

Discussion and Construction of Badminton Flipped Classroom Teaching Mode

Mengyao Xie

School of Physical Education

Jiangnan University

Wuhan, China 430056

Abstract—Badminton is one of the hot items in PE class of university. Facing the reform of physical education in ordinary colleges and universities, the teaching of badminton is trying to transform and develop. When higher requirements are put forward for the physical literacy and business ability of physical education teachers with the transformation of flipped classroom teaching mode, in order to improve the motivation of physical education teachers to participate in the reform and innovation of teaching mode, schools should improve the campus network learning platform, promote the development of teaching, and form teaching resources to better serve students.

Keywords—badminton; flipped classroom; teaching mode

I. INTRODUCTION

At present, there are many domestic researches on the attempt and applications of online courses and flipped classroom, and relevant scholars have also discussed the application of flipped classroom teaching. However, application research on physical education, PE MOOC and PE flipped classroom is rare. According to the characteristics of the physical education class, the actual effect of physical education discipline completing the lesson goal in the classroom for the students' physical quality and technical mastery is poor, and it is necessary to combine a large amount of spare time to consolidate, reflect and practice. Flipped classroom requires learners to use the video and other educational resources to complete the self-learning of knowledge points before the class through transforming the traditional teaching process. In the classroom, various forms will be carried out such as teacher-student interaction, group discussion, demonstration, correction, and Q&A discussion, which brings about the advancement of knowledge transfer and the optimization of knowledge internalization [1], realizing the transformation of the roles of teachers and students in traditional teaching.

To this end, the necessity of analyzing the "flipped classroom" teaching mode is of great importance to the characteristics of the badminton project, the problems in the teaching process, the design of the flip classroom content, the supplement of the traditional teaching and flipped classroom, provision a feasibility analysis for the reform of the sports technology department, encouraging teachers to actively change teaching concepts, speeding up the updating

and upgrading of physical education teachers' education technology, awakening the intrinsic motivation and enthusiasm of physical education teachers, improving the effect of physical education classroom teaching, and promoting the colleges to accelerate the trial, application, popularization and promotion of new teaching modes.

II. TECHNICAL CHARACTERISTICS OF BADMINTON IN UNIVERSITIES AND THE STATUS QUO OF BADMINTON TEACHING

A. Badminton Technical Characteristics and Learning Process

The formation of basic skills and tactics of badminton requires students to carry out theoretical study and practice and strengthen basic techniques in the process of learning. Students fully grasp the basic skills of badminton and complete the goal of badminton course with high quality. They should not only learn theory and take technical practice in the classroom, but also increase the time of badminton technology learning and improve the intensity and density of basic skills. It is a relatively complicated process from the mastery of a movement to the formation of a movement pattern to skilled movements. In the mastery of movements, the essentials of technical movements and the erroneous movements are constantly considered. In teaching, students should not only actively correct, but also master and understand how to grasp the correct action while analyzing and discussing the knowledge structure of the key and difficult points of skilled movement. The training method of technical movement is also an important part of students' thinking in learning technical movements. Practice through training methods can improve the quality of technical movements more effectively. Combined with the characteristics of the badminton project, strength, flexibility, coordination, sensitivity and other qualities are also the focus of badminton teaching.

B. The Actual Teaching Status of Badminton Classroom

College badminton course is one of the preferred items for students to choose. Many obvious problems exist in the actual badminton teaching process, including large number of class teaching objects, different students' physical quality, uneven level, limited number of venues, and students'

comprehension ability, which result in students' fair learning effect, not high enthusiasm, insufficient exercise intensity and density, limited knowledge level mastered in one semester, and the weak ambition and coordination consciousness. The overall teaching effect is fair, and the entire teaching goal has certain limitations.

III. PROBLEMS IN CURRENT PHYSICAL EDUCATION TEACHING

A. Single Teaching Objectives and Content

In traditional physical education, teachers often only pay attention to the content and method of teaching around the syllabus and teaching progress, how the students learn and the learning effect, but pay little attention to students' emotion, perplexity, sense of accomplishment and inferiority in the process of teaching and learning. Thus students both acquire sports knowledge, and master certain basic knowledge of sports, basic skills and certain practical ability. However, students' awareness of physical practice and comprehensive sports literacy has not been improved. Students have shown indifferent emotional affection to physical education teachers and physical education classes. They like playing badminton but do not like to listen to teachers about how to play, and only play badminton in physical education, lacking the physical exercise awareness and habits of playing badminton after class. These indirectly lead the teaching methods of arranging post-class consolidation exercises to have no constraint. The professors who stress technology in traditional physical education teaching lack the method of students' self-consolidation of the content they are learning. To achieve the goal of mastering, understanding and developing physical fitness in physical education, it is necessary to improve the connotation of "teaching".

B. Teaching Is Based on "Teacher"

In traditional physical education, physical education teachers often show "universal application" characteristic subjectively, from teaching routines to teaching objectives, the establishment of teaching tasks and the selection of teaching content, teaching methods and means, and the evaluation of students' learning effects. It seems to be "face to all students", but in fact it is the neglect of the individual differences of students; in order to realize the transmission of sports knowledge and skills, physical education teachers have always been at the center, and the explanation and demonstration of sports movements almost occupy the class time. Limited by the classroom capacity, students can't realize the internalization of sports knowledge and skills in class, let alone improving their comprehensive ability.

In the actual practice of physical education, the learning groups faced by physical education teachers are very complicated. They differ in learning ability, learning style, sports foundation, personality characteristics, learning needs and study habits. This requires physical education teachers to deepen the understanding of their students and treat them differently, to carry out personalized physical education based on the students' actual situation. The lack of

individualization and humanization in traditional physical education makes the teaching of students in accordance with their aptitude become empty talks. Good students can't become better while worse students become even worse. They have no subjectivity and independence in physical education, which leads to the deviation of talent cultivation concept.

C. Evaluation Criteria and the Effect Are Not Obvious

The essence of scientific evaluation is "to promote learning by evaluation" and "to promote education by evaluation", not just giving students a score. The shortcomings of taking this as a standard to measure the evaluation of traditional physical education are obvious. From the perspective of evaluation methods, paper-pencil test and skill assessment have become the consistent way of traditional physical education evaluation. Individual differences of students are completely ignored. From the field of evaluation, traditional physical education evaluation mainly focuses on cognitive field and motor skills, but the evaluation of the emotional field is often neglected; from the timing of evaluation, traditional physical education focuses on summative evaluation but ignores process evaluation, and the degree of progress of students is completely ignored; from the perspective of evaluation subject and purpose, physical education teacher has become a single subject of evaluation and the purpose of evaluation is to give students a score. The evaluation results can hardly play a positive role in teaching and learning. Although the evaluation of teachers' teaching evaluation includes student evaluation, peer evaluation, and supervision evaluation, there is a certain sense of form in the actual assessment.

IV. FEASIBILITY ANALYSIS OF THE CONSTRUCTION OF BADMINTON FLIPPED CLASSROOM

A. The Significance of Implementation of Badminton Flipped Classroom

The emergence of "flipped classroom" has changed the traditional teaching mode with knowledge transfer as the main body to realize the classroom flipping. In view of the shortcomings of the traditional teaching mode, the implementation of flipped classroom can promote students to be the main body, arrange the teaching content in advance, change the role, experience the teaching implementation process, and strengthen the theoretical cognition of technology. In the process of flipping, the teaching form is changed from "classroom explanation + after-school homework" to "pre-class study + classroom study"; teachers change from knowledge initiators and classroom managers to study mentors and facilitators; students transform from passive receivers to active learners; the face-to-face discussion-based teaching in the classroom is more conducive to the deepening and expansion of thinking, the communication of emotions, and the richness of experience. It is worth noting that the pre-class learning session in the flipped classroom is crucial in the whole flipped teaching. The quality of the students' pre-class learning directly affects the effect of classroom flipping.

B. Implementation Steps of Flipped Classroom

The implementation steps of flipped classroom can be done in three parts: pre-class, in-class and after class. Before the class, the teacher divide the teaching content into modules according to the teaching objectives, and uploads the teaching materials in the form of micro video, PPT, animation, etc. to the online network teaching platform. Students complete the learning of knowledge and skills before class relying on this specific teaching platform and reach the level of initial mastery. Then the teacher masters the student's learning situation according to the students' online test results or the feedbacks from the group members' learning; during the class, the students solve the problems encountered in the study one by one through the teacher's introductory, group discussion, organization activities and targeted learning and practice; after class, the teacher evaluates the students' learning situation, improves the deficiencies in the course teaching, and design the next class based on the evaluation results. The students summarize and reflect the problems in learning and further consolidate the knowledge and skills [2].

C. Design of Content of Badminton Flipped Classroom

For example: Taking Jiangnan University badminton course as an example. It is the college physical education badminton compulsory option course. Students can enter online educational platform each semester to choose the physical education class that they want to attend, with the priority of high credit and grade points, totaling 32 hours. After completing the course and passing the assessment, they can get 1 credit.

According to the syllabus of the badminton course, the teaching content of the badminton course is selected, and the online badminton learning plan for students is formulated. The entire badminton class is divided into 16 weeks of course content for teaching. The first week is an overview of badminton sports, including badminton courts and equipment, badminton equipment, badminton competition rules, etc.; in the 2nd-8th week, the teaching of badminton techniques is carried out; the 9th-12th weeks are for special exercises and teaching competitions; 13-16 weeks are for online exam. The online exam focuses on the badminton skills, competition rules, equipment and venues learned in the first 12 weeks, and uses text, pictures, videos and other materials to conduct evaluation of students in the form of subjective and objective questions.

The final score is divided into online assessment, offline assessment and mutual evaluation. (1) Online scores (25%, including 5% of video clicks, 10% of forum posts, and 10% of work submissions and completion quality); (2) Offline scores (30%, including 10% of classroom technology display quality, 10% of normal learning attitude, and 10% of classroom activity), final exam scores (40%, 15% of online theoretical scores, and 25% of offline technical test scores; (3) The passing score is determined by the total score of peer review, and the credit is given to students who have passed the grade.

D. Evaluation Mechanism of Badminton Flipped Classroom

Under the flipped classroom mode, the procedural evaluation of physical education has been paid attention to. The evaluation subjects include physical education teachers, members of various study groups and students themselves. The content and methods of evaluation also show diversified characteristics. In order to respect the individual differences of students, the progress of students has become an important basis for evaluation. The performance and evaluation results of students in the process of physical education are also organically linked. For example, some students have poor sports foundations and talents, but they can practice hard and make progress. Even if they still have a big gap with some students, their interests in sports, attitudes, sports knowledge and skills, and the comprehensive understanding of sports have been significantly improved. This kind of evaluation based on the students' actual learning situation of physical education curriculum helps to achieve the goal of "promoting learning by evaluation". In addition, the diversification of evaluation subjects, evaluation content and evaluation methods allows physical education teachers to examine students' physical learning and the problems in physical education from a broader perspective, so as to improve teaching according to problems, which is conducive to the realization of "promote teaching by evaluation". The evaluation of physical education teaching under the flipped classroom mode has truly realized "promoting teaching by evaluation" and "promoting learning by evaluation", so this evaluation is more scientific and reasonable.

V. CONCLUSION

Flipped classroom is a new concept, new method, and new model, which is the result of the education and teaching form adapting to the information society.

The application of flipped classroom in physical education can not only effectively solve the typical problems existing in physical education, but also explore the obstacles and advantages of the application of physical education in combination with the characteristics of badminton teaching, so as to continuously summarize and improve in the practice of physical education and actually help improve the quality of physical education. Through the transformation of the teaching mode of the flipped classroom, the teacher greatly improves the teaching effect, continuously increases the interaction with the students, understands the real situation of the students, and enhances their teaching ability.

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