The Application of Computer Assisted Instruction in College Physical Education

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Keywords: Physical Education, Cai, Teaching Students According to Their Aptitude

Abstract: in College Physical Education, Traditional Teaching Methods Are Increasingly Showing Their Limitations and Cannot Fully Meet the Needs of Modern Teaching and Social Development. with the Development of Educational Theory and Computer Technology, Computer Aided Instruction (Cai) Has Appeared. the Application of Computer-Aided Teaching in Physical Education Teaching Can Not Only Enhance Students' Interest in Learning and Enhance Their Understanding of Specific Actions, But Also is Not Restricted by Seasonal Weather. in Order to Successfully Construct a Teaching Mode Based on the Principle of Aptitude Teaching in Physical Education in Colleges and Universities, Effective Measures Have Been Taken to Vigorously Cultivate Students 'Comprehensive Ability to Use Physical Education and Students' Individual Autonomous Learning Ability. This Article Starts with the Application of Computer-Assisted Instruction in Physical Education, Analyzes the Current Problems of Computer-Assisted Instruction, and Puts Forward Suggestions, Hoping to Promote the Application and Promotion of Computer-Assisted Instruction in Physical Education.

1. Introduction

With the Reform and Development of Modern Physical Education, Personalized Physical Education Has Received Extensive Attention from Physical Education Teachers, Parents of Students and Students Themselves [1]. in Developing China, Sports Has Become a National Strategy At the Same Time, Becoming an Important Strategy to Promote the Realization of the Chinese Dream and Complete the Great Rejuvenation of the Chinese Nation [2]. Promoting the Development of Sports for All is the Result of the Progress of China's Times and the Inevitable Choice for the Development of World History. Physical Education Teaching in Colleges and Universities is More Complicated Than Other Subject Teaching Mainly Based on Theoretical Courses. There Are Not Only a Large Number of Abstract Theoretical Concepts, But Also Teaching Courses Mainly Based on Physical Exercise [3]. the Development of Sports for All Requires Modern Sports Talents and the Training of Sports Professionals in Colleges and Universities to Step Up the Modernization System of Education and Teaching. in the Teaching of Colleges and Universities, the Traditional Teaching Mode Has Been Strongly Impacted by Informatization, and the Reform of Teaching Mode is Imperative [4]. At the Same Time, the Organic Combination of Computer Networks and College Teaching is Gradually Becoming a New Development Trend. the Use of Computer-Assisted Instruction in Physical Education Can Not Only Strengthen Students 'Interest in Learning, But Also Enhance Students' Understanding of Specific Actions, and It is Not Restricted by Seasonal Weather.

The Cai Courseware Contains a Large Amount of Information in Multiple Media Forms, Which Can Provide Students with Comprehensive Sensory Stimulation, Improve Their Learning Interest, and Strengthen Their Subjective Initiative [5]. through Animation and Video, the Key and Difficult Technical Movements in Physical Education Are Demonstrated to Students in the Form of Slow Playback and Playback, Which Can Deepen the Understanding of the Movements, Thereby Improving Learning Efficiency [6]. in the Past, under the Influence of Traditional Concepts in

China's College Physical Education, the Emphasis Was Placed on the Norms of Movement and Training Intensity, Which Made Physical Education in Colleges and Universities with Some Mandatory Specificities [7]. Cai Courseware Can Also Conveniently Show Different Sports Items to Students, Which Will Help Improve Students' Comprehensive Sports Quality. as Far as the Overall Development of Sports is Concerned, School Sports Are the Cornerstone of Sports Development in the Whole Country [8]. Therefore, the School Physical Education Class Should Be of Concern to the General Public and More Importantly by Educators. after All, an Important Aspect of the Development of School Physical Education Has a Direct Impact on the Effectiveness of Student Learning, and It Also Affects the Effectiveness of the Implementation of Education as a Whole.

2. Advantages of Computer Aided Instruction in College Physical Education

2.1 The Cultivation of Students' Learning Interest in Computer Aided Instruction

There is a big defect in the current college education that is the lack of humanization. Many educational methods and concepts ignore the unique personality of students and the differences between students. Students expect to meet their needs for sports skills and lifelong physical fitness in physical education [9]. If students are unable to learn skills effectively during physical education classes so that they cannot establish sports habits, students may lose interest in physical education and do not want to develop lifelong physical fitness. The traditional physical education teaching mode in colleges and universities is mainly taught by teachers, supplemented by listening by students. Students are in a passive state of acceptance and their subjective initiative in learning is not high. At the university stage, students' independence and autonomy are more demanding, but students at this stage are often affected by less social experience. Their independence and autonomy often manifest themselves as arbitrary, sometimes contradictory, and often lead to a loss of self. It can be seen that students at this stage need teachers' active and correct guidance. The application of computer-aided teaching in physical education can give full play to its novel teaching form and the characteristics of intuitive teaching display, mobilize students' enthusiasm for learning, cultivate students' thirst for knowledge, and achieve the purpose of improving teaching efficiency.

2.2 The Improvement of Computer Assisted Instruction to Students' Teaching Effect

If physical education teachers in colleges and universities can personalize their physical education classes based on their own specialty and students' reality and rely on their own practical teaching experience, they will certainly form their own personalized classroom teaching style that students like. The goal of practical teaching is to take the cultivation of students' professional ability as the main line and the cultivation of basic professional quality, post employment ability and professional development ability as modules. Improving students' knowledge and cognition level and cultivating students' ability to solve work problems in practical application have become important contents of practical teaching objectives. The primary factor to promote the development of college students' sports personality lies first in the training objectives set by colleges and universities. With the help of computer-aided teaching, teachers can use freeze-frame or slow-release methods to show students all the decomposition actions thoroughly. In this way, the physical education teachers can explain and analyze each technical difficulty in an orderly way, and the students can quickly master the technical difficulty and the main points of the movement by practicing according to the complete movement representation.

3. The Application of Computer Assisted Instruction in Physical Education

In specific physical education teaching practice, physical education teachers must completely change the traditional teaching mode in the past if they want to implement personalized teaching strategies. College physical education is not only to cultivate personal fitness and good social behavior, but also the foundation of college education. By taking physical education classes, students' basic sports ability is cultivated, and they are encouraged to contact sports in many aspects.

The computer-aided teaching system interface module mainly presents relevant content pages to users according to different operations of different users [10]. Using natural language processing, semantic query, data mining technology and other technologies to provide an operating interface to achieve human-computer interaction, to achieve interaction between users and the system. Mastering sports skills is of course a necessary condition for students majoring in physical education, but under such conditions, only students majoring in physical education can be trained but not talents.

Based on computer-aided technology, the management of sports test items in sports teaching is carried out. Sports test item management refers to the management of information related to sports test items. Its functional modules mainly include: addition of sports test items, modification and deletion of sports test items, weight setting, etc. The database tables involved in the implementation mainly include test item information tables. Here, only a detailed implementation description will be given for the addition of test items. The implementation process is shown in Figure 1.
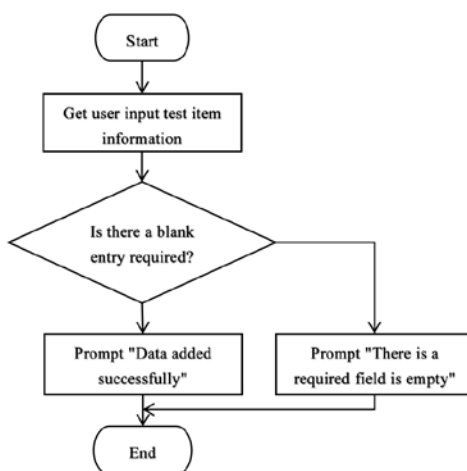

Fig.1 Test Project Program Flow

A good teaching effect can not be separated from a good teaching atmosphere and teaching environment, and the implementation of personalized teaching in college physical education can not be separated from a teaching and learning environment conducive to personalized teaching. The teacher platform in CAI platform mainly provides the management interface of teaching resource database and teaching rule database, and presents the analysis information obtained by personalized data analysis module. The student platform mainly presents teaching materials recommended by the information scheduling module for different students. The administrator platform mainly presents the interface for managing user information, user rights and various resources. The user data collection module is the basis of the whole online teaching assistant system to realize personalization, which is mainly responsible for collecting the relevant information and data of users. The personalized data mining and analysis module uses different data mining algorithms to mine and analyze the information of the students' original database. The results are regularized and stored in the teaching rule database, and the personalized information is transferred to the information scheduling module. The information of students' learning activities is fed back to the personalized data analysis module, which is reprocessed to update the information base of students.

4. Conclusion

Nowadays, with the popularization of information technology, in the daily teaching activities of colleges and universities, traditional classroom teaching mode alone can no longer meet the requirements of both teachers' teaching and students' learning. The traditional classroom teaching mode ignores the personalized features of the learning process, and the reform of the teaching mode is imperative. The full realization of personalized service of computer-aided teaching system is a very complicated research content, involving a variety of technologies and fields such as network

communication, artificial intelligence, multimedia, pedagogy and psychology. Therefore, at present, the traditional class teaching system is still widely used in physical education teaching in colleges and universities in our country, but with the development of the times, this class teaching system can no longer meet the internal needs of the development of education. When using multimedia teaching, we can scientifically grasp its application in classroom teaching according to the purpose and requirements of teaching, combining teachers' teaching style, teaching habits and personal character, and following the principles of its design and production. At present, the application and popularization of computer-aided teaching technology in physical education class still needs a long process, which requires physical education teachers to continuously update their teaching concepts, and schools and relevant departments to increase their investment in modern teaching facilities and teacher training.

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