

# **Research on the Flipping Classroom Mode of College Physical Education Teaching under the Background of Informatization**

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**Abstract:** Flipping classroom is the result of information society while Education technology is an important support for implementing flipping classroom. Whether the flipping classroom can introduce the physical education in colleges and universities and the effect after the introduction can be further demonstrated through teaching practice. Applying the flipping classroom to college physical education and constructing a hybrid classroom model combining traditional classroom and flipping lessons not only helps to promote the process of college physical education reform, but also enhances the teacher's proficiency and improves efficiency in classroom teaching.

## **1. Introduction**

At present, the development of information technology has penetrated into all aspects, and the information life style of college students has become a habit. [1] For example, in daily life, the use of QQ group and WeChat group has become popular. [2] In order to adapt to students' behaviors and habits, informational teaching will also become a trend of education development. Flipping the classroom is precisely a kind of teaching mode that combines teaching and information technology effectively. It originated from the United States. [3] In recent years, which has developed rapidly in China? The flipping classroom adopts information technology to require students to use the time of class to watch videos and courseware by online teacher-student discussion and other methods to pre-learn the teaching content.[4] Under the guidance of the teacher, the teachers and students will discuss the results of the preparation through the teacher-student discussion and the student group discussion.[5] The students will consolidate the learning results through self-evaluation and teacher evaluation.[6] Flipping the classroom is an educational model that combines teachers, students, networks, and knowledge.

## **2. The Connotation and Basic Characteristics of the Flipping classroom**

The flipping classroom originated in the United States in 2011, which is aimed at capacity development, with information network and practical classroom as the intermediary, based on group learning, focusing on pre-class knowledge and skills learning, internalization and application of in-class and after-school knowledge and skills.[7] The personalized teaching form reflects the students-centered and deep-learning ideas. It is a form of visual teaching and has become a hot topic in current educational teaching research.[8] On the whole, the flipping classroom has the characteristics of teaching technology informationization, teaching resources optimization, teaching platform dualization, student learning autonomy and individualization, teaching evaluation diversification and personalization.

## **3. Applying the "Flipping Classroom" Mode to College Physical Education**

### **3.1. The urgency of applying "flip classroom" in physical education classes in colleges and universities**

In the past teaching system, in the traditional classroom, the teaching staff carried out the teaching activities on the relevant technical details, and also through the theoretical teaching to assist the teaching of the action, which combined with the necessary demonstration. In the process

of teaching, the teaching staff must ensure the standardization and precision of the action. In the teaching method, the real demonstration by teachers or teaching video can be used to classroom teaching, so that students can get a more intuitive impression in practice. Based on the reality of the above requirements, the teaching mode of flipping classrooms came into being. Teachers can use the relevant materials of the teaching to upload and share, and pass the standardized and reasonable teaching videos to the students, so that students can learn anytime and anywhere as they like. The application of flipping classroom teaching mode adapts to the current development trend of college physical education. As a different type from the previous physical education teaching model, it realizes the reform and innovation of the current physical education teaching system. It is the promotion and innovation of physical education teaching in Chinese colleges and universities. Great try. From the current situation of physical education, if this new way of teaching is adopted, it will be able to increase students' interest in participation to a large extent. Taking the reference method as an example, the author combines the in-depth development of flipping classroom teaching, and further expands the classroom activities through activities, continuously enables students to develop independent personalities, and broadens students' learning space and development while broadening students' thinking and vision. A vivid learning atmosphere based on theory to enhance the quality of education. In the reform of the teaching system of colleges and universities, it is particularly important and urgent to promote this new model, which provides realistic possibilities for improving teaching quality and teaching effects.

### **3.2. The inevitability of promoting the "flip classroom" mode in college physical education**

Due to the limitations of teaching venues and time, the lack of learning time or the accumulation of teachers' teaching experience is not enough, the learning effect of the main sports skills of students in teaching is not high, and the consolidation and proficiency of physical education classroom teaching content is low. Physical education in colleges and universities can not achieve the expected effect of physical education, thus hindering the healthy development of physical education. The flipping classroom has achieved a breakthrough in teaching fundamentally, and a large number of computers and network technologies have been used in teaching. In this way every student can communicate with the teaching staff and share with the teachers the difficulties and confusions they encounter during the learning process. The teachers can give timely guidance and answers, which promotes the reform of the physical education system in colleges and universities to some extent. It provides a strong guarantee for students to complete their own learning content. The flipping classroom combines with the current popular information industry technology to enable efficient exchange and sharing of various types of teaching information. Combined with the practical teaching and operation of the physical education classroom, the theory practice will be practiced, and the cultivation of learning autonomy will be strengthened in teaching. At the same time, the expansion of learning greatly improves the current physical education in colleges and universities to achieve the goal of improving the physical fitness of students.

### **4. Construction of flipping classroom teaching mode in college physical education teaching**

The implementation steps of flipping the classroom can be divided into three parts: before, during and after class. Before the class, the teacher selectively cuts the teaching content according to the teaching calendar according to the teaching calendar. Then, the cut teaching module is shot into a micro-video, PPT, animation form to upload to the online course platform or the student's daily custom application of the WeChat group, QQ group. Students rely on these online platforms to complete knowledge preparation before class and to find out the extent to which the problem is at a preliminary level. The teacher grasps the general feedback of the students according to the online discussion of the students, in order to grasp the students' learning situation and achieve targeted. In the class, the teacher gave a targeted explanation based on the pre-study situation of the students. Through the teacher's explanation, group discussion, and teacher guidance, the students participate in practical exercises to solve the problems encountered in the study one by one. After class, through the methods of student self-evaluation and teacher evaluation, teachers improve the

deficiencies in the curriculum teaching, and students summarize the problems in the study.

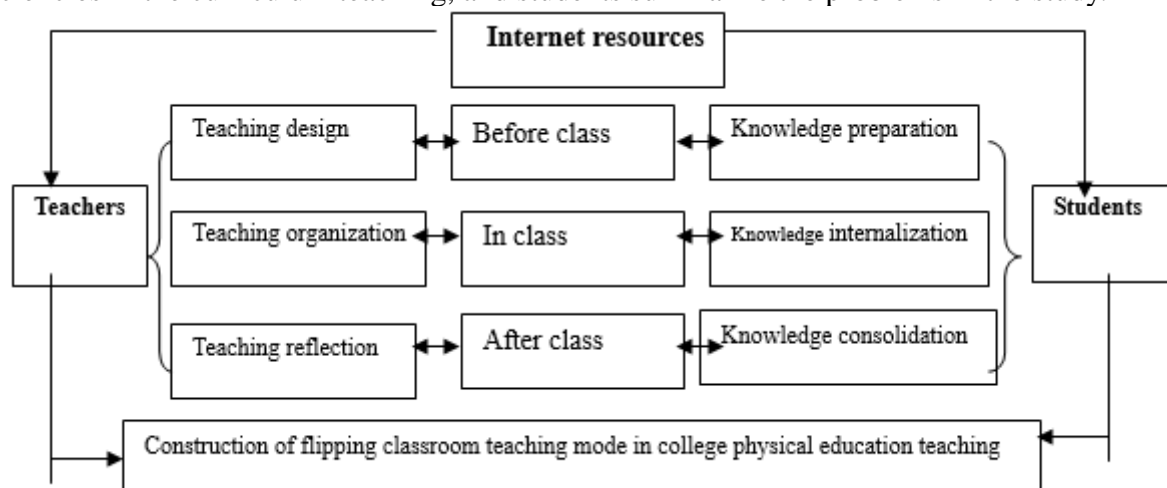


Fig. 1 Construction of flipping classroom teaching mode in college physical education teaching

#### 4.1. Before class

Taking the aerobics elective course of college sports as an example, the pre-class preparation sections are mainly: first, the construction of an online network platform. Make full use of our school's online teaching platform to enrich the module construction of the teaching platform. According to the teaching objectives and the syllabus, the teacher will record the teaching video of the gym. At the same time, from the open network resources to find high-quality video resources for students to learn, according to the age characteristics and learning ability of students, choose the popular audio and video as teaching resources to improve students' learning interest. Teaching video recording should be concise and time-consuming, and the time should be controlled within 5 minutes. Emphasis should be placed on guiding students to learn independently and improve the efficiency of independent learning. Reasonably interspersed with different styles of aerobics, weight-loss shaping exercises, ghost dances, sports games and expansion of the mouth video are widely used to stimulate students' enthusiasm for learning. Second, it is to facilitate real-time communication with students by the Constructing WeChat groups, QQ groups, public forums, etc. Compared with the online teaching platform, students use more QQ group and WeChat group in their daily life. Students can use the QQ group and WeChat group to use the fragmented time to conduct action learning and classmate exchanges and teacher-student exchanges anytime and anywhere. At the same time, it is possible to share the videos of their own learning into the group, which not only stimulates the enthusiasm of the students to learn from each other, but also facilitates the teachers to grasp the dynamics of student learning.

#### 4.2. In class

The basic structure of practical teaching in the class is similar to the curriculum structure of traditional physical education, which is divided into preparation part, basic part and ending part. The preparation time is about 15minutes, mainly for the students' warm-up exercises and basic physical exercises. Using the task-driven method to intersperse sports games, on the one side promotes the warm-up of the students, preventing and reducing sports injuries, and on the other hand, through the basic pace of practice, the foundation of the students' health care is established. The basic part time is about 60 minutes. Flipping the classroom will greatly reduce the time for physical education teachers to explain and demonstrate, so that the time for students to practice is greatly increased. The teacher first explains the problems that are generally raised during the student preparation process, and then the students discuss the exercises in small groups, and raise questions that are not understood or of interest, and discuss them in groups or groups. The teacher patrols and guides the questions and answers, and conducts practical exercises in the form of joint exploration by teachers and students. Finally, the teacher recorded the student's practice display

process as a video, correcting the wrong action and body posture. These videos will be uploaded to the learning group under the class so that the students can review the class. The end part is about 5-10 minutes, mainly based on stretching and relaxation.

#### **4.3. After class.**

The after-class implementation mainly includes two aspects: First, the teacher guides the students to further consolidate the content through the homework, and the students summarize the learning results and the learning process by analyzing the videos displayed in the class. Second, teachers distribute questionnaires to students through the online platform, summarize the teaching process, evaluate teaching effects and improve teaching design.

### **5. Conclusion**

The flipping classroom is a personalized teaching model generated under the background of information society, which provides new ideas, ideas and methods for the reform of public physical education in colleges and universities. The flipping classroom has higher requirements for the network environment, the autonomy of students' learning, the comprehensive ability and quality of physical education teachers, and the three stages are closely connected and complement each other. Any problem in any aspect will affect the overall effect of physical education. The teaching effect under the flipping classroom mode is better than the traditional physical education teaching, especially for the mastery of students' sports skills and the cultivation of sports attitudes. Under the situation that the informationization of physical education is difficult, relying on educational technology to study the application of flipping classroom in public physical education in colleges and universities is of great significance to promote the reform of public physical education in China.

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