



# Research on the Relationship Between College Students' Boredom and Learning Burnout Under the Mediation of Mobile Phone Addiction

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**Abstract.** University is a golden development period for learning knowledge and increasing talents. However, learning burnout is quietly spreading in the university campus. Long-term learning burnout will bring many harm to the physiology and psychology of college students, and lead to various bad behaviors. The problem of learning burnout has gradually become the focus of widespread attention from all walks of life. This study introduces “mobile phone addiction” as an intermediate variable, and constructs a theoretical model of the mechanism of the effect of boredom on learning burnout, so as to explore the impact of different dimensions of boredom on learning burnout, such as monotonicity, loneliness, and constraint of college students, and test the intermediary effect of mobile phone addiction between boredom and learning burnout in various dimensions, It is expected to provide guidance and reference for the improvement of college students' learning burnout and the promotion of college students' mental health development.

**Keywords:** Boredom · Mobile phone addiction · Learning burnout

## 1 Introduction

Learning burnout is quietly spreading in the university campus. According to the survey, 84.7% of the respondents admitted that the current phenomenon of college students' truancy is serious, 54.3% of college students said they felt tired after facing a day's study, 72.6% of college students found it difficult to maintain long-term enthusiasm for learning, and 68.6% of college students said they wanted to study but felt bored with learning. Previous studies have shown that boredom is an important factor affecting learning burnout. Individuals with high boredom generally lack learning motivation, have less interest in things around them, and are more prone to learning burnout. There are also experiments abroad that show that when boredom occupies the brain, individuals can't concentrate on learning and work, and eventually lead to burnout. In addition, the study found that mobile phone addiction also has a significant predictive effect on learning burnout. In today's society, more and more people cannot live without mobile phones, and even have a pathological addiction to mobile phones. The situation of mobile phone addiction among college students is also quite serious. Excessive use of mobile phones takes up more rest and study time for students, increases students' fatigue, reduces learning efficiency and motivation, and is more prone to learning burnout [1].

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Through literature review, it is found that boredom can cause mobile phone addiction and predict learning burnout, and mobile phone addiction can aggravate learning burnout, but the interaction between the three is rarely studied in academic circles. Based on the above considerations, this study will investigate the current situation of college students' sense of boredom, mobile phone addiction and learning burnout, and reveal the psychological mechanism of college students' sense of boredom affecting learning burnout through the investigation of the relationship between sense of boredom, mobile phone addiction and learning burnout, so as to provide a certain basis for the prevention and intervention of college students' learning burnout.

## **2 Research Hypothesis and Model Construction**

### **2.1 Concept Definition**

#### 1) Boredom

Boredom is a special word to describe the state when people are the subject, and it is also a kind of mental state of people [2]. The generation of boredom is attributed to two factors: one is external factors and stimulation, and the other is their own regulatory ability. Huang Shihua, Li Dongling, etc., combined with Vodanovich's two-factor model and the characteristics of China's cultural background, compiled a questionnaire of college students' boredom tendencies in 2010, which is suitable for the use of Chinese college students, and put forward a second-order factor model of boredom. The external stimulus dimension includes four first-order factors: monotony, loneliness, tension and restraint, while the internal stimulus dimension includes two factors: creativity and self-control [3].

#### 2) Learning burnout

Psychologists take college students as the research object and find that students lack interest and motivation in learning during long time of study, and too much pressure on schoolwork causes various problems, which leads to low sense of personal achievement and other phenomena called learning burnout. For the measurement of learning burnout, the main methods used by domestic psychologists to measure it are observation, interview, self-report, etc. According to different aspects and different research objects, the scale designed by scholars Yang Lixian and others is used in this study [4]. The factors include three factors, one is improper behavior, the second is weak sense of achievement, and the third is low mood [5].

#### 3) Mobile phone addiction

Mobile phone addiction can be defined as excessive use and intermittent desire to use mobile phones. On the basis of the existing research on mobile phone addiction in China, Xiong Jie and others drew lessons from the diagnostic characteristics of addiction behavior, combined with the actual use of mobile phones by college students, and finally developed a representative scale with college students as the test object through interview,

prediction and formal test. The scale is divided into four dimensions: social comfort, mood change, withdrawal symptoms and highlighting behavior [6].

#### 4) The relationship between boredom and learning burnout

The study found that boredom, as a negative personality, will have an impact on the mental health of college students. The boredom of students has a significant positive correlation with abnormal behaviors such as truancy and addiction to the Internet, and has a significant negative correlation with the degree of concentration and hard work [7]. The relationship between academic burnout and boredom is specifically manifested in that there is a significant positive correlation between each dimension of boredom and each dimension of academic burnout. Individuals with boredom are more likely to be distracted and slow in thinking because of their insensitivity to various external stimuli, and will have problems such as improper behavior and low sense of achievement, which is more likely to show higher learning burnout [8].

#### 5) The relationship between mobile phone addiction and learning burnout

The research shows that mobile phone addiction is positively correlated with learning burnout [9]. The research results of college students show that the higher the score of mobile phone addiction, the higher the score of learning burnout.

#### 6) The relationship between boredom and mobile phone addiction

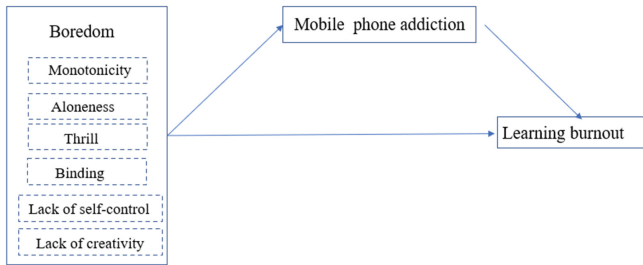
Mobile phone addiction is a common phenomenon among college students today. Nowadays, the functions of mobile phones are becoming more and more powerful and easy to carry, which has become the first choice for college students to kill time when they are bored, and the completeness and completeness of various functions of mobile phones also enable college students with different needs to meet their own needs through mobile phones, which in turn further deepens the individual's addiction to mobile phones. Through summary, we can find that boredom is correlated with mobile phone addiction, and there is a positive correlation [10]. The stronger the sense of boredom, the higher the degree of mobile phone addiction.

## 2.2 Construction of Conceptual Model

Based on the above assumptions, the model of this study is constructed by taking college students' boredom in all dimensions as independent variables, mobile phone addiction as intermediary variables, and learning burnout as dependent variables, as shown in Fig. 1.

## 3 Questionnaire and Analysis

The purpose of this study is to explore the current situation of boredom, mobile phone addiction and learning burnout of college students across the country and the internal relationship between them. Therefore, this study selects online survey and takes college students across the country as the survey object. After the recovery of the questionnaire, the questionnaire with incomplete and non-standard filling, regular changes in filling options and contradictory filling options will be eliminated. Finally, according



**Fig. 1.** Research model

**Table 1.** Correlation analysis of each variable

	1	2	3	4	5	6	7	8	9
Monotonicity	1								
Aloneness	0.95	1							
Thrill	0.87	0.82	1						
Binding	0.73	0.72	0.64	1					
Lack of self-control	0.78	0.77	0.73	0.72	1				
Lack of creativity	0.64	0.73	0.77	0.69	0.76	1			
cell phone addiction	0.42	0.56	0.55	0.56	0.59	0.69	1		
Learning burnout	0.79	0.82	0.75	0.75	0.77	0.75	0.57	1	
Monotonicity	0.78	0.79	0.73	0.69	0.75	0.72	0.59	0.75	1

to statistics, 1500 questionnaires were collected in this survey, including 1132 valid questionnaires, with an effective rate of 96.3%.

### 3.1 Correlation Analysis

The correlation coefficient is a measure of the correlation between two variables. A correlation analysis was conducted on college students’ sense of boredom, mobile phone addiction, and learning burnout. See Table 1. The results show that college students’ sense of boredom, mobile phone addiction, and learning burnout are significantly positively correlated with their dimensions.

### 3.2 Test of the Mediating Effect of Mobile Phone Addiction on College Students’ Boredom and Learning Burnout

Taking college students’ boredom as the independent variable, learning burnout as the dependent variable, and mobile phone addiction as the intermediary variable, this paper

**Table 2.** Breakdown of effects and intermediary effects

	a*b (Intermediary effect)	c' Direct effect	Inspection conclusion
Monotonicity	0.029	0.252	Partial intermediation
Aloneness	0.004	0.055	Partial intermediation
Thrill	0.015	0.061	Partial intermediation
Binding	0.012	0.146	Partial intermediation
Lack of self-control	0.013	0.054	Partial intermediation
Lack of creativity	-0.000	0.080	Not significant

tests the intermediary effect of mobile phone addiction between college students' boredom and learning burnout. The results show that mobile phone addiction plays a partial intermediary role between monotony, loneliness, tension, restraint and lack of self-control and learning burnout, while the intermediary role between lack of creativity and learning burnout is not obvious. See Table 2 for the specific results of the mediation test.

## 4 Conclusion

By introducing "mobile phone addiction" as an intermediate variable, this study constructs a theoretical model of the mechanism of the effect of boredom on learning burnout, explores the impact of different dimensions of boredom on learning burnout, such as monotonicity, loneliness, and restraint of college students, and tests the intermediary effect of mobile phone addiction between boredom and learning burnout in various dimensions. The results show that

- 1) There is a significant positive correlation between college students' boredom, cell phone addiction, learning burnout and their various dimensions.
- 2) All dimensions of boredom have a significant positive predictive effect on learning burnout, while mobile phone addiction has a significant positive predictive effect on learning burnout.
- 3) Mobile phone addiction plays a partial mediating role between monotony, loneliness, tension, constraint and self-control deficiency and learning burnout, while the mediating role between creativity deficiency and learning burnout is not obvious.

This study found that college students' boredom, cell phone addiction and learning burnout are quite serious, so schools should pay attention to students' mental health education. Including strengthening publicity, education and system construction, and establishing a good school spirit and style of study; Pay attention to the construction of school culture and create a humanistic campus; Pay attention to students' mental health education and dredge students' emotions. For students, set up lofty career ideals and attach importance to the realization of life values; Strengthen the ability of time management and reasonably arrange after-school life; Learn self-psychological guidance and actively seek help from others.

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