On the Innovation of College Physical Education Teaching Mode under the Computer Multi-media Environment

Jinghong Guan1,*

1Jilin International Studies University Physical Education Department, China
*Corresponding author e-mail: guanjinghong@jisu.edu.cn

Abstract. Many students are in poor physical condition now. Although students' academic performance is very good, the school should also find ways to help them improve their physical quality. Therefore, physical education has become a hot topic in the field of education. Nowadays, physical education in many universities is irregular. They don't have a complete teaching model of their own. This leads to students in physical education class can not learn professional knowledge. The improvement of students' physical quality cannot be guaranteed by professional knowledge. In recent years, the application of multi-media technique in the field of teaching is a new breakthrough in education mode [1]. Researchers believe that the combination of multi-media technique and physical education will greatly improve the effect of physical education in universities. This paper briefly analyzes the current situation of physical education in universities. In this paper, the implementation of multi-media teaching mode in universities is described.

Keywords: Multi-media, Physical Education, Teaching, Innovation

1. Introduction
In the past, parents and teachers attached great importance to students' learning of the three major subjects. They think that students' academic performance is above everything else. The old educational system is also based on mathematics, Chinese and English. In the past, the educational circles didn't realize the importance of physical education. However, in recent years, college students' physical performance is gradually decreasing. Students' physical quality is also gradually getting worse. The Ministry of Education found that compulsory education only taught students how to learn, but not to improve their physical fitness. There is no doubt that such education is a failure. At present, there are no complete rules and regulations in PE Teaching in some schools. The old teaching mode has been deeply rooted in people's mind. In order to solve this problem, schools can only innovate the mode of physical education teaching (see Figure 1).

In recent years, school education has carried out many times of reform and innovative development. In this process, people gradually found that the application of multi-media technique can effectively improve the quality of classroom teaching [2]. It can make boring classes active. It can help students concentrate on the class. Moreover, the use of multi-media technique can also improve the use of network teaching resources. In the face of the old physical education teaching mode,
researchers believe that multi-media technique can be used to innovate the design of physical education teaching mode. Because multi-media technique is very successful in the laboratory of teaching reform of other subjects, it is considered that the combination of multi-media technique and physical education teaching will be a major breakthrough in physical education reform.

2. The deficiency of physical education teaching in universities

2.1. Lack of professional knowledge
There is no standard teaching system in many schools. According to the social survey, students think that there is no standard of physical education. Physical education has been completely turned into a time for students' independent extracurricular activities. Physical education in universities has become a separate extracurricular practice class. There are few opportunities for professional knowledge to be taught in-house. This leads to the phenomenon that students are tired of physical education and lack of learning motivation.

![Figure 1. Offline outdoor physical education.](image)

2.2. Teachers' professional skills are not standardized
In general, students can learn professional knowledge of basketball and other ball games in physical education. However, the academic knowledge of many teachers is not perfect. They teach students wrong knowledge and concepts. This leads to the students' incorrect dribbling movements. Wrong movements can even cause students to sprain. Of course, students can not improve their physical fitness according to these wrong common sense.

2.3. Do not pay attention to the assessment of final results
Today's college sports performance assessment is only a formal examination. Some irresponsible teachers will announce the answers to the test papers in advance. Some schools also adopt the form of open book examination for the final examination of physical education. They completely ignored the importance of the assessment of students' physical quality. It is not of any substantial innovative significance for physical education teaching to only consider the students' test scores.

2.4. The singleness of physical education teaching items
Many schools only offer ordinary ball games. Some schools do not even carry out professional sports teaching. Compared with physical education in China, there are many kinds of sports in foreign schools. They include ball games, gymnastics and martial arts. The current situation of physical education in China leads to the lack of students' sports consciousness. This will also greatly reduce the effect of physical education.
3. The main application of multi-media technique in physical education

3.1. Video Explanation of sports technical movements
In the process of demonstrating technical movements by physical education teachers, students can only rely on their own understanding ability to find out the implementation skills of movements. However, this process can last a long time. Some impatient students can't learn professional and correct technical movements. The sports video action explanation supported by multi-media technique can slow down the sports action to help students understand. This technique can help students to make more correct sports technique.

3.2. Game based classroom interaction
The traditional indoor class of physical education is very boring. Students are tired of this kind of class. However, the Knowledge Q & A games produced by multi-media technique can help teachers and students interact in class [3]. The psychology of students is naive. They like to play games together. The question and answer session of classroom knowledge in the form of games can help students improve their professional knowledge. In the long run, it can help them form a permanent memory of knowledge.

3.3. Application of human computer interaction supported by multi-media
The most important thing in physical education is to let students learn professional sports knowledge. Such as basketball shooting skills and football shooting skills. Teachers can upload students' technical actions to the Internet. With the help of Internet analysis technique, multi-media compares students' movements with professional ones. The interactivity of multi-media can find out the mistakes of students' actions. This can help students correct their own shortcomings.

3.4. The use of a large number of network resources
Many students are complaining that there are few kinds of sports offered in schools. Through the combination of multi-media technique and Internet technique, a large number of network resources can be applied to the teaching of physical education. Students want to learn a variety of sports can be found in the network. Teachers can use multi-media technique to classify these network resources. According to the different preferences of students, let students choose sports learning independently.

4. Innovation of college physical education teaching mode based on computer multi-media

4.1. Innovation of indoor teaching of Physical Education
In the traditional classroom teaching, teachers only instill knowledge. This teaching method is not worth promoting. It blocks the mind of the students themselves. The form of multi-media network teaching can improve the enthusiasm of students in class. multi-media supported animation can attract students' attention. Using the form of watching animation for indoor teaching is also a kind of innovation in the traditional sense.

**Table 1.** A survey of students' voting on traditional physical education and multi-media Physical Education.

| Physical education          | Student voting |
|-----------------------------|----------------|
| Traditional theory teaching | 50.3%          |
| Traditional practice teaching | 81.4%          |
| multi-media Theory Teaching | 65.9%          |
| multi-media action teaching | 85.7%          |

4.2. Innovation of outdoor teaching of Physical Education Curriculum
In many schools, the teaching method of physical education is students' free activities. Although this way can help students improve their physical fitness, it still can not let students learn professional
sports knowledge. In the way of outdoor teaching, teachers can open the outdoor mode of multi-media physical education teaching. Teachers can carry electronic screens with them. Teachers can carry out outdoor teaching activities according to the content of multi-media physical education teaching.

4.3. Theoretical teaching innovation of Physical Education Curriculum
Many students dislike the study of sports theory. They think physical education should be the time for their extracurricular activities. In order to avoid students' Weariness of sports theory, we can use the form of multi-media man-machine interaction to innovate teaching. For example, two pictures of similar sports are shown on the screen. After discussion, students can find out the difference between the two pictures and find the wrong movements of the athletes. This way can indirectly help students learn sports theory.

4.4. Innovation of practice teaching in Physical Education
The practice teaching of physical education is divided into many kinds. They include the teaching of ball games and gymnastics [4]. Many physical education teachers' teaching thinking is traditional. They think that the teaching of sports technical movements should be strict. However, this form of teaching will not be popular with students. multi-media holographic projection technique can be used to project the technical action to the main screen. Students learn the related knowledge according to the action demonstration on the screen.

5. Problems in the application of multi-media technique in physical education

5.1. The content of multi-media electronic manuscript is not substantial
Generally speaking, most of the electronic courseware of multi-media teaching are electronic manuscripts. By explaining the contents of the electronic manuscript, the teacher delivers professional sports knowledge to the students. However, many physical education teachers use electronic documents are copied from the network. The content of the manuscript has no independent and innovative knowledge of teachers. Many teachers don't even make electronic documents. This leads to the content of the electronic manuscript of multi-media teaching is not substantial.

5.2. Many teachers are not familiar with multi-media teaching system
As a new teaching mode, multi-media teaching is popular in China's education field in recent years. However, the teaching thinking of some senior PE teachers is traditional. They are used to the traditional teaching method. Many teachers are not familiar with the multi-media teaching system. Because students dislike the traditional teaching mode, their performance in the classroom is very poor.

5.3. Obsolete electronic equipment affects the quality of multi-media teaching
Multi-media teaching needs the support of good network state and advanced electronic equipment [5]. However, the computer equipment and projection equipment in many universities are obsolete. They have even been destroyed. The projected audio and video are not clear. The videos are all stuck. This situation is not conducive to the effective implementation of multi-media teaching. This situation is very difficult to ensure the quality of multi-media teaching classroom.

5.4. Over reliance on multi-media Teaching
We can not ignore the advantages of multi-media teaching in physical education classroom. However, we can not rely too much on multi-media teaching. In order to be opportunistic, some college PE teachers spend their PE classes under the guidance of multi-media indoor teaching. This teaching mode ignores the significance of the implementation of physical education. We need to make students improve their physical fitness, not just improve the academic level of sports theory.
6. The innovation strategy of the application of multi-media technique in college physical education teaching mode

6.1. Schools must improve the construction of multi-media facilities
The innovation of teaching mode needs not only high-level teachers, but also diversified teaching equipment. The innovation of multi-media teaching mode is based on the improvement of computer equipment. Many schools think that the cost of multi-media teaching equipment is very high. In order to save money, they don't pay attention to the renewal and maintenance of computer equipment. This situation leads to the further delay of the innovation of teaching mode.

6.2. Schools should cultivate teachers' concept of multi-media teaching
According to the above description, many old teachers are not familiar with the application of multi-media teaching system. In order to solve this problem, schools should cultivate teachers' concept of multi-media teaching. Schools should improve teachers' computer application technique. Schools should help teachers change their old teaching ideas. Teachers should study computer knowledge seriously. Teachers should improve the application ability of their own multi-media teaching system to give full play to the advantages of multi-media classroom.

6.3. Domestic universities should pay attention to the sharing of excellent teaching resources
Different schools have different ways of physical education teaching. Each school has a different field of exploration in sports [6]. In order to strengthen the innovation of physical education teaching mode, domestic universities should help each other. Some college teachers who have good opinions in physical education can make high-level physical education courseware. Schools can share this courseware with different universities. The sharing of excellent teaching resources is the ultimate way of physical education teaching mode innovation.

7. Conclusion
With the rapid progress of information-based teaching, physical education in universities has been a major breakthrough development. The innovative mode of college physical education supported by multi-media environment has become the substitute of traditional teaching mode. Although it has many shortcomings, we still have to do our best to improve this information-based teaching mode.

References
[1] Xin C, Wang X. Research on the Application of College Physical Education Teaching Mode in the Cloud Computing Environment [J]. Journal of Physics: Conference Series, 2020, 1624(2): 022068.
[2] Zhu, Biao. Design and Implementation of Intelligent Remote multi-media Physical Education Teaching System [J]. 2016: 421-423.
[3] Qiu Y H, Ou G Z, Huang J. Research on Design & Application of multi-media CAI Courseware for Technique Teaching in Physical Education Courses [J]. Journal of Beijing University of Physical Education, 2002, 989-994: 5120-5123.
[4] Wagner A, Altherr S, Eckert B, et al. multi-media in physics education: teaching videos about aero and fluid dynamics [J]. European Journal of Physics, 2007, 28(4): L33-L37.
[5] Ji-Sheng Z, LEI-Junrong. On Issues of multi-media Application in Teaching of Physical Education in Higher School [J]. Journal of Bjing Teachers College of Physical Education, 2002.
[6] Wen-Qing L U, Hui-Qiang J. Improving multi-media Teaching in University Physics Education [J]. Journal of Shenyang College of Education, 2007.