# Research On Online Teaching Mode Based On Rain Class

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**Abstract:** The only way which must be passed is to enhance the traditional teaching mode and Internet plus. On February 12, 2020, the Ministry of education and the Ministry of industry and information technology issued a notice, which required that the prevention and control of epidemic situation should be put in the first place, the health and safety of teachers and students should be maintained, the national curriculum learning and knowledge learning of epidemic prevention and control should be combined, and students should be encouraged to exercise and carry out extracurricular reading. Making full use of PPT + voice mixed teaching in rain class, empirical research on network physical education teaching mode, enhancing students' physical quality and exploring a new way out of physical education teaching is an important issue to be solved.

## 1. Research purpose

At the end of 2019, a nationwide outbreak occurred. The outbreak of the epidemic, with its rapid spread and wide range, has attracted widespread attention and attention from all over the country and even the world. The sudden situation has brought a great impact on the education and teaching of our country. Provinces and cities respond to the call to postpone the start of school according to the actual situation. On February 12, the Ministry of education and the Ministry of industry and information technology issued a notice to put forward new requirements for "no suspension of classes and no suspension of school". "Suspension of classes without suspension" is not only a major decision made by the party and the state from the height of policy, but also a new mode of teaching development. In the case that both teachers and students can only use modern communication technology "cloud listening", how to design various teaching links to ensure the effect of online teaching is of great importance to the development of China's education Value and meaning. For individuals, health is everything. However, nowadays, most schools generally ignore the teaching of physical education curriculum, and bring serious consequences. Not only do students have heavy schoolwork burden and less extracurricular activities, but also the abuse of electronic products has led to more and more "little fat people", "small glasses" and "mobile phone control". Take juvenile myopia as an example. At present, the number of "small glasses" in China has exceeded 100 million. The myopia rates of primary and secondary school students are as high as 71.6% and 36% respectively, and 21.9% of senior three students have myopia higher than 600 degrees. What's more, many primary and secondary school students are suffering from adult disease early because of lack of daily physical exercise. As one of the most basic courses in school teaching, physical education plays an important role in the modern teaching process. "National college physical education curriculum guidance outline" points out that college physical education curriculum is mainly physical exercise<sup>[1-5]</sup>.

Through reasonable physical education and scientific physical exercise process, the public compulsory course with the main goal of enhancing physical fitness, improving health and improving physical literacy is an educational process that combines promoting the harmonious development of body and mind, ideological and moral education, cultural and scientific education, life and sports skill education in physical activities. Rain class is Microsoft office power

Point2010 and a higher version of plug-in, through the PPT+ voice mixed teaching mode, can better play the advantages of Internet plus, do physical education teaching arrangements, so that

students can stay indoors to build up their health, to a certain extent, to prevent the occurrence of epidemic infectious diseases<sup>[6-10]</sup>.

### 2. Analysis of the current situation of traditional physical education teaching mode

The main purpose of physical education is to enhance students' physique. For a person, health is the most important and necessary. If you have a strong body, you can do all kinds of work. Young people are the hope of a country and the future of a nation. Therefore, in the process of training young people, we must develop "morality, intelligence, physique, beauty and labor" in an all-round way, and no link can be ignored. In the traditional physical education teaching, due to a series of factors such as short class hours and heavy academic work, students can not devote themselves to physical education, which limits and restricts the healthy growth of students to a certain extent. Compared with the traditional physical education curriculum, the network physical education teaching is easy to operate, easy to understand, low difficulty to achieve, easy to stimulate students' fun and enthusiasm, and improve students' autonomous learning ability. Teaching in a pleasant environment is the happiest and happiest thing, and the efficiency will continue to increase<sup>[11-15]</sup>.

### (1) Teaching mode of offline physical education in China

The teaching of traditional physical education in China is mainly divided into three parts: Teachers' explanation and demonstration, students' operation and practice, and free activities. From primary school to university, China's education model has always attached great importance to the study and research of cultural courses, physical education curriculum is less, basically one to two sessions a week. At the same time, the short class hours also restrict the students' understanding of sports knowledge, leading to the lack of sports knowledge of most students<sup>[16-20]</sup>.

# (2) The necessity of setting up physical education curriculum

"The effect of physical education lies in strengthening muscles and bones, increasing knowledge, adjusting feelings and strengthening will". The importance of physical education is not only to strengthen students' physique, but also to be a part of education, which will benefit students for a lifetime. If we do not attach importance to the education of physical education, it must be a problem education, and it is very difficult to cultivate the talents needed by the times. Physical education not only enhances students' physique, but also develops students' brain thinking. Human brain is an important part of the body. When students' physique is enhanced, the thinking function of brain is also enhanced correspondingly. In sports activities, we often use the brain thinking activities to judge the balance of the body, direct the speed of movement and adjust the rhythm of competition. There is no physical activity without positive thinking in the brain. On October 25, 2016, the CPC Central Committee and the State Council issued and implemented the "healthy China 2030" planning outline, aiming to promote the construction of a healthy China and improve people's health level. In September 10, 2018, general secretary Xi Jinping made clear instructions at the National Education Conference: "we must establish a healthy first education concept, and open up enough physical education classes to help students enjoy physical exercise, enhance their physique, improve their personality and temper their will." Physical exercise, not only can promote students' physical and mental health, strong physique, but also can temper students' will, broaden their mind and enhance their ability of unity and cooperation. The research shows that Taijiquan, Baduanjin and other sports have the obvious effect of "preventing disease". Therefore, as a world power in the 21st century, China should be a good leader, Do a good job in physical education and teach physical education<sup>[21-24]</sup>

### 3. Analysis of PPT + Voice online mode in rain class

## (1) Analysis of rain classroom teaching mode

Rain classroom is an interactive intelligent teaching tool jointly developed by school online and Tsinghua University Online Education Office. Rain classroom software is attached to power point2010 and higher versions, which is easy to install and operate, and is suitable for most educators. It gives a new visual experience to every link before, during and after class, which

greatly improves both teachers and students

The interaction between the students will never be offline. The teacher made the preview PPT courseware online in advance, and dubbed the PPT through the rain classroom platform, and generated the online class of voice class. The official account was pushed back to the students as the preview material before class (or the video resources could be inserted) through the WeChat classroom. Students receive ppt with dubbing. They can listen to the teacher's lecture while watching the PPT, or interact with the teacher through the barrage. In addition, rain class also has the function of student data analysis, so that teachers can grasp the students' learning dynamics at any time. "Rain class" integrates the three learning links of "before class, in class and after class", which increases students' ability of autonomous learning, releases the energy of teaching and learning, provides teachers and students with complete and three-dimensional data support, personalized reports and automatic task reminders, so that teachers and students can interact more and teach more efficiently. This mode is not only simple to operate, but also suitable for all teachers who use PPT to teach. It can quickly build a course without making video courses. It has a large audience and is suitable for promotion in a wide range.

### (2) Teaching design of Physical Education

Making a reasonable and efficient physical education teaching mode, giving full play to the advantages of digital and intelligent Internet, adopting ppt + voice mixed teaching mode, and doing a good job in physical education teaching in the new period will help to establish a healthy concept and improve the life beliefs of contemporary college students. Using rain class, teachers can push the pre class preview courseware with MOOC video, exercises and voice to students' mobile phones, so that teachers and students can communicate and give feedback in time; in class, real-time question answering and bullet screen interaction provide a perfect solution for the interaction between teachers and students in traditional classroom teaching.

#### 2.1. Preparation before class

At present, most colleges and universities do not make compulsory requirements for preview before class. More importantly, teachers require students to preview the next lesson at the end of a class. Preview before class is an important part of improving the effect of classroom teaching, which plays a role of preheating. If students have a general understanding of the content to be taught, it will greatly reduce the pressure of classroom teaching. At the same time, the teacher analyzes the difficult knowledge points fed back by the students, so as to avoid the situation that the students can not understand some concepts and affect the follow-up learning. The practice of physical education classroom teaching in recent two years shows that the knowledge system of this course is huge, and there are many knowledge points. It is difficult for students to understand and master the relevant knowledge and teach all the contents in the teaching materials in limited class hours. Therefore, only by urging students to preview and sort out the course content in advance, can the classroom teaching effect be effectively improved. Preview before class is not simply to ask students to read the content of the textbook in advance. Teachers should prepare some materials in advance to guide students to preview. The rain classroom platform provides an effective way for teachers to release preview materials. If there is no pre class preview, it is very difficult for students to keep up with the rhythm of teachers in class. If the understanding of concepts and definitions is not in place, it is easy to feel that knowledge points are out of touch. Through the rain classroom platform, the preview courseware made in advance is pushed to the students' mobile phone terminal, and students are required to preview in advance, which can effectively solve the above problems. The preview courseware consists of two parts: the summary of the next lecture and five additional exercises, which can sort out the knowledge points and improve the preview effect. It should be noted that the preview courseware content should focus on the basic knowledge points that students can learn by themselves, and the exercises should also be closely related to the preview content, and the amount of questions should not be too much, so as to avoid students' fatigue and affect their learning enthusiasm. According to the feedback of students and the completion of exercises, teachers should adjust the teaching content in time, and put the emphasis of classroom teaching on the concepts that are difficult to understand and easy to be confused, so as to improve the efficiency

## of classroom teaching.

First of all, physical education teachers should make clear the teaching tasks of this semester and make reasonable teaching arrangements. Physical education is mainly divided into two parts: sports theory knowledge and sports events. Sports theoretical knowledge needs to do PPT courseware in advance, with more pictures and less words, so as to increase the interest, upload to the rain classroom platform, and PPT the courseware Dubbing, repeated check, using wechat background push to students' mobile phones; for sports events, such as Baduanjin, it is divided into several links, and professional videos are properly added in the process of PPT production to assist voice interpretation, and push to students' mobile phones under the condition of clear and easy to understand.

### 2.2. Teaching in class

After receiving wechat push, students watch ppt learning in advance. In the course of class, PE teachers simply explain the whole thing in the form of live broadcast. The rest of the time is left for students to exercise independently. Teachers can view the background data in real time. If students have any questions, they can leave a message in the background for discussion.

Through elaborately designing questions, activating the classroom atmosphere, deepening students' understanding and digestion of important and difficult knowledge, the basic concepts involved in physical education are complicated, so it is particularly important to grasp the key and difficult contents in limited class hours and to explain them pertinently. This not only requires teachers to deeply analyze the teaching content, to be sure of it, but also to grasp the students' understanding of the important and difficult contents and grasp the teaching rhythm. For those basic and simple knowledge points, we should guide students to use the time after class to study independently. The past classroom teaching practice shows that it is difficult to mobilize the classroom atmosphere and stimulate students' learning enthusiasm by giving priority to teachers' teaching. Classroom discussion and communication is an effective way to activate the atmosphere. After explaining some important and difficult contents, teachers can send the designed subjective and objective exercises synchronously through the rain classroom platform. Students can use the bullet screen function to discuss, so as to improve the students' participation in the teaching process. Therefore, we carefully designed two exercises to help students understand and master. What needs to be pointed out is that each discussion session needs to give students some time to think. For those students with poor foundation, special attention should be paid to them so that each student can understand and master the teaching content.

### 2.3. Review after class

At the end of the course, students can integrate the fragmented time for learning anytime and anywhere. Teachers and students can also exchange and discuss in wechat group to express their opinions and enrich their life after class. At the same time, teachers also arrange tasks after class to help students review and consolidate.

## 2.4 auxiliary methods

The innovation of curriculum reform idea is important, but how to implement the curriculum idea effectively is more valuable. To improve the efficiency of physical education, so that students with different physical conditions can benefit from sports learning is the goal of college sports. College physical education has been put forward and tried for many years, but the scale of implementation is limited, and most of them are limited by the relevant teaching documents of various schools. Firstly, students' Sports credits can only be obtained by studying in the regular physical education classroom, which is a single learning method; secondly, teachers can not calculate the teaching workload when they carry out multi-level teaching and guiding activities; thirdly, they are not in the Academic Affairs Office of the University It is stipulated that physical education should be held once a week at a fixed time, which is not allowed by the school. As a result, the multiple ways of obtaining credits by the Ministry of physical education are not consistent with the spirit of the students. According to the syllabus and curriculum teaching requirements, the hierarchical teaching of college public physical education is to design multi-level teaching objectives, use different teaching methods and implement different teaching strategies

according to the requirements of the syllabus and curriculum teaching, aiming at different students' acceptance ability and sports foundation, and according to the rules and characteristics of sports technology formation, so as to make students at different levels obtain steady improvement and development on their own basis  $_{\circ}$ . The hierarchical teaching mode is mainly to solve the problem of continuous improvement and development of sports advantage students and the transformation of sports weak students. At the same time, it also lightens the burden of classroom teaching for middle level students. The goal of physical education in Colleges and universities is to face all college students and achieve the goal of "big"

For the all-round development of students' body and mind, regular physical education in Colleges and universities is an important link to achieve this goal. However, facing the students with different physical qualities and great differences in sports cognition, it is difficult to achieve the expected effect by adopting the uniform teaching mode of unified content, unified progress and unified assessment standards. Teachers should take care of the front and back in class, increase the difficulty of teaching, and improve the teaching efficiency It is difficult to improve the quality of teaching. "Teaching" and "learning" is a bilateral dynamic process. Students are the main body of teaching activities. In classroom teaching, we should promote all students to improve on the original basis, instead of sacrificing the development of some people for the sake of the development of others. Therefore, the use of hierarchical teaching mode is to separate the excellent and disadvantaged students from the regular physical education, so that class A and C students no longer occupy the conventional classroom resources. For class B students, teachers can have more time and energy for the same level of students to carry out more targeted teaching. The key of level teaching is to give students a determination and self-confidence. Class a students study under the organization of Sports Association and the guidance of instructors. The main activities include self-study and self-training, mutual exchange among students, organizing group competition, referee training, cheerleading training, characteristic skill display, campus sports service (school sports meeting, collective winter long-distance running, physical fitness test and publicity and referee task of individual sports competition). In the process of implementation, we have developed a good spirit of cooperation, learned how to communicate with each other, help each other, and improve together; we also trained a number of students' sports backbone, assisted physical education teachers to participate in the organization and management of extracurricular sports activities in the school, which further explored and improved the physical education ability of the dominant students, and promoted the enthusiasm of the whole school students to participate in physical exercise At the same time, it also reserved reserve forces for the school sports teams.

At present, the causes of sports vulnerable groups are various, including education system, family, social environment, students' physiological and psychological factors, such as the traditional examination oriented education, which only pays attention to the enrollment rate and ignores physical exercise, resulting in poor physical quality; for example, the family's doting on children leads to the lack of hard-working spirit and the ability to resist setbacks; such as their own physiological problems (figure, skin, outside) For example, the lack of understanding of the significance and role of exercise does not matter whether there is physical exercise or not, resulting in not serious class, and even showing rebellious and antagonistic behavior. In college physical education, the particularity of this group is generally ignored, and this kind of students are even divided into "poor students, inferior students" as a burden, which leads to the situation of these students getting worse. Therefore, it is of great significance to realize the effective transformation of sports vulnerable groups in hierarchical teaching. According to the investigation, this kind of student group is engaged in physical training

In terms of practice, they are still eager for the care, guidance, encouragement and guidance of physical education teachers. In this study, we do not lose heart and give up in the treatment of class C vulnerable group students. The teaching method is "psychological counseling + body shape + physical quality + game + exploring specialty"  $15 \sim 20$  students, fully stimulate the students' subjective initiative, use the guidance of learning in class and homework after class (quality practice video display), guide students to establish a good sense of physical exercise, pass rate increased to

more than 97%, to achieve the effective transformation of sports disadvantaged students. Class D students are a special group with a small proportion of people. Their physical condition is very different and the teaching content can not be unified. Therefore, it is necessary to set up a physical health class to teach separately. The curriculum design and teaching methods should be practical. Through the questionnaire, on the basis of collecting the activities and interest orientation that students like to participate in, the teacher studies the personalized teaching scheme with the students. The teacher guides the general warm-up exercise, arranges the homework, lets the students prepare lessons by themselves after class, uses the network resources to find out the exercise items that they can and explains in class

#### 4. Conclusion

The traditional teaching mode of physical education is to transfer book knowledge with teachers as the center. Under the premise of completing teaching tasks within limited class hours, it is easy to ignore students' ability to accept knowledge, which can only guarantee the quantity but not guarantee the quality, which will lead to the teaching effect not reaching the expected goal. In contrast, the new teaching mode based on rain classroom scientifically covers the whole process of "before class, in class and after class", and truly implements the "student-centered" teaching concept. Only with more time to design the teaching content carefully and grasp the teaching process in a more flexible way can the advantages of rain classroom intelligent teaching mode be brought into full play and become the natural extension of traditional teaching mode.

Of course, the teaching mode based on rain class also poses new challenges to teachers,

The importance of physical education is not only to enhance students' physical fitness, but also to be a part of education, which will benefit students for a lifetime. If we don't pay attention to physical education, we must have some problems. The use of rain classroom in physical education teaching not only enriches the classroom content, strengthens the relationship between teachers and students, brings a new teaching experience, but also has low difficulty to achieve, which can fully meet the students' understanding and learning of sports knowledge, and is suitable for the promotion of teaching in a wide range.

As classroom teaching is difficult to cover all aspects, it requires students not only to review and consolidate what they have learned, but also to learn part of the content independently after class. Due to the limitation of classroom teaching time, we focus on explaining that after the end of a certain chapter or a certain stage of classroom teaching activities, we push a certain amount of review materials and exercises to the students' mobile phone terminal through the rain classroom platform, as an extension of classroom teaching, to help students consolidate what they have learned, and timely evaluate the learning effect of students after class. The feedback of students' learning after class is an important basis for teachers to timely adjust the teaching progress and carry out targeted teaching guidance.

(1) Constructing new physical education teaching mode to make up for the disadvantages of offline physical education curriculum

Traditional physical education, although less class hours, but the teaching content is various, it is difficult to fully grasp in a short time. In addition, the teaching mode is rigid, many students often secretly do small movements, unable to concentrate on learning. Network teaching with the help of rain class has changed the traditional teaching mode of physical education, which is very novel for students. In the process of implementing network teaching, sports videos, such as World Cup, NBA and other sports events, can be played to cultivate students' national feelings and sense of national honor, and can also influence students' correct sports actions imperceptibly. More importantly, online physical education is easy to operate. Compared with culture class, it is relatively easy to implement and has strong operability. Students can also use their extracurricular time for fragmented learning.

(2) Reconstruction of new relationship between teachers and students in Physical Education in rain class

Students can send problems to teachers through the "discussion area" of "rain class", and

teachers can solve students' problems through mobile phones at any place and at any time. On the other hand, through students' autonomous learning, students can find problems in time and correct them in time, which really teaches them how to acquire the knowledge they need. The traditional teaching mode in China is that teachers speak and students listen. After class, students may have problems in the operation process. However, due to the actual conditions, students are not convenient to ask the teacher for advice, and dare not ask the teacher for advice. As a result, the problems are repeatedly delayed and finally come to nothing. The network of rain class makes it easy for students to watch ppt voice and video, find out the problem or ask the teacher to answer questions online, so as to solve this difficulty.

(3) Network physical education curriculum, master the dynamic of each student

Rain class through real name class certification, through the mobile phone background release preview and review materials before and after class, students can preview and review before and after class. In real life, some students are shy and introverted. They dare not ask teachers and classmates for advice when they encounter problems they don't understand. The physical education curriculum is networked so that students can speak freely on the network platform and solve their difficult problems. In addition, at the end of the course, the rain classroom background will automatically send the students' performance in this class to the teacher's mailbox in the form of e-mail. At the same time, the review and preview before and after class are also recorded in the background. Through the background of students to master the situation, is conducive to real-time understanding of student dynamics. It is worth noting that students need to use mobile phones to learn in the teaching process of rain class. However, the temptation of mobile phones is great. Some students may abuse their mobile phones to play games, watch videos and other activities unrelated to learning. Therefore, the rational use of mobile phones is very important. As long as the students finish the preview before class and review after class on time and according to the quality, the teacher can supervise through the backstage; in the classroom teaching, it should be emphasized in the first class that the use of mobile phone is only auxiliary teaching in the classroom, the teacher should follow the teacher's screen when teaching the content, and then operate the mobile phone when the classroom test or barrage discussion is needed.

To sum up, PPT + phonetic hybrid physical education teaching in rain classroom has changed the traditional teaching mode to a certain extent, significantly improved the learning effect and teaching quality. In the process of physical education teaching, it has increased a certain degree of interest and autonomy. The classroom form is simple, effective and timely, which is of great help to stimulate students' independent thinking. In the face of the current special situation, it is necessary to do a good job in online course teaching. Therefore, the correct use of rain classroom physical education teaching

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