	1	5	3.26	1.32
ELM	1.58	4.92	3.35	1.08

5.2. Reliability and validity analysis

5.2.1. Reliability analysis

The trustworthiness of the questionnaire scale is tested through reliability analysis, which describes how well the questionnaire items correspond to the real situation. The α is often used to check the dependability of the questionnaire. As can be seen in Table 3, the α for all variables exceeds 0.8, implying that the questionnaire scale has high reliability and it is reasonably designed.

Table 3: Reliability test result

Study elements	Amount of projects	α
FLA	8	0.925
FLS	6	0.939
FLP (English study)	4	0.898
FLP (teacher support)	3	0.902
FLP (peer support)	4	0.899
ELM	12	0.957

5.2.2. Validity analysis

Validity evaluation is a measurement of the validity of a questionnaire to confirm the study's pertinence. The KMO is often used to analyze the validity level of the data, and the validity degree results of the variables in this research are in Table 4, and the KMO of the overall questionnaire scale is 0.885, indicating that the validity of the questionnaire is very good and can be further studied.

Table 4: KMO and Bartlett test

Total Volume	KMO	Bartlett sphericity test		
		Approximate χ^2	df.	Sig.
	0.885	3212.712	666	0.000

The questionnaire's structural validity was checked by reducing the dimensions of 37 core measurement items, extracting the latent structural factors, and using the factor analysis method. Examining the rationality of the factor load distribution for each item on the six common factors, it can be spotted from Table 5 that the cumulative variance captured after rotation is for 73.77%, and the amount of information extracted is adequate.

Table 5: Sum of variances explanatory

Ingredients	Initial eigenvalues			ESS			SSRL		
	Total	Variance percentage	Cumulative %	Total	Variance percentage	Cumulative %	Total	Variance percentage	Cumulative %
1	13.448	36.345	36.345	13.448	36.345	36.345	8.212	22.195	22.195
2	3.861	10.434	46.78	3.861	10.434	46.78	5.427	14.668	36.863
3	3.471	9.38	56.16	3.471	9.38	56.16	4.759	12.863	49.726
4	2.734	7.388	63.548	2.734	7.388	63.548	3.233	8.738	58.464
5	2.216	5.988	69.536	2.216	5.988	69.536	3.177	8.585	67.049
6	1.567	4.236	73.772	1.567	4.236	73.772	2.487	6.722	73.772

5.3. Correlation analysis

The following is an analysis of the correlation analysis table between this variable in Table 6. Focus on ELM and the correlation between foreign language learning performance and other variables.

ELM was significantly negatively correlated with FLA $r = -0.459^{**}$, indicating that the higher FLA the lower ELM, that is, students' anxiety may inhibit their motivation to learn foreign languages. There also existed a significant negative correlation between ELM and FLS $r = -0.383^{**}$, indicating that the stronger the foreign language shame emotion, the weaker the learning motivation, and the shame might adversely affect students' motivation to learn. ELM and FLP had a significant positive correlation, with $r = 0.371$, which means that the stronger the pleasure experienced by students in English learning, the higher their learning motivation, and the pleasant learning experience can help stimulate learning motivation. Another substantial positive linkage was between ELM and teachers' support pleasure $r = 0.453^{**}$, indicating that teachers' support could make students feel happy, and then enhance students' ELM, and teachers' support had a positive effect on learning motivation. Besides, a significant positive correlation was observed with peer support pleasure $r = 0.399^{**}$, indicating that the pleasure brought by peer support could also promote students' motivation to learn foreign languages, and good peer relationship could help improve learning motivation.

AG was significantly negatively correlated with FLA $r = -0.274^{**}$, indicating that students characterized by higher anxiety had a tendency to have lower foreign language learning scores, and anxiety may interfere with students' learning and test performance. AG and FLS also exhibited a significant negative correlation, with $r = -0.257$, indicating that foreign language shame may adversely influence AG and students' performance with strong shame may be inhibited to a certain extent. While, a positive correlation existed between foreign language learning performance and FLP $r = 0.242^*$, although the correlation was relatively weak, it still indicated that the pleasure in learning had a certain positive effect on the grades, and the pleasant learning state may help to improve the learning effect. Simultaneously, a substantial positive link was between FLL

performance and teacher support pleasure $r = 0.687^{**}$, which was the higher of all correlation coefficients, indicating that teacher support pleasure had a very important impact on students' foreign language learning performance, and the support from teachers and students' pleasure from it had a significant effect on the improvement of performance. Foreign language learning performance was significantly correlated with peer support pleasure, with a r of 0.259^{**} , indicating that peer support and students' pleasure had a beneficial impact on academic performance, and good peer relationship and support could promote the improvement of academic performance to a certain extent. There was a significant positive correlation between foreign language learning performance and ELM $r = 0.313^{**}$, indicating that the stronger the learning motivation, the higher the foreign language learning score, and learning motivation was one of the important factors affecting learning performance.

There were varying degrees of correlation between ELM and foreign language learning performance and other variables. FLA and FLS are detrimental to them, while English learning pleasure, teacher support pleasure, and peer support pleasure have positive effects on them. In teaching, teachers can provide more support and help by paying attention to students' emotional experiences, creating a good learning atmosphere, enhancing students' sense of pleasure in learning, and then improving students' motivation and performance in foreign language learning.

Table 6: Analysis of correlation between variables

	1	2	3	4	5	6	7
FLA	1						
FLS	.280**	1					
FLP (English study)	-.330**	-.280**	1				
FLP (teacher support)	-.465**	-.228*	.238*	1			
FLP (peer support)	-.347**	-0.173	0.144	.450**	1		
ELM	-.459**	-.383**	.371**	.453**	.399**	1	
AG	-.274**	-.257**	.242*	.687**	.259**	.313**	1

Note: **, $p < 0.01$; *, $p < 0.05$

5.4. Regression analysis

5.4.1. The regression analysis of ELM as the criterion variable

The regression analysis in Table 7 Strives to assess the outcome of independent variables in different learning emotions on students' ELM. The dependent variable is ELM.

The unstandardized coefficient of foreign language anxiety $B = -0.203$, the standard error (SE) is 0.101, the $\beta = -0.189$, the t value is -2.019 , and the significance p value is 0.046 ($p < 0.05$). This indicates that for each unit increase in FLA, ELM will drop by an average of 0.203 units under the unchanged other conditions, and this effect is statistically significant, that is, FLA has a significant negative impact on students' ELM.

FLS unstandardized coefficient $B = -0.185$, SE 0.076, $\beta = -0.204$, t -value is -2.436 , significance p -value is 0.017 ($p < 0.05$). It demonstrates that for every unit added to foreign language shame, the motivation for foreign language learning decreased by 0.185 units on average, and this negative

relationship is statistically significant, that is, foreign language shame will significantly reduce students' motivation for foreign language learning.

English learning pleasure unstandardized coefficient $B = 0.149$, SE 0.071, $\beta = 0.179$, t-value 2.1, significance p-value 0.038 ($p < 0.05$). It reveals that for each unit of English learning pleasure, the motivation for foreign language learning will increase by an average of 0.149 units. The stronger the sense of pleasure students experience in English learning, the higher the motivation for foreign language learning.

Teachers support pleasure SE 0.074, $\beta = 0.192$, unstandardized coefficient $B = 0.15$, t-value 2.019, significance 0.046 ($p < 0.05$). This means that for each unit of teacher support pleasure, the motivation for foreign language learning increased by an average of 0.15 units, and this positive relationship is statistically significant, that is, the sense of pleasure brought by the support given by teachers can significantly improve students' foreign language learning motivation.

Peer support pleasure unstandardized coefficient $B = 0.151$, SE 0.073, $\beta = 0.186$, t-value 2.082, significance 0.040 ($p < 0.05$). This shows that for each additional unit of peer support pleasure, the motivation for foreign language learning increased by an average of 0.151 units, and the positive impact is significant, that is, the sense of pleasure brought by peer support has a evidential promoting effect on students' ELM.

The R^2 value of the model is 0.362, illustrating that the regression model can explicit 36.2% of the variation in foreign language learning motivation, that is, independent variables have a 36.2% explanatory power on the changes in foreign language learning motivation. Although it is not very high, it still has a certain explanatory effect. The overall model F value is 12.798 and $p < 0.001$, which proves that the entire regression model is statistically substantial, that is, at least one independent variable in the model greatly influences ELM, and the model is statistically significant.

To sum up, the regression analysis shows that FLA and FLS negatively affect students' ELM, while English learning pleasure, teacher support pleasure and peer support pleasure greatly influence students' ELM, which provides a valuable reference for improving students' foreign language learning motivation.

Table 7: Results of regression analysis (dependent variable: ELM)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	3.049	0.603		5.054	0.000
FLA	-0.203	0.101	-0.189	-2.019	0.046
FLS	-0.185	0.076	-0.204	-2.436	0.017
FLP (English study)	0.149	0.071	0.179	2.1	0.038
FLP (teacher supprot)	0.15	0.074	0.192	2.019	0.046
FLP (peer support)	0.151	0.073	0.186	2.082	0.040
R^2	0.362				
F	12.798 ($p \square 0.001 \square$)				

5.4.2. The regression analysis of foreign language learning performance as the dependent variable

Because this research also seeks to exploring the influencing factors of AG, the regression analysis was conducted on each foreign language learning emotion and motivation. In Table 8 is a

regression analysis based on the independent and dependent variable - FLA and AG.

The unstandardized coefficient of foreign language anxiety $B = -5.646$, the standardized coefficient $Beta = -0.274$, the t value is -2.896 , and the corresponding significance $p = 0.005 < 0.01$ indicates that the impact of FLA on AG is significantly negative, that is, it is believed that there is a true linear relationship between FLA and AG. At the same time, for every unit increase in FLA, AG dropped by 5.646 points. The standardization coefficient $Beta = -0.274$ reflects the negative relationship between FLA and AG, and its absolute value indicates the degree of influence of independent variables on foreign language academic performance. Here it shows that FLA has a certain degree of negative impact on AG. The higher the FLA, the lower the foreign language academic performance.

Table 8: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	82.294	6.113		13.461	0.000
FLA	-5.646	1.95	-0.274	-2.896	0.005

In Table 9 below, the independent variable foreign language shame unnormalized coefficient $B = -4.468$, which intuitively reflects that the average foreign language learning score decreases by 4.468 points for every unit of foreign language shame. The normalization coefficient $beta = -0.257$ not only clearly shows a dissident relationship between FLS and AG, but also reflects that FLS will have a more obvious adverse effect on AG. The higher the FLS, the lower the students' foreign language learning score.

Table 9: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	77.977	5.012		15.559	0.000
FLS	-4.468	1.654	-0.257	-2.701	0.008

In the in-depth study of the factors affecting foreign language learning scores, Table 10 shows that the independent variable English learning pleasure is not normalized to $B = 3.87$, which means that other things being equal, each unit of English learning pleasure increases the foreign language learning score by an average of 3.87 points. The normalization coefficient $Beta = 0.242$ not only reflects the positive relationship between FLP and AG, but also shows that this positive effect has reached a certain extent from its absolute value. The t -value was 2.532, and the corresponding significance $p = 0.013 < 0.05$ further fully demonstrated that the linear relationship between FLP and AG was true and reliable.

Table 10: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	53.024	5.307		9.992	0.000
FLP (English study)	3.87	1.528	0.242	2.532	0.013

In Table 11, The independent variable Teacher Support Pleasure Unnormalized Coefficient B = 10.301 clearly indicates that each unit of teacher support pleasure improvement is associated with a significant increase of 10.301 points on average when other conditions remain constant. The normalization coefficient Beta = 0.687 not only intuitively shows the close positive relationship between teacher-supported pleasure and foreign language learning performance, but also clearly perceives from its absolute value that the teacher-supported pleasure has a profound impact on foreign language learning performance. The t-value of teacher-supported pleasure was as high as 9.59, corresponding to a significance of $p = 0.000$, which suggests that the linear connection between teacher support pleasure and AG is real and solid. The greater the joy of the teacher's support for the student, the more likely the student's performance in foreign language learning will be greatly improved.

Table 11: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	35	3.504		9.988	0.000
FLP (teacher supprot)	10.301	1.074	0.687	9.59	0.000

The unnormalized coefficient B = 4.039 for peer support pleasure, the independent variable in Table 12, indicates that when other conditions are constant, each unit of peer support pleasure increases the foreign language learning score by an average of 4.039 points. The standardized coefficient Beta = 0.259 indicates that peer support pleasure is positively correlated with foreign language learning performance, and this effect has a certain extent. The t-value was 2.722, corresponding to a significance $p = 0.008 < 0.01$, which confirmed that the linear association between peer support pleasure and AG was true and reliable. The more pleasure a student feels at peer support, the higher their performance in foreign language learning is likely to be.

Table 12: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	52.335	5.22		10.027	0.000
FLP (peer support)	4.039	1.484	0.259	2.722	0.008

The independent variable in Table 13 has an unnormalized coefficient of $B = 6.006$, which means that all other things being equal, the average increase in foreign language learning score is 6.006 points for each unit of improvement in foreign language learning motivation. The normalization coefficient $Beta = 0.313$ indicates that a positive relationship exists between ELM and performance in English, and the magnitude of the correlation suggests that it has a certain extent. The t-value was 3.35, corresponding to a significance $p = 0.001$, which confirmed that the linear relationship between ELM and FLL performance was true and stable. The stronger the ELM of the students, the higher their performance in FLL.

Table 13: Results of regression analysis (dependent variable: AG)

Argument	Factors not normalized B	Standard error	Normalization factor Beta	t	Distinctiveness
(Constant)	45.408	6.3		7.208	0.000
English Learning Motivation	6.006	1.793	0.313	3.35	0.001

In summary, the regression analysis showed that FLA and FLS had detrimental influence on students' foreign language learning performance, while English learning pleasure, teacher support pleasure, peer support pleasure and ELM had a significant positive contribution to students' foreign language study scores, and teacher support pleasure had the most favorable impact on students' foreign language learning performance. This provides a valuable empirical basis for the school to effectively improve students' AG.

6. Conclusion

The recent study has explored the intricate interplay between FLA, FLS, FLP, and ELM among Chinese learners in secondary school. The findings reveal that these emotional factors exert significant and multifaceted influences on students' ELM.

On the one hand, anxiety, shame and pleasure are prevalent among high school students from China. While, the proportion of these three emotions will vary among students. On the other hand, anxiety, shame, and pleasure are related to learning motivation and academic grades. Negative emotions (anxiety and shame) were negatively correlated with learning motivation and academic grades, and positive emotions (pleasure) were positively correlated with them. At the same time, students with more motivation to study generally have higher test scores.

The importance of emotional factors in motivating high schoolers to learn English in China is highlighted in these results. In particular, FLP (teacher support) had the greatest positive correlation with students' learning motivation. Educators should be aware of the potential negative impacts of anxiety and shame and strive to foster a supportive and non-threatening learning atmosphere that relieves students' emotional stress. Therefore, students can improve their intrinsic and extrinsic motivation to learn, and take an active part in academic performance.

While, it is important to acknowledge the limitations of this study. The number of participants is a little bit limited, there are only 105 high school students, all of whom are from the same grade at the same school. At the same time, this research lacks long-term observations of samples. Future research may further investigate the specific mechanisms through which anxiety, shame, and pleasure influence different aspects of English learning motivation, such as cognitive, behavioral, and emotional components. Additionally, longitudinal studies could examine how these emotional

factors evolve over time and the way their effects on motivation vary as students move through their high school years.

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