



Research on Task Driven Basketball Teaching Mode Based on ITbegin Cloud Platform

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Abstract. In the traditional basketball teaching mode, teachers could't solve the problems in the training of students in time, which affected the training effect of students. Therefore, the basketball teaching mode based on ITbegin cloud platform is designed. According to the difficulty of basketball teaching and training content, it is divided into basic content and advanced content. On this basis, made basketball teaching and training ITbegin course. Published it in the ITbegin cloud platform through the Internet. Students watched the course by downloading or online, complete the training and timely feedback the training progress and problems encountered in the training, adjusted the teaching mode in time, ensured training quality. The test results showed that: In the case of similar physical quality of the test personnel, the overall level of the basketball teaching mode based on the ITbegin cloud platform was higher than that of the traditional teaching mode. It is proved that the design of basketball teaching mode based on ITbegin cloud platform was more suitable for practical training projects.

Keywords: ITbegin cloud platform · Basketball teaching · Teaching model

1 Introduction

ITbegin is based on the Internet, which is opened and promoted by leading figures of various disciplines, and relevant system courses are released on corresponding platforms. It is a new teaching method and method that users can choose freely, study independently and discuss with each other to complete certain teaching tasks with a certain course schedule [1]. In the field of education, the research on the nature, characteristics and development trend of ITbegin platform is gradually mature. However, in the field of sports, the research results of ITbegin are relatively few, and most of them focus on the theoretical research of the current situation, future prospects and inspiration for physical education of "sports ITbegin", lacking the research of practical application of ITbegin platform.

In the course of learning physical education, the basketball course is more popular with students. After years of reform and development, the teaching of basketball in Colleges and universities has basically formed two teaching modes, namely, basketball option teaching and basketball club teaching. The integration of these two teaching modes ensures the realization of the teaching objectives of theoretical knowledge learning and sports skills mastering of college students, as well as the lifelong physical

education of college students. The cultivation of sports consciousness. However, throughout the process of basketball teaching activities in Colleges and universities, the introduction of modern education technology and teaching methods is very limited, and the tumor disease of traditional teaching mode still exists [2].

This paper introduces the teaching mode of ITbegin into the basketball teaching mode, makes full use of the advantages of the teaching mode of ITbegin, and combines with the actual situation of basketball physical education, carries out the reasonable teaching reform of basketball physical education, so as to provide some reference for the current reform of basketball teaching mode. The introduction of ITbegin cloud platform will become an important opportunity to promote the reform of basketball teaching and improve the quality of basketball teaching.

2 Design of Basketball Teaching Mode Based on ITbegin Cloud Platform

2.1 Determine the Training Content of Basketball ITbegin

Basketball is an antagonistic sport, which can last for a long time or a short time, but it requires participants to run fast, take off suddenly and continuously, react quickly and compete with strength [3]. In the actual training, we need to do different special skills training. The details are shown in the table below (Figs. 1 and 2).

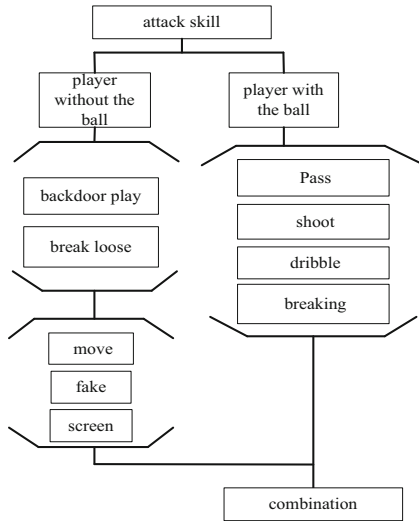


Fig. 1. Classification of basketball attack techniques

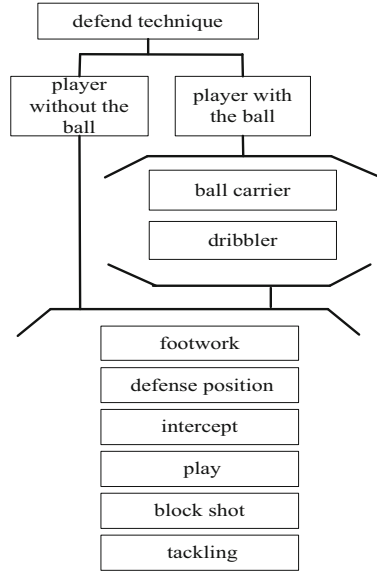


Fig. 2. Basketball defense technology classification

According to the actual situation of the students, adjust the training schedule appropriately. The students with poor basic skills choose basic training. The students with good basic training can choose relatively difficult advanced content training.

2.2 Making Basketball Teaching ITbegin

According to the characteristics of ITbegin and physical education courses, the design of college basketball ITbegin mainly refers to the following principles: first, the video design time of basketball ITbegin should be controlled within 12 min, so as to ensure the optimization of teaching effect. Because the time of students' excitement point and attention entering the highest peak of physiology and psychology is about 10–12 min, students can learn ITbegin content independently offline, lack of teachers' on-site management and guidance, and it is difficult to concentrate for a long time. Second, design the teaching plan reasonably. Because there are individual differences in students' basketball knowledge and skill base, students' differences should be considered in the selection of content, and the teaching plan should be designed reasonably. The starting point should not be too high to ensure that students actively participate in the basketball curriculum learning [4]. Third, design a diversified teaching evaluation system. When designing the basketball ITbegin course, in addition to the regular indicators such as the final skill test, quality test and the usual class assessment, the assessment indicators such as the online student assignment, technical action analysis,

theoretical topic, group discussion, online time length and unit test should be added to make the teaching assessment diversified and ensure the rationality and scientificity of the assessment. After establishing the framework of basketball ITbegin teaching platform, it is necessary to make and design ITbegin. According to the requirements of the basketball course syllabus in Colleges and universities, combined with the cognitive characteristics of students, the basketball ITbegin teaching unit is designed in different levels.

Determine the teaching objectives and contents of the basic teaching unit. According to the analysis of learning situation, master the overall characteristics and individual differences of teaching objects, and then determine the teaching objectives. After determining the teaching objectives, analyze and determine the teaching contents. For example, the teaching objectives are to let students learn and master the basketball dribbling technology. The teaching contents must be explained around the dribbling technology and skills. If it is about the dribbling rules, it deviates from the theme [5]. The third is to make videos of teaching contents and collect teaching auxiliary materials. After determining the teaching content, the next step is to design the specific teaching content. The teaching design should pay special attention to the details of the teaching content. Each ITbegin course can not exceed 12 min at most, and can only explain a specific knowledge point or skill. If there are more contents, they should be designed separately. For example, the common technical actions of basketball dribbling are as follows: high dribbling, low dribbling, quick stop of dribbling, forward to hand changing dribbling, back dribbling, turn of dribbling, crotch transportation. The ball is [6]. Every action is a knowledge point. Make teaching video for knowledge points, strive to make every skill and action have video explanation and demonstration, collect and sort out teaching auxiliary database, and store rich and diverse information. The fourth is online interactive communication design. The purpose of online communication is to strengthen the interaction between teachers, students and students, including online learning, interactive discussion and feedback evaluation. The specific way is to design a video window for situational dialogue, which is conducive to the demonstration of technical action points. There are also difficult questions, teachers can preset several difficulties and give answers [7]. Another is to organize the basketball match, release the arrangement of the match and the judgment of the result in the interaction, increase the atmosphere of communication, and stimulate the interest of students. Finally, the evaluation system is designed. Students' evaluation of teaching can be carried out in the interaction, or leave a message in the evaluation part. Teachers should establish a reasonable evaluation system, such as setting up online time and online class hour requirements. Each basic unit is designed with test questions, and the scores of students' learning evaluation are calculated [8]. The effect is shown in Fig. 3.

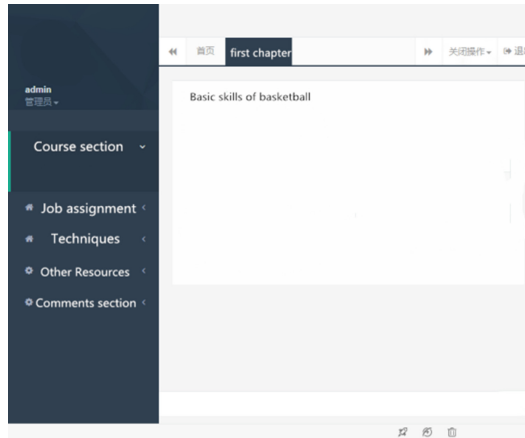


Fig. 3. Effect of basketball teaching mode ITbegin

As shown in the figure, each chapter has both video learning resources and courseware in the form of PPT. At the same time, the key and difficult points of teaching, teaching design, evaluation and assessment, and the content of teaching materials are available to the students who need to download in the form of files [9]. Different groups can unify the learning progress according to their basketball skill level. The discussion area of the basketball ITbegin course includes three sub sections: the teacher's question answering area, the note taking area and the discussion area. The students in the experimental group can consult the teachers or classmates at any time through the online communication platform of the discussion area for problems encountered in the process of independent learning. Students watch the audio resources of the intuitive and outstanding decomposition demonstration actions. Through the independent practice in the group and the learning of theoretical knowledge after class, they can answer and upload the ITbegin video as a sign in means to ensure the frequency of the students' after class practice. Before class, the instructor gives the learning task, and the team leader organizes the team members to watch the short video on the ITbegin platform within the specified time, make notes, and make records at any time for those who do not know the knowledge, learn the basic technical actions through the video resources, and preliminarily form the understanding and understanding of basketball [10]. After watching the video, the students were organized to do outdoor exercises. The students in the experimental group were required to practice twice a week for 90 min each time. Each group can arrange training time and teaching time for other students. The instructor shall organize a unified guidance course once a week, conduct field tour guidance and evaluation, assist students in teaching, let students practice and teach by themselves, and irregularly share the successful experience of the group or individual with better performance as a learning example under the condition of ensuring normal teaching progress, so as to cultivate students' organizational ability and self-confidence. The students help each other and communicate with each other. The girls in the group with poor basketball level can consult the boys with relatively good basketball level to help them learn.

2.3 Training with ITbegin Cloud Platform

ITbegin resource is an open resource, which is made by excellent professionals for basketball teaching and training. It is uploaded to ITbegin cloud platform. Through the network learning platform, videos and learning materials are published for students to download or watch on line, and discussion modules are organized to facilitate students to discuss and learn from each other, solve problems, and have doubts. Online consulting services are provided at the place where you ask. The display page in the ITbegin cloud platform is as follows (Fig. 4).

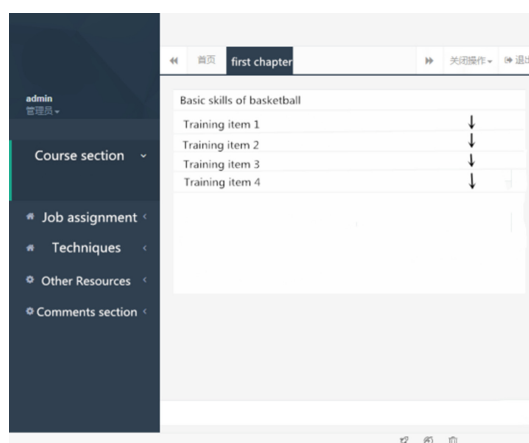


Fig. 4. Download interface of ITbegin courses in ITbegin cloud platform

After the course is released, the students are required to watch the ITbegin video and related auxiliary materials before the actual training. According to the training tasks set in the course, they are required to complete one by one in order. After the training, according to the students' own training situation, summarize the experience, sort out the problems found in the training process, record the problems that are still unsolved after the discussion between the students, and bring back the problems. To the classroom, through communication with teachers to solve the problems found.

In the actual classroom, teachers test the effect of basketball teaching and training in a certain way, discuss and solve the problems existing in the students, and then study the basketball teaching and training content in the ITbegin video in depth, put forward new problems to discuss and solve.

According to the test of students' training results, the training files of each student in each stage are established for quantitative evaluation. The content of the evaluation includes self-evaluation and others' evaluation. By synthesizing the two evaluation results, we can master the real-time training state of students and the mastery degree of basketball skills. The student's training evaluation page is shown below (Fig. 5).

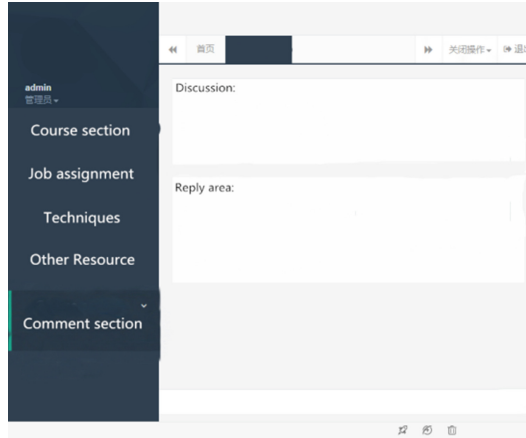


Fig. 5. Discussion area of basketball teaching and training students

Using ITbegin cloud platform in basketball teaching mode is convenient for students to learn relevant skills anytime and anywhere, arrange training time reasonably, solve problems found in training in time, enable students to better master the skills and actions of basketball, which is conducive to the fast improvement of students' sports.

3 Comparative Experiment of Basketball Teaching Mode

3.1 Pre Experiment Preparation

The comparative experiment of basketball teaching mode is carried out in an outdoor basketball court of a university, and the subjects of the experiment are the students who choose basketball skills in the University. Limited by the curriculum, The basic contents of basketball course in college physical education are selected as the experimental items. Its basic contents include: 1 min in-situ two handed chest pass and catch; 1 min in-situ one handed shoulder shot and back and forth dribble and lay up. Taking shooting skills as an example, the two groups of students can have the same test standards and evaluation standards at the end of the semester. This can ensure the objective test of the teaching effect of the two teaching methods.

The experimental training period is 32 h, 42 people are divided into two groups, one group is the experimental group, 21 people in each group. Before the basketball class begins, the initial physical fitness test is carried out first, then the experimental group uses the basketball teaching mode based on the ITbegin cloud platform to carry out the teaching and training of basketball technology, and the final test and evaluation are carried out at the end of the semester according to the examination standard. One group is the control group, 21 people, also in the basketball class before the beginning of the initial test of physical fitness, and then using traditional teaching methods for basketball technology teaching, in the end of the semester according to the test criteria for the final test and evaluation.

The content of basketball teaching and training used in the experiment is exactly the same. The teaching time, training time, assessment standard and assessment method of the two groups are completely the same. The only variable is the teaching method. Due to the weather, the original 32 class hours are actually 28 class hours, of which 2 class hours are occupied by testing the basic physical fitness of students, and 2 class hours are occupied by the final comparative test.

3.2 Basic Situation of Physical Quality of Students in Control Group and Experimental Group

Basketball project requires athletes to have good speed quality, endurance quality and strength quality. Based on the above three quality requirements, 100 m test, 3000 m long run and solid ball throw are selected as the test indexes of basic physical quality of students in the control group and the experimental group. After 2 h of testing, the test data is shown in the table below.

Table 1. Physical fitness test results of control group

| | 100 m | 1000 m | A solid ball is thrown |
|--------------------|---------|----------|------------------------|
| Average | 14.62 s | 4.56 min | 10.25 m |
| Maximum | 19.23 s | 5.74 min | 13.67 m |
| Minimum | 12.45 s | 3.57 min | 6.41 m |
| Standard deviation | 1.05 | 0.81 | 0.96 |

Table 2. Test results of physical fitness of experimental group

| | 100 m | 1000 m | A solid ball is thrown |
|--------------------|---------|----------|------------------------|
| Average | 14.59 s | 4.71 min | 10.36 |
| Maximum | 18.24 s | 5.96 min | 14.21 |
| Minimum | 13.65 s | 3.42 min | 6.08 |
| Standard deviation | 1.03 | 0.82 | 0.98 |

Compared with the data in Table 1 and Table 2, the standard deviation of 100 m test in the control group is 0.81 for 1.051000 m test and 0.96 for solid ball throw test; the standard deviation of 100 m test in the experimental group is 0.82 for 1.031000 m test and 0.98 for solid ball throw test. The standard deviation between the two groups is not more than 0.02, which shows that the two groups of students have similar physical quality and meet the standard of normal physical quality, which has no significant impact on the subsequent basketball skill test, and can be tested normally.

3.3 The Test and Analysis of Basketball Shooting on the Shoulder with One Hand in Place

The two groups completed basketball teaching and training through different teaching methods to prepare for shooting test.

According to the progress of teaching, the control group adopted the traditional teaching and teaching mode, and the teacher demonstrated the standard action, and explained the action structure and method. The specific action method is: (take the right hand as an example) the specific action method is: the feet are opened in place, the right foot is slightly forward, the body center of gravity falls in the middle of the two feet, the elbows are bent, the wrists are tilted back, the palms are upward, the fingers are naturally opened, the ball is held in the upper right eye, the left hand is on the ball side, the knees are slightly bent, the upper body is relaxed and tilted later, and the eye is on the basket point. When shooting, the lower limbs should be stretched out, the waist should be stretched out according to the potential, the forearm should be raised and extended, the wrist should be bent forward and the fingers should be used to move the ball. Finally, the ball should be thrown out with gentle force through the index finger and middle finger. The right arm should follow up naturally after the ball leaves the hand. After the teacher's explanation, demonstrate the complete action again.

The experimental group, through the ITbegin cloud platform, through watching the teaching video and the teacher's demonstration actions, establishes the overall concept of the in-situ one hand shoulder shooting action, obtains the preliminary impression, divides the learning content into different steps according to the technical action essentials in the video, studies step by step, and gradually improves their basketball skills.

When the two groups completed all the teaching tasks, the final test was carried out.

Measurement and evaluation content: quantitative evaluation of basketball in situ one hand shoulder shooting technique

Index selection: 60 s continuous shooting ability. The unit is number.

Index meaning: Students' skill level and shooting effect of one hand shoulder shooting in situ in 60 s. Data collection method: one teacher clocked with a stopwatch, and the other one counted the number of hits made by the students and recorded them.

Test method: when the tester stands under the basket and hears the "start" command (open the watch), he uses the method of one hand shoulder layup in situ to shoot at different points continuously, and calculates the score by the number of hits in 60 s.

Test requirements: the tester shall take the projection point of the ground as the center of the circle at the midpoint of the basket, jump up and shoot in the area beyond the semicircle within 4 m, and shall not be fixed on the same side or at the same point on the same side for repeated shooting, shall not grab the rebound, shall not run with the ball, or the shot will be invalid. Test twice for each person, with the best score.

The test results are shown in Table 3.

Table 3. Comparison test results of in-situ single hand shoulder shooting

| Group | Control group | Experimental group |
|--------------------|---------------|--------------------|
| Number of people | 21 | 21 |
| Average | 9 | 15 |
| Maximum | 15 | 21 |
| Minimum | 6 | 9 |
| Standard deviation | 1.13 | 0.46 |

It can be seen from Table 4 that the average number of shots in the control group is 9, the standard deviation is 1.13, and the average number of shots in the experimental group is 15. The standard deviation is 0.46. From the above two groups of data, the average number of shots in the experimental group is higher than that in the control group, and the standard deviation is lower than that in the control group, indicating that the overall shooting level of the experimental group is higher than that in the control group. It proves that the basketball teaching mode based on ITbegin cloud platform is better than the traditional teaching mode.

3.4 The Test and Analysis of Shooting from One Hand to Shoulder in Basketball Jump

The relevant requirements for the basketball jump up one hand shoulder shooting test are as follows:

Measurement and evaluation content: quantitative evaluation of one hand shoulder shooting technique in basketball jumping.

Index selection: 60 s continuous shooting ability. The unit is number.

Index meaning: Students' skill level and shooting effect of one hand shoulder shooting in situ in 60 s. Data collection method: one teacher clocked with a stopwatch, and the other one counted the number of hits made by the students and recorded them. Test method: the tester stands under the basket, hears the "start" command, uses the way of jumping up the one handed shoulder to lay up the basket, shoots continuously at different points (grabs the rebound by oneself), and calculates the score by the number of hits in 60 s.

Test requirements: the tester shall take the projection point of the ground as the center of the basket circle, jump up and shoot in the area beyond the semicircle within 4 m, and shall not repeat shooting at the same side or at the same point on the same side. After grabbing the rebound, he shall not run with the ball, or the shot will be invalid. Test twice for each person, with the best score.

The test results are as follows (Table 5):

Table 4. Basketball on the spot jump shoulder shooting test results

| Group | Control group | Experimental group |
|--------------------|---------------|--------------------|
| Number of people | 21 | 21 |
| Average | 8 | 13 |
| Maximum | 13 | 18 |
| Minimum | 5 | 8 |
| Standard deviation | 0.93 | 0.41 |

It can be seen from Table 4 that the average number of shots in the control group is 8, the standard deviation is 0.93, the average number of shots in the experimental group is 13, and the standard deviation is 0.41. From the above two groups of data, the average number of shots in the experimental group is higher than that in the control group, and the standard deviation is lower than that in the control group, indicating that the overall shooting level of the experimental group is higher than that in the control group. It proves that the basketball teaching mode based on ITbegin cloud platform is better than the traditional teaching mode.

3.5 Test and Analysis of One Hand Shoulder Shooting in Basketball

The related requirements of the test of one hand shoulder shooting between the two groups are as follows:

Measurement and evaluation content: quantitative evaluation of one hand shoulder shot during basketball March.

Index selection: the speed of half court round-trip dribbling, running and shooting. The unit is time.

Index meaning: the proficiency and ability to finish two round-trip fast running shooting techniques in a row.

Data collection method: the teacher uses the stopwatch to time and take charge of recording, and makes score assignment according to the score table.

Test method: the tester starts from the middle point of the right sideline of the court, and starts to lay up the basketball for the right dribbler at the same time. After the ball hit the basket, he grabbed the rebound and dribbled the ball with his right hand to the midpoint of the left sideline. Then the switch player continues to dribble and lay up the basket. After the throw, he dribbles back to the original starting point with his right hand. Repeat the dribble and lay up again, and then return to the original starting point.

Test requirements: the tester should dribble continuously and not push the dribble far to lay up the basket; the dribble can only be continued after the shot is hit, if the shot is not hit, make up the basket until the hit. Test twice for each person, with the best score.

The test results are as follows:

Table 5. Test results of one hand shoulder shooting during basketball movement

| Group | Control group | Experimental group |
|--------------------|---------------|--------------------|
| Number of people | 21 | 21 |
| Average | 40 s | 35 s |
| Maximum | 45 s | 42 s |
| Minimum | 33 s | 26 s |
| Standard deviation | 2.23 | 1.54 |

It can be seen from Table 4 that the shooting time in the control group is 40 s, the standard deviation is 2.23, the shooting time in the experimental group is 35 s, and the standard deviation is 1.54. From the above two groups of data, the average time of the experimental group is less than that of the control group, and the standard deviation is lower than that of the control group, indicating that the overall shooting level of the experimental group is higher than that of the control group. It proves that the basketball teaching mode based on ITbegin cloud platform is better than the traditional teaching mode.

4 Conclusions

ITbegin cloud platform is widely used in the education industry, but it is rarely used in physical education. Design the basketball teaching mode based on ITbegin cloud platform, solve the problems existing in the traditional basketball teaching mode, solve the problems encountered by students in basketball teaching and training in time, adjust training skills, and improve basketball teaching and training skills. The basketball teaching mode based on ITbegin cloud platform is superior to the traditional basketball teaching mode through the test of one hand on shoulder shooting in place, jumping up one hand on shoulder shooting and one hand on shoulder shooting in the process. The implementation of this method is of great significance to the development of sports in the future.

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