Research on the Function of Computer Aided Teaching in College Physical Education

Houxi Zhou1,*

1Port College, Qingdao Harbour Vocational & Technical College, Qingdao, China, 266500

*Corresponding author e-mail: zhouhouxi@qdgw.edu.cn

Abstract. With the rapid iteration of computer information technology and the application of CAI in college physical education teaching, the physical education teaching mode has developed from the empirical and theoretical teaching mode to the scientific and digital direction, and the physical education teaching has played a significant function in stimulating students' learning initiative and promoting the promotion of students' subjective status, so it has important research value. Based on this, this paper first analyses the necessity of CAI application in college physical education teaching, then studies the application function and status quo of CAI in college physical education teaching, and finally puts forward suggestions and Countermeasures for the application of CAI in college physical education.

Keywords: Computer Aided Teaching, Physical Education, College, Function

1. Introduction
With the rapid iteration of computer information tech, computer aided tech has made a great breakthrough and has been widely used in many fields [1]. It has made outstanding achievements and played a more important function. In this context, computer-aided tech in the field of education has also been more in-depth research, in which computer-based teaching tech has been more in-depth use at all levels of current university education, especially in Physical Education (PE) has played a significant function in stimulating students' learning initiative and promoting students' dominant position. The application of CAI in college PE teaching, on the one hand, promotes the development of its PE teaching mode from empirical and theoretical teaching mode to scientific and digital direction; on the other hand, it has gradually become one of the important development trends of the current university PE teaching reform.

As a tech based on computer hardware and software as a teaching medium, the application of CAI in college PE teaching can significantly improve the interaction and communication between teachers and students. And the application of CAI in college PE teaching can improve students' understanding ability with the help of information tech means and platform, so as to significantly improve their learning efficiency and sports literacy, making the tech has an irreplaceable position and function in PE teaching. Through the application of CAI in college PE teaching, it can vividly and vividly show

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the action essentials and key points in the process of PE teaching to students by means of multimedia interaction, so as to enhance students' macro understanding and micro understanding of sports learning.

In addition, as an important part of college PE teaching reform, the utilization of CAI has obvious flexibility and is not easy to be limited by teaching space and time, this greatly facilitates the development of teachers’ teaching work and students’ learning process [2]. And with the help of the characteristics of CAI as shown in Figure 1, we can realize the double improvement of teaching method and learning process. However, there are still many deficiencies in the use of CAI in college PE teaching, which is mainly affected by the traditional experiential teaching thinking, which makes it difficult for teachers to have the information literacy required by CAI teaching, which limits its effect and function. Therefore, the research on the function of CAI in college PE teaching is of great practical value to enhance teachers and students' correct understanding of CAI and fully release its due function.

![Figure 1. Characteristics of CAI in college physical teaching.](image)

2. The necessity of CAI utilization in college PE teaching

2.1. The necessity of CAI utilization in college PE teaching

With the informatization as an important reform trend of college PE teaching, the traditional experiential college curriculum teaching has serious limitations, which are embodied in two aspects. First of all, at the subjective level, college sports have higher requirements for students' sports literacy, as shown in Figure 2, which leads to students' little interest in PE teaching. Secondly, at the objective level, PE teaching needs to show students the decomposition and details of sports movements intuitively, so as to significantly improve students' learning efficiency. In addition, based on the characteristics of college PE teaching, teachers need to constantly show the teaching process to students, so as to help students build up action memory. However, due to the traditional teaching methods, it is difficult for students to understand the movements once and for all, which makes it difficult for students to correctly understand the details of movements. The utilization of CAI can show students the correct action decomposition with the help of its interactive function, so as to improve the efficiency and effect of teaching [3]. Therefore, the utilization of CAI in college PE teaching is imminent.

In addition, the utilization of CAI can greatly stimulate students' learning initiative, mainly due to the interaction of the tech, which can make students feel the fun of PE teaching school, and can transfer the boring theoretical teaching process to students through intuitive, dynamic and image forms, so as to promote the improvement of students' understanding ability. Not only that, the main position of students can be greatly reflected. Under the utilization of CAI, teachers no longer need to transmit
action essentials to students again and again. Students can learn autonomously with the help of learning system platform, and can show them intuitively from all directions and angles, so that they can have a more intuitive understanding of details and ensure the accuracy of actions.

![Diagram](image1.png)

**Figure 2.** The concrete embodiment of students' sports accomplishment.

2.2. **Advantages of CAI utilization in college PE teaching**

The advantages of CAI utilization in college PE teaching are mainly reflected in its flexibility, intuition and the promotion of students' dominant position [4]. First of all, in its flexibility level, the utilization of CAI can stimulate the flexibility of PE teaching make students' learning process more vivid and interesting, so as to improve the learning effect. Secondly, it can stimulate students' interest in learning, ensure the improvement of students' learning initiative, and carry out targeted content push according to students' personalized characteristics, so that students can always maintain a high learning state and learning experience. In addition, the utilization of the system can give full play to the subjectivity of students' learning, further weaken the function of teachers, fully release students' autonomous learning ability, and help them master sports skills and necessary theoretical literacy more flexibly and efficiently.

3. The utilization and status of computer aided teaching in college PE teaching

3.1. **Function of computer aided instruction in college PE teaching**

The utilization of computer-aided teaching in PE teaching in colleges is mainly reflected in the teaching of sports tech practice, sports theory, sports skills and promoting sports learning. Among them, in the teaching level of sports tech practice course, it can shorten the students' practice time and make them master the action essentials faster. In the theoretical teaching level, it can greatly increase the classroom capacity, increase the information density, improve the teaching efficiency and enrich the students' learning content [5]. At the level of sports skills, it can make up for the lack of teachers' ability, so as to promote the overall improvement of students' Sports literacy. At the level of promoting PE teaching learning, it can meet students' personalized learning needs with the help of multi-level and multi-dimensional teaching methods and rich and intuitive visibility, so as to continuously improve the learning effect of students. In addition, the utilization of CAI can improve teaching methods, promote the formation of computer-aided teaching ideas in teaching, and improve the cognitive environment of PE teaching learning with rich content, flexible forms and means of expression.

3.2. **The requirements of CAI for information literacy of PE teaching teachers**

First of all, it is necessary for college PE teachers to have a high sense of responsibility, which is the basis of PE teaching. Secondly, PE teaching teachers should strengthen professional learning, especially the teaching process of teachers needs to be input into the computer system, which puts forward higher requirements for the accuracy of teachers' actions, and requires teachers to accurately
grasp the essence of teaching materials and impart the core points to students. In addition, P.E. teachers should change their teaching concept, change the traditional experiential teaching concept into a more modern information-based teaching concept, so as to be able to accept and use computer-aided tech more from the level of thinking and action. Finally, PE teaching teachers should strengthen their computer knowledge learning ability, so that they can give full play to the ability and function of CAI system.

3.3. Utilization of CAI in college PE teaching

As a means to achieve the purpose of teaching through the interaction between students and computers, it can cross integrate the multimedia content and subject tech as shown in Figure 3 below, so as to break through the limitations of traditional teaching mode, and make students' PE teaching learning process more efficient [6]. In addition, with the rapid iterative improvement of computer software and hardware level, the ability and function of CAI are constantly improved and powerful, which has been popularized and applied in many universities. Specific in the PE teaching level, its utilization of sports is gradually deepening, not only including track and field, basketball and volleyball and other traditional sports, but also swimming and fencing and other relatively new projects.

![Figure 3. Multimedia content and subject tech of CAI.](image)

4. Countermeasures on the utilization of CAI in college PE teaching

4.1. Limitation of CAI utilization in college PE teaching

At present, CAI has been widely used in universities, and has achieved good teaching effect. However, there are still many limitations in the practical utilization process of CAI tech, which are embodied in the following aspects. First of all, due to the lack of clear teaching objectives in some universities, it is difficult for CAI tech to fully release and give full play to its due effectiveness, and these universities only use the system to show their teaching hardware level, which makes it reduced to a kind of image engineering. Secondly, there is a lack of software system corresponding to CAI. Due to the lack of software system, the function of CAI system has been greatly restricted, and due to the lack of targeted optimization software system, the teaching is not targeted and it is difficult to carry out individualized teaching. In addition, PE Teachers' information literacy needs to be further improved. The lack of information literacy of PE teaching teachers makes it unable to give full play to its energy efficiency in the process of using CAI system, which limits some functions and functions, which lead to the difficulty in giving full play to the advantages of CAI teaching.

4.2. Utilization of CAI in college PE teaching

In view of the specific problems and deficiencies of CAI in college PE teaching, it is necessary to further improve and optimize the work. First of all, it is necessary for the planning department of the university to make a scientific and reasonable plan at the top level of PE teaching activities, so as to make the process and objectives of PE teaching activities more clear and intuitive, so as to lay the foundation for its utilization in CAI system. Secondly, universities should also pay attention to the
improvement of PE Teachers' information literacy, and help teachers change their teaching thinking and improve their ability to use information tools and habits by carrying out corresponding training and knowing. In addition, at the level of systematic communication, it is necessary for universities to carry out inter school communication and analyze the development trend of sports industry, so that the utilization of CAI can aim at the development trend of future sports and help students improve their sports skills adaptability.

5. Conclusion
In summary, the utilization of CAI in college PE teaching can improve students' understanding ability with the help of information tech means and platform, so as to significantly improve their learning efficiency and sports literacy, making the tech has an irreplaceable position and function in PE teaching. And can play the subjectivity of students' learning, so that the function of teachers can be further weakened, students' autonomous learning ability can be fully released, help learning more flexible and efficient grasp of sports skills and the necessary theoretical literacy. This paper analyzes the necessity of the utilization of CAI in college PE teaching, and studies the advantages and functions of CAI in college PE teaching. Through the research on the utilization of computer-aided teaching in college PE teaching, this paper analyzes its utilization status. Through the research on the utilization of CAI in college PE teaching, this paper analyzes the countermeasures of CAI utilization in college PE teaching.

References
[1] Chen Rong, Xu Hao. Current situation and Prospect of multimedia and network assisted teaching of PE teaching in Colleges and universities [J]. Journal of Beijing Sport University, 2014, 27 (2): 249-252.
[2] Hou Lingzhong, Li Xiangru. Experimental study on running multimedia teaching [J]. Journal of Capital Institute of PE teaching. 2016, 40 (3): 21-213.
[3] Qiu Baolin. CAI and PE teaching [J]. Shandong sports science and tech, 2014, 26 (3): 121-122.
[4] Tang Xiangbin. Research on the development of multimedia teaching software for the general course of boasting and holding the ball in College PE teaching [J]. Journal of Beijing Sport University, 2014, 27 (7): 968-970.
[5] Wang Lijun. Development and utilization of computer aided software in College PE teaching [J]. Journal of Beijing Sport University, 2016, 29 (1): 116-118.
[6] Zhou Yao. Making and utilization of multi-media CAI Courseware for hurdles [J]. Journal of Beijing Sport University, 2012, 25 (2): 242-243.