

Boredom and Learning Burnout in English Classroom of College Students: The Mediating Role of Self-efficacy

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Abstract: This study examines the relationship between boredom, self-efficacy, and learning burnout among non-English major college students in an English class at a normal university in Lanzhou. Utilizing questionnaires on classroom boredom, learning burnout, and academic self-efficacy, the findings reveal moderate levels of classroom boredom, particularly concerning satisfaction and challenge. Learning burnout is generally above average, especially regarding diminished personal accomplishment. Self-efficacy is also at a moderate level. Analysis indicates that classroom boredom positively correlates with learning burnout and negatively with self-efficacy, while self-efficacy negatively correlates with learning burnout. Mediation analysis shows that self-efficacy partially mediates the relationship between classroom boredom and learning burnout.

Keywords: Boredom, Learning burnout, Self-efficacy, Non-English majors, English classroom

1. Introduction

Since positive psychology and educational psychology entered the field of second language acquisition in 2012, other emotions besides pleasure and anxiety in second language learning have attracted scholars' attention. In recent years, the research on boredom in foreign language learning has become a hot topic. It is important to pay attention to boredom because it is pervasive in the learning process and can adversely affect several aspects of learner engagement, self-efficacy, and academic performance [1]. In the process of foreign language learning, learners may show burnout such as exhaustion, apathy and reduced sense of self-efficacy [2], which leads to learning burnout. Under the framework of social cognitive theory, boredom and self-efficacy in foreign language learning both affect the behavior and effectiveness of foreign language learning, and may also have a close relationship with learning burnout. Therefore, this study aims to explore the correlation between boredom, self-efficacy and learning burnout of non-English majors in the classroom, in order to provide more effective teaching and learning strategies for educators and students.

2. Literature Review

2.1. Boredom

When the information or stimulation provided by the external environment is monotonous, it will induce an emotional experience of dissatisfaction and rejection, namely boredom [3]. In the multi-dimensional classification system of academic emotion, boredom refers to the negative and inactive mental state emerging in the process of continuous learning activities or task execution, including emotional elements such as loss of interest, inner unease and aversion. This emotional state is widely permeated in the diverse situations of the second language teaching classroom [4]. Based on the framework of the control value theory, Li further expanded the definition of the three-dimensional concept of English learning and attributed boredom in second language learning to the imbalance (too much or not enough) in the degree of challenge in the learning environment, as well as the uninterest or lack of value of learning tasks or activities [5]. According to this three-dimensional model, boredom in foreign language learning is defined as a negative emotion state with low activation level and focused on the learning process. China's English education system often focuses on test-oriented, which tends to cause students to experience boredom, which may subsequently weaken their learning motivation, affect the effective allocation of cognitive resources and the depth of learning input, and ultimately be

potentially detrimental to the achievement of academic achievement [6].

2.2. Self-efficacy

Bandura put forward the concept of self-efficacy [7], which is defined as an individual's perception or belief of whether he can complete a certain event, and the degree of confidence in whether he can complete a certain job. Academic self-efficacy can be understood as an individual's assessment of his or her confidence in his or her ability to complete a given learning task, and a subjective judgment of his or her ability to control the learning process and performance [8]. Li Banban & Xu Jinfen defined self-efficacy in English learning as learners' evaluation of whether they can use their own abilities or skills to complete English learning tasks and the quality of the completed tasks [9]. It is a subjective judgment of individuals' ability to control their English learning behaviors. This is an evaluation of the learner, which is used to judge whether the learner can use his or her ability to complete the English learning task and evaluate the quality of the completion. English self-efficacy is divided into two dimensions: behavioral self-efficacy and competence self-efficacy [10].

Previous studies have shown that there is a negative correlation between self-efficacy and boredom. Tze et al. conducted a study on 274 Canadian undergraduates and found that self-efficacy was negatively correlated with four factors of English boredom [11]. Ren Xiaofang & Zhang Xiaoxian found that boredom tendency significantly negatively predicted academic efficacy [12].

2.3. Learning burnout

Maslacht & Jackson proposed that burnout is the emotional exhaustion, dehumanization, and lack of personal achievement experienced by practitioners in the professional field of serving people. Learning burnout of college students refers to the negative attitude and behavior that they are tired of learning due to academic pressure or lack of interest in learning [13]. It is found that personality trait is an important factor affecting students' learning burnout and an effective index to predict learning burnout [14]. Boredom, as a negative personality trait, is positively correlated with learning burnout [15]. As another intrinsic individual factor of learners, self-efficacy is negatively correlated with burnout [16]. Charkhabi et al. studied the relationship between academic burnout and self-efficacy by using the Learning Burnout Scale and the general self-efficacy scale, and found a significant negative correlation between them [17]. Recent studies also show that learning burnout is negatively correlated with self-efficacy. However, the exact relationship between boredom and burnout is still unclear, especially the relationship between boredom and burnout in foreign language learning, which needs to be further explored and explored.

2.4. Summary

At present, the research on the relationship between boredom, self-efficacy and learning burnout is still a blank field. In view of the English learning characteristics of non-English majors, there may be some interaction between the three. Therefore, this study aims to explore the relationship between boredom, self-efficacy and learning burnout in college students' English classes. Therefore, this paper intends to investigate the following questions: (1) What is the overall situation of boredom, learning burnout and self-efficacy of college students in English class? (2) What is the relationship between boredom, learning burnout and self-efficacy of college students in English class? (3) Does self-efficacy play a mediating role between classroom boredom and learning burnout?

3. Research design

3.1. Research subject

In this study, 127 non-English major college students from freshman to senior year in a normal university in Lanzhou were selected, and 110 valid questionnaires were collected, with a recovery rate of 87%.

3.2. Research tools

This study uses the questionnaire star to issue and retrieve questionnaires. The questionnaire is a five-level Likert scale in Chinese, which is divided into two parts. The first part is personal basic information, and the second part includes three scales: boredom in English class, foreign language learning burnout

and self-efficacy.

3.3. Boredom in English classroom

The English classroom boredom questionnaire was revised on the basis of the questionnaire prepared by Pawlak, Zawodniak & Kruk to adapt to the classroom environment of non-English majors. There were 23 items in total, including two dimensions: disengagement, monotony and repetitiveness (DMR); Lack of satisfaction and challenge (LSC). The scale uses 1-5 grades, and the higher the total score, the more serious the boredom state. In this study, the internal consistency of the scale was 0.978.

3.3.1. College student learning burnout survey scale

Based on the Maslach scale compiled by Lian Rong et al. [13], the *Study Burnout Survey for College Students* was revised according to the actual situation and characteristics of non-English major college students. There are 20 items, consisting of three dimensions: dejection, improper behavior, and reduced personal accomplishment. The scale adopts 1-5 grades, and the higher the total score, the more serious the degree of learning burnout. In this study, the internal consistency of the scale was 0.865.

3.3.2. Academic self-efficacy scale

The scale was compiled by Liang Yusong, with a total of 22 items, including two dimensions: behavioral self-efficacy and competence self-efficacy. The scale was graded from 1 to 5, and the higher the score, the higher the sense of efficacy. In order to be more consistent with this study, the items in the original scale were adjusted to suit the English language learning environment. In this study, the internal consistency of the scale was 0.85.

3.4. Data collection and analysis

Descriptive statistics (including normal distribution test) and Pearson correlation analysis were conducted on the collected questionnaire data to explore the overall situation of classroom boredom, learning burnout and self-efficacy of non-English major college students and the correlation between each variable. Finally, SPSS macro program Process was used to test the mediation effect.

4. Research results

4.1. The overall situation of classroom boredom, learning burnout and self-efficacy

Table 1 Descriptive statistics.

	N	Mean	Standard deviation	Significance	Significance (two-tailed)
Boredom in English classroom	110	3.19	1.132	0.000	0.000
Disengagement, monotony and repetitiveness	110	3.18	1.143	0.000	0.000
Lack of satisfaction and challenge	110	3.20	1.133	0.000	0.000
Self-efficiency	110	2.94	1.048	0.000	0.000
Competence self-efficiency	110	2.97	1.013	0.000	0.000
Behavioral self-efficiency	110	2.92	1.102	0.000	0.000
Learning burnout	110	3.21	1.180	0.000	0.000
Dejection	110	3.20	1.139	0.000	0.000
Improper behavior	110	3.22	1.264	0.000	0.000
Reduced personal accomplishment	110	3.25	1.303	0.000	0.000

As can be seen from Table 1, the average dimension of boredom in college English classes is 3.19, and the boredom level is at the medium level. The disengagement, monotony, and repetitiveness dimensions of mean (3.18) and standard deviation (1.143) show that non-English majors show significant

differences in these aspects. This indicates that some students feel extremely bored in the process of English learning, reflecting the relatively simple content of activities in college English classes. The mean value (3.20) and standard deviation (1.133) of the lack of satisfaction and challenge dimensions indicate that a large number of non-English majors have differences in this dimension, indicating that the activities of college English classes cannot fully meet the needs of students. The mean values of overall self-efficacy, ability self-efficacy and behavioral self-efficacy were 2.94, 2.97 and 2.92, respectively, indicating that non-English majors were at the medium level in all aspects of academic efficacy. The standard deviation of competition dimension (1.013) and behavior dimension (1.102) were significantly different. The overall level of learning burnout, dejection, improper behavior and reduced personal accomplishment were all in the medium level.

4.2. Correlation between classroom boredom, learning burnout and self-efficacy

Pearson correlation analysis results show (see Table 2) that the correlation coefficient between classroom boredom and English self-efficacy is -0.875^{**} , indicating a significant negative correlation between the two. This also means that the higher the level of boredom in the classroom, the lower the sense of English self-efficacy. The correlation coefficient between boredom and learning burnout is 0.989^{**} , indicating that there is a significant positive correlation between them. The correlation coefficient between self-efficacy and learning burnout was -0.877^{**} , indicating a significant negative correlation between the two. In addition to studying the correlation of the overall level, the correlation among different dimensions of boredom, learning burnout and self-efficacy in English classroom was also analyzed. The results show that the correlation of the three dimensions is consistent with the overall relationship.

4.3. The predictive role of boredom in English classroom on learning burnout

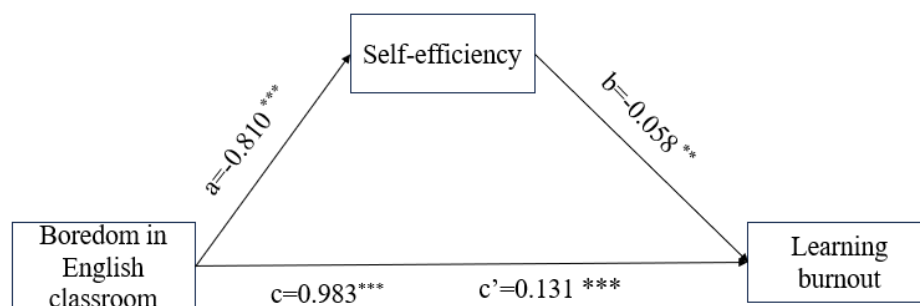
The English classroom boredom was input into the regression model as a predictor of learning burnout and its sub-dimensions. As shown in Table 3, the regression results show that the degree of English classroom boredom can significantly predict learning burnout and its sub-dimensions. The linear regression model has a good fit, $R^2=0.989>0.6$, which means that the results of this calculation can truly and reliably reflect the influence of disengagement, monotony and repetitiveness, and lack of satisfaction and challenge on learning burnout. The model verifies that there is no significant collinearity between the independent variables, and VIF is all less than 5, which ensures the independence and validity of the analysis results. The regression equation shows that $F=2288.913$, $P<0.001$, indicating that at least one of the two independent variables can significantly affect the dependent variable learning burnout. Specifically, DMR (disengagement, monotony and repetitiveness) significantly positively affected the degree of learning burnout ($\beta=0.612>0$, $P<0.05$), while LSC (lack of satisfaction and challenge) also significantly affected the degree of learning burnout ($\beta=0.382>0$, $P<0.05$), both of which independently and significantly promoted the phenomenon of learning burnout.

Table 3 The predictive effect of boredom on learning burnout in English classroom.

	Unstandardized Coefficients		Standardized Coefficients	t	significance	VIF
	B	Standard error	β			
(Constant)	-.076	.052		-1.471	.144	
Disengagement, monotony and repetitiveness	.632	.067	.612	9.463	.000	1.986
Lack of satisfaction and challenge	.398	.067	.382	5.909	.000	2.884
R ²				.989		
F				2288.913		
P				.000		
Dependent variable: learning burnout						

4.4. The role of self-efficacy in English classroom boredom and learning burnout

In this study, the Process macro in SPSS software (the specific Model is Model 4) and Bootstrap method (specifically 5000 repeated samples to build 95% confidence interval) were used to verify the mediating role of self-efficacy between boredom and learning burnout in English class. The results (Figure 1) showed that boredom in English classroom had a significant and direct positive effect on learning burnout ($\beta=0.983$, $p<0.001$), and had a significant negative predictive power on self-efficacy ($\beta=-0.810$, $p<0.001$). When self-efficacy was included in the model as an intermediate variable, the overall fit of the model remained good ($R^2=0.765$, $F=351.788$, $p<0.001$). At this time, the direct influence of boredom in English classroom on learning burnout was significantly weakened ($\beta=0.131$, but still maintained statistical significance). At the same time, self-efficacy also showed a significant independent effect on learning burnout ($\beta=-0.058$, $p<0.01$). According to the data in Table 4, the mediating effect of boredom in English class on learning burnout and self-efficacy is not reached 0 at the upper and lower bounds of Bootstrap 95% confidence interval. This finding proves that boredom can not only directly affect learning burnout, but also have an impact on learning burnout through the indirect path of self-efficacy. Specifically, the direct effect (0.983) accounted for 95.4% of the total effect (1.03), while the intermediate effect (0.131) contributed the remaining 12.7%, which together revealed the complex mechanism of the relationship between boredom and learning burnout.



(** means $p < 0.01$, *** means $p < 0.001$)

Figure 1 The mediating role of self-efficacy in English classroom boredom and learning burnout.

Table 4 Total effect, direct effect and intermediate effect.

	Effect value	se	LLCI	ULCI	Effect size
Total effect	1.03	.133	.800	1.32	
Direct effect	.983	.031	.922	1.044	95.4%
Mediator effect	.131	.020	.010	.091	12.7%

5. Discussion

5.1. The overall situation of boredom, learning burnout and self-efficacy of non-English majors in English classroom

In this study, it is found that the overall level of classroom boredom of non-English majors is medium ($m=3.19$), and the specific dimension is relatively high, which is consistent with the research conclusion of Li Yingxin et al. [10]. The reason is that students have to overcome huge psychological barriers in completing such tasks, which leads to disengagement. At the same time, this study also found that the general level of English learning burnout of non-English majors was medium, relatively speaking, the degree of reduced personal accomplishment in learning burnout was higher, and the degree of dejection and improper behavior was lower. The self-efficacy of non-English majors is at a medium level in all dimensions.

5.2. The correlation between boredom, learning burnout and self-efficacy of non-English majors in English class

The research shows that there is a significant positive correlation between boredom and learning burnout among non-English majors, which indicates that the higher the boredom tendency, the higher the degree of learning burnout. This is consistent with the results obtained from the analysis of Zhao Xin et al. [15]. Individuals with high boredom tendency often have obvious deficiencies in the efficiency of regulating and allocating cognitive resources required for learning. When these individuals face various challenges in the learning process, they are more likely to generate and maintain some irrational cognitive patterns. This cognitive pattern may predispose them to negative coping mechanisms, such as avoidance strategies and avoidance behaviors, rather than active problem solving. In addition, research indicates that self-efficacy can significantly negatively predict classroom boredom of non-English majors. This research result is basically consistent with the findings of Li Jie et al. [18], which shows that negative and low-arousal English emotions are negatively correlated with competence self-efficacy and behavioral self-efficacy. On the one hand, people with high academic self-efficacy have a higher cognition of their own learning ability, and they have clear goal orientation and effective learning strategies. On the other hand, such students also have higher control ability of persistence and timeliness of academic tasks and strong self-regulation ability, so they have less boredom in class. In the research, there is also a significant negative correlation between self-efficacy and learning burnout. The reason is that learners with high self-efficacy tend to set high goals, believe that they can successfully complete learning tasks, and are good at managing stress and anxiety, so as to effectively reduce learning burnout.

5.3. The mediating role of self-efficacy

The results of mediation effect analysis revealed that classroom boredom had a significant negative predictive effect on self-efficacy and a positive predictive effect on learning burnout. In addition, self-efficacy plays a partial mediating role between classroom boredom and learning burnout. This result indicates that classroom boredom not only directly enhances the non-English major students' sense of English learning burnout, but also indirectly affects this negative behavior by affecting the level of self-efficacy. In the classroom environment, boredom may trigger students' negative emotional experiences, leading to a reduction in behavioral incentives, which in turn limits their opportunities to experience success. This lack, in turn, weakens their confidence in their own abilities and thus tends to exhibit patterns of anxiety and avoidance when faced with academic challenges. On the contrary, when individuals perceive a higher sense of self-efficacy, they are more likely to have a strong motivation to learn and cultivate the internal motivation to actively cope with learning, which helps to reduce the sense of burnout in English learning. However, self-efficacy only plays a partial mediating role, and the mediating effect accounts for 12.7% of the total effect, which means that classroom boredom still affects the level of learning burnout to a large extent. On the one hand, although self-efficacy has a certain moderating effect on learning burnout, other factors such as students' individual needs, learning environment and social influence also play a role. On the other hand, classroom boredom may cause students to lose interest in the learning content and feel the lack of stimulation in the learning process, thus increasing their susceptibility to learning burnout. This direct emotional response can drive students into learning burnout, even when they have high self-efficacy.

6. Conclusion

This study aims to explore the relationship between classroom boredom, learning burnout and self-efficacy of non-English majors, and verify the interaction between classroom boredom and self-efficacy on learning burnout, as well as the mediating role of self-efficacy between the other two. Self-efficacy, as the embodiment of an individual's internal belief level, can stimulate students' more positive cognition and behavior, help cultivate students' psychological qualities such as self-confidence and optimism, and improve their ability to absorb language information. The result of this study has important reference significance for second language learning and teaching.

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Table 2 English classroom boredom, learning burnout and self-efficacy and their correlation.

		Boredom in English classroom	Disengagement, monotony and repetitiveness	Lack of satisfaction and challenge	Self- efficiency	Competence self- efficiency	Behavioral self- efficiency	Learning burnout	Dejection	Improper behavior	Reduced personal accomplishment
Boredom in English classroom	Pearson correlation	1									
Disengagement, monotony and repetitiveness	Pearson correlation	.996**	1								
Lack of satisfaction and challenge	Pearson correlation	.990**	.974**	1							
Self-efficiency	Pearson correlation	-.875**	-.862**	-.882**	1						
Competence self-efficiency	Pearson correlation	-.863**	-.851**	-.869**	.990**	1					
Behavioral self-efficiency	Pearson correlation	-.869**	-.856**	-.878**	.991**	.962**	1				
Learning burnout	Pearson correlation	.989**	.985**	.979**	-.877**	-.864**	-.872**	1			
Dejection	Pearson correlation	.979**	.976**	.970**	-.872**	-.861**	-.867**	.989**	1		
Improper behavior	Pearson correlation	.957**	.954**	.947**	-.856**	-.844**	-.852**	.974**	.945**	1	
Reduced personal accomplishment	Pearson correlation	.967**	.963**	.958**	-.842**	-.830**	-.838**	.976**	.956**	.937**	1