

# **Research and Practice on the Reform of Physical Education Teaching in Colleges and Universities under the Information Technology Environment**

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**Keywords:** Information Technology, Environment, Universities, Physical Education, Reform

**Abstract:** Physical education is an important part of college education. with the further development of the new curriculum reform, the requirements of school education for students'physical and mental development and comprehensive quality are constantly improved, and the role of physical education in the college education system is becoming more and more important. The reform of physical education in colleges and universities under the information technology environment, through the application of information technology means in the physical education classroom, provides more abundant teaching content and teaching methods for physical education teaching, and realizes the smooth development of physical education teaching reform. This paper discusses the strategy of physical education reform in colleges and universities under the information technology environment to provide reference for the development of related work.

## **1. Introduction**

With the rapid development of information technology, the integration of information teaching means and physical education teaching in colleges and universities is more in-depth and common, and the reform of physical education teaching in colleges and universities in the information technology environment can enhance the advantages of teaching through diversified teaching means, rich teaching resources, flexible learning methods, effective combination of online and offline. The practice of physical education classroom teaching reform in colleges and universities under the information technology environment should make full use of the advantages of information technology and design more scientific teaching content to help the development of teaching reform.

## **2. The Important Value of Information Technology Means to the Reform of Physical Education Teaching in Colleges and Universities**

### **2.1 Benefits Stimulation Students' Sports Learning Interests**

The traditional teaching mode of physical education in colleges and universities is mostly teacher-oriented training-oriented teaching with the aim of taking examination-oriented or obtaining credit. Teachers take the teaching content of physical education syllabus as the guidance, carry out physical education training in physical education class, the teaching form is relatively single, the task of physical education training is heavy and difficult, which puts great pressure on students, which leads to the lack of students'interest in physical education learning. The reform of high-efficiency physical education in the information technology environment enriches teachers'teaching methods, and teachers can create rich teaching situations and provide interesting teaching contents for students through information technology. In this way, the new teaching means integrate the rich and colorful physical education content into the physical education curriculum, and the students'interest is greatly stimulated.

### **2.2 Favorable Assisting the Development of Teaching**

The development of physical education in colleges and universities under the information technology environment can provide teachers with more abundant teaching resources and more

diverse teaching methods. Teachers can screen suitable learning materials for students in mass information materials, use information means to realize online teaching, watch events, explain action essentials and so on; students can also use Internet, mobile terminal and other equipment to achieve communication and interaction with teachers, improve the relationship between teachers and students, activate the classroom environment, strengthen the offline and online connection, and improve the teaching effect.

### **2.3 Lifelong Sports Awareness for Students**

The development of physical education curriculum in colleges and universities should be based on the profound connotation of lifelong sports culture, which combines the teaching of sports theory, the popularization of sports culture, the guidance of sports spirit and the comprehensive teaching of physical training [1]. The development of physical education should not only meet the requirements of the education department, but also help students to develop the consciousness and habit of lifelong physical education in life, infiltrate sports into students'life, help students cultivate strong will and promote physical and mental development. With the help of information technology, it breaks the limitation that physical training can only be carried out in physical education classroom, and provides students with rich access to sports and sports information, which realizes the purpose of cultivating students'sports consciousness and habits in imperceptibly, and strengthens the popularization and penetration of physical training in students'life.

## **3. Practical Strategies for the Reform of Physical Education Teaching in Colleges and Universities in Information Technology Environment**

### **3.1 Creating a Rich Multimedia Teaching Context**

Multimedia teaching is the most important application way in college physical education based on information technology. By using the information technology, teachers can obtain and screen the massive physical education resources in the network, and combine the teaching content to carry out the targeted application. The wide application of multimedia teaching situation has changed the teacher-led teaching mode in the traditional teaching mode, through the rich multimedia teaching resources, effectively stimulated the students'interest in physical education learning, enhanced the interest and richness of the content of physical education teaching, strengthened the interaction between teachers and students, enhanced the learning experience, and realized the continuous improvement of the teaching effect in the atmosphere of teaching in fun.

For example, in the teaching of sports aerobics and taijiquan in colleges and universities, the teaching of aerobics and taijiquan requires students to show themselves actively, follow the beat to make the action accurately, show the coordination and flexibility of the body, maintain a good posture, and play the role of strengthening the body. In the process of carrying out aerobics and Taijiquan teaching, if only rely on the teacher's words and deeds to teach, the students'imitation and memory are more difficult, and the ability of different students in receiving and learning movements is different, teachers often need to show and teach a set of actions repeatedly, and the teaching efficiency is low. And with the help of the means of multimedia teaching, the movement essentials of aerobics and Taijiquan, the action decomposition, the complete video are displayed in class, and the students follow the video content to learn the action and master the action essentials, so as to effectively improve the efficiency of aerobics and Taijiquan teaching.



Figure 1 Watch Taijiquan teaching video

### 3.2 Effective Assistance in Microcourse Teaching

The so-called micro-class refers to the use of information technology, according to certain discipline rules, in the form of fragmented learning content, learning process and learning materials structured production of teaching resources [2]. The main form of microcourse is the teaching video of physical education subject, and also includes the resources of learning materials and expanding materials related to the teaching subject. These learning resources together constitute the physical education subject system and comprehensive knowledge network of the university. The main features of microcourses include short teaching time, generally within 5-10 minutes; prominent theme, refined content; can be fluent, flexible online viewing, storage and dissemination; have a strong practicality, the application of microcourses in the teaching of physical education in colleges and universities, through the teaching video closely related to the teaching theme, the effective separation, extraction and production of teaching content, effectively assisted the teaching work of teachers, and realized the innovation of physical education teaching in colleges and universities.

For example, in the teaching of "taekwondo" in college sports, taekwondo can effectively improve the coordination of students'upper and lower limbs and body, cultivate students'strong character of overcoming difficulties and not afraid of hardship, and realize the purpose of strengthening physique, exercising will and strengthening body. In the teaching of this lesson, teachers can use the micro-class to explain the main points of taekwondo into micro-class video, through the action decomposition, action focus analysis, teacher action demonstration and other micro-class video production, taekwondo training courses to help students watch micro-class video, quickly master the requirements and methods of taekwondo training, improve teaching efficiency, reduce learning difficulty.



Figure 2 With the help of Taekwondo micro-class to explain the action

### 3.3 Use of Sports Videos to Stimulate Interest

Most of the sports events belong to the category of competitive sports, the benign competition situation, can effectively stimulate the enthusiasm of students to participate in sports, stimulate students'desire to win or lose, sense of honor and team spirit, in order to obtain good learning results. Therefore, by combining the teaching content, teachers can interspersed some interesting sports videos, such as the big events, the Olympic Games, the World Championships and so on, by watching these videos to connect the teaching content with them, and lead the students to analyze the technical essentials in the course of watching the event, and enhance the students'interest. They can also use the major events to hold friendly competitions, team competitions and other activities, so as to enhance the students'interest in participating in sports competitions.[3].

For example, in college basketball teaching, teachers can use their time in class To organize students to watch and analyze basketball events, large-scale basketball events at home and abroad, covering a large number of star players at home and abroad, the scale, overall level, technical difficulty, can provide students with training goals, directions and role models, especially some favorite basketball star events such as NBA, CBA and so on, with the help of the idol effect teachers can enhance students'enthusiasm and interest in basketball training, and then carry out competition activities such as confrontation games, friendly games and so on.



Figure 3 NBA All-Star Game to stimulate students' interest in basketball learning

### 3.4 Effective Combination of Online and Offline with Learning Platform

With the popularization of information technology in school education, various online communication platforms provide great convenience for teachers and students to communicate and learn online, teachers can establish "sports learning group" through WeChat, QQ and other forms, publish learning tasks and teaching videos online, realize the real-time interaction between teachers and students, help students to prepare ahead of time by uploading learning materials before class, publish practice video after class to guide students to use the time after class to review and consolidate the training content, use the way of online card to strengthen the management, strengthen the communication between teachers and students, and enhance the effectiveness of physical education classroom teaching.

## 4. Conclusion

Sports The construction of information teaching classroom emphasizes information technology and teaching Content effective In order to improve the effectiveness of information technology teaching, teachers should combine the current mathematics teaching objectives and teaching content, through the creation of multiple situations, use information technology to enrich teaching forms, and use information technology means to achieve communication and interaction with students, so as to constantly innovate teaching means, optimize learning experience and improve teaching results.

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