

## Research on the Application Strategy of Modern Information Technology in Physical Education

Qiquan Hu

Wuhan Polytechnic, Wuhan, Hubei 430070, China

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**Abstract:** Traditional Teaching Methods and Teaching Methods Have Not Been Able to Keep Up with the Development Needs of the Current Society, and the Emergence of Computer Information Technology Has Provided the Possibility of Teaching Reform. the Advent of the Digital Information and Multimedia Era, the Development of the Era of Big Data, Has Made the Original Teaching Methods and Teaching Concepts Have to Make New Adjustments to Adapt to the Big Environment under the Background of Information Technology. However, the Combination of Information Technology and Other Disciplines Takes a Long Time to Develop, But the Combination of Information Technology and Sports is Mostly in Sports Competitions and Sports Measurement. the Combination of Information Technology and Physical Education Teaching is Not Close Enough. Therefore, This Study Investigated and Analysed the Existing Information Technology in the Application of Physical Education Teaching, Found the Main Problems Existing in the Current Physical Education Teaching, and Tried to Use Information Technology to Find a New Teaching Application Strategy for Physical Education Teaching. through the Use of Information Technology Means to Stimulate Students' Interest in Learning, and Then Promote the Reform of Physical Education, and Ultimately Improve the Efficiency and Quality of Teaching.

### 1. Introduction

The Use of Computer Information Technology Makes the Time of Physical Education More Random and Flexible. Using Information Technology, Students Can Learn in Any Corner of the World, and Can Choose Any Point in Time to Master the Knowledge According to Their Own Time Schedule. This Frees the Constraints of Time and Place, Making Students' Learning a Considerable Amount of Flexibility [1]. for Example, in the Study of Basketball in Sports, Physical Education Teachers Can Use Computer Multimedia Teaching to Decompose the Actions of World-Class Superstar Athletes in the Nba and Demonstrate Them One by One. At the Same Time, the Learning Content Can Be Transmitted to the Students through the Network, So That Students Who Are Slow to Learn Can Use the Private Time to Learn. the Physical Education Classroom Using Information Technology is No Longer a Teacher's Blind Explanation and Demonstration, But More of the Multimedia Materials [2]. Especially for Difficult Technical Movements, Physical Education Teachers Can Deepen Students' Impressions of Movements by Releasing Slow Motion and Looping, and Then Form Accurate Technical Movement Concepts in the Brain. Physical Education Classroom Teaching is Not Only Limited by Objective Conditions, But Also Enhances the Quality and Efficiency of Classroom Teaching Because of More Intuitive Presentation.

Compared with the Fixed Time, Fixed Place, and the Same Progress of Traditional Physical Education, Students with Information Technology Participation Can Formulate Their Own Learning Plans According to Their Actual Situation. in This Way, Teachers and Students Can Completely Get Rid of the Limitations of Teaching Time, Teaching Location and Personal Learning Ability. It Can Be Seen That Compared with Traditional Teaching Methods, Physical Education with the Aid of Information Technology is More Conducive to Universal Quality Education [3]. However, the Combination of Information Technology and Other Disciplines Takes a Long Time to Develop, But the Combination of Information Technology and Sports is Mostly in Sports Competitions, Sports Measurement, and the Combination of Physical Education Teaching is Not Close Enough. Therefore, How to Make Better Use of the Development Environment of Information Technology

to Promote the Development of Teaching Has Become the Focus of Many Researchers.

This Research Investigated and Analysed the Application of Existing Information Technology in Physical Education Teaching, Found the Main Problems Existing in the Current Physical Education Teaching, and Tried to Use Information Technology to Find a New Teaching Application Strategy for Physical Education Teaching. through the Use of Information Technology Means to Stimulate Students' Interest in Learning, and Then Promote the Reform of Physical Education, and Ultimately Improve the Efficiency and Quality of Teaching. It is Hoped That through the Research Conducted in This Paper, It Will Provide Help and Reference for the Application of Information Technology in College Physical Education in China, and Add to the Cultivation of Sports Education in China.

## 2. Overviews of Related Research

### 2.1 The Status Quo of Modern Information Technology Assisting Physical Education Teaching

In addition to theoretical courses such as sports research methods, the curriculum of physical education mainly includes many specialized training courses such as track and field, basketball, football and volleyball. The outdoor class teachers in many courses chose a computer-free environment, that is, the special training class did not involve information technology [4]. Therefore, the status quo of modern information technology assisted physical education teaching is shown.

### 2.2 The Role of Modern Sports Information Technology in Physical Education

The development of information technology has brought new vitality to the physical education of colleges and universities and promoted the reform of physical education. It also shows teachers and students a class that is unique and combines teaching and technology, and it inspires teachers to explore and inspires students to try [5]. Therefore, the role of modern sports information technology in physical education is mainly reflected in the points shown in Table 1.

Table 1 the Role Of Modern Sports Information Technology in Physical Education

Effects	Explanations
Inspiring students' interest in learning and broaden their horizons	Modern information technology makes teaching methods and teaching methods lively and novel, so that the whole process of "best movement" can be reproduced intuitively and accurately.
Promoting the interaction between teachers and students and improve the efficiency of the classroom	Through the video, students can see the transformation of the teaching screen in the teaching courseware, the superposition of the sound effects, and the processing of the animation effects.
Helping students build correct action representations and effectively improve athletic skills	Image, intuitive and vivid cognition can effectively improve students' motor skills
Giving play to the main role of students and improve their ability to analyse and solve problems	Teachers use modern information technology to make various sports techniques, technical difficulties and key points, common mistakes, etc. into multimedia courseware, and show them to students.
Promoting physical education teachers to strengthen the cultivation of their own information literacy	The application of information technology in physical education has put forward higher requirements for physical education teachers, that is, the information quality of physical education teachers themselves.

## 3. Research on the Application Strategy of Modern Information Technology in Physical Education

The use of information technology, combined with sensors, can quickly transfer the student's physical fitness test to the computer, record to the database and display the results. Therefore, in the face of opportunities and challenges, it is necessary to apply modern information technology to college physical education, to construct an information-based teaching and learning environment, and to adopt new learning models to achieve higher teaching goals. Physical education is a very practical teaching activity. It uses information technology to impart knowledge and technology to students. Students actively carry out active thinking activities in active physical exercises, which is

conducive to the improvement of classroom efficiency [6]. Combined with the application of existing information technology in the teaching of physical education, this study believes that the application strategy of modern information technology in physical education can start from the following points.

### **3.1 Continuing to Improve the Hardware Infrastructure and Conduct in-Depth Research and Development of High-Quality Software**

While developing hardware facilities, the software environment must also keep pace with hardware construction. Actively develop software suitable for the course itself and the needs of learners, fully realize the superiority of information technology and integrate it into the teaching software environment. Encourage sports frontline teachers to actively participate in the design and production of volleyball information technology courseware. Or jointly developed by teachers and computer teachers, the physical education teachers should solve the design of teaching content, and the computer teachers should solve the design of the program, software and appearance. The two work closely together and complement each other to build a volleyball teaching software that is truly suitable for our province [7]. The role of volleyball teaching software in physical education.

### **3.2 Rational Use of Network Resources to Eliminate the Negative Impact of the Network on Students**

The school should do a good job in the management of students' online learning and strengthen network ideological education. Through the education of students' world outlook, outlook on life and values, we strive to improve and improve our ability to distinguish and control, strengthen mental health education, and reduce the problem of students' internet addiction as much as possible. At the same time, the school also needs to cultivate students' ability of independent learning, cooperative learning and inquiry learning, so that students become true learning masters, consciously resist the interference of bad information, and make full use of network resources to learn.

### **3.3 On the Basis of Giving Full Play to the Leading Role of Teachers and the Status of Students, Appropriate and Appropriate Application of Modern Information Technology**

Teachers should correct the relationship between teachers, students, and modern information technology, and must not make information technology a teaching leader. The application of information technology in physical education is only an auxiliary tool. It can neither replace teachers nor replace traditional teaching. In the process of teaching, the dominant position of the teacher and the subjective status of the student cannot be lost. When applying modern information technology to assist volleyball teaching, we must pay attention to the actual situation of students.

### **3.4 Deepen the Content of Students' Physical Education Curriculum and Analyse**

According to the teaching objectives, the content of the physical education curriculum should be re-analysed according to the students' needs for physical education courses. For the first time, information technology such as WeChat, QQ, and online questionnaires can be used to investigate the needs of students' physical education curriculum. Secondly, through the analysis of student's curriculum demand data through information technology, it provides decision-making basis for the subsequent curriculum adjustment and construction. Thirdly, according to the student's physical condition and the school's physical education construction, the informatized multimedia physical education curriculum is re-set [8]. In this way, we can truly play the role of informatized physical education to help students' physical health development and physical quality improvement, in order to maximize the effect of physical education.

### **3.5 The Content of Teaching Materials for Physical Education Should Be Multimedia**

The content of traditional textbooks basically only presents words and illustrations. This monotonous course content can't mobilize students' interest in learning, and even affect students' understanding of abstract content. The multimedia courseware developed in the multimedia

technology environment integrates text, sound and video to meet the needs of students' senses such as sight and hearing. This greatly stimulates students' interest in learning, and makes the abstract and hard-to-observe content easy to understand with its intuitiveness and image. Moreover, these learning materials are also easy to decompose, combine, retrieve and utilize, which provides great convenience for the acquisition and preservation of knowledge. It should be pointed out that the development of multimedia textbooks should not be a replica of the "printed matter" textbooks, and should reflect its own advantages of hypermedia, interactivity and intelligence to meet the needs of individualized learning.

### **3.6 The Curriculum Objectives of Physical Education Need to Be Quality**

It is the primary goal of school sports and physical education curriculum to promote health, enhance physical fitness and promote the comprehensive development of students' physical and mental health. The content of the textbook should meet the needs of students to enhance their physical fitness, and also reflect the characteristics of physical education and reflect the guiding ideology of "health first". The goals that physical education curriculum can achieve in individual students should also be different, so the goal of physical education curriculum should focus on the development of individual students. However, the development of teaching materials centered on people and improving the quality of students requires high information resources, which is inseparable from the support of information technology [9]. Under the conditions provided by information technology, the goal of modern physical education curriculum should also pay attention to the cultivation of students' will quality. Excellent qualities such as courage, tenacity, tenacity, and self-confidence make students endowed with life attitudes, life beliefs, and human feelings. This will enable each student's potential intelligence to achieve maximum development, and effectively improve students' ideological and moral qualities.

## **4. Case Study of the Application of Modern Information Technology in Physical Education--Taking the Application of Micro-Course in College Volleyball Teaching as an Example**

When designing the micro-courses for college volleyball, we should consider the application of micro-courses according to the software and hardware conditions of the school and environmental factors. Especially in college physical education, there are fewer class hours and more students. The application of micro-courses must not only be independent and individualized, but also the object of concentrated discussion in the classroom, and it will become the basis for students' evaluation. Therefore, in the specific design and production, the learner's learning conditions should be adjusted or changed according to the learning conditions to optimize the teaching effect of the micro-course.

### **4.1 Application Strategy of Micro-Curriculum**

In order to systematically help students to complete their own learning, micro-courses must have platform support. In other words, it is necessary to put the micro-curricular resources on a certain platform for the learners to learn independently, so as to better play the effect of the micro-course. Therefore, the choice of the micro-disciplinary application platform is very important. The WeChat public platform is an era proposition that contains many complex semantics such as cultural communication, interpersonal communication, social psychology, and lifestyle. It enables users to enjoy personalized services such as 2D subscription, message push, brand communication. Therefore, through the analysis of selected content and the analysis of learning objects and the analysis of the network teaching platform, this study decided to apply the micro-courses on the WeChat public platform for students to learn independently. The structure of the specific volleyball autonomous learning platform is shown.

In this study, before the group micro-curricular resources, the author first previews the messages to be sent by the mobile phone. When previewing, check the text size of the message, whether the text paragraph spacing is suitable, whether the layout of the image is appropriate, and whether the video is played smoothly. At the same time, the author also sends a specific micro-signal preview to view, and finally modify and improve according to the feedback after viewing. Students are

required to pay attention to the WeChat public number “Sports Micro Lessons School” before the course, and they can receive all the push messages on the WeChat public platform. In the classroom, the teacher can arrange a small amount of time for the students to conduct self-learning again for review and consolidation. After the students conduct self-learning, arrange the students to conduct group discussion. Students can discuss the problems and feelings encountered in self-learning. If there are unresolved issues in the group and after the discussion between the groups, the teacher will answer and summarize. After the course, the students in the experimental class will also be tested and evaluated. After the experiment, the instructors were interviewed and the students in the experimental class were surveyed.

#### **4.2 Analysis of the Application Effect of Micro-Courses in College Physical Education**

After the students had completed the micro-class study, the author issued the questionnaire to them and ask the students to fill out the submission. Through statistical analysis of the questionnaire data, the author could draw the following points of view of students on micro-learning. This showed that the novel resource learning method of micro-course is popular among students. For the presentation of micro-curricular resources, most students prefer video, audio, animation and other forms. This is also in line with human response to image-like information. Therefore, we can conclude that students still prefer to use micro-courses to study physical education courses, which provides a favourable guarantee for us to apply micro-class learning in the follow-up study.

#### **5. Conclusion**

With the continuous development of information technology, the emergence of new technologies and new media, informatization has become an important direction for the development and reform of physical education. In this environment, physical education teachers should first establish the concept of modern physical education, and consciously use the theory and methods of modern information technology to improve the effect of physical education. Secondly, from different levels to think about the physical education objectives, teaching situations, teaching strategies and teaching evaluation in the information environment. In this way, we can actively use modern information technology to create an informatized physical education environment to ensure the effective implementation of physical education and the effective achievement of physical education goals. Thirdly, teachers should be good at learning modern educational theories at home and abroad, study physical education practice, take students as the foundation, adopt flexible and diverse teaching methods and means, give full play to students' initiative in physical education, and continuously improve teachers' teaching activities and student learning. The effectiveness of the activity. In short, human beings have entered the information age, and the continuous development of modern technologies centered on computers and networks is changing our production methods, lifestyles, working methods and learning methods more and more profoundly.

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