A Study on the Factors Influencing Learning Burnout Among College Students in an Online Teaching Environment

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Abstract: With the advancement of economic globalization, mobile networks and media technology are developing rapidly. Media information is manufactured and spread at any time, and people can better understand global information with the help of the media. In the Internet era, college students, overwhelmed by complex information and a lack of information discernment, are susceptible to indulging in the curated online world presented by others. At the same time, negative information such as false, violent, and pornographic also spread rapidly in various media. These phenomena impact students' media literacy and affect their mental health, thereby leading to learning burnout. This study analyzes the current situation of learning burnout among university students, explores the effective path of improving online education of college students, and provides a theoretical basis for reducing the burnout of college students and assisting students in developing a positive mentality.

Keywords: Online education; Learning burnout; College students

1. Introduction

Nowadays, the culture of "lying flat" is gradually causing waves in society. Most college students who have experienced advanced high school studies in the relatively free environment of university receive a large amount of information from the Internet and begin to suffer from learning burnout. Learning burnout is a form of psychological burnout that individuals demonstrate in the learning process. Domestic and foreign scholars hold different views on its specific meaning. Long-term learning burnout will bring about various negative psychological and behavioral phenomena, which will seriously affect individual learning and life. Therefore, it is particularly necessary to explore the methods to interfere with learning burnout.

In online teaching, college students have to devote a lot of energy to learning in order to cope with the learning pressure and stand out from the fierce competition. However, this kind of long-term investment causes physical and mental fatigue and students cannot experience a sense of achievement, thus holding a negative

attitude toward study.

2. Definition of online teaching and learning burnout in college students

2.1. Online teaching

Online teaching, also known as virtual teaching, refers to the use of computers, mobile phones, and other network equipment, an online communication platform for courses, real-time interaction, and Q&A (question and answer), including live broadcast, recording, and other forms. Differing from offline education, online education is based on the Internet, and there are two forms of expression: live and recorded. Online education is a test of students' self-awareness since it is taught through video without teachers' physical presence. Online education is characterized by its time-saving and convenient nature. In contrast, offline education typically requires physical presence in a specific classroom or location, allowing for a more structured and face-to-face experience with a well-defined curriculum [1].

2.2. Learning burnout

In 1974, the American clinical psychologist Freudenberg published a paper titled "Staff Burnout" describing a series of negative symptoms that individuals experience at work. Burnout is a symptom of emotional exhaustion that is most likely to occur in the workplace when the work itself requires too much capacity, energy, and resources, making workers feel emotionally and physically exhausted. Since the concept of burnout was put forward in the 1970s, it has aroused the interest of many scholars and become a research hotspot. Among the many definitions of burnout, Maslach defined burnout as emotional fatigue, depersonalization, or dehumanization, which usually occurs in people who work with them. Emotional fatigue is an individual's evaluation of stress, which is the core content of stress dimension and job burnout. Pines and Meyer defined learning burnout as a phenomenon in which students' energy is depleted due to long-term academic stress and burden, diminishing enthusiasm for studies and activities, resulting in indifference to classmates and negative attitudes to school. Yang Hui-chen, a scholar from Taiwan region, defined learning burnout as students' emotional fatigue, lack of humanity, academic stress, academic burden, or other psychological factors caused by a low sense of personal achievement. This definition is derived from burnout, and the dimensions are essentially similar. Therefore, these scholars define learning burnout from the aspects of homework stress and workload. Zhu Jingyuan defined learning burnout as "a state in which physical and mental resources and energy are exhausted due to long-term stress in the school environment" [2].

3. Current situation of learning burnout among college students in online teaching

This study focuses on the content and manifestation of learning burnout among college students, with many scholars having conducted relevant research. Based on the literature, the researchers mainly analyze from two aspects, which are to investigate the status quo of learning burnout in students and to explore the factors that affect learning burnout. Sun Xiaoli found that 37.5% of college students had a sense of burnout, a phenomenon that was not severely pronounced but nonetheless lacked an optimistic outlook. There were significant differences in burnout between grades, gender, and majors. Factors affecting burnout include learning initiative, professional interest, learning attitude, anxiety, self-efficacy, employment stress, etc. The descriptive statistical analysis of learning burnout by Yang Lixian and Lianrong shows that the overall state of learning burnout is not severe, with the score falling in the medium range. Wei Zhen found that academic self-efficacy, external pressure, and teaching conditions had more effect on learning burnout than in grade 20, and homework stress

had more effect on learning burnout than in other grades [3]. According to Sun Ailing, the phenomenon of learning burnout is not conspicuous, let alone highly serious. However, she emphasized the importance of acknowledging and addressing the role it plays among university students. Tang Wenqing and Fan Huiyong proposed to create a healthy and appropriate learning and development environment to enhance effective communication between schools, families, and students.

In order to understand the overall level of learning burnout among college students in online education, the reliability of learning burnout was tested by the principal component analysis method. The three dimensions of physical exhaustion, academic alienation, and low sense of achievement, and their overall level were analyzed. The study found that the overall learning burnout was higher (M = 3.17), specifically, physical exhaustion (M = 3.21), academic alienation (M = 3.22), and low sense of achievement (M = 3.07).

3.1. Environmental factors affecting learning burnout

Maslach and Leiter analyzed previous studies to identify six sources of burnout: overwork, lack of control, underpayments, community collapse, lack of equity, and conflict of values [4]. Tomori *et al.* found that most students experienced short-term or frequent overload, which may lead to psychological and physical symptoms. Slivar believed that a large number of subjects, external evaluations, and stress behaviors (getting the best grades or being the best student in the class) are common in all schools. Becaj also found that external evaluations of grammar schools lead to negative learning environments. Lovoin *et al.* found in 1988 that approximately 60 percent of students in the Ljubljana secondary school had school-related psychological and physical problems. Students are required to study extensively in a relatively short time with limited resources. The high expectations of parents, the aspirations of students, and the demands of schools all constitute constant pressure.

3.2. Personal factors affecting learning burnout

Chen Yan found that boys had higher learning burnout than girls as evidenced by their higher scores in all dimensions of burnout. Contrastingly, Wei Ting pointed out that the burnout rate of college boys was lower than that of girls, with 62.16% for boys and 78.49% for girls [5]. Scholars from Taiwan region, Zhang Zhiyao and Song Xiaoying put forward different views on gender differences. Their research generally concluded that there was no significant difference in learning burnout among male and female college students. In addition, Zhang found that there was no significant difference between subjects except engineering students who were more alienated than liberal arts students. Xu Youyun discussed the relationship between learning burnout and coping style and found that students with different coping styles had significant differences in burnout scores and coping styles. Among them, the total burnout score and all its factors were found to be lower among those adopting resilience, non-control, and abnormality coping styles.

4. Methods to reduce learning burnout for college students in online education

In the new era, communication technology has advanced rapidly, and various media applications have continuously emerged. A great deal of information is presented to people through the Internet, including news and information, leisure and entertainment, shopping and consumption, live webcasts, and other information, making people's lives more convenient and interesting. However, in the complex network environment, college students often lack appropriate thought guidance and scientific thinking capability in the face of various positive and negative information. Therefore, it is especially important to reduce learning burnout, improve the learning effect, and enhance learning motivation and the quality of learning courses in online teaching [6].

4.1. Improving learning motivation

Learning burnout has a significant effect on learning motivation and learning effectiveness. Therefore, it is necessary to provide more learning content and resources relevant to students' lives, and stimulate students' interest and motivation, so that students can study more attentively and improve learning effectiveness.

4.2. Enhancing the quality of learning courses

The quality of curriculum content has a significant impact on online education, which in turn influences learning effectiveness. Rich and high-quality curriculum resources will promote students' perception of the usefulness of online platforms and improve learning effectiveness. It is necessary to provide students with rich learning resources and tools to promote the construction of knowledge. Interaction with resources and tools is an important aspect of students' learning process. Students should be viewed as masters of the learning process. Learning is no longer a process of teachers teaching in classrooms and students passively listening, but a meaningful activity in which students participate actively. Knowledge is the result of subject-object interaction. It is not unilaterally transmitted by teachers, rather, students acquire knowledge according to their individual needs.

4.3. Strengthening the awareness of self-directed learning among college students and improving their own learning literacy

In online education, the enthusiasm of university students should be prioritized. Schools should focus on strengthening students' awareness in self-reflection, realizing self-discipline in learning and information environment, and forming active thinking and learning. College students should establish the concept of study subject and the goal of self-learning, and make appropriate plans to ensure the smooth implementation of the goal.

5. Conclusion and recommendation

With the gradual popularization of online education in colleges and universities, the problem of learning burnout has gathered increasing attention from scholars and university educators. This study combined pedagogic and psychological research paradigms and used questionnaires to explore the influencing factors of learning burnout in online education curriculum. This paper put forward three factors that affect learning burnout from the perspective of personal and environmental factors, including physical exhaustion, academic alienation, and low sense of achievement. Based on the influencing factors, several methods to improve learning burnout were suggested.

First of all, learning burnout and learning motivation have significant effects on learning effectiveness. Therefore, it is necessary to provide more learning content and resources relevant to students' lives, stimulate students' learning interests and motivation in order for them to study more attentively.

Secondly, the quality of curriculum content has a significant impact on online education, which in turn affects the learning effect. Diverse and high-quality curriculum resources will promote students' perception of the usefulness of online platforms and improve learning effectiveness. Thirdly, the teaching strategies of online education generally include establishing clear learning objectives, presenting problem scenarios, designing learning tasks, and providing feedback on students' learning progress. Specifically, it is necessary to set up a clear learning goal as a study guide for students. By creating problem scenarios for students, cognitive conflict can be generated and students can be stimulated to think thoroughly. Learning tasks are designed to further promote students' participation in learning activities. Through timely feedback on the learning progress,

students can adjust and improve their learning.

Lastly, learning burnout is an important factor that affects students' learning effectiveness. On the one hand, students' learning motivation needs to be emphasized. On the other hand, students' learning effect is still dependent on the reduction of learning burnout. Therefore, it is essential for students to achieve learning outcomes to reduce the influence of learning burnout on students during online teaching intervention.

Disclosure statement

The authors declare no conflict of interest.

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