

Research on the Application of Martial Arts and Tennis Skill Integration Training in Middle School Physical Education Classroom

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Abstract

In the current situation where secondary school physical education is actively developing towards innovation and diversification, exploring novel and effective teaching models plays a crucial role in improving the quality of physical education classroom teaching and promoting students' comprehensive growth. Martial arts, as a traditional sport, emphasizes the combination of movement and stillness, as well as the balance of rigidity and flexibility, while tennis requires participants to have high requirements for quick reaction ability and precise control ability. It is not difficult to find that there is an inherent connection between martial arts and tennis. Integrating the two can create a completely new learning experience for students. Based on this, this article focuses on in-depth analysis of the complementary characteristics of martial arts and tennis, and proposes specific fusion training application strategies in a targeted manner.

Keywords

martial arts; Tennis; Skill integration training; Middle school physical education; application.

Martial arts and tennis seem to have significant differences on the surface. But integrating them together can fully showcase their strengths in physical exercise and skill development, achieve complementary advantages, and produce a synergistic effect. In this way, students can not only feel the intersection of traditional and modern sports culture in the same physical education class, but also experience the collision and integration of Eastern and Western sports cultures.

1. Analysis of the complementarity between martial arts and tennis

1.1. At the technical level

In the field of martial arts, the unique principle of "waist and horse in one" contains profound mechanical wisdom. The integration of waist and horse emphasizes the need for a coordinated and good state between the waist and lower limbs, utilizing appropriate body rotation and smooth transmission of strength to maximize strength. Careful observation reveals that there are many similarities between the transmission of the power chain during the forehand swing of tennis and the principle of "waist and horse in one" in martial arts, and the two share similarities in their power mechanisms. For students, if they can experience and

comprehend the principle of "waist and horse in one" in martial arts, they can more accurately grasp the timing of power connection and release in the process of carrying out tennis forehand swing operations, thereby improving the quality and effectiveness of tennis forehand strikes.

1.2. Physical fitness level

In the multi-directional turn back training of tennis, athletes need to quickly change direction in a short period of time, which requires a high degree of coordination and reaction ability in the body. This ability can be transferred to the landing stage of martial arts aerial movements, which can help martial artists land more stably and accurately after completing difficult aerial movements. From this, it can be seen that martial arts and tennis learn from and promote each other in physical training, providing a more comprehensive way for athletes to improve their physical fitness.

1.3. Psychological level

The concept of "guiding qi with intention" advocated by martial arts plays a unique role in cultivating the concentration of martial artists. In the process of martial arts cultivation, practitioners need to focus their minds on the coordination of movements and breath, without distractions, in order to achieve a state of coordinated movements and smooth breath. Tennis matches are fiercely competitive, and the situation on the court is constantly changing, requiring players to bear enormous pressure. With the concentration cultivated by martial arts training, tennis players can better eliminate external interference during matches, focus on handling each ball, and not be affected by factors such as score fluctuations and audience reactions, thus coping with pressure more calmly and playing to their best level.

2. The application strategy of integrating martial arts and tennis skills training in middle school physical education classrooms

2.1. Decomposition of Martial Arts Movements and Transfer of Tennis Techniques

The integration of martial arts and tennis skills training has unique value and significance in middle school physical education classroom teaching. This fusion is not simply a patchwork, but an organic combination based on the similarity of the principles of the two movements, which can effectively enhance students' mastery of sports skills and learning interest.

In physical education teaching, taking the teaching of martial arts action decomposition and tennis technique transfer as an example, teachers can use detailed decomposition of typical martial arts actions to find the corresponding key links with tennis technique, thereby achieving effective skill transfer. In Tai Chi, the movement of "wild horse splitting mane" requires teachers to break it down into multiple power units in detail. The execution process of the "Wild Horse Mane Splitting" movement places great emphasis on the overall coordination of the body, starting with the movement of the feet, followed by the rotation of the waist, and then the extension of the arms, forming a coherent and rhythmic process of exerting force. In tennis techniques, the key step of pedaling, spinning, and swinging also relies on the coordinated cooperation of various parts of the body. Teachers should guide students to carefully observe the method of using their waist to drive their arms in the "Wild Horse Mane Splitting" movement, and try to apply this feeling of force to tennis kicking and

swinging movements.

In actual classroom teaching, a student found it difficult to master the correct sequence of power when learning how to hit a tennis forehand. This leads to insufficient hitting power and poor accuracy. After introducing the analogy of the "Wild Horse Mane Splitting" action, the teacher asked the student to focus on practicing the "Wild Horse Mane Splitting" first, to experience the entire process of exerting force from the waist and then naturally extending the arms. After a period of practice, this student gradually found the feeling of coordinated physical exertion. Afterwards, when he returned to practicing forehand hitting in tennis, he was clearly able to apply the power generation techniques he experienced in "Wild Horse Mane Splitting" to his hitting movements. In the end, not only did the hitting power increase, but the accuracy of the hitting also significantly improved.

2.2. Gamified confrontation practice in offensive and defensive situations

In middle school physical education classroom teaching, integrating martial arts and tennis skills for training can bring students a unique and effective learning experience. Conducting gamified confrontation exercises in offensive and defensive situations is an effective teaching method that is very helpful in improving students' physical literacy.

For example, in the practice of "blocking counterattack", the teacher will select two students to demonstrate. Xiao Li threw a flat ball with force, and the tennis ball flew towards Xiao Wang like an arrow. This is the simulated "attack" phase. Xiao Wang held a martial arts short stick and stared intently at the flight trajectory of the tennis ball. At the moment when the ball was about to reach his body, he quickly made a blocking motion with the short stick, firmly blocking the tennis ball back, and then quickly counterattacked, simulating a "counterattack". In this process, students not only need to quickly make blocking movements, but also accurately determine the direction and strength of the ball, in order to achieve rapid counterattacks, which poses a great challenge to their quick reaction ability and spatial prediction ability. Through repeated practice, students gradually master the skills of dealing with "offense and defense" in complex situations.

In order to further stimulate students' enthusiasm and initiative to participate, teachers adopt a point based incentive mechanism and adopt a "rank promotion" model. Teachers carefully observe students' completion of movements in various exercises, comprehensively evaluate them from multiple aspects such as the degree of movement standardization, the use of strength, and reaction speed, and then give corresponding "martial arts points". The points earned by students can be used to exchange for priority serve rights in tennis matches. This point based incentive mechanism can effectively encourage students to actively participate in integrated training and improve teaching effectiveness.

2.3. Martial Arts Breathing Techniques and Tennis Physical Psychological Collaborative Training

In the field of physical education teaching, combining martial arts and tennis skills for integrated training is a novel and effective teaching model. Especially in the part of martial arts breathing techniques and tennis physical psychological coordination training, it plays a unique role that cannot be ignored in improving students' tennis skills and enhancing their psychological qualities.

In daily tennis classes, teachers can guide students to use the martial arts technique of "humming and exhaling" during the moment of hitting the ball. For student Xiao Li, when he hit the ball initially, his strength was clearly insufficient and his movements appeared weak and powerless. After the teacher emphasized and guided the use of the "heha exhalation method", Xiao Li tried to exhale briefly at each moment of hitting the ball and use this force to exert force. After several attempts, he truly felt that his hitting power had increased, and his control over the speed and landing point of the ball had also made significant progress. In addition, during the running intervals of tennis, students can use "Tai Chi diaphragmatic breathing" to promote rapid physical recovery. Xiao Li shared that in the past, after practicing multiple balls continuously, he would quickly become breathless and it was difficult to maintain a good state for a long time. However, after learning the "Tai Chi diaphragmatic breathing", using this breathing method during running can quickly adjust one's breath, significantly accelerate physical recovery, and provide more energy for subsequent exercises.

In addition to the use of breathing techniques mentioned above, the cultivation of meditation concentration is equally significant in tennis teaching. Before the campus tennis match, the teacher will arrange for students to perform a 3-minute martial arts exercise called "standing on a stake to adjust their breath". Students follow the teacher's guidance to concentrate on Dantian and earnestly engage in "standing on a stake to adjust their breath". During the competition, they can clearly feel a calm mentality, more focused attention, and more stable technical movements.

It can be found that integrating martial arts breathing techniques into tennis physical and psychological collaborative training can comprehensively improve students' physical and psychological abilities in the process of tennis learning and practice. This teaching model injects new vitality into middle school physical education classrooms and has a positive significance in promoting the development of students' comprehensive physical literacy.

Conclusion

In summary, martial arts, as a traditional sports event in China, has a strong cultural heritage and rich technical movements. Tennis is a popular ball sport that plays a unique role in enhancing students' reaction and coordination abilities. Integrating martial arts and tennis organically can provide students with diverse sports experiences. In future secondary school physical education, teachers should continuously explore and promote integrated training models like this, deeply explore the complementarity between different sports projects, and optimize course content and teaching methods.

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