Research on the Improvement of College Physical Education Teaching Based on Computer-aided Teaching

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Abstract. Computer has been used as a new teaching means in various major teaching fields. Compared with traditional culture courses, physical education is not closely related to computer. The application of computer-aided technology in many teaching zones is quite different from that in physical education. In order to make the combination of the two produce the best practical effect, to make the students have interesting in learning and to make their learning and practice sports more efficient, this paper puts forward some special ideas for improvement by analyzing the application of CAT in physical education teaching.

Keywords: Computer, Teaching, Physical Education

1. Introduction
With the continuous penetration of computer technology in every corner of society, the innovation of computer-aided teaching in physical education teaching methods and means in colleges and universities has followed. It provides a refreshing way to popularize and promote the physical education system and create a new situation of physical education. Since its own curriculum, physical education has been very different from the education of other subjects because of its own particularity [1-3]. In addition to the always marginalized concept disadvantages, physical education requires learners to pay equal attention to theoretical learning and practical sports. Many learners often ignore one another, and those who are proficient in abstract sports theory do not necessarily master and use movements skillfully in physical exercise, while strong and flexible learners have few systematic and familiar grasp of theoretical concepts. In the past teaching, whether it is abstract and obscure sports theory, or all kinds of complex sports movements with high requirements for physical quality, teachers should rely on real, face-to-face teaching, so that students can learn in the osmosis. After the computer aided teaching method has been popularized and applied, the teaching form of physical education has been greatly enriched, the teaching time has been fully utilized, and the students of physical education have also obtained great learning motivation in the diversified education [4-7]. Many abstract concepts and complex and difficult to decompose actions are visualized and displayed step by step with the help of computers, which is a great improvement in the effect of it. Because the application of computer-aided teaching in physical education teaching in is limited, the outstanding experience accumulated in all aspects is also insufficient, so there are still many aspects to be concerned about and put forward.
2. Brief introduction of computer-aided teaching

Computer aided teaching is a good understanding, that is, schools or educational institutions so as to achieve educational purposes, in the teaching process using computer as one or more of the tools of teaching organization. Computer-aided teaching is not gradually produced in the self-development of teaching mode, but after the high development of computer technology, social production has undergone major changes, people's life, work or production has undergone major changes, The pursuit of education in human society has more detailed requirements and high goals. Under this background, it conforms to the trend, seize the opportunity of scientific and technological revolution and concept change, introduce computer technology into the teaching of physical education in universities, expand the content of physical education and enrich the form of physical education. Figure 1 is a schematic diagram of a computer-aided teaching software interface.

![Diagram of a computer-aided teaching software interface.](image-url)

**Figure 1.** Example of a computer-aided physical education courseware.

After decades of development and accumulation, the advantages of it have been confirmed in practice. In addition to a variety of computer-aided teaching software, these software are much the same, each has its own characteristics and emphasis. With the help of software, the advantages of physical education teaching with computer in colleges to traditional teaching are obvious, the form and content are more flexible, the curriculum is more versatile, and the new demonstration of the same sports action course can be applied to different other actions with a little modification. In addition, the characteristics of sharing and repeatability fully reflect teachers' teaching art and creative thinking. So that students' thinking is open and creativity can be developed. Comprehensive quality can be improved in an all-round way. For example, computer aided product making is a kind of excellent idea which is similar to movable type printing, and different arrangement and combination become different sports movements. Figure 2 is a flow chart of product making.
Figure 2. Flow of product production.

3. Application of computer-aided teaching in college physical education teaching

3.1. Application in the teaching of technical practical courses
With the application of physical education technology, teachers often need to teach students some technical actions, which often have certain skills and need students to learn, but in the teacher's actual demonstration, because of the continuity of the action, many details are fleeting and impossible to stay and explain, causing students learning and understanding difficulties. In computer-aided teaching, the movements of every second or even smaller time units can be displayed to the learners by computer demonstration, supplemented by the main points of the teacher, so that the students can quickly establish the correct motion appearance, thus cooperating with the accurate practice, greatly shortening the practice time.

3.2. Application in the teaching of physical education theory
System theory is very important in any subject and is the essence of the subject. Only by being familiar with theoretical knowledge can we guide practice and sum up new theories in practice. In the traditional physical education teaching, the physical education theory teacher uses the traditional teaching culture curriculum method to explain in the classroom, has seriously restricted the teacher's teaching ability and the student's acceptance upper limit. After the computer-aided teaching has been popularized, the teacher can present the sports theory to the students in a more vivid, intuitive and concise way such as image, text, sound and so on, so that the students' various sensory organs can produce the ability to accept knowledge at the same time.

3.3. Application in mastering sports skills
Mastering certain sports skills is a compulsory course for every college physical education student and an important task for college physical education. In practice, there are many kinds of sports and there are great differences between various skills. In theory, every student cannot be proficient in sports skills, but can choose some sports skills that are better and subjective according to their physical conditions and preferences. To meet the diverse requirements of learners, physical education teachers are proficient in various sports skills, and physical education teachers come from former sports students, and some sports skills will degenerate with age. This contradiction has been solved perfectly after the application of computer-aided education. Physical education teachers only need macro
guidance, and the detailed teaching tasks in the field they are not good at can be completed by computer.

4. Suggestions on the improvement of physical education teaching in colleges and universities

4.1. Invest in more professional and advanced equipment
The basis of computer aided teaching popularization and popularization is computing technology, and the corresponding hardware facilities are also needed. At present, the network in teaching places and the classrooms with hardware facilities can basically meet the requirements, but there are very few computer-aided teaching classrooms that can be used for physical education courses. On the one hand, because of the small demand for physical education, On the other hand, the importance is not fully recognized. Therefore, the establishment of computer-aided teaching classrooms so as to adjust to physical education and the improvement of facilities and equipment are the first steps to improve teaching.

4.2. To enhance awareness of the importance of computer-assisted physical education
In modern efficient teaching, the means of computer-aided teaching are used everywhere, and it is one of the necessary means of teaching in many majors. However, in physical education, both educators and educates do not attach importance to computer-aided teaching, because people think that sports and computer are not the same, the introduction of computer-aided in physical education is only a superficial article. Add a few gimmicks. This kind of understanding is very wrong and very harmful. It is necessary to popularize the feasibility and necessity of it, remove the root of the disease from the thought, and remove the obstacles for the modernization of college physical education.

4.3. Strengthen the development of application software of physical education teaching
The total new teaching method requires higher knowledge literacy of educational practitioners, not only mastering sports theoretical knowledge, mastering sports skills and strategies, but also having a certain degree of computer professional knowledge. In this way, it is possible to link software development with physical education and meet the requirements of practical teaching. That is the key step to work hard on the cultivation of talents, especially to develop the application software of it. In order to enrich the teaching content, but also to provide experience and lessons for the subsequent curriculum development.

5. Conclusion
Computer-aided teaching means have changed the traditional teaching methods and models, and their weight in it is increasing. Its importance will be strengthened in future and with the modernization of physical education. However, the development of computer-aided physical education teaching is based on rich traditional physical education teaching practice. It is necessary to gradually deepen and steadily improve, must not take the way of jumping forward, and do a good job of linking the information age with the traditional era step by step.

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