



# The Bidirectional Impact of Immersive Experiential Learning on Students' Emotional Regulation and Learning Motivation in Higher Education

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DOI: 10.32629/jher.v5i5.3042

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**Abstract:** The application of immersive experiential learning in higher education has increasingly shown its significant impact on students' emotional regulation and learning motivation. This teaching method, by simulating real learning environments, enhances students' situational engagement, thus profoundly influencing their emotional experiences and learning behaviors. This paper explores how immersive teaching leverages students' emotional responses to strengthen their intrinsic learning motivation and analyzes how students can optimize learning outcomes through effective emotional regulation. The study finds that the positive emotions elicited by this teaching method can significantly improve students' learning engagement and motivation, while good emotional regulation helps students maintain cognitive efficiency when facing learning challenges. With the continuous advancement of teaching technologies, immersive learning is expected to play a greater role in the educational field, promoting both the academic and emotional development of students.

**Keywords:** higher education; immersive experiential learning; student emotional regulation

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## 1. Introduction

In the teaching reform of higher education, effectively motivating students and enhancing their emotional regulation abilities have become key issues for improving teaching outcomes[1]. Traditional teaching models often focus on the transmission of knowledge but struggle to effectively stimulate students' learning initiative and emotional engagement. Immersive Experiential Learning (IEL), as an innovative teaching approach, creates real or nearly real learning scenarios, enabling students to gain a deep learning experience through multi-sensory engagement[2]. This teaching model emphasizes learners' direct experience and situational participation, encouraging students to spark intrinsic learning motivation through hands-on activities and problem-solving. At the same time, the interactivity and emotional engagement of immersive teaching can effectively regulate students' emotional states, making them more adaptable when facing learning challenges. Research shows that immersive experiences can not only stimulate students' curiosity and desire for exploration but also help alleviate anxiety and stress during the learning process, thus improving concentration and efficiency. This paper delves into the application of immersive experiential learning in higher education, analyzing its bidirectional impact on promoting students' emotional regulation and learning motivation[3]. It aims to provide educators with new perspectives and methods to enhance teaching quality and students' learning experiences.

## 2. Theoretical Foundations of Immersive Experiential Learning

### 2.1 Definition and Characteristics of Immersive Experiential Learning

Immersive Experiential Learning is based on constructivist learning theory, emphasizing knowledge and skill acquisition through active participation and practice by students[4]. Its core lies in the use of technological means (such as virtual reality and augmented reality) to create a learning environment that resembles reality, enhancing the authenticity and engagement of learning. In this teaching model, students are no longer passive recipients of knowledge but active constructors of knowledge through interaction with the scenario.

### 2.2 Experiential Learning and Emotional Regulation

Experiential Learning Theory posits that learning is not merely the acquisition of knowledge but involves deep emotional and cognitive engagement[5]. By placing students in real-life scenarios, immersive teaching can trigger more intense emotional experiences, thus better regulating students' learning emotions. The stimulation of positive emotions helps enhance student engagement, while moderate stress situations can stimulate students' cognitive challenge abilities.

## **3. The Impact of Emotional Regulation on Learning Motivation**

### **3.1 The Role of Emotional Regulation in Learning**

Emotional regulation refers to an individual's ability to manage and control their emotional responses. In educational psychology, emotional regulation is considered one of the key factors affecting learning outcomes[6]. The emotional states of students during the learning process, such as anxiety, excitement, curiosity, or frustration, significantly impact their cognitive absorption and memory capabilities. Positive emotions not only enhance the encoding and retrieval of information but also increase the intrinsic motivation for continued learning. Conversely, negative emotions such as anxiety and stress can lead to the dispersion of cognitive resources, thereby reducing learning efficiency and motivation.

### **3.2 How Immersive Teaching Affects Student Emotions**

Immersive experiential learning, by simulating real learning environments (such as historical battlefields or scientific laboratories in virtual reality), provides a rich emotional learning experience. This teaching model can trigger strong emotional responses, such as a sense of achievement when solving virtual challenges or curiosity when exploring unknown fields. Moreover, due to the high interactivity of immersive environments, students can more naturally express and manage these emotions, thereby utilizing positive emotional impacts to enhance learning engagement and motivation. Immersive experiences may also cause certain emotional fluctuations, and the role of the teacher is to help students understand and regulate these emotions, ensuring they have a positive impact on learning.

### **3.3 The Promotional Role of Emotional Regulation on Learning Motivation**

In immersive teaching, the positive regulation of student emotions can significantly enhance their interest in and desire to explore learning materials. For example, when students successfully solve problems in virtual reality, they not only feel a sense of satisfaction, but this sense of achievement also enhances their perceived value of the learning task, further motivating them to explore more complex concepts or skills. Additionally, immersive experiential learning, through its instant feedback mechanism, allows students to see the results of their actions intuitively. This feedback helps adjust their learning strategies and emotional states, thereby better adapting to the learning environment and requirements, maintaining, and enhancing learning motivation.

## **4. The Reciprocal Effects of Learning Motivation on Emotional Regulation**

### **4.1 The Influence of Learning Motivation on Emotions**

In higher education, learning motivation is a key factor driving students to actively participate in learning activities. Learning motivation is divided into intrinsic and extrinsic motivations. Intrinsic motivation stems from the student's interest in or enjoyment of the learning activity itself, usually accompanied by positive emotions such as pleasure and satisfaction. This type of motivation can enhance students' emotional regulation abilities when facing learning challenges, such as maintaining optimism and a persistent spirit of exploration when solving complex problems. Conversely, extrinsic motivation, such as studying to achieve good grades, obtain rewards, or avoid punishment, may cause anxiety or tension, especially before exams or significant assessments. However, immersive experiential learning, by providing tangible and concrete learning outcomes, helps students shift from extrinsic to intrinsic motivation because they can directly see how their efforts impact results, thereby enhancing their sense of achievement and self-efficacy.

### **4.2 Motivational Feedback Mechanisms in Immersive Teaching**

Immersive experiential learning environments, such as simulated scenarios implemented through virtual reality technology, offer rich sensory experiences and immediate feedback. This teaching method, by simulating actual operations and providing real-time feedback, greatly enhances students' intrinsic motivation. For example, in a virtual chemistry lab, students can safely mix chemicals and observe reactions, with immediate feedback on the success or failure of the experiment. This successful experience can significantly boost students' sense of achievement and positive emotions, thereby stimulating further learning motivation and emotional regulation abilities. Additionally, even in the face of failure, the immersive learning environment provides opportunities to retry in a low-risk manner, helping students learn how to adjust their emotions amid setbacks, thus fostering a resilient learning attitude and better emotional regulation strategies.

### **4.3 The Bidirectional Interaction Between Motivation and Emotions**

In the immersive teaching environment, there is a clear bidirectional interaction between learning motivation and emotions. On one hand, enhanced intrinsic motivation can improve students' emotional states, making them more positive and engaged during the learning process. On the other hand, through effective emotional regulation, students can better

maintain and enhance their learning motivation. For instance, students who can effectively manage stress and anxiety typically maintain a more sustained interest in learning and achieve higher educational outcomes. Therefore, developing and implementing teaching strategies that simultaneously promote students' emotional regulation and motivation enhancement, especially in immersive learning environments, is an important area of research and practice in higher education.

## 5. Challenges and Prospects in Educational Practice

Although immersive experiential learning has a significant bidirectional impact on emotional regulation and learning motivation, it still faces several challenges in educational practice[7]. The operability and widespread adoption of technology are urgent issues to address, as many higher education institutions still lack sufficient investment in equipment and technical support. Moreover, variations in emotional responses and motivation levels among students make personalized instructional design crucial[8]. It is particularly important to adjust immersive learning content according to the specific needs of students. With the rapid development of virtual reality technology, immersive teaching has a broad prospect in higher education. Scientifically and reasonably using this teaching method can not only effectively cultivate students' autonomous learning abilities and innovative thinking but also enhance their emotional regulation capabilities, injecting new vitality and possibilities into educational innovation.

## 6. Conclusion

Immersive experiential learning, by regulating students' emotional states and enhancing learning motivation, achieves a bidirectional improvement in learning outcomes. This teaching model not only profoundly affects students' learning processes at emotional and cognitive levels but also provides more opportunities for autonomous learning through interactivity and immediate feedback mechanisms. In the future, with technological advancements, immersive teaching is expected to be more widely applied in higher education, becoming a significant means to promote the comprehensive development of students.

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