

Research on the Improvement of Teacher-student Interaction Quality in University Physical Education Classrooms under the Guidance of Emotional Learning Theory

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Abstract: *The interaction between teachers and students in university physical education classrooms is a key link that affects teaching effectiveness and the comprehensive development of students. Currently, there are problems in the classroom such as a single form of interaction, weak emotional connections, and passive student participation. This article is guided by the theory of emotional learning, and comprehensively uses literature review, questionnaire survey, classroom observation, and interview methods to select public sports and physical education courses in multiple types of universities as research objects. It systematically analyzes the current characteristics, emotional dimension shortcomings, and causes of teacher-student interaction in university physical education classrooms. Research has found that emotional learning theory can optimize interaction quality through three paths: promoting emotional resonance between teachers and students, creating a positive classroom atmosphere, and stimulating students' learning motivation; Based on this, targeted improvement strategies are proposed from three aspects: enhancing teachers' emotional education ability, cultivating students' emotional expression and interaction ability, and constructing classroom emotional environment. The practical effectiveness of these strategies is verified through teaching cases. The research results can provide theoretical references and practical paradigms for improving the teaching ecology of university physical education classrooms, strengthening the effectiveness of teacher-student interaction, and achieving the goal of "educating people and nurturing hearts" in physical education.*

Keywords: *Emotional Learning Theory; University Physical Education Classroom; Teacher-Student Interaction; Emotional Atmosphere*

1. Introduction

In the higher education system, university physical education classrooms have a dual function of enhancing students' physical fitness and promoting their mental health, social skills, and overall development. They are an important field for students' comprehensive growth. However, there are significant problems in the current practice of teacher-student interaction in university physical education classrooms. Firstly, due to the constraints of traditional teaching concepts, some teachers adopt a one-way teaching mode of "teacher centered", overly focusing on the imparting of sports skills, neglecting students' emotional needs and subject status, resulting in a lack of enthusiasm for student interaction and participation, and a dull classroom atmosphere. The typical manifestation is that in some courses, teachers only mechanically complete action demonstrations and essential explanations, and then ask students to practice repeatedly, lacking effective communication and two-way interaction with students; Secondly, with the expansion of enrollment in universities, the contradiction between the expansion of student scale and the insufficient supply of physical education teaching resources has become prominent. The imbalance in the teacher-student ratio makes it difficult for teachers to fully pay attention to students, thereby hindering the construction of a positive teacher-student interaction relationship.

The core essence of emotional learning theory lies in emphasizing the crucial regulatory role of emotional factors in the learning process. It believes that positive emotional experiences such as interest and confidence can effectively stimulate students' learning motivation and improve learning efficiency, while negative emotions such as anxiety and boredom can have inhibitory effects on learning behavior. Applying this theory to the guidance of teacher-student interaction in university physical education classrooms has important value: it can create a positive classroom atmosphere, encourage students to participate in physical education learning in a pleasant emotional state, and enhance learning initiative

and sustainability; It can also enhance the emotional connection between teachers and students, build a harmonious teacher-student relationship, improve students' acceptance of teacher guidance, and optimize teaching quality; At the same time, it also helps to promote students' comprehensive development, cultivate their teamwork spirit, competitiveness, and willpower.

This study is based on the perspective of integrating theory and practice, aiming to explore in depth the improvement path of teacher-student interaction quality in university physical education classrooms under the guidance of emotional learning theory, and provide reference for improving the effectiveness of university physical education teaching. The focus is on three aspects: first, the path and internal mechanism of emotional learning theory applied to teacher-student interaction in university physical education classrooms; Secondly, there are problems and causes in the emotional dimension of teacher-student interaction in current university physical education classrooms; The third is the specific measures and practical application effects of improving the quality of teacher-student interaction based on emotional learning theory.

2. Emotional learning theory and related theories of teacher-student interaction in university physical education classrooms

2.1 Overview of emotional learning theory

2.1.1 Basic concepts and types of emotional learning

The origin of emotional learning theory can be traced back to the mid-20th century, when the flourishing development of multiple disciplines such as cognitive psychology, educational psychology, and anthropology laid the theoretical foundation for it [1]. Emotional learning refers to the process in which individuals acquire knowledge, develop emotional abilities, and achieve mutual promotion between emotions and cognition through emotional experiences. It not only focuses on the learning of knowledge, but also attaches great importance to the development and improvement of individual emotions, which is of great significance for cultivating a sound personality and promoting the comprehensive and harmonious development of individuals.

Emotional learning mainly includes two types: implicit learning and explicit learning. Implicit emotional learning refers to an individual's unconscious perception and absorption of emotional information in the environment to achieve learning. For example, in a long-term positive classroom atmosphere, students may unconsciously be infected, thereby cultivating optimistic and confident emotional qualities; Explicit emotional learning refers to individuals consciously acquiring emotional knowledge and skills through learning, training, and other means, such as attending emotional management training courses to learn how to recognize and regulate their emotions.

2.1.2 Main viewpoints of emotional learning theory

The core viewpoint of emotional learning theory is that emotions and cognition are interdependent and mutually reinforcing, and emotions are a key factor in the learning process [2]. In social cognitive theory, Bandura emphasizes that individual learning is achieved through observation, imitation, and self-regulation in the social environment, and emotions play an important role in this process. For example, when students see role models demonstrate perseverance and success in the face of difficulties, they are inspired and more likely to exhibit positive emotions and behaviors when they encounter difficulties themselves.

The theory of emotional regulation suggests that individuals can regulate their emotions through cognitive and behavioral strategies to adapt to different situations and needs. During the learning process, if students can master effective emotional regulation strategies, such as using deep breathing and positive self-suggestion to alleviate anxiety when feeling nervous before exams, they can better exert their abilities and improve their learning outcomes.

2.1.3 Application of emotional learning theory in the field of education

Emotional learning theory has a wide range of applications in educational and teaching activities[3]. Teachers can use this theory to pay attention to students' emotional needs, create a positive and harmonious learning atmosphere, and stimulate students' interest and motivation in learning. For example, in the classroom, through vivid and interesting teaching methods and encouraging language, students can feel the joy and sense of achievement in learning, thereby enhancing their learning enthusiasm.

Emotional learning theory can also be used to cultivate students' emotional abilities, such as

emotional management skills, empathy, and so on. Teachers can design relevant teaching activities to guide students to recognize their own and others' emotions, understand others' feelings, and improve interpersonal communication skills. In group cooperative learning, students can better understand the perspectives and emotions of others, cultivate teamwork spirit and empathy through mutual communication and collaboration.

2.2 Theory of teacher-student interaction in university physical education classrooms

2.2.1 Connotation and significance of teacher-student interaction

In university physical education classrooms, teacher-student interaction refers to various forms of communication and interaction that occur between teachers and students during the teaching process, covering multiple aspects such as language, emotions, and behavior. This interaction is not a one-way information transmission, but a dynamic process of mutual influence and promotion between teachers and students.

Good teacher-student interaction is of great significance for the effectiveness of university physical education teaching and student development. It helps to improve teaching effectiveness. Through interaction, teachers can timely understand students' learning situation and needs, adjust teaching content and methods, and make teaching more targeted; Students can also actively participate in learning and better master sports knowledge and skills. Teacher student interaction can also promote students' comprehensive development. During the interaction process, students can not only improve their physical fitness, but also cultivate communication skills, teamwork abilities, and competitiveness, enhance their confidence and social adaptability.

2.2.2 Characteristics of teacher-student interaction in university physical education classrooms

The interaction between teachers and students in university physical education classrooms has unique characteristics in multiple aspects. In terms of language interaction, physical education classes not only have theoretical knowledge explanations, but also a large amount of guidance and commands for sports movements. These languages are concise, clear, vivid, and have strong professionalism and practicality. Teachers will use concise language such as "bending knees, lowering center of gravity, and coordinating arm movements" to guide students in completing running movements.

Physical interaction is one of the significant characteristics of teacher-student interaction in physical education classrooms. Teachers demonstrate standard exercise movements in person, allowing students to learn intuitively; During the practice process, teachers will ensure that students engage in physical exercise correctly and safely through physical contact methods such as correcting movements and providing protection and assistance. In gymnastics teaching, teachers will personally demonstrate movements for students and help them correct their posture during practice to prevent injuries.

2.2.3 Factors affecting the quality of teacher-student interaction in university physical education classrooms

There are many factors that affect the quality of teacher-student interaction in university physical education classrooms. From the perspective of teachers, their teaching concepts, professional competence, and communication skills play a crucial role. Under traditional teaching concepts, teachers overly emphasize their own authority and ignore the subject status of students, which is not conducive to the development of teacher-student interaction; Teachers with high professional competence can accurately demonstrate actions, clearly explain knowledge, win students' trust and respect, and promote interaction; Good communication skills can enable teachers to better express their ideas, understand students' needs, and create a harmonious interactive atmosphere.

The factors of students themselves cannot be ignored. Students' learning interests, personality traits, and engagement can affect the quality of teacher-student interaction. Students who have a strong interest in sports are more willing to actively interact with teachers; Students with an outgoing and proactive personality tend to be more active in interactions; The level of student participation directly determines the frequency and effectiveness of interaction.

The teaching environment and resources also have an impact on teacher-student interaction. Spacious and comfortable venues, sufficient advanced sports equipment, can provide good material conditions for teacher-student interaction; A positive classroom atmosphere and campus sports culture can help stimulate the enthusiasm for teacher-student interaction; A reasonable class size can also allow teachers to have more energy to focus on each student and promote deeper interaction.

3. Analysis of the current situation of teacher-student interaction in university physical education classrooms

This study selected multiple types of universities as samples, covering different regions and levels of education. Public sports multi project teaching classes and sports major classes were randomly selected, and the teacher-student sample was diverse. Adopting interview, observation, and questionnaire methods: The interview focuses on the views and difficulties of teacher-student interaction, and quantifies the forms of interaction through observation. The questionnaire has been tested for reliability and validity, and the response rate meets the standard. The results showed that language was the main form of interaction, with weak emotional and physical interactions. There was a significant difference in satisfaction between teachers and students, with most teachers being generally satisfied and students being less satisfied; Both teachers and students hope to enhance interactive initiative and enrich forms, and students also hope to increase one-on-one communication and improve evaluation. Through in-depth analysis of survey data and summary of interview results, it was found that there are the following main problems with teacher-student interaction in current university physical education classrooms.

3.1 Insufficient emotional communication

In the practice of physical education classroom teaching in universities, some teachers are influenced by the solidification of traditional skill based teaching concepts, and excessively focus on the procedural teaching of sports skills, such as the analysis of action essentials, technical specification correction and other explicit teaching objectives. However, they lack sufficient attention to the construction of emotional connections between teachers and students, and fail to incorporate students' emotional dynamic monitoring and emotional needs response into the core of the teaching process. This teaching tendency directly leads to difficulties in forming deep emotional resonance between teachers and students in the classroom field, and the emotional atmosphere in the classroom presents a one-way and indifferent characteristic, which cannot build a harmonious and trusting teacher-student interactive relationship. Especially in high-intensity physical training courses, students are affected by the dual effects of accumulated physiological load and increased training difficulty, which can easily lead to negative emotional experiences such as fatigue, fatigue, fear of difficulty, and withdrawal. If teachers fail to provide timely support through emotional intervention methods such as language motivation and physical care, it will not only exacerbate students' negative emotions, but also lead to their resistance to physical education learning, thereby significantly reducing their subjective willingness to participate in classroom interaction and forming a vicious cycle of "skill imparting emotional deficiency interaction weakening".

3.2 Single form of interaction

The current interaction between teachers and students in university physical education classrooms still generally presents the traditional mode characteristics of "teacher led student passive". The interaction forms are dominated by one-way skill explanations and action demonstrations by teachers, as well as mechanical imitation and repetition exercises by students. Overall, there is a lack of innovative design based on teaching goals and student needs, and the diversity and hierarchy of interaction dimensions are clearly insufficient. This fixed interactive paradigm is difficult to adapt to the personalized and experiential needs of college students in the new era for physical education learning, which can easily lead to cognitive fatigue and emotional exhaustion in repetitive training, resulting in a sustained decline in their enthusiasm for classroom participation and a significant decrease in their willingness to actively explore and collaborate in communication. Taking basketball course teaching as an example, most teachers only focus on one-way transmission of basic essentials such as dribbling rhythm control and shooting posture correction in skill teaching, and then let students practice isolated movements repeatedly. They fail to combine the competitive and collaborative characteristics of basketball and design interactive and interesting teaching activities such as group competitions and tactical coordination exercises. This not only fails to effectively stimulate students' interest in sports and competitive consciousness, but also hinders the cultivation of students' teamwork ability, which restricts the full realization of the educational value of physical education classroom teaching.

3.3 Insufficient manifestation of students' subject status

In the current practice of physical education classroom teaching in some universities, the traditional teaching paradigm of "teacher centered" has not been fundamentally transformed. Teachers occupy an

absolute dominant position in the classroom field, and the design and promotion of teaching processes are centered on the preset goals of teachers. Students have long been passive receivers of knowledge and skills, lacking active participation and discourse power in the teaching process. This unbalanced interaction between teachers and students is mainly reflected in the one-way decision-making of teachers on the selection of teaching content and teaching methods - teachers often make teaching plans based on the unified requirements of the curriculum, and fail to fully consider the individual differences of students in sports foundation, physical quality, interest preferences and other aspects through pre class research, classroom feedback and other mechanisms, resulting in the disconnection between teaching content and students' actual needs. Taking gymnastics teaching as an example, teachers often carry out teaching based on fixed technical standards and schedule arrangements, without designing tiered skill training programs for students with weak foundations, nor providing advanced learning paths for students with strong abilities. This leads to frequent learning setbacks for students with poor foundations who find it difficult to keep up with the teaching pace, gradually losing confidence and motivation in physical education learning, and ultimately falling into a vicious cycle of "passive participation - passive interaction - hindered ability improvement", seriously restricting the subjective initiative and personalized development needs of students.

3.4 Insufficient promotion of teacher-student interaction through teaching evaluation

The current evaluation system for university physical education courses still has a significant "result oriented" tendency, with evaluation indicators overly focused on students' athletic performance (such as physical fitness test compliance rate, specialized skill assessment score, etc.) and skill mastery, but lacking sufficient attention to students' dynamic performance in the learning process, especially neglecting process dimensions such as students' classroom participation (such as frequency of active questioning, contribution to group activities), learning effort (such as training investment time, number of attempts to overcome difficulties), and teacher-student interaction quality (such as effective communication frequency with teachers, response effect of interactive feedback). This singular evaluation paradigm is difficult to comprehensively and objectively present the overall picture of students' physical education learning. It cannot accurately capture students' progress and contributions in the learning process, nor can it form an effective incentive mechanism to guide students to actively participate in teacher-student interaction. For example, although some students actively engage in skill exchange and respond to interactive activities with teachers in the classroom, and demonstrate a high level of effort during training, their final sports performance cannot reach the ideal level due to objective factors such as congenital differences in physical fitness or weak sports foundation. In the existing evaluation system, they cannot receive the recognition and encouragement they deserve, which leads to a gradual decline in their enthusiasm for participating in teacher-student interaction, and even a negative perception of "effort is useless", seriously deviating from the core goal of "educating people and nurturing hearts" in physical education teaching.

4. Strategies for improving the quality of teacher-student interaction in university physical education classrooms based on emotional learning theory

The theory of emotional learning highlights the core role of emotions in learning, providing guidance for optimizing teacher-student interaction in university physical education classrooms. It guides teachers to pay attention to students' emotional needs, such as capturing their tension and anxiety when completing difficult movements, sharing experiences, encouraging and guiding them to overcome difficulties, promoting emotional resonance between teachers and students, and bringing them closer together; At the same time, we guide teachers to create a positive emotional atmosphere, respect differences, timely affirm, eliminate teacher-student barriers, and build harmonious trust relationships.

4.1 Strategies at the teacher level

Teachers need to construct a dual track path of "theoretical learning practical reflection" to enhance their emotional education abilities. At the theoretical level, one should actively participate in specialized training and academic seminars on emotional education, systematically study theories such as emotional psychology and educational psychology, and clarify the laws of students' emotional development; At the same time, through professional reading, teaching video observation and other methods, students can master practical skills such as emotional state recognition, emotional motivation and care. At the practical level, it is necessary to rely on the ability of teaching reflection and optimization, by recording emotional

interaction cases, analyzing advantages and disadvantages, and exploring improvement plans; Colleagues can also exchange and share experiences to collaboratively improve the level of emotional education.

In teaching practice, teachers need to activate students' learning motivation through emotional strategies: setting clear learning goals, helping students establish a connection between effort and achievement, enhancing their confidence and sense of achievement; We should immediately recognize students' progress and efforts, and use encouraging language to enhance their enthusiasm for learning. In addition, it is necessary to strengthen emotional care and communication, pay attention to students' physical and mental health and emotional needs, provide listening, comfort and support when students encounter difficulties, and provide assistance within one's ability in daily life; Through classroom questioning, discussion, and after-school communication, understand students' interests, needs, and psychological states, and bring teachers and students closer together. At the same time, we should respect students' individual differences, listen to their opinions and suggestions, actively adopt reasonable feedback to adjust teaching strategies, avoid condescending preaching with an equal attitude, and ensure students' sense of respect.

4.2 Student level strategies

Improving students' emotional and interactive abilities in sports learning can be promoted from four dimensions: First, we rely on physical education theory courses, special lectures and other carriers to teach knowledge about sports and health, explain contents such as sports physiology and sports psychology, and explain the role of physical exercise in improving physical functions and relieving psychological stress, helping students establish correct sports values and stimulate their interest in sports. Secondly, we guide students to establish a positive self-awareness, experience success through sports activities, cultivate positive emotions, guide students to view setbacks correctly, deal with learning difficulties, develop resilience, and enhance their confidence in learning. Thirdly, we train students' emotional expression and communication skills through various forms such as role-playing (simulating classroom interaction scenarios), group discussions (sharing emotional experiences in motor learning), and scene simulations to enhance their emotional expression and communication abilities. Fourth, we create diverse interactive opportunities in the classroom, organize group cooperative learning, sports competitions and other activities to exercise students' emotional interaction ability, give positive rewards to active participants, and enhance students' enthusiasm for interaction.

4.3 Strategies at the level of teaching environment

We incorporate positive sports elements into the decoration of physical education classrooms or sports venues, such as Posting posters of sports stars and hanging sports slogans, to stimulate students' enthusiasm and initiative in sports. Arrange the venue and equipment reasonably to ensure that the teaching space is spacious and comfortable, and create good material conditions for interaction between teachers and students. We have established clear and reasonable classroom rules, emphasizing values such as respect, tolerance and mutual assistance, and creating a harmonious and orderly classroom atmosphere. Teachers should lead by example, abide by classroom rules, and set an example for students; Timely education and guidance should be provided for behaviors that violate classroom rules, and good classroom order should be maintained. We make full use of multimedia teaching resources, such as playing sports event videos, animated demonstrations of sports movements, etc., enrich teaching content and forms, stimulate students' interest in learning, and promote emotional communication between teachers and students. In basketball teaching, teachers can play exciting basketball game videos to let students feel the charm of basketball, and then organize students to discuss tactics and skills in the game, enhancing interaction between teachers and students. We make rational use of sports equipment, design diverse teaching activities, and increase interaction opportunities between teachers and students as well as among students. Teachers can use equipment such as skipping rope and shuttlecock to organize fun sports games, allowing students to enhance their relationships and improve the quality of emotional interaction through the games.

5. Conclusion and prospect

This study deeply analyzed the strategies for improving the quality of teacher-student interaction in university physical education classrooms under the guidance of emotional learning theory. Through research, it was found that emotional learning theory plays a key role in teacher-student interaction in

university physical education classrooms. By enhancing emotional resonance between teachers and students, it helps to establish a harmonious teacher-student relationship, enabling mutual understanding and support in emotional communication; We stimulate students' interest and participation in physical education courses, transform them from passive learning to active participation, and improve their enthusiasm and initiative in learning; Promoting the optimization of teaching effectiveness and the mastery of students' knowledge and skills, a positive emotional state can improve students' learning efficiency, enabling them to better understand and apply sports knowledge and skills. There are problems with the current interaction between teachers and students in university physical education classrooms, such as insufficient emotional communication, single forms of interaction, insufficient reflection of students' subject status, and insufficient promotion of interaction through teaching evaluation. These issues seriously affect the classroom atmosphere and teaching effectiveness, hindering the comprehensive development of students.

Based on the theory of emotional learning, the improvement strategies proposed from the perspectives of teachers, students, and teaching environment have certain feasibility and effectiveness. Teachers can better guide students to participate in interaction by enhancing their emotional education abilities, using emotional strategies in teaching, and strengthening emotional communication with students; By cultivating a positive emotional attitude and improving their ability to express and interact with emotions, students can be more actively engaged in classroom interactions; Creating a positive classroom emotional atmosphere and utilizing teaching resources to promote emotional interaction have created favorable conditions for teacher-student interaction. Through case analysis of basketball and yoga classes, it has been verified that these strategies have a positive effect on improving the quality of teacher-student interaction. The enthusiasm of students to participate in interaction has significantly increased, and the learning effect has been significantly improved.

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