

# **Application Analysis of Multi-Ball Training Based on Hierarchical Teaching Method in Table Tennis Teaching and Training**

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**Abstract:** the Multi Ball Training Method Increases the Frequency of Back and Forth Activities in the Training Process through Continuous Supply and Demand, and Reduces the Gap in the Training Process. in the Same Unit Time, the Number, Intensity and Density of Table Tennis Exercises for Students Should Be Significantly Improved. Attention Should Be Paid to the Implementation of Teaching Goal Layering: Students At All Levels Will Choose Higher-Level Goals to Try after Achieving the Goals of This Learning Area, So That the Teaching Requirements and Student Learning Are Always in Dynamic and Coordinated Development. from the Perspective of Science, Safety, Physical Strength and Other Comprehensive Considerations, Any Kind of Movement Must Be Arranged in the Training Process for a Certain Interval Time, Instead of Being in the Training State All the Time, That is, Interval Time is Necessary and Necessary. At the Same Time, with the Help of Teaching Media, Students Can Repeatedly Find and Correct Problems Until Their Own Level is Improved, and Then Reach the Same Level with Other Students, Which is Conducive to the Improvement of Classroom Teaching Quality and Effect.

## **1. Introduction**

Table Tennis is China's "National Ball" and is Loved by Many People for Its Strong Interest and Fitness. At the Same Time, Table Tennis Teaching is Also an Important Branch of College Physical Education Curriculum. the Development of Table Tennis Curriculum Plays a Vital Role in Cultivating Students' Competitive Awareness and Cooperative Spirit [1]. However, Objectively Speaking, Almost Any Kind of Teaching Method Has Its Advantages and Disadvantages, Has Its Own Application Scope and Occasions, and Multi Ball Training is No Exception. to Make the Teaching Purpose More Clear and More Conducive to Improving the Teaching Quality of Physical Education [2]. the Layered Teaching Method Can Realize the Reasonable Allocation of Talents, the Cooperative Learning among Students, the Interaction between Students and Teachers and Students, the Cultivation of Students' Cooperative Consciousness and the Characteristics of Complementary Advantages, and the Construction of a Learning Atmosphere of Coordinated Development among Groups [3]. the Hierarchical Teaching Method is Applied to the Public Sports Table Tennis Teaching in Colleges and Universities. According to the Differences of Students, Combined with Table Tennis Knowledge, Targeted Teaching Activities Are Carried out for Students, Thus Enhancing Students' Learning Interest [4].

## **2. Analysis of the Current Situation of Table Tennis Teaching in Colleges and Universities**

College Students Come from All over the World. Everyone Has Different Family Background and Growing Environment, Which Determines Their Different Individual Qualities. the Advantages of Applying Multi Ball Training in Table Tennis Teaching in Colleges and Universities Are as Follows [5]. the Ball Training Method Uses Continuous Supply and Demand to Increase the Frequency of Back and Forth Activities during the Training Process and Reduce the Gap in the Training Process. in the Same Unit Time, the Number of Times, Intensity and Density of the Students' Table Tennis Practice Must Be Significantly Improved [6]. the Multi-Ball Training Method is Applied to Table Tennis Teaching. by Increasing the Number of Times Students Swing and Hit the Ball, Students Can Be Familiar with and Master Basic Sports Skills in a Limited Time,

Thus Improving the Quality of Table Tennis Teaching [7]. Therefore, in the Face of the Uneven Status of the Student Base, It is Necessary to Improve the Existing Single Teaching Model. Teachers Use Multi-Ball Training Methods to Train Each Footwork in Table Tennis, and Effectively Integrate Footwork and Hand Training to Allow Students to Train Footwork and Handwork At the Same Time, Which Helps to Promote the Coordination of Students' Limbs It Can Also Help Students Strengthen Their Mastery of Table Tennis Footwork and Techniques, and Master Various Table Tennis Table Tennis Skills, Thereby Improving Their Table Tennis Sport Skills [8]. Therefore, the Application of Multi-Ball Training in Table Tennis Teaching and Training in Colleges and Universities is Very Beneficial to the Cultivation and Development of Students' Good Will Quality and Has a Promoting Effect.

### 3. Application Strategy of Hierarchical Teaching Method in Table Tennis Teaching of Public Sports in Colleges and Universities

#### 3.1 Stratification of Students

No matter what stage students are in, there will be differences between groups. So in the process of teaching, we need to implement the method of teaching students according to their aptitude [9]. For multi ball single practice, it is required that the players have a good level of ball supply and can continuously provide table tennis for students. In order not to hurt every student's self-esteem, teachers should explain why to adopt stratified teaching method and the possible benefits of stratified teaching method before stratification, so that students can truly accept this method in their hearts, which is more conducive to the development of subsequent teaching and learning [10]. In order to implement the stratification of teaching objectives, we should pay attention to: students at all levels should try to choose a higher level of objectives after reaching the objectives of their own learning field, so that the teaching requirements and students' learning are always in a dynamic and coordinated development. Pay attention to the proportion of male and female students in the stratification, enhance students' cooperation ability, and realize the application value of stratification teaching method in table tennis teaching. Students can choose their own starting point of practice, one by one to conquer and pass the test step by step. For students who are proficient in the general style of play, teachers can focus on teaching some smash or left-right change style of play.

The article discusses from the structure shown in Figure 1.

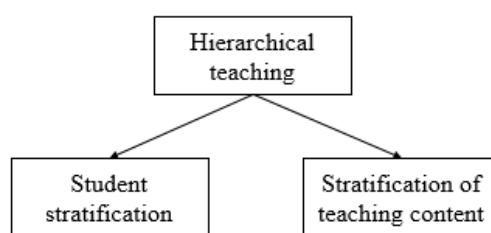


Fig.1 Hierarchical Teaching Structure

#### 3.2 Stratification of Teaching Content

For different levels of students to carry out different teaching. Students in the struggling group are required to master the forehand and backhand skills. The students in the improvement group must master the technique of spinning ball in different directions, and at the same time, they must have certain angle and rotation force. For good students, the teaching goals are set as follows: to enhance students' mastery of table tennis skills, to promote students to master table tennis for individual tutoring, and to help them keep up with the teaching progress. Through reasonable control of the density and intensity of ping pong ball practice, guide students to independently explore the laws existing in ping pong ball sports, and continuously improve their overall quality and physical fitness. For students with good physical education foundation, some basic courses are difficult to arouse their enthusiasm for participation. They prefer some challenging tasks. Pay

attention to the learning process, so as to help students to better self-position, stimulate learning motivation and improve learning enthusiasm. Targeted, targeted and hierarchical teaching is a powerful guarantee for good teaching results. Post-sports backbones will also actively cooperate with teachers in classroom practice evaluation after class, providing objective and fair basis for process evaluation.

#### **4. Problems Needing Attention in the Application of Multi-Ball Training Method in Table Tennis Teaching in Colleges and Universities**

##### **4.1 Take the Teaching Method of Group Competition**

Students' love for table tennis is mainly reflected in their talent and interest. From the comprehensive consideration of science, safety and physical strength, any kind of movement must arrange a certain interval time in the training process, but not always in the training state, that is, interval time is necessary and necessary. Due to the individual differences of different students, long-term continuous practice is likely to exceed the student's physical load, causing students to have negative emotions and affect the emotional cognition of table tennis. The training intensity of the multi-ball training method is relatively large. If the previous interval time arrangement is used, the students may not have enough interval time, be easily fatigued, and greatly reduce the training effect. At the same time, they can also play in groups. Teachers should find out the shortcomings of students in time and correct them in time during the competition. The rationality of the interval time arrangement in the training process can create good conditions for the normal exertion of the advantages and functions of the multi-ball training method, thus effectively improving the teaching and training effect of table tennis in colleges and universities and improving the students' table tennis skills.

##### **4.2 Hierarchical Use of Teaching Media**

At present, the application of multi ball training method in table tennis teaching in Colleges and universities is still difficult to meet its teaching objectives. Under the background of educational information modernization, the formation of new teaching media, such as micro class, MOOC class and flipped class, has brought new opportunities for the hierarchical teaching of table tennis. Considering from this angle, the teaching and training of table tennis in colleges and universities should follow the rules of table tennis itself, carefully design and arrange the contents of table tennis teaching and training, and reasonably design and grasp the rhythm, speed and intensity of multi-ball training. In table tennis teaching activities, teachers should set up different teaching activities and tasks according to different levels of students, so that students can participate in teaching activities to complete different teaching tasks, thus enhancing students' learning ability of table tennis techniques and tactics. At the same time, with the help of teaching media, students can repeatedly find and correct problems until their own level is improved, and then reach the same level with other students, which is conducive to the improvement of classroom teaching quality and effect. It can be said that students enjoy the teaching content tailored for them. In such a mode, students' interest in learning is greatly enhanced, because the classroom not only brings them knowledge, but also enables them to gain a sense of achievement, and the teaching effect is naturally different.

#### **5. Conclusion**

Layered teaching method has opened up a new way in table tennis teaching. It focuses on the characteristics of individualized teaching, people-oriented, step-by-step and step-by-step teaching, and plays an important role in improving the level of students. After a long period of experience accumulation and development, China's multi-ball training system has gradually matured, but there is still room for improvement. This requires us to collect more data and accumulate rich experience in the process of multi-ball training. In the learning process, how to prevent students from focusing on competitions instead of skills training is something we need to explore continuously in future

teaching. To promote the application of multi-ball training method to give full play to its advantages, and to promote the rapid development of college sports while improving college students' physique, willpower and table tennis skills.

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