

Analysis on the Reform of Informational Teaching of Physical Education Curriculum in Colleges

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Abstract: In line with the needs of the "Internet + Education" era, the college physical education curriculum has carried out the reform of information-based teaching. Through the construction of the network teaching platform, the sharing of curriculum resources, and the use of informational means such as pre-class micro-courses, the phenomenon that the physical education class pays attention to technical teaching and despise theoretical teaching has been changed, so that the space for university physical education is no longer restricted to the campus. Time is not limited to the physical classes, and "learning and exercise" can be brought into life, thus achieving the long-term goal of improving physical health.

1. Introduction

With the development of information technology and the continuous improvement of educational equipment, information technology has become more and more widely used in colleges teaching in China. However, there are still problems in the teaching of physical education, such as teaching mode and teaching methods. The teaching reform of physical education curriculum should also take advantage of the trend, actively use information technology and explore a set of teaching methods that are conducive to the development of its own curriculum. In the reform of curriculum informatization teaching, college PE teachers belong to backward groups due to various reasons such as low level of information technology knowledge and less policy support. To study the reform of informational teaching of physical education curriculum in colleges and universities, to promote the informatization teaching ability of physical education teachers, to strengthen the level of teaching and research reform of physical education teachers, and to keep up with the e-age of informational teaching. Combined with the information-based teaching mode, students will establish a "health first" sports concept, learn and cultivate the habit of "lifelong" physical exercise.

2. Research methods

2.1 Documentary Method

Through the retrieval of relevant literature, we can understand and sort out the status quo and case of informational teaching of college physical education curriculum and find out its development strategy.

2.2 expert interview

Interviews with modern education technology industry experts and college physical education teachers and solicited opinions on the reform of informational teaching of physical education courses in colleges and universities.

2.3 Experience Summary Method

Through the physical education teaching team to carry out information-based teaching reform and curriculum construction, continue to summarize, analyze, and make recommendations.

3. Results and analysis

3.1 The Necessity of Informatization Teaching Reform of Physical Education Curriculum in Colleges and Universities

In the process of college education, students' physique is more and more valued by the state and schools. However, people seem to pay more attention to the setting of physical education curriculum, the increase and decrease of teaching hours, neglecting the powerful platform of information education technology, neglecting the need of a new generation of college students to learn with mobile devices. Contemporary college students are already very accustomed to using the Internet for learning and communication. Physical education courses should also be designed to be able to learn anywhere, anytime, and facilitate fragmented learning.

The reform of informational teaching of physical education curriculum in colleges and universities follows the patterns of modern education and teaching, adapts to the development of big data, artificial intelligence and other technologies, builds a learner-centered educational ecology, and builds courses that meet the needs of project-based and modular teaching, and actively and effectively carry out education and teaching, and improve the quality of personnel training.

Physical education is a public compulsory course for college students. Most students realize the importance of physical education, but they are not willing to spend more time to study the theoretical knowledge and skills of physical education. Learning often only stays in the traditional demonstration and explanation of teachers in the classroom. There is a one-sided or missing understanding of sports theory knowledge and technology. Therefore, using information technology to build online courses and applying informatized teaching methods, students can quickly and easily acquire relevant sports knowledge and technology before, during and after classes, and achieve better learning results through online and offline learning and complementation.

3.2 Feasibility of Informatization Teaching Reform of Physical Education Curriculum in Colleges and Universities

In recent years, the development of various colleges and universities' informatization teaching contests has promoted the reform of teaching methods, prompting teachers to change their concepts and realize the transformation of roles. Information technology provides teachers with a large stage for reform and innovation, which has promoted teachers' innovation awareness and ability.

The concept of college education requires teachers to continuously learn new information technology to adapt to the changing needs of talent training and teaching needs. In recent years, in response to the needs, the university held information teaching contest, micro-class competition, MOOC class competition, flip classroom, mixed classroom, online and offline various related training and other teaching reform initiatives. It provides a good learning and communication environment for teachers to continuously improve their informatization teaching ability. Physical education teachers have room for improvement in their information-based teaching ability.

College students, who like to play with modern information technology, are already used to learn about using mobile phones. The reform of informatization teaching of college physical education curriculum adopts advanced educational technology such as multimedia technology, network technology and virtual reality technology, so that students can learn in the educational environment created by information technology in the new era. The various senses are repeatedly mobilized, enhancing students' understanding of the theoretical knowledge and skills of sports, and motivating them to participate more actively in the learning process of physical education curriculum. In addition, it fully embodies the teaching philosophy of students in the teaching of colleges and universities, students become the masters of learning, which will greatly mobilize the enthusiasm of students to learn independently. Students can use a variety of course technology platforms to access a large number of learning materials, micro-courses and motion technology videos in a convenient, in a relatively independent manner. For example, the amount of information in the Internet environment is getting larger and larger, teachers and students can get the latest sports events in real time [1], thus greatly improving their interest and efficiency in learning.

3.3 Analysis of the Status Quo of Informatization Teaching Reform of Physical Education Curriculum in Colleges and Universities

The reform of information technology education has been widely used in many courses of many majors in colleges and universities. In the application and development of physical education curriculum reform, there are mainly the following situations:

(1) The degree of networked physical education curriculum is not high, and the ability to use information-based teaching is not high. [2] There are relatively few sports teaching resources such as animations or cases. In recent years, there have been relatively few physical education courses that have participated in the informatization teaching competition and won awards.

(2) The use of information technology in colleges and universities for webpage operation and processing ability is not high enough to convey the vividness of physical education curriculum [3], and teachers' ability to process information technology is also poor. Most physical education teachers are not willing to spend a lot of time and energy on the informatization teaching of physical education courses.

(3) In the construction of physical education teachers' team, it is not familiar with the use of new information technology, and information technology enterprises have relatively little investment in the production of sports resources. It is the main status quo of the current physical education curriculum reform in colleges and universities.

3.4 Factors Affecting the Reform of Informational Teaching of Physical Education Curriculum in Colleges and Universities

3.4.1 College PE teachers have lower ability to apply information technology

Traditional college physical education teachers rely on classroom demonstrations to teach. Physical education teachers have a weak level of modern information technology teaching, and the methods are relatively boring. Modern college students are accustomed to playing mobile phones to learn knowledge and skills. Therefore, strengthening the ability of college PE teachers to apply information technology teaching is an important measure for the reform of physical education curriculum.

3.4.2 The installation of information technology software in stadiums is more difficult

At present, most of the colleges and universities' physical education teaching places are mostly outdoor sports fields. The information technology software and multimedia required for the installation of teaching in the stadium still have certain difficulties, and it is difficult to fully install and popularize. On the other hand, in the physical education curriculum, when the human body is exercising, the use of mobile communication technology is often unchanged, which restricts the implementation of the use of information technology teaching in the physical education classroom.

3.4.3 Relatively scarce auxiliary software for physical education

However, due to the lack of pressure and professional skills in college physical education curriculum, physical education teachers lack motivation and enthusiasm for information technology teaching reform, which greatly limits the enthusiasm of computer-aided physical education.

3.5 Discussion on the Teaching Experience of Informational Courses in Colleges and Universities

3.5.1 Informatization teaching resources and teaching methods of physical education curriculum

Through the network teaching platform, the sports information teaching resource area is constructed, including the micro-class, animation, action video, task list and finishing games' highlights. Through the production of related teaching videos, micro-courses, PPT, VR technology and other physical education teaching aids, students can improve their efficiency in learning, and facilitate the preparation and review. Such as: teacher and student action comparison video, used to clarify the correct technical essentials; practice reference video to guide students to carry out efficient exercises.

Through the application of electronic motion trajectory capture devices such as badminton sensors, the development of the teaching reform of physical education curriculum is promoted. Its main role is to record the speed, strength and angle of action, to help monitor the mastery of the student's essentials, to generate a "speed and power curve" to help students analyze the adjustments. It

can also generate "3D motion trajectories" to help students analyze the timing of adjustments. It is also possible to generate an action record for the entire class to help the teacher monitor the student's practice efficiency and exercise intensity.

The advent of more and more brands of mobile heart rate testers has enabled the monitoring of the physical education center rate. Teachers can adjust the exercise intensity and load through the collected heart rate data, making the course content more reasonable and effective. The continuous promotion of sports health apps is also a major boost to the rapid development of sports curriculum information.

3.5.2 Advantages of informational teaching in physical education curriculum

(1) Optimization of the teaching process

Informatization teaching makes the physical education classroom more interesting and image, and students have higher interest in learning and better learning experiences. Traditional sports courses are purely knowledge-based teaching and technical demonstrations. Through the clever use of information technology, the classroom teaching content is vivid, interesting and image oriented. Students no longer imagine the technical points out of thin air, but through intuitive video, motion technology animation and intuitive learning, and can be repeatedly replayed, strengthen learning and memory, and achieve better learning results. Practice the movements and processes through video recording before, during and after class, which is convenient for teachers to check and help correct actions.

(2) Student status subjectivization

Under the physical education curriculum, college students can watch sports technology action videos in advance, and have an understanding of the concept of motion technology. In the process of learning, you can also continuously strengthen your skills formation through information means. At the same time, you can record your own action videos, which can be used to visually discover your own technical error actions and quickly correct actions. After class, you can further consolidate your knowledge by watching advanced events or sports and tactical instructional videos. It reflects the students' independent learning and satisfies the individuality of students' learning.

(3) Diversification of teaching methods

A variety of information methods are applied before, during and after the course to diversify the teaching content and teaching methods, avoid single explanation and demonstration teaching methods, and actively motivate students to learn. Such as learning through the platform, mobile learning, multi-assessment and scoring mechanism to stimulate students' interest in learning; embedding simulation, micro-video, animation, live broadcast and other teaching methods in teaching. In the end, we will break through the key points and difficulties in teaching by doing with learning and doing with teaching.

(4) Teaching and learning break the time and space restrictions

With the continuous application of network technology in the informatization teaching of physical education curriculum, the teaching and learning of physical education teaching is no longer confined to the classroom and is no longer confined to the campus. It is conducive to the expansion of teaching effects and is also conducive to the development of social fitness for all.

4. Summary

In the era of rapid development of information technology, the reform of informational teaching in college physical education curriculum is an inevitable trend. High-tech intervention can improve students' awareness and interest in participating in physical exercise and help students to maintain physical fitness and achieve better health goals. Through the construction of network teaching platform and the share of curriculum resources, it promotes the transformation of college PE teachers' educational concepts, the reform and development of college PE curriculum information teaching, avoids excessive repetition of basic theory teaching and motion technology demonstrations by physical education teachers, and improves teaching efficiency. It also facilitates the exchange of teaching experience between physical education teachers and is more conducive to the development

of teaching and research. The “best agent” for promoting physical health – exercise, can be promoted to the ubiquitous way of teaching and learning through the advancement of information technology.

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