



Application research of O2O teaching mode in college volleyball teaching

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Abstract. In order to explore the application effect of O2O teaching mode in college volleyball teaching, 36 college students were selected by using literature data method, experiment method and mathematical statistics method, and divided into experimental group and control group for experimental intervention. It is concluded that after a two-month experiment, the students in the experimental group have significantly improved their learning attitude and basic volleyball skills ($p < 0.05$); in terms of physical fitness, the O2O teaching model has a significant effect on improving students' standing long jump. Positively impacted with endurance running quality level ($p < 0.05$). It is suggested to promote the O2O teaching mode in the future volleyball teaching, so as to better improve students' learning attitude, basic volleyball skills, and enhance their physical fitness. The O2O teaching mode provides a new development path for realizing the reform of volleyball teaching in colleges and universities and improving the teaching effect of volleyball classrooms.

Keywords: O2O teaching mode; colleges and universities; volleyball teaching

1 Foreword

The reform of teaching methods is an important part of the current physical education teaching reform. In traditional volleyball teaching, most students learn and train under the guidance of teachers. In this teaching mode, students passively accept the knowledge imparted by teachers. Can't effectively stimulate students' interest in volleyball practice. O2O is Online to Offline. It was originally an online and offline business model in the business world. It combines offline entity management with the Internet platform and has achieved great success[1]. With the application and development of Internet technology in the education field, new forms of online education models such as micro-classes and MOOCs continue to develop. Especially in the special environment of the global new crown epidemic, the emergence of online teaching models is a better realization. Teaching goals and improving teaching quality provide a new reform path. The O2O teaching mode is different from traditional teaching methods in that teachers use the Internet platform to introduce a wide range of volleyball teaching resources into classroom volleyball teaching, which increases the diversity of volleyball

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teaching content and better motivates students. Learning autonomy for participation in volleyball[2]. The emergence of the O2O teaching mode has broken the shackles of a single teaching mode, and has played an important role in promoting the optimization of the teaching methods of college volleyball courses, the reform of teaching methods, and the renewal of teaching concepts[3]. Based on this, the study deeply integrates high-quality volleyball teaching resources on the Internet platform with volleyball teaching in colleges and universities, adopts O2O teaching mode for volleyball teaching within a certain range, and selects three dimensions of physical fitness, volleyball technology, and learning attitude to test the effectiveness of O2O teaching mode in colleges and universities. Effectiveness in volleyball teaching.

2 Teaching design of college volleyball classroom based on O2O teaching mode

The O2O teaching mode design of the college volleyball course is taught through three parts. Before the experiment starts, an online teaching platform (WeChat group) is established for the volleyball general course students in the experimental group, so that teachers can post learning to students through the online teaching platform[4]. Tasks and teaching videos, taking one of the basic techniques of volleyball - cricket technology as an example to design O2O classroom teaching.

2.1 Pre-class preview, online course resource sharing and learning

According to the teaching plan and teaching objectives, the teaching micro-lesson video of volleyball cricket technique is recorded in advance before class, and the basic movement essentials, practice requirements, practice methods, and easy mistakes of the cricket movement are described, and the online teaching platform Publish classroom learning tasks and micro-lesson videos of paddling balls[5]. Students preview in advance according to the published learning tasks, conduct independent learning according to the micro-class video, observe the technical essentials and easy mistakes of the volleyball cricket movement taught in the micro-class, and try to imitate the cricket movement[6].

2.2 Classroom teaching, offline flipped classroom inquiry learning

Through the pre-class micro-class video learning, students have established a certain movement cognition of volleyball kicking technology[7]. In the classroom teaching part, the form of flipped classroom is adopted to improve students' participation in independent learning. In response to the questions raised by students in the process of independent learning, guide students to carry out cooperative inquiry learning[8]. The teacher explains and demonstrates the difficult points of the ball-ball technique that the students have doubts about, and assists the students in the ball-ball practice. After the students have mastered the cricket technique through repeated practice, they will take the form of group mutual evaluation to carry out the classroom test, so as to stimulate

students' enthusiasm for learning and form a benign competitive atmosphere. At the end of the class, the teaching content of this volleyball teaching course is summarized to help students improve their understanding and mastery of volleyball kicking techniques.

2.3 Review after class, Online to Offline extended classroom teaching

Students' after-class review is divided into two sections, namely online learning and offline practice. After the course is over, on the one hand, teachers share relevant practice methods about volleyball kicking skills through the online teaching platform, guide students to practice independently after class, deepen their mastery of volleyball kicking skills, and provide students with offline practice Doubts to answer[1]. On the other hand, use the Internet online teaching platform to establish a volleyball teaching resource database, including volleyball special physical fitness, volleyball skills and tactics, volleyball refereeing methods, volleyball practice and training methods, etc. In addition, you can share domestic and foreign volleyball teaching, volleyball games, The latest news about volleyball stars cultivates students' attention to volleyball and increases students' enthusiasm for learning[9].

3 Research objects and methods

3.1 Research object

Select two classes of college students' volleyball public elective courses, the average age is 19 years old, and the learning foundation of the volleyball project of the two classes is the same. Before and during the experiment, all the functions of the body were in good condition, the physical examination was normal, and there was no history of diseases in the nervous system, cardiovascular system and musculoskeletal system. There is no trouble of sports injury, and he voluntarily participates in this experiment and strictly obeys the experimental arrangement. The two classes were randomly divided into an experimental group and a control group, with 18 students in each group.

The comparison of the basic information of the two groups of students before the experiment shows that there is no significant difference in the age, height, weight and years of volleyball learning between the two groups of students[10], which meets the basic conditions of the experiment and ensures the scientificity and rigor of the experiment in Table 1

Table 1. Basic information of students in the experimental group and the control group (N=36)

index	Experimental group (18 people)	Control group (18 people)	P value
height	179±10.28	178±11.12	P>0.05
weight	77±13.56	76±13.88	P>0.05

age	19.0±1.12	19.12±1.38	P>0.05
Years of study	0.5±0.39	0.5±0.56	P>0.05

3.2 Research Methods

Experimental method.

(1) Experimental time and place: From March to May 2022, two volleyball classes per week will be used for relevant volleyball teaching and training. The teaching time of O2O teaching method and traditional teaching method in each training is 90 minutes. A total of 16 teaching sessions in 8 weeks.

Experiment location: a volleyball court in the school.

Experimental tools: several volleyballs, scoreboard, stopwatch

(2) Experimental content

The experimental group used the classroom teaching design of the O2O teaching mode for volleyball teaching, and the control group used the traditional volleyball teaching mode for teaching. According to the volleyball teaching objectives, the volleyball skills of the two groups of students were evaluated before and after the experiment. In order to control the experimental variables, the experiment The volleyball teaching in the group and the control group is taught by the same volleyball teacher, and the same amount of control is maintained in terms of teaching progress, teaching venue equipment, teaching objectives, etc., to ensure that the two groups of students only have the volleyball teaching mode as a variable between groups.

Mathematical statistics.

Use EXCEL and SPSS statistical software to analyze the data obtained before and after the experiment, and make it into a three-line table while quantifying the test data, so as to intuitively show the influence of the O2O teaching mode in college volleyball teaching.

4 Research Results and Analysis

4.1 Comparative analysis of the basic technical level of volleyball between the experimental group and the control group before the experiment

Before the experimental test, start with the basic technical test of volleyball, because the basic technology is the standard that can reflect the efficiency of students in class. First, investigate the basic technical level of volleyball from the two classes of students in the four aspects of cushioning, passing, dunking and serving. There are four aspects: padding the ball with both hands, passing the ball with both hands in the front, smashing the ball in the 4th position, and serving the ball in the front. Among them, there are a total of 10 balls with both hands in the front, each with 1 point, and 1 point for being

able to successfully pad into a 1.5-meter-high ball circle. The technical evaluation will be carried out based on the student's ball-playing movements, whether the body is coordinated and exerting force, and the quality of the ball (The technical evaluation coefficient is 0.5-1, the maximum value is 1, and the minimum value is 0.5), and the score of the student's paddling ball is the number of successful paddling balls*technical evaluation; a total of 10 positive two-handed passes, each with 1 point, can pass successfully 1 point is scored for entering the 2.4-meter-high ball circle, and the technical evaluation is carried out based on the student's passing action, whether the body is coordinated, and the quality of the pass. The student's passing score is the number of successful passes*technical evaluation; A total of 10, each with 1 point, 1 point for smashing the ball within the bounds and not touching the net, the skill evaluation is carried out according to the student's run-up and take-off action, spiking action, and spiking quality, and the student's spiking score is a successful spiking Count*technical evaluation;;A total of 10 front-handed serves, 1 point for serving within the bounds and not stepping on the line, technical evaluation will be carried out according to the student's serving posture and quality of serving, and the score for the student's serving is the number of successful serves*technical evaluation. To analyze whether there is any difference in volleyball learning attitude between the experimental group and the control group before the experiment in Table 2

Table 2. Comparison of the basic technical level of volleyball between the experimental group and the control group before the experiment (N=36)

	test group	control group	T value	P value
TFront two-handed ball	6.28±2.87	6.20±2.80	0.681	P>0.05
front two hand pass	5.76±2.73	5.64±2.05	0.619	P>0.05
4 spike	5.78±2.27	5.14±2.49	0.528	P>0.05
front serve	6.43±3.93	6.24±3.47	0.787	P>0.05

Through the comparative study, it was found that in these four aspects, the P values of the comparison between the experimental group and the control group all showed P>0.05, and there was no significant difference[1]. It shows that there is no significant difference in the basic technical level of volleyball between the students of the experimental group and the control group before the experiment.

4.2 Comparative analysis of the basic technical level of volleyball between the experimental group and the control group after the experiment

After a two-month experiment, the basic volleyball skills of the students in the two classes were investigated, and the investigations were carried out from the four aspects of the front two-hand pad, the front two-hand pass, the No. 4 spike, and the front-hand serve. The score is based on 3.1.1) to analyze whether there is any difference in the basic volleyball technical level between the experimental group and the control group after the experiment.

Table 3. Comparison of the basic technical level of volleyball between the experimental group and the control group after the experiment (N=36)

	test group	control group	T value	P value
Front two-handed ball	8.63±1.27	7.20±0.80	3.341	P<0.05
front two hand pass	7.76±1.76	6.64±1.05	3.879	P<0.05
4 spike	7.37±1.22	5.94±1.42	3.628	P<0.05
front serve	8.43±1.93	6.94±2.47	3.627	P<0.05

Through the comparative study of the basic volleyball skills between the experimental group and the control group after the experiment, it was found that in the four aspects of front two-hand padding, front two-hand pass, No. The P values all showed $P<0.05$, and there were significant differences. It shows that after the experiment, there is a significant difference in the basic volleyball technical level of the students in the experimental group and the control group[3], that is, the basic volleyball technical level of the students can be improved to a greater extent through the O2O teaching mode in Table 3

5 Experimental Discussion

In the traditional volleyball teaching mode, teachers need to complete the teaching of volleyball theory and volleyball skills in the classroom. Due to the limited teaching time, students at the beginning stage are prone to make mistakes during the learning process of volleyball skills. Teachers need to spend A lot of time is spent to help students correct wrong volleyball technical movements to improve their volleyball technical skills. In the O2O teaching mode, the use of online platforms provides a platform for students to learn volleyball theory, and opens up time and space for students' volleyball technical action representation training. In online classrooms, teachers can play high-level volleyball technical videos. To help students establish correct action representations, and communicate with teachers in a timely manner to solve the important and difficult points in the practice process after class. Compared with only practicing in the classroom in the traditional mode, the O2O teaching mode improves students' learning efficiency and helps students improve their volleyball technical skills.

6 Summarize

The emergence of network information technology in the 21st century has become an important driving force to promote social and economic development and transformation, and the development of education in the information age is also constantly updated. The O2O teaching mode based on Internet information technology has a good teaching effect in college volleyball teaching. Through experimental research, it is concluded that the O2O teaching mode has a positive effect on the improvement of students' learning attitude, volleyball special technical level, and physical fitness. A certain boost. Guided by the O2O teaching model, combining online course resources such as "MOOC" and "micro-course" with classroom teaching to realize the organic integration

of online and offline teaching is the key to realizing the reform of physical education teaching in colleges and universities and improving the effect of classroom teaching. new path.

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