Research on flipped Classroom of Physical Education in Colleges and Universities Based on multimedia Technology

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Abstract. In recent decades, the rapid development of modern science and technology has brought a series of profound changes to human society. Multimedia technology is also gradually favored by the majority of PE teachers in specialized courses of physical education in colleges and universities in China. In recent years, people have gradually realized the auxiliary role of multimedia in physical education teaching and have carried out a lot of research and exploration on it. Although some achievements have been made, there are still some problems and deficiencies in physical education. Of course, the continuous development of the society also puts forward higher requirements for people's own quality, how to train students to become high-quality, all-round development of talents, in front of every educator. Therefore, the traditional way of physical education teaching is being challenged more and more severely. To reform physical education teaching with media as technical support will undoubtedly greatly improve the physical education teaching system in China and make contributions to the development of physical education in China.

Keywords: Multimedia Technology, College Education, Flipped Classroom

1. Introduction
In addition to physical education colleges, physical education has never been a key point in China's education system. P.E. class, intelligence and physique is just for the sake of the existence of art of subjects and let the students to relax the body, under the impetus of the country, more and more modern technology began to come into our colleges and universities, in the teaching process ACTS as a auxiliary role, the process of teaching in colleges and universities sports teaching with multimedia technology, breaking the original traditional way of teaching, value is reflected in all kinds of sports teaching, help the university sports teacher is more efficient to complete the physical education teaching, improve the teaching quality, this article is based on university sports teaching condition into the in-depth analysis, discusses the teaching of deficiency, in view of the shortcomings of put forward the corresponding suggestion, Use multimedia technology to assist in upgrading.
2. Current situation of physical education teaching in universities in China

2.1. Disadvantages of existing physical education teaching
Physical education teaching can make students form the spirit quality of hard-working and aggressive, and occupy a certain share in the shaping of comprehensive talents. However, due to the national conditions of Our country, it is impossible for the government to focus its work on physical education in colleges and universities, and then go to colleges and universities themselves, which makes the current situation of physical education in Our country unsatisfactory [1-3]. First of all, there is no main line in physical education teaching in colleges and universities. From the initial skills to the later physique and then to the later health, the teaching objectives of different stages exist separately, which greatly influences the physical education teaching mode in China. The teacher sets the teaching task for the students according to the examination requirement [4-6].

And the content of the exam was determined by the whole sports industry center at that time. That is to say, when China's physical education attaches importance to technology, the content of the exam takes technology as the main examination point, and the teacher makes the central point of the daily teaching task for the students, which also becomes the training of technology. When physical education attaches importance to the physique, the teacher's teaching task center has also changed to the student physique aspect carries on the training, to later becomes the health, the situation is also the same. There is no transition between skills, physique and health, and the school itself does not invest enough in sports facilities, so that the sports programs opened by the school can only meet the preferences of some students, which directly leads to the weak awareness of students' physical education, thus seriously reducing the effect of physical education teaching in colleges and universities. Secondly, the content of physical education in colleges and universities is unitary, the way is fixed, and there is no innovation. In the study of physical education, students can only rely on the explanation and demonstration made by the teacher during class time, while the teacher's teaching method has not kept pace with the changes of The Times, and still stays in the traditional teaching mode. The most typical

Type is a class teacher tell students the test project, and then according to the test content show students how to again, for the rest of the time the students have to do is to practice constantly test project, the teaching way to teach students only simple mechanical memory, no matter on skill or sports accomplishment can let students get substantial training.

2.2. Limitations of traditional teaching mode on the application of multimedia technology
In the development process of traditional physical education classes in colleges and universities, the method of narration is mostly adopted. In the practice classes of physical education teachers in colleges and universities, they still follow the traditional education and teaching mode, in which teachers teach and demonstrate relevant sports actions, and students watch and learn and practice them. As for the theoretical knowledge of physical education, it is mostly mentioned in the process of explanation or in the process of students' practice. Students' learning efficiency is low, and there are relatively big safety risks in the process of practice. And in the theory course, mostly by the blackboard writing and the static projection and so on monomial teaching. The form and method of this traditional teaching mode are relatively unitary, and the teaching technology used in the teaching process is relatively backward, which makes the teaching effect of physical education course in colleges and universities limited and not given due play. Thus, the value of multimedia technology cannot be fully developed, and PE teachers' use of it can only stay in the primary stage.

2.3. There are limitations on the application of multimedia technology in the teaching site
So far, the vast majority of colleges and universities classroom multimedia equipment has been widely installed, but the most of college sports activities carried out in professional training venue and/or open Spaces, influenced by the weather, human, and climate factors, multimedia equipment can't be good maintenance and preservation, this to a certain extent hindered the sustainable use of multimedia
equipment, leading to the university cannot be put into use in the open field of multimedia equipment.

2.4. The professional level of teachers needs to be improved

Under the current education environment and background, the younger teacher’s group is relatively more, the application of multimedia technology to the relevant technological learning faster, and for some of the older PE teachers, due to their own age or physical condition restriction, can't be - some acrobatic moves the demonstration, the za body using multimedia technology level also to stay on the shallow level, then certainly will not finish the teaching efficiency. As currently envisaged, the physical education teachers in colleges and universities in the use of multimedia related technical equipment, - a man can do more skilled use of multimedia computer, projector, computer network equipment, but on the other, more need to technical content of the use of multimedia equipment, such as multimedia platform, video equipment, audio equipment performance is unfamiliar. There is little training in higher education to improve these skills, and teachers themselves do not spend a lot of effort learning these skills. In this way, multimedia devices cannot realize their value.

Table 1. Students' views on traditional teaching and multimedia teaching in South China University.

| View         | Traditional teaching | Multimedia teaching |
|--------------|----------------------|---------------------|
| Very bad     | 2%                   | 5%                  |
| Bad          | 5%                   | 10%                 |
| Commonly     | 11%                  | 15%                 |
| Good         | 4%                   | 25%                 |
| Very good    | 3%                   | 20%                 |

Table 2. Teachers' evaluation of multimedia technology in South China University of technology.

| Project                              | View          | Number of Teachers | Percentage |
|--------------------------------------|---------------|--------------------|------------|
| Multimedia technology evaluation     | Not optimistic| 21                 | 21%        |
|                                      | So-so         | 25                 | 25%        |
|                                      | Think it's good| 30                 | 30%        |
|                                      | Very nice     | 24                 | 24%        |

3. Advice

3.1. Change the thinking of traditional teaching mode

Colleges and universities have been difficult to change the teaching mode of unilateral teaching and practice of students, which not only has a great impact on the teaching efficiency of teachers and the acceptance of students' learning skills. Teachers' oral narrative in the form - some of the teaching of sports techniques, unable to make the students have a good movement imagery, students on the basis of not familiar with the technology of movement, not the teacher explains the theory of knowledge and the technical key points with clear concept, easy to make students in the learning process of distraction, learning enthusiasm is reduced, resulting in low efficiency of learning. The multimedia technology shows the main points of technical movements through images, audio and pictures, and can control the speed of the completion of the movements in the video at will, so that the students can clearly learn methods to improve the learning efficiency. As teachers, we should pursue the teaching philosophy of "lifelong learning", constantly reflect on and improve the teaching mode, improve teaching efficiency, pay attention to innovation, and put students at the center of the classroom.

3.2. Colleges and universities should increase equipment delivery

Colleges and universities should pay attention to the software and hardware of multimedia equipment and put limited funds into unlimited learning results. In order to enable students in the new era to combine the development of information technology and deeply explore students' thinking ability, schools must also improve teaching equipment, create a good learning atmosphere for students, provide students with solid backup resources, and train outstanding students. At the same time, on the
basis of introducing into new equipment, colleges and universities should also earnestly do a good job in the follow-up safeguard of equipment, and employ professionals to install, repair and maintain equipment, so as to guarantee the operation of equipment.

3.3. Develop multimedia technology courses for teachers
As an excellent teacher in the new era, he/she must urge himself/herself to make reasonable use of the school's multimedia equipment, avoid the phenomenon of "falling ashes", learn new educational concepts, use new teaching methods, and contribute his/her modest strength to the teaching cause. In learning, the courses of multimedia technology training should be added to each teacher, so as to effectively improve each teacher's technology application ability. The multimedia technology application ability of teachers can be included in the teacher's ability assessment.

![Figure 1](image-url) Wide application of multimedia technology.

3.4. Reduce the impact of regional differentiation
Regional difference is an inevitable problem and the level of regional economic development affects the development of information technology in the region. In order to alleviate the problem of teaching mode differentiation in college physical education, we can start from the following two aspects: first, accelerate the development of regional science and technology, promote the construction of regional information infrastructure, and enable colleges and universities in different regions to realize the reform of multimedia information technology education. Second, we should draw lessons from the successful application of foreign multimedia technology in the physical education of colleges and universities and gradually develop the application of multimedia technology in the physical education of colleges and universities all over the country.

3.5. Strengthen the popularization of multimedia technology education
Given age university teachers is unwilling to accept physical education teaching mode reform, through the investigation, we found that the main reason is that older PE teachers for multimedia technology is unfamiliar, they guide into a lack of confidence in the new teaching mode, so to strengthen the popularization of multimedia technology, to improve college PE teachers' quality, changing the teaching idea.

3.6. Integrate college PHYSICAL education teaching and information technology
Traditional physical education teaching content is relatively outdated and has a single structure. Under the multimedia technology, college physical education teaching content is rich, and students have more ability and time for independent learning. However, if the curriculum content is not properly arranged, students are likely to have too many topics and no focus in the process of independent learning. Therefore, it is necessary to integrate college physical education teaching and information technology with school teaching conditions, and make reasonable arrangements for teaching content based on students' reality. In addition, teachers should also test the learning status of students in real time and give guidance to students in time. Strengthen the interaction between teachers and students.
4. Conclusion
At present, China has made some achievements in the research of multimedia technology, but it is far from enough compared with western developed countries. In the future sports teaching, the flexible application of multimedia technology in the classroom can achieve good results, strengthen the physical quality of students in our country has a great role in promoting, for the cultivation of all-round sports ability, the construction of sports power in the new century contribution.

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Wuhan education bureau, Flip the classroom teaching mode application in sports science——Take the "sports sponsorship and advertising" course as an example, Item number: 2019104.

References
[1] Han Jinlong. Design and manufacture of multimedia CAI courseware for badminton Social Sports Instructor's Primary Training [D]. Capital Sports Institute, 2010.
[2] Zhang Jianfei. Development and Application of Multimedia CAI Courseware for Table Tennis Competition Rules [D]. Wuhan Institute of Physical Education, 2008.
[3] Shi Ping. Research on the Application of Multimedia Technology in Physical Education teaching in Colleges and Universities [J]. Contemporary Sports Science and Technology, 2008, 8 (33) : 67-68.
[4] Wang Ning. Research on the Application and Development of Network Technology in College PHYSICAL Education [D]. Mudanjiang Normal University, 2014.
[5] Zhang Wei. Research on the Application of PI Teaching Method in e-commerce Operation Courses [J]. Laozihao Brand Marketing, 2020(12):125-126.
[6] Ge Jinxiang. Innovation and Dream -- A Chronicle of the 20-year Innovation Journey of AGRICULTURAL Bank of China R&D Center [J]. China Financial Computer, 2020(12):30-40.