

## Research on mixed Teaching Practice of Tennis Teaching in Rain Classroom

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**ABSTRACT:** Jinan University introduces rain classroom wisdom teaching professional version platform, which can integrate tools into daily teaching, optimize teaching resources, teaching process and teaching cycle data analysis and teaching evaluation, quantify learning situation to help teachers accurate teaching, and realize mixed wisdom teaching based on wisdom teaching application. The mixed teaching practice of tennis under the application of rain classroom is a new teaching method. It mainly takes the teaching video as the carrier, subdivides the teaching content in the subject, and makes it through the teaching methods such as problem explanation, technical action analysis and so on, combined with a variety of multimedia MOOC teaching methods<sup>[1]</sup>. In the process of making tennis micro-course teaching video, the selection of teaching content, the writing of teaching plan, the integration of teaching materials, the making of teaching courseware, the recording of "micro-class" teaching video, the post-editing of video, the teaching feedback, the summary and perfection of teaching experience, the students undefined homework and discussion. These eight parts form a teaching cycle, and then highlight the advantages of "micro class" in tennis teaching. After class, the teaching courseware is pushed to the student mobile phone terminal, teachers and students interact in real time, students can answer questions in real time, vote, play screen interaction, effectively arouse students undefined classroom enthusiasm and improve students undefined learning efficiency. In or after class, the teacher can push the preview or review courseware with MOOC video, exercises, pronunciation to the student mobile phone terminal, and the teacher and student communicate and feedback in time to realize the reversal of the classroom.

**Keywords:** Tennis; Rain classroom; mixed teaching

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### I. THE GOAL OF MIXED TEACHING IN RAIN CLASSROOM TEACHING IN TENNIS COURSE

Physical education teaching has its own characteristics, it is a purposeful and planned educational process to guide students to master physical education knowledge, basic sports technology and skills, strengthen students undefined physique, cultivate physical education teaching ability and good ideological and moral character with the joint participation of physical education teachers and students, and the process of physical education teaching is a process in which teachers, students and media participate together. The whole teaching process is that in order to realize the teaching purpose and task, teachers and students use all kinds of information carriers and tools to process, transmit and reproduce information with modern information processing theory. The learning process can be described as: the process of information input, coding, processing, storage, decoding and output, in which the teacher acts as the input of information and the student as the output of information<sup>[2]</sup>.

Tennis course faces the public elective course of physical education II, physical education IV, which is a credit, but due to the limitation of venue and the large number of students, many students may not be able to choose tennis course. Tennis is a project with high technical requirements for sports. Even if the students who choose tennis lessons are limited by the field and the number of school hours, there are fewer opportunities to practice and the improvement of tennis skills is slow, so higher requirements are put forward for tennis teaching. The teaching of any sports technology is the process of teacher explaining, demonstrating, students practicing, feedback, correcting and practicing again. The mixed teaching practice of tennis based on the application of rain classroom is a new teaching method. The teacher will take the teaching video MOOC as the carrier, subdivide the teaching content in the subject, through the teaching methods such as problem explanation, technical action analysis and so on, combine a variety of multimedia teaching means to make it on the network, students can watch the classroom teaching video through the computer and mobile phone class. Give the students who do not choose the class an opportunity to teach online, create more sensory preview, study and stimulation for the students who are in the tennis class, improve the teaching effect in practical practice, better complete the teaching objectives and

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improve the reversal efficiency of the classroom.

## **II. THE OVERALL THINKING OF MIXED TEACHING IN THE APPLICATION OF RAIN CLASSROOM TEACHING IN TENNIS COURSE**

Tennis has developed rapidly in our country, and tennis courses have been offered in colleges and universities one after another, but the teaching effect is not satisfactory. The research shows that there are three problems: on the one hand, the high technical content of tennis and the complex and changeable movements make it difficult for students to master, mainly including forehand batting, backhand batting, serve, intercepting, high pressure, technical and tactical and other technical factors; on the other hand, the constraints of teaching hours and venue equipment; Another aspect is the teaching strategy factor, which has been influenced by the traditional teaching mode for a long time. Most teachers adopt the monotonous teaching mode of "teacher oral explanation and demonstration, student imitation practice, teacher error correction".

### **Compared with traditional tennis teaching, rain classroom tennis classroom practice course has the following advantages:**

The main results are as follows:

(1) Teachers can systematically guide students to study and arrange teaching contents and procedures with modern teaching theory, which can optimize the teaching content and systematize and standardize the teaching process. The computer contains a large amount of teaching information, which can realize man-machine dialogue, call and carry out all kinds of teaching activities at will according to the needs of teaching<sup>[3]</sup>.

(2) It can help students to establish the concept of action as soon as possible. If multimedia CAI is adopted in the classroom, the effect can be greatly improved. For example, teaching tennis theory class, when teachers talk about the concept of scoring principle, most students feel that the concept is easy to understand, but it is not easy to master in practice. The teacher can not only express it in the form of drawing, but also use audio and video materials to edit the scoring lens in some competitions, show the students how to "score", and be equipped with repeated explanation words to mobilize the students undefined senses, so that students can understand the concept not only rationally but also from the perceptual point of view.

(3) Students can directly carry out self-learning self-test and self-evaluation teachers to teach the teaching software to students, students can not only study in class, but also self-study or review after class.

(4) Timely and accurate feedback to students on their learning process and improvement of learning efficiency. In the past, when teachers taught tennis jumping technical movements, they pointed out that when students undefined tennis movements were not standardized or their movements were not perfect, students sometimes did not feel that the movements were wrong, so that there were obstacles in communication between teachers and students. This kind of obstacle only the students repeat a certain action over and over again, and the teachers guide them carefully. Students can slowly understand the key points of action in order to eliminate this obstacle. If the athlete has taken shape to improve or improve the sports performance, this will lead to the low level of sports technology and poor teaching effect. We record the students undefined technical movements and let the students see by themselves by slowing down the movements, so that the students can find out the problem in time and correct it. Or then through the computer processing, some outstanding athletes in advance of this action recording, the two compare, the difference between the two can be clear at a glance.

(5) to improve students undefined interest in learning is monotonous in the backward form of teaching in the past, so it is difficult to eliminate the negative psychological state of students in the process of learning, while the rain classroom is changeable and novel in its form, which can make students maintain a good state of mind, stimulate their thirst for knowledge and improve their learning efficiency.

To sum up, rain class can stimulate students undefined senses, maximize the absorption of information (knowledge) education software multimedia, in each knowledge section, carry out a variety of cut-in exercises, such as multimedia courseware, online learning, offline practice, virtual practice, automatic question and answer, "interactive practice"<sup>[4]</sup>. Embedded quizzes, after-class quizzes and exams, peer evaluation questions, automatic evaluation and scoring of learners are added to the micro-class video to realize the immediate evaluation of learners, guide students to learn and improve more actively and effectively, and can better meet the different psychological requirements of students. It encodes the information into the image to recognize synchronously, makes the textbook sound picture merge, makes it clear, easy to understand, easy for students to accept.

## **III. THE BASIC INFORMATION OF MIXED TEACHING IN THE APPLICATION OF RAIN CLASSROOM TEACHING IN TENNIS COURSE**

Tennis course faces the public elective course of physical education II, physical education IV undergraduate students in the whole college. Two hours a week, a total of 36 school hours, 80 internal enrollment and 80 foreign enrollment (did not attend the rain class), a total of more than 80 students use this course platform for self-study and tutoring, and submit homework, use discussion area, use wiki to study, and achieve certain learning results.

#### IV. COURSEWARE DESIGN METHOD OF TENNIS MULTIMEDIA

##### (1) pre-class preparation

First of all, before the beginning of the course, teachers publish the curriculum objectives, course introduction, teacher information, syllabus (including class schedule, curriculum requirements, main content of the course, test standards, etc.) on the Internet. Prepare the students in advance.

##### (2) The combination of classroom instruction and network platform learning.

Through the application of the courseware in the course of teaching or the self-study of the students, the student is provided with an interactive learning environment with the combination of the vividness and the direct view, and the functions of the image, the graphics, the animation, the audio and video and the like of the computer are fully utilized to enable the students to set up the correct forehand, The concept of backhand ball striking and serving technology, master the service technology, and master the tasks, action specifications, technical points, teaching methods and means of each technical stage, the identification of common error actions and the cause and the correction. in addition, through the selection of the tennis technical reference, the learning of the data and the test of the question and answer of the tennis technical knowledge designed by the design, the learning efficiency of the students is improved, the learning interest is improved, the knowledge surface of the students is widened, Such as backhand and serve, and the like<sup>[5]</sup>.

In the classroom teaching link, teachers first teach and demonstrate tennis skills and learning key difficulties, and then adopt heuristic teaching methods and task-based teaching methods such as imitation, practice or assignment of certain topics on the network platform to deepen students undefined understanding of tennis technology, and it is up to students to sum up the phenomena and laws in learning. Encourage students undefined innovative thinking, for students to think independently, put forward innovative opinions to be positively evaluated and summarized in a timely manner. The concrete teaching content is vivid and vivid, and the three-dimensional image acts on a variety of sensory organs of the students, so that the students can see the learning content, methods, steps, the structure of the technical action, remember and understand quickly, create good conditions for the students to accurately grasp and understand the technical essentials, and quickly form the sports skills, so that the students are always in a positive and active learning state. At the same time, the joint participation of teachers and students in teaching is beneficial to the information feedback of teaching and learning, and gives full play to the leading role of teachers and the main role of students. Therefore, the application of tennis multimedia teaching courseware is bound to promote the teaching of physical education towards the use of high-tech means to improve the quality of teaching<sup>[6]</sup>.



Fig.1 structural design drawing

##### (3) After-class practice and feedback

Each project gives students a certain amount of homework, which is completed by students independently or in groups. Students submit their homework online on time (teachers can choose to read only and share them). Teachers feedback online in time, and summarize and comment on all students. Students can also ask questions to teachers after class, teachers to answer in time, if more important questions, can also prompt the class to pay attention to.

#### **(4) Practice and discussion to achieve the goal**

Tennis multimedia courseware has distinct characteristics, its main characteristics include: first, pertinence. The teaching object and goal of courseware are clear, the teaching content is in line with the cognitive level, body and mind, hobby and other characteristics of college students, and the choice of teaching content is helpful to support students undefined independent and cooperative inquiry learning, to stimulate students undefined interest in learning and enthusiasm for active participation, and to develop their personality. Second, scientific. The content is scientific, the expression is accurate, the terminology is standard, in which not only has the accurate, the systematic theory knowledge about tennis, but also turns the theory into the standardized technical action, thus causes the two to combine organically, the teaching strategy is reasonable, the key point, the difficulty outstanding carries on the teaching, conforms to the study cognition law. Third, interaction. On the basis of making full use of computer multimedia technology, the courseware has good interactivity, which is mainly embodied in: 1, the logic level is clear, the key points and difficulties are prominent, there are not only complete technical display, but also decomposition actions and key points, difficult action slow shot demonstration and explanation, so that the learning progress can be controlled; 2, the content is rich and diverse, the theoretical part has both the basic knowledge of tennis and the scientific exercise methods, and so on.

### **V. TAKE TENNIS FOREHAND TEACHING AS AN EXAMPLE**

Tennis forehand batting position:

#### **1. Prepare posture**

In the face of the net, the feet are naturally separated from the shoulder, the knees slightly bend the body slightly forward, the center of gravity falls on the forefoot palm of the feet, the right hand grip, the left hand gently supports the neck, the elbows bend slightly, the racket is comfortably placed in front of the body, the bracket is perpendicular to the racket head to point to the other side, both eyes look at the other side to the ball, be ready to hit the ball.

#### **2. rear pendulum lead**

When judging that the ball needs to be hit back with the positive beat, turn your feet, lift your left heel and lean forward to the right, turn your right foot 90 degrees parallel to the bottom line, and turn your shoulder to the hip and drive your right hand to swing the lead back (this is a closed gait, which is suitable for beginners to turn around; The other is open footwork, left foot does not have to step up, two feet flat stand but need more right turn action), elbow bend, naturally droop, clap head below knee, left hand extends forward, maintains body balance, body center of gravity moves to right foot when back swing lead, left shoulder to right net post, wrist fixed, swing rotation about 180 degrees beat head points to back block net.

#### **3. The act of hitting the ball (swinging the ball before)**

Hold the racket from the back swing forward, extend the wrist back, fix, climb the foot hard, turn the body and swing, the batting point does not exceed the height of the waist in front of the right side of the body, the swing speed is the fastest when hitting the ball, the ball is hit in the center of the face of the racket, and the head of the racket is waved from top to bottom to make the ball spin slightly.

After the tennis forehand hit the ball with the stroke, make the racquet face parallel to the net for as long as possible, the swing forward along the direction of the ball, the center of gravity moved forward on the left foot, the body also turned to the net, the swing ended at the top of the left shoulder, and the racquet head pointed higher than the head. Follow-up with the swing is larger and more sufficient than the post swing to ensure the stability of the bat. follow up with the swing, immediately resume the preparatory position and prepare for the next shot<sup>[7]</sup>.

#### **4. learning and feedback**

##### **4.1 Establish basic technical concepts**

According to the three technical links taken by the tennis forehand, these knowledge points are established in the online classroom through text, pictures and some external network connections.

##### **4.2 To give an assignment**

In the network class, some homework will be arranged according to the teaching content of this class, and the students will be required to complete it, so that the students can further deepen the understanding of forehand technology.

##### **4.3 Recording original video**

By recording the class video of the students and the video of the whole forehand teaching, the students can see their own action technology intuitively, compare their own action technology with the action technology required by the teacher, and strengthen the learning effect through one step deepening.

#### **4.4 Feedback and absorption**

Any exercise technique is repeated practice, the formation of muscle memory, students continue to practice, not only in class, but also in their spare time to contact, for the practice of the questions can be put forward in time with the classroom, the teacher timely online reply to this course through a variety of network methods (BB platform, WeChat, etc.) for teacher-student interaction.

This course sets up several forms of learning interaction on the BB platform, including:

(1) Discussion area

Students exchange and ask questions through "skill irrigation area", "experience area", "question area" and so on.

(2) Wechat

Establish students undefined WeChat group, communicate with students faster and more timely, feedback lessons and teaching requirements.

#### **VI Implementation effect**

(1) To meet the needs of students undefined individualized learning

The multimedia courseware and rich knowledge points in rain classroom, as well as the learning convenience and flexibility of the network platform, can better meet the needs of the students. Students can adapt to their own learning plans, personal idle conditions, living habits and needs. In addition to learning in the classroom, the rich knowledge on the network platform can give students the flexibility to choose the learning place and arrange the study time. In this way, we can solve the time contradiction in the process of adult learning to a great extent, make full use of scattered and piecemeal time to learn, and realize the real teaching according to their aptitude.

(2) The Reform and extension of traditional classroom Teaching

The combination of traditional speech teaching and online learning platform is the supplement and extension of realistic classroom teaching, breaks through the linear arrangement of classroom teaching content, enriches the realistic classroom teaching, effectively guides learners to think actively and review effectively, stimulates learners undefined interest in learning, at the same time, breaks through the limitation of time and space, and enables learners to arrange their study freely and exchange knowledge at any time and place. To provide learners with a convenient, relaxed and lively autonomous learning environment to meet the learning needs of the majority of learners, so as to effectively improve learning quality and learning efficiency.

(3) More intuitive teaching

In the initial stage of tennis teaching, multimedia is mainly to promote students undefined understanding of sports technology and cultivate the appearance of sports technology, which can overcome the shortcomings of teachers in explaining demonstration technical movements, and facilitate students to learn technical movements more accurately. In addition, through the shooting and playback of students undefined practical videos, students can make students more direct and effective to students undefined content and learning feedback.

### **VI. INNOVATION POINT**

Combined with the requirements of college students undefined tennis teaching and the characteristics of teaching goal education, breaking through the limitation of space and time, using the concept of turning the classroom<sup>[8]</sup>, the network learning platform can fully play the role of "bridge link", make the relationship between teachers and students more closely, and broaden the scope of study and discussion.

(1) Diversify a single classroom learning and become a way of self-study, teaching and collaborative learning.

(2) It makes the learning individualized, adapts to the needs of adult learners, and can record the learning experience and find problems anytime and anywhere through the online learning platform.

(3) Improve the ability of self-solving, realize self-learning, change the simple teacher teaching, students passive teaching form, under the guidance of the syllabus, the teacher undefined teaching knowledge content and the students undefined basic knowledge intersect with each other, the teacher undefined action demonstration, the student undefined own action exercise, as the comparison, improve the student undefined self-study ability, find the problem ability, effectively improve the learning effect.\

### **VII. SUMMARY AND REFLECTION**

After two semesters of practice, the online learning platform has a certain auxiliary effect on both teachers and students, but if you only use the online learning platform for self-study, there are still some problems.

(1) It is necessary to improve students undefined learning consciousness

In addition to showing the teachers undefined teaching and students undefined learning, it is important to guide the students to think and practice in me. If the students have less time to study and the effect is not good, if the students are completely out of the classroom, their learning consciousness still needs to be improved. Therefore, the online learning platform of this course uses the idea of flipping the classroom and arranges certain

preview tasks, so that students can discuss with the teachers with problems in the classroom, expand their students undefined time and improve the efficiency of classroom learning.

(2)The combination of many kinds of Network interaction means

With the development of current situation and technology, modern people like convenient communication methods, such as using BB platform discussion area, need to log in and leave messages, lack of timeliness. Therefore, QQ group, WeChat group and other interactive tools can be used to discuss between teachers and students in order to solve the problem timely, and some intellectual content can be classified and placed in the discussion area.

(3)Use of Wiki tools

Wiki has good cooperation and can be modified together after the establishment of Wiki. Therefore, for the rapidly developing computer technology, Wiki is one of the good tools to improve learning cooperation. In the production process of tennis Wiki teaching video, we should grasp the purpose of micro-class teaching and combine tennis teaching methods.

(4)The application of network learning means in students undefined learning solves the problems of time and space, improves the students undefined learning consciousness, improves the learning effect, and obtains the unanimous praise of the students.

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