

# Research on the Flipped Classroom Teaching Mode of Aerobics Courses in Colleges and Universities

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**ABSTRACT.** *With the rapid development of science and technology, information technology has been fully popularized in the field of education. As one of the most popular courses for students, aerobics courses are facing the opportunity of the integration of information technology and teaching reform. Using literature research methods and logical analysis research methods, aiming at the problems existing in the traditional teaching mode of aerobics courses in ordinary colleges and universities, the concept of flipped classroom is introduced into the aerobics courses, using online and offline teaching methods to establish the main body of students position, build aerobics course flipped classroom teaching mode; improve students' interest in learning aerobics, cultivate students' independent learning, teamwork and problem-solving abilities, and at the same time improve the comprehensive ability of aerobics teachers in information teaching, and provide aerobics for ordinary colleges and universities course teaching provides reference basis.*

**KEYWORDS:** *aerobics, flipped classroom, teaching mode, teaching method, colleges and universities*

## 1. Introduction

The unique charm of "health, strength and beauty" of aerobics has made it one of the most popular public sports courses in ordinary colleges and universities. In recent years, the teaching objectives of physical education courses in ordinary colleges and universities have changed, from simply enhancing physical fitness and imparting sports knowledge to the cultivation of students' interest in learning, independent learning ability, teamwork ability, social adaptability and creativity. The physical education curriculum of ordinary colleges and universities has received increasing attention, and a series of corresponding teaching reforms have been produced. As an important part of physical education courses in ordinary colleges and universities, the aerobics course has its problems and disadvantages increasingly prominent. The traditional teaching model is facing severe challenges in the new era,

and it is urgent to realize more efficient classroom value through teaching reform. Flipped classroom, as a hotspot of reform in the global education community, has been applied in many disciplines and has achieved remarkable results. It can effectively solve the contradiction between collective learning and individualized learning, knowledge learning and ability learning in the traditional teaching model, and passive learning. The contradiction between learning and active learning, and the contradiction between teacher center and student center [1]. Therefore, the ordinary colleges and universities aerobics courses should also actively adapt to the needs of the times and society, realize the integration of information technology and teaching concepts, and build a new teaching model.

## **2. Defining the concept of flipped classroom**

"Flipped classroom" is one of the most popular education methods in today's society, and its application is still in the stage of continuous exploration, and a complete education system has not yet formed [2]. "Flipped classroom" generally refers to the highly integrated advanced teaching equipment and a large number of educational resources based on Internet technology, supported by the platform, guided by the teaching concept of "thinking visualization", to achieve classroom interaction, situational teaching, and efficient development of various classroom of teaching and learning model activities [3]. In the teaching process of aerobics in colleges and universities, teachers transform the teaching content into audible and watchable video materials, which are used as the main materials for students' self-study. Class time is no longer the teacher's teaching time, but the time for students to communicate with students, students and teachers. This way of turning the classroom and after-class is "flipped classroom."

## **3. Problems in the traditional teaching mode of aerobics courses in ordinary colleges and universities**

To explore the flipped classroom teaching model and carry out a thorough teaching reform, it is necessary to clearly understand what the flipped classroom expects to achieve, what problems need to be solved for this purpose, and avoid the flipped classroom becoming a formality due to the completion of teaching tasks. Therefore, we must fully understand the current problems in the teaching process of aerobics.

### ***3.1 The teaching content lacks pertinence***

Under the traditional teaching model, whether it is basic movements, combined movements with music, or aesthetic perception and expression, all rely on the teacher's face-to-face teaching; however, it is difficult for teachers to design a variety of teaching content in the limited classroom teaching time, and students have more understanding of aerobics stay at the simple action imitation stage. In addition, the traditional teaching mode requires teachers to ensure that the teaching content is

consistent and the teaching progress is uniform, and lacks emphasis on individual differences and targeted guidance. Some students master the movements faster, but they still need to spend more time following most of the students in the classroom to practice low-difficulty and repetitive movements, and then despise the classroom teaching; while some students are slow to master the movements and cannot keep up with most of the classroom people's progress makes it difficult to gain interest and confidence in aerobics courses.

### ***3.2 Teaching methods and methods are not flexible***

The hardware facilities of most ordinary colleges and universities have been able to achieve network scene coverage, or even full coverage. But for ordinary colleges and universities students who take aerobics courses in public physical education, they lack the motivation and direction of preview because the teachers lack technical means before class, the integration of educational resources is insufficient. In the class, teachers mostly focus on unitary explanations, and students imitate, and their attention is easily distracted; technical means remain in the simple use of TV and audio content, and students have limited space for independent exploration and communication innovation. After class, due to the lack of supervision and feedback mechanism, the students' consolidation situation was overestimated. The students with good foundation despise the course, and the students with poor foundation lack the corresponding learning resources to practice further. This will not only affect the teaching effectiveness of the course, but also indirectly affect the students' aerobics is even a sports experience.

### ***3.3 The evaluation method design lacks rationality***

The traditional evaluation method is based on the traditional teaching model, pays attention to the instillation of teaching content and ignores the design of teaching evaluation. In terms of the evaluation subject, the traditional evaluation method takes teachers as the evaluation subject and students as the assessment objects. Students are prone to the idea that "learning is to skip to the teacher and score high". In terms of evaluation content, the evaluation is one-sidedly determined by the mid-term or final display scores, that is, summative evaluation, ignoring individual innate conditions, differences in abilities and evaluation of the progress process, causing students such as "whatever the teacher teaches, I will learn what no matter how hard you try, you will not be as good as a talented person." Unreasonable evaluation methods directly lead to passive learning of students and weaken their knowledge exploration ability and autonomous learning ability.

## **4. Reform measures for the teaching mode of aerobics courses in ordinary colleges and universities**

The reform of teaching mode needs to take into account the characteristics of different courses for targeted design. The teaching content of aerobics courses in

ordinary colleges and universities has the characteristics of distinct levels, strong appreciation, and rich teaching resources. The introduction of the flipped classroom teaching mode into the aerobics courses in ordinary colleges and universities can further improve the quality of aerobics teaching.

#### ***4.1 Construct knowledge dissemination channels with informationized teaching environment and teaching content***

The colleges and universities build an online learning platform, establish an electronic resource library, clarify learning tasks, and allow students to complete the initial learning of learning content in a free and relaxed personal environment, to make up for the teaching limitations caused by insufficient classroom time and space. The learning platform is also an interactive platform and a Q&A platform. Teachers and students communicate on the difficult points of preliminary learning together; as an extension of offline classrooms, this platform is the most timely and effective feedback tool. Teachers can interact with students one-on-one in real time. This kind of interaction can make students feel that the teacher pays attention to and care for themselves, and to a certain extent can strengthen the confidence of students to continue reflection, interaction and feedback [4]. The information-based teaching environment and teaching content provide technical guarantees for flipped classrooms, and also the key to the implementation of flipped classrooms. It changes the way of knowledge dissemination in the past and gives students more autonomy, so that teachers only need to spend time in the classroom. Less time for corrective guidance can allow more time to cultivate students' perception of health, strength, and beauty, as well as the coordination of music, expressions, and body movements.

#### ***4.2 Construct knowledge absorption pathways with flexible and diverse teaching methods***

The colleges and universities use heuristic teaching to make it clear that students are the main body of the classroom. To be precise, the teacher is the organizer of the classroom, responsible for guiding and helping students discover and solve problems on their own. In the part of prescribed actions, colleges and universities use technical means to guide self-learning before class; in the part of independent creation, case explanations can be used to inspire students to innovate and cooperate face-to-face. Only the requirements of creation and evaluation are put forward, and students independently cooperate and discuss the team features, creative action combinations, beginning and end shapes, changes in space, etc. According to the characteristics of different teaching content, choose flip or traditional teaching methods to achieve the best teaching purpose.

After the online and offline channels are opened before, during and after class, the absorption of knowledge is firmer, and the overall depth of the course learning is increased: the explanation of the important and difficult points of the movement is more detailed, the logical relationship of the routine movements is clearer, and the

students are more healthy, the understanding and mastery of strength and beauty are deeper, and the perception of music and movement is deeper.

#### ***4.3 Construct a course evaluation system with a three-dimensional and comprehensive evaluation method***

The previous evaluation standards were based on the traditional teaching model. With the updating of teaching goals and the continuous appearance of the shortcomings of the traditional teaching model, the evaluation standards also need to be changed. First of all, in the construction of the evaluation system, teachers should pay attention to the individual differences of students, introduce process evaluation, and combine process evaluation, quantitative evaluation, qualitative evaluation, and result evaluation. It not only emphasizes the self-longitudinal comparison of the degree of progress in the participation process, but also emphasize the horizontal contrast of competition among students in the same class. In addition, in the establishment of the evaluation subject, teachers should emphasize that students are the main body, introduce student self-evaluation and mutual evaluation, combine teacher evaluation, student self-evaluation, and student mutual evaluation, and encourage students to reflect and improve themselves, learn from each other, and cooperate, actively participate in physical exercises during and after class.

### **5. The construction of aerobics course flipped classroom teaching mode**

Flipped classroom means that in an information environment, teachers provide learning resources in the form of teaching videos before class. Teachers and students face-to-face answering questions and interactive exchanges during class time. Students complete learning resources such as teaching videos outside class. A teaching model of autonomous learning, that is, the model of "explanation before class + problem solving in class" is used to replace the model of "explanation in class + problem solving after class" [5]. The construction of the flipped classroom teaching model includes both online teaching and offline teaching from the perspective of knowledge transfer, that is, moving simple, active, and flexible content to an online platform outside of the classroom, and transforming the deep, boring, creative The content is left to the offline classroom for discussion, extracurricular memory and understanding of primary cognitive goals, valuable time in the classroom is used for knowledge application, analysis, evaluation, creation and other advanced cognitive goals[6].

#### ***5.1 Online teaching resources and platforms***

In the flipped classroom teaching model, teachers need to clarify the goals and tasks of online teaching, and design and prepare related materials before class accordingly. There are two main forms: (1) Short video. The third set of the second set of prescribed action combinations for the mass aerobics exercise standard is divided into chapters to produce multi-level short videos including front

demonstration, back demonstration, password version, and music version. Make use of the popular short videos to be more vivid and simpler than traditional texts and long videos. Compared with face-to-face teaching, which is reproducible, students can study repeatedly according to their own situation. Password teaching and music teaching are progressive. On the basis of familiarity with basic hand shapes and steps, combined with music to further cultivate the body's perception of music. (2) Course platform construction and supervision. Flipped Class uses the well-functioning and popular QQ platform to upload corresponding pictures, videos, audios and other materials one week before the start of each course. Flipped classroom requires students to study independently before class, so an effective supervision and answering platform is very necessary. Through downloading learning materials, shooting and uploading learning videos, you can know the students' preview situation, and can also supervise students who have not previewed learn in time. In addition, through interaction, teachers can clearly understand the students' difficult points and the evaluation feedback of the courses, as the basis for optimizing the teaching design plan, and perfecting the specific operation form of the flipped classroom.

### ***5.2 Online and offline teaching mode***

The construction of a blended teaching model requires distinguishing and reasonable selection of teaching content suitable for traditional or flipped forms. Basic gestures, such as open palm, open palm, parallel palm, etc., and basic steps, such as parallel step, open and close jump, v-step, etc., are not suitable for flipping, because teachers cannot correct students' mistakes in time, and these basic movements once the wrong stereotype is formed, it is very detrimental to the standardization and continuity of subsequent combined actions, so it is more appropriate to choose the traditional teaching mode. The flipped form is more suitable for the teaching content after the basic movements, for example, the teaching of prescribed routines, mainly in the form of audio perception and video teaching, supplemented by key and difficult explanations, in order to have a basic understanding of combined movements. Teachers devote more classroom time to teaching design, focusing on summarizing and commenting, focusing on exercises, and showing results. The purpose is to help students pay attention to the effectiveness of independent learning, cultivate interest in aerobics, and cultivate the perception and teamwork of music and movements awareness.

### ***5.3 Online and offline evaluation methods***

The key to realizing flipped classroom is that students learn online course content independently before class, and this link is not supervised by teachers [7]. Therefore, the online link needs to set up a corresponding supervision mechanism to ensure the learning progress and learning effect in the absence of a teacher. The forms include online interaction, audio and video assignments, etc., in fact, the pre-class learning tasks are quantified as clear the purpose of learning evaluation

task is to cultivate good self-study habits of students. The offline assessment part of the aerobics course is divided into individual prescribed action scores and team independent creation scores. Process evaluation is introduced on the basis of summative evaluation, and student self-evaluation and mutual evaluation are introduced on the basis of teacher evaluation. The purpose is to encourage students self-reflection and improvement, mutual learning and cooperation among students. Incorporate the supervision mechanism into the comprehensive assessment, with offline assessment as the mainstay and online assessment as a supplement. The two complement and extend each other to enrich the evaluation system of aerobics courses.

#### ***5.4 The effect of the reform of aerobics flipped classroom teaching mode***

Flipped classroom can increase students' sensitivity to music and movements, improve their understanding of important and difficult points, and invigorate the classroom atmosphere. They are not learning for the purpose of learning movements, and strive to create a good aerobics experience for students able to self-learn related knowledge and skills [8]. Before class, students use online resources to learn based on their learning tasks, clarify learning requirements, freely control the learning progress, time, and location, and complete homework spontaneously to reach the level of initial mastery. Flipped classrooms make up for the shortcomings of traditional classrooms that focus on receptive learning and have a uniform schedule. It stimulates students' interest in exploratory learning outside of class, has more room for thinking, and cultivates students' ability to discover and solve problems. In the classroom, teachers conduct targeted guidance based on the situation that students have mastered before class, establish the student's dominant position, and strengthen the teacher's guiding role. After class, students consolidate and reflect, further internalize the learning requirements in the classroom into learning needs, establish learning initiative, and improve students' subjective initiative in learning. Flipped classroom requires teachers to change their teaching concepts and teaching process, and requires teachers to make a new design for the process of learning, internalizing, consolidating, summarizing and reflecting on aerobics knowledge and skills. The selection and construction of network platforms, the division of teaching content, the production and update of online educational resources, the supervision and management of online learning, the assessment and evaluation of the flip mode, etc., the teacher's computer operation ability, resource development ability, teaching organizational ability puts forward higher requirements. The comprehensive ability and quality of teachers have been significantly improved at the level of consciousness, theory and practice.

#### **6 .Conclusion**

Information technology is becoming an important means to promote teaching innovation and promote teaching equity. The aerobics course based on the flipped classroom concept is the embodiment of the combination of information technology

and teaching activities. The aerobics course aims at interaction and supervision, with practicality and simplicity as the starting point, and creates an electronic resource library based on short videos. In the teaching mode of aerobics, teachers choose the form of flipped classroom according to the characteristics of different teaching contents, and adopt a teaching mode that combines online and offline. In terms of evaluation methods, the flipped classroom adopts a combination of online and offline evaluation, summative evaluation and process evaluation, and teacher evaluation and student self-evaluation and mutual evaluation. The new teaching model has changed teaching concepts and teaching habits, made the aerobics classroom more rich and interesting, fully mobilized students' learning enthusiasm and initiative, stimulated and cultivated students' independent learning ability and teamwork ability, and further improved the teaching quality of aerobics courses has greatly promoted the teaching reform of aerobics courses in ordinary colleges and universities.

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