

Application of Table Tennis Training System Based on Personalized Recommendation

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Abstract: Table tennis is not only a competitive sport, but also a highly technical sport. Skills and tactical levels will be the deciding factor in the outcome of the game. Therefore, training is vital to athletes at all stages of development and growth. At present, in the training of table tennis reserve talents in China, the teaching level varies from region to region, and the training methods vary widely. This paper will explore the principle and implementation method of table tennis training based on individualization from the perspective of table tennis training development, and try to apply the individualized-based table tennis training to practice.

1. Introduction

Without the professional training of many years of scientific systems, it is extremely difficult to train world-class athletes. Creating excellent athletic performance is the ultimate goal of athletes in the competitive phase. Competitive ability mainly includes physical ability, skills, tactical ability, mental ability and sports intelligence. It takes a long period of repeated training to continue to enhance and enhance the athletic ability. In the whole process of years of training, it is very important to develop a detailed implementation of tactical training programs for the personality characteristics of athletes at different stages.

2. The status quo of Table tennis training development and the significance of individualized training

2.1 Status quo of technical training development

Since the founding of New China, Chinese Table tennis has experienced 67 years of development. In the 1960s, Chinese Table tennis developed a "fast, accurate, ambiguous, and changeable" style of near-Table fast break technology, leading the world. From the 1970s to the 1980s, the technical style of Chinese Table tennis has developed. The technical style of "turning" was added to the technology of the 1960s, and the combination of fast attack and arc ball is the most prominent. In the 1990s, the technical style was characterized by special skills, and the first three boards took the initiative. After 2000, on the basis of inheriting the essence of the past technology, the characteristics of Chinese Table tennis technology are characterized by outstanding special technology, comprehensive technology and no obvious technical loopholes. Its constantly innovative and changing technical style is a key factor in establishing its world status.

2.2 Significance (playing research chart)

Through daily training and exploration, the technical characteristics of the athletes and the characteristics of the offensive and defensive transitions were truly discovered. Continuous training will lead to similar styles for Table tennis players. The technical characteristics of both players are easily broken by the opponents, which is not conducive to the development of the game and the technical characteristics of talents. The chart below shows the type of play of all participating players in the 2018 National Youth Table Tennis Tournament. The statistical results are shown in Figure 1.^[1]

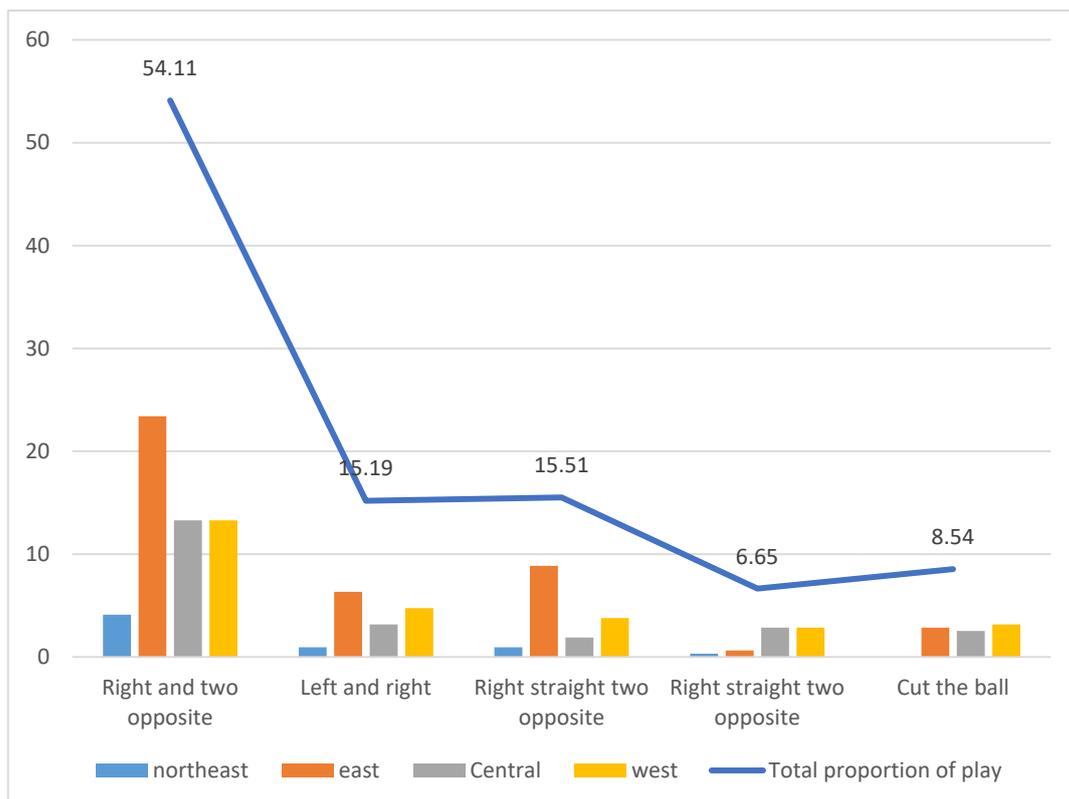


Figure 1 Statistics on the type of play characteristics of participating members of the 2018 National Youth Table Tennis Tournament [n(%)]

In Table tennis, different technical styles can restrict and promote each other. Individualized training programs based on the individual characteristics of the players can effectively help players adapt to various technical styles and encourage them to fully utilize their skills. In addition, personalized training allows athletes to make full use of their individual characteristics, give full play to their potential, and establish a unique and excellent technical style. Studying the individualized training methods of Table tennis players, verifying the scientific nature of individualized training, it is helpful to establish a scientific individualized training system for Table tennis players, and provide an important theoretical basis for the development and improvement of Table tennis technology in China.

3. Personalized training follows principles and implementation methods

3.1 Principle

3.1.1 Follow the athletes' competitive ability and age characteristics

For athletes, the process of teaching and training is the process of mastering and improving knowledge, skills and skills. Therefore, the teaching and training process must follow the law that people recognize affairs from perceptual to rational, from easy to difficult, from known to unknown. [2] Table tennis is a technology-oriented competition. The strength of its competitiveness is related to the age of the contestants to a certain extent. From the perspective of the training period, the athletes must have 4-6 years of training in the special promotion stage, and the athletes should have 4-8 years of training in the best competition stage. Therefore, in order to acquire mature Table tennis competition skills, it takes 8-12 years of scientific, professional and systematic training.

3.1.2 Follow the stage division principle of athletes' full-time training

Based on the division of the athlete's full-year training period, the training tasks and training content of each stage are closely related to the results of the previous stage. The following stages of the exercise load gradually increase, and the load intensity reaches the maximum in the best

competitive stage.

Table tennis players usually start learning at the age of five or six. During this period, athletes have not yet formed an independent thinking ability. At this stage, the repetitive exercises are mainly used to establish clear goals and general motion representations in the brain, to understand the basic movement processes, and to accumulate basic movement experiences. In the technical training process, athletes should receive ball sense training, and physical coordination exercises should be strengthened. At the same time, the coach should standardize and correct the wrong technical actions in the player's operation.

The improvement of the technical characteristics of the special improvement phase is the main task. The coaches should dismantle the teaching according to different technical characteristics, so that the athletes can further understand and master the movement principle, and the ball-fighting reaction action against the technology is deeply reflected in the brain. At the same time, athletes' psychological training should be gradually carried out at this stage, so that athletes can learn from the participating events and build a strong and stable psychological quality.

The best competitive stage gradually rises to the maximum with the training load. The high-intensity repeated exercises need to start from the individual characteristics of the athletes, gradually subdivide the competitive technical movements, and help the athletes to stably play and use the various motion techniques in the competition. At the same time, athletes' psychological construction training should also follow the training load gradually. The strong mental construction has a certain relief effect on the training load that the athletes gradually strengthen, eliminating the training burnout and improving the training quality, in order to maintain a strong competition level and Get the foundation for good results in the competition.

3.1.3 The coach observes and establishes the athlete's technical style

The athlete's physical form and physical fitness are the key factors in the athlete's career growth. The coaches first need to look at the type of athletes from the perspective of the type of athletes, and tailor the training methods and competition techniques for the personality characteristics of the type. Observe the technical and tactical actions that athletes use in high-frequency in daily technical training, consciously focus on training and analysis, help athletes gradually gain experience and gradually evolve into unique technical movements, and form a unique technical style. [3]

3.1.4 Basic training personalized

Basic training mainly includes physical fitness, technical and psychological training. In terms of physical fitness, athletes need to form a personality and technical style to carry out comprehensive and targeted basic training with their own physical quality. In terms of technical training, the combination of technical actions is formulated to form a tactic that conforms to the athlete's technical style. Targeted training expertise and existing technical shortcomings to develop personal skills form their own outstanding style. In terms of psychological training, the first study analyzes whether athletes' psychological quality requirements are up to standard. Finally, special psychological training is carried out in places where psychological construction is insufficient, and a stable psychological mechanism of competition is gradually improved and established.

3.1.5 Specialized training personalized

In the special training stage, the physical quality needs to carry out special quality training according to the technical style gradually formed by the athletes. Technical training with individual training programs focuses on technical and tactical training. Technical and tactical training focuses on improving the technical competition ability of athletes and formulates tactics that meet their technical requirements. Different athletes arrange individual plans according to their personal technical characteristics, so that the training to strengthen individual special skills is not rigid. Psychological training is aimed at the changes in the psychological activities of the athletes' competition. The coaches carry out appropriate intervention and guidance, and the athletes' psychological state tends to be stable.

4. The application of Table tennis training system based on personalized recommendation

This paper takes the athletes A and B of Hubei Table tennis team as an example to carry out the research based on personalized Table tennis training, analyzes the training method based on personalized Table tennis training, demonstrates the training effect, and is the Table tennis training based on personalized recommendation. System application provides sufficient theoretical basis and practical basis.

4.1 Cultivate and improve the physical fitness of athletes

Physical training includes strength, speed, endurance, flexibility and agility training. The physical fitness test for athletes is the premise for the development of personalized training. The results of the physical fitness test of the two athletes are shown in Figure 2.

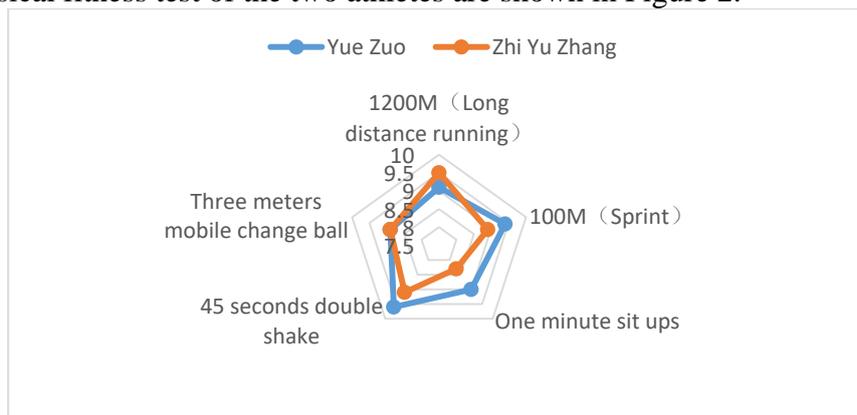


Figure 2 A, B physical quality test statistics

According to Figure 2 physical quality score analysis, the comprehensive physical quality test situation: A in the speed quality, strength and coordination quality is significantly better than B; B's endurance quality performance is more prominent. Therefore, compared with A, B can better adapt to long-term exercise.

In the basic quality training stage, A focuses on the cultivation of strength and speed quality, while focusing on the formation of technical styles dominated by strength and speed. B is biased towards the cultivation of endurance and speed quality, and forms a technical style with outstanding endurance speed. Since B is still in a weak position in speed, coaches should increase their proportion of training in speed training.

In the special improvement stage, A meets the special quality requirements of technical style by strengthening the bench press, waist and frog jump training. The special training of upper limbs, waist and abdomen, leg strength and reaction speed is crucial to improve the left explosive force. B's technical style requires special qualities such as endurance, footwork movement speed and flexibility. Therefore, B has joined the long-distance running and flexibility training at this stage.

4.2 Cultivating athletes' psychological quality

Through the observation and analysis of the psychological activities of the two athletes participating in the team's various levels of competition. A has excellent psychological characteristics such as tenacity, concentration and calmness, but also shows the characteristics of lack of self-confidence in the game. Its technical style requires her to have a positive and psychological quality. B shows a high level of psychological quality in terms of hard work, calmness, flexibility, etc. B also lacks self-confidence, and her technical style requires her to be steady and persevering.

In the simulation competition, focus on the psychological ability of training A to take the initiative to change flexibly; A appears to be suspicious of negative emotions when exercising, and exercise it to give positive hints in time; in addition, the supervisor coach actively guides the continuous encouragement and encouragement, and gradually helps build confidence. Mental quality. B cultivates the psychological character of decisive action and bold struggle in the

simulation competition; exercises the awareness of strengthening self-psychological suggestion when B mentality is unstable and wants to give up the competition; at the same time, the supervisor coach actively follows up his psychological changes and provides guidance in real time. Personalized psychological quality training has enabled the psychological weakness of the two athletes to be targeted and further cultivated and improved the level of psychological quality.

4.3 Forming athletes' unique technical style and improving their technical level

By giving personalized targeted training at different times. The two athletes have achieved great results. Since the 13th year, A has been continuously improving. In 2014, he became the national first-class athlete and won the eighth place in the A-B league. Later, he was selected to participate in the National Junior Championships, the National Youth Championship and other large-scale competitions. B entered the team in 2013 and gradually rose from the end of the game to the middle level. In 2016, he became a national first-class athlete and won the women's doubles championship in the youth championship. The data verifies that the application of Table tennis training system based on personalized recommendation can effectively help athletes to achieve better level of competition.

5. Conclusion

According to the technical direction and the characteristics of the athletes' needs to provide individualized Table tennis training system, it will greatly improve the training efficiency of the athletes, significantly enhance the athletes' mastery of the competitive technology, and then cultivate more based on the personalized training system. The requirements of quality Table tennis technical talents.

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