Study on the Recognition and Application Effects of Computer Assisted Instruction (CAI) in Physical Education

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Abstract: With the development and popularization of modern teaching methods, computer assisted instruction (CAI) has become a hot spot in current classroom teaching. CAI overcomes the defects of traditional teaching methods, and it has become an important way to optimize teaching. In college physical education classroom teaching, CAI makes up the textbook illustration and the writing explanation limitation. CAI simplifies complex actions, and it presents non-decomposable actions. CAI not only helps students to understand, master knowledge and develop intelligence, but also enables teachers to better grasp information and achieve good teaching results. This paper first analyses the necessity of the CAI application in physical education, and then analyses the recognition and application effect of CAI, and finally this paper puts forward some suggestions.

1. Introduction

Nowadays, with the development of modern education, traditional teaching methods are no longer suitable for the current education mode, especially in physical education. Computer education network resources are very rich. We can popularize the knowledge without physical education through the Internet. At the same time, we can improve the traditional experience teaching method of physical education through Internet technology, which is also an important process of reforming physical education teaching mode. The application of CAI can cultivate students 'interest in learning sports. So, CAI can promote physical education into a new stage.

2. The necessity of computer aided teaching in physical education

2.1 The objective constraint in physical education

Liking other subjects, physical education teaching should abide by the educational principles. Meanwhile, it has its own unique teaching characteristics, especially physical education technology teaching. However, the traditional teaching methods of physical education are arranged by teachers through teaching and demonstration, which makes it difficult for students to understand what teachers say. In the technical teaching, when the teacher demonstrates the complete movement skill system, the student is difficult to understand the complete movement. At the same time, not every teacher can demonstrate the correct and complete movements in the physical education teaching. So,

the traditional physical education teaching still has certain restraint.

2.2 The objective constraint in subjective education

Physical fitness is of great value in sports, especially in speed, endurance, strength, flexibility and agility. It is also the key to open physical education classes for students. However, students will feel very difficult and boring in physical education class with a little technical difficulty. So, students reduce the interest in physical education class, and students will be fear of physical education class. It is necessary to carry out CAI in public physical education.

3. Analysis on recognition and application effect of CAI in physical education

3.1 The recognition of CAI in physical education

3.1.1 Questionnaire design

Due to the particularity of physical education class, the traditional explanation and demonstration by teachers are irreplaceable. However, if CAI is used in teaching, it will have unexpected effect. Which is the reason why most students choose the best combination of CAI and traditional teaching. However, at present, most of the public physical education teachers still take the traditional teaching as the main teaching form, and relatively few use CAI. This paper makes a survey on the recognition of CAI in physical education. A total of 300 questionnaires were issued, and 282 of them were effectively collected, accounting for 94%.

3.1.2 Students' satisfaction on CAI forms in physical education

Among the survey results, 55.8% hold a positive attitude on CAI forms. And 31.4% think it is "Satisfied", and 10.5% think it is "A little satisfied", only 2.3% think it is "Not satisfied". Students' satisfaction on CAI forms by teachers is shown in figure 1. Students think that CAI courseware acts on their multiple senses by its graphics, text, image, animation and sound. This kind of teaching method can not only make the undecomposable movements easy to be visualized, but also get rid of the the traditional boring teaching mode. CAI can not only attract students' attention and learning interest, but also stimulate students' desire for knowledge. Which will make them actively participate in sports learning. Students who are not satisfied with the CAI form think that the teaching courseware is single, and the content is the same as the book. In addition, teachers play courseware faster in class teaching, which is not conducive to memory.

3.1.3 Students' satisfaction on CAI contents in physical education

Among the survey results, 2.3% hold a positive attitude on CAI forms, and 18.9% think it is "Satisfied", and 29.5% think it is "A little satisfied", only 49.3% think it is "Not satisfied". Students' satisfaction on CAI contents by teachers is shown in figure 2. The reason why students are satisfied with CAI content is that they think CAI courseware has large information capacity and high knowledge density. The clear animation demonstration replaces the relatively rough manual drawing on the blackboard, so that teachers have more time to communicate with students, and the content can be demonstrated repeatedly. The students who are not satisfied with CAI content think the courseware is the simplest presentation and the simplified teaching material. CAI content is single, mainly using word, ppt and video.
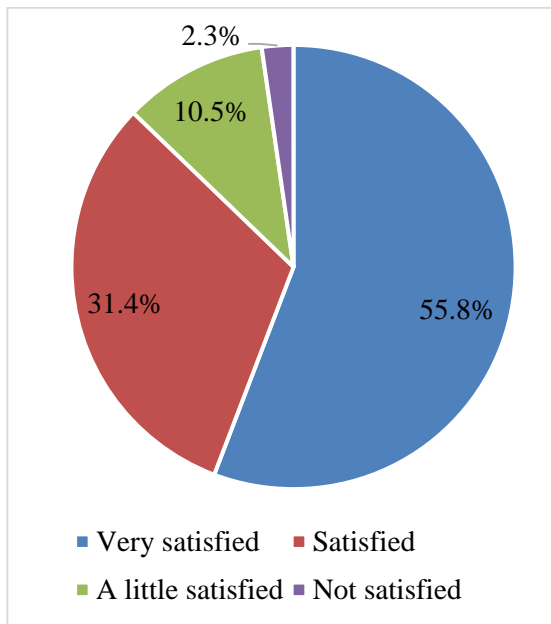
Figure 1: Students' satisfaction on CAI
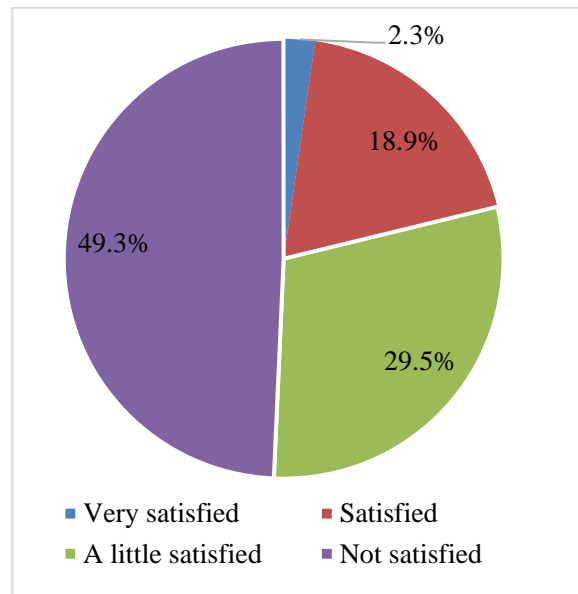forms in physical education

Figure 2: Students' satisfaction on CAI
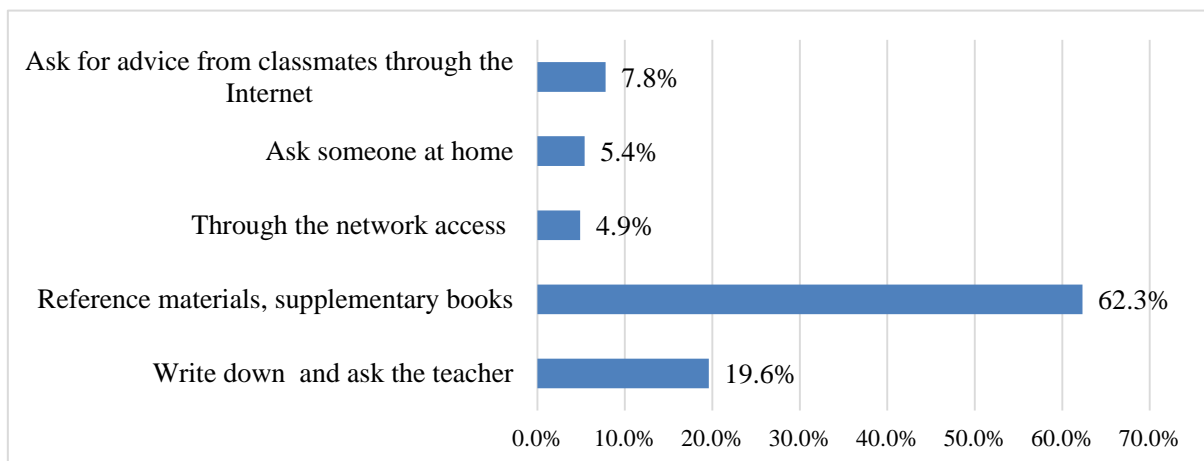contents in physical education

Figure 3: The measures when encountered problems

3.1.4 The measures when encountered problems

Among the survey results, 62.3% of students are more willing to refer to textbooks and tutorials. And only 4.9% of students will solve problems with computers. The measures when encountered problems is shown in figure 3. Students do not have enough understanding of computer-aided physical education, just like the traditional physical education in the early days. The computer network equipment and physical education study softwares are few, at the same time student's own operation level is not high. So, instead of spending a long time using computers, students are more willing to refer to textbooks and tutorials, or write down problems to consult teachers and parents.

3.2 Application effect of CAI in physical education

Compared with the traditional teaching, some students think that their learning interest, sports scores, knowledge and skills have a greater impact with the application of CAI. Their interest in

learning has improved, their performance in sports has improved, and their mastery of knowledge has strengthened. The application effect of CAI in physical education is shown as the table 1.

Table 1: The application effect of CAI in physical education

	Promoting	Reducing	Don't know
Sports learning interest cultivation	18.2%	11.3%	70.5%
The help of improving sports scores	14.6%	18.7%	66.7%
The mastery of knowledge and skills	33.1%	16.4%	50.5%

4. Conclusions

Although students approve of CAI in physical education class, it cannot meet students' needs. Teachers do not often use CAI, which restricts the development of public physical education CAI. So, colleges and universities can enhance the application effect of CAI through the following steps. First, colleges and universities set up a multimedia production studio for physical education, and actively make CAI courseware. CAI courseware can provide documents and reference for physical education teaching optimization and enrich diversified knowledge structure. Second, colleges and universities should increase the input of physical education hardware equipment. Third, increase physical education teachers' study. Physical education teachers mostly contact the computer operation slant little. So, they must make great efforts to improve their computer operation ability. Only in this way can physical education teachers carry out CAI teaching better.

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