

The Application Dilemma and Innovative Path of "MOOC+ Flipped Classroom" Model in Physical Education Classrooms in Primary and Middle Schools

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Abstract: Using literature and other methods to analyze the plight and path of the "MOOC+Flipped classroom" teaching model in physical education classrooms in elementary and middle schools, the research found: The deviation between two-dimensional video presentation and three-dimensional physical exercises, the double dilemma of the Internet and physical education in primary and secondary schools, the lack of directivity of teaching videos, and the misunderstanding of teachers' teaching are the main elements of physical education in the current "MOOC+Flipped classroom" model. It is necessary to reasonably position the role of MOOC in the physical education teaching process, properly preview and strengthen review; improving the platform network environment, popularizing the recognition of movement concepts and strengthen the pertinence of videos, and reshaping the new concepts of "teaching" and "learning" to solve the existing problems.

Keywords: "MOOC+Flipped classroom", primary and secondary schools, physical education classroom, physical education teaching

1. Introduction

In 2018, the Ministry of Education issued the "Education Informatization 2.0 Action Plan", which further pointed out the direction for my country's education informatization. In recent years, the emergence and popularization of information-based teaching methods such as flipped classrooms and Moocs have gradually enriched and standardized online education resources in various disciplines. At the same time, school physical education has also had a solid theoretical foundation and systematic learning content. However, since the direct participation and practicality of the body are the essential characteristics of the physical education discipline, network resources and online learning alone are far from enough. The process of physical education informatization still faces many challenges. Popularizing and improving informatization teaching is the inevitable development of education and the only way for education to go to the future. Under this background, what kind of difficulties will the informatization of physical education face? How to make physical education not limited to its characteristics and keep up with the era of information teaching? This article will combine the "MOOC+Flipped classroom" teaching model with the essential characteristics of the physical education subject, deeply analyze the problems existing in the "MOOC+Flipped classroom" model of physical education classrooms, and provide relevant measures for accelerating the informatization process of physical education teaching.

2. The application dilemma of "MOOC+Flipped classroom" model in physical education classrooms

Among the many pieces of researches on Moocs and flipped classrooms, most of them are based on the traditional teaching model of the primary and middle school class system, which generally includes information about hardware facilities, limitations of teaching methods, low autonomy of students in off-class learning, and assessment mechanisms that need to be issued such as improvement and solidification of the teaching model. However, because physical education classrooms are different from general classrooms and have their particularities, they also have some special application dilemmas.

2.1 The deviation of two-dimensional video presentation and three-dimensional body exercise

The biggest difference between the physical education classrooms and other classrooms lies in the physical practice, activity, experience, and the unfixedness of the venue [1]. It is characterized by the direct participation of the body in the three-dimensional space. In the "Flipped classroom" mode, the MOOC for self-learning before class only displays two-dimensional imaging on the Internet platform. Especially for primary and middle school students, there will be a certain deviation in the understanding of the technical action explanation of the two-dimensional screen. From another perspective, the formation of technical actions is generally divided into the cognitive phase, the decomposition phase, the practice positioning phase, and the automation phase [2]. Once the understanding of the technical actions is deviated during the learning process, and on the basis of the deviations, after forming self-awareness and developing to the stage of automation, it is difficult to correct the technical actions that have been formed. Therefore, elementary and middle school students do not receive realistic guidance after class. They only use two-dimensional instructional videos as the main learning basis and perform technical exercises after comprehension deviations, thus forming self-cognition and certain fixed movements, which are actually for sports teachers increase the difficulty in the field teaching process. In traditional teaching, a physical education teacher connects dozens of students, and cannot fully take care of each student when teaching on the spot, which leads to the inability of the physical education teacher, the uneven distribution of classroom resources, and the students cannot learn real special skills in the physical education class. Therefore, in the "MOOC+Flipped classroom" model, absolutely allowing students to study by themselves and practice technical movements after class will also lead to serious teaching malpractices. The reasonable use of MOOC for self-learning before class is one of the urgent problems in physical education teaching under the model of "MOOC + Flipped classroom".

2.2 The dual dilemma of Internet and sports development in primary and secondary schools

The learning method of "MOOC+Flipped classroom" teaching model is mainly based on the network platform, but due to the openness, diversity, concealment, and independence of the network [3], many primary and middle school students who have not formed correct values use the network. Improper remarks published on the platform may even cause verbal abuse and personal attacks in the course discussion area. At the same time, due to the poor self-control of primary and secondary school students, it is difficult to distinguish the bad information that exists in the network, and there is the possibility that unhealthy network information seriously harms the mental health of primary and secondary school students. On the other hand, the development status of physical education in primary and secondary schools is still worrying. Although physical education is one of the indispensable subjects in the school curriculum today, there are still many people (including physical education teachers) who have always had certain prejudices against physical education subjects. Physical education has not really been accepted and recognized by people like Chinese, mathematics, and other subjects [4]. The main reason of this problem is that school leaders, physical education teachers, parents, and students have serious deviations in the cognition of the concept of physical education. They believe that physical education is just a form of expression of simple minds and developed limbs, and only needs to be mastered some kind of action or jumping high and far is enough. Physical education teachers and parents only saw the "scores" in the additional examinations of the Chinese recruitment physical education in the physical education class but did not see the scientific value and the physical and mental value that the school physical education can reflect through the universities, middle schools, and primary schools. Although people's emphasis on physical health has been gradually increasing in recent years, most parents believe that they do not learn too many sports skills in physical education classes in schools, which has given birth to a large number of sports training institutions. However, physical education is still stuck in the status quo of pursuing scores. Therefore, the network and sports entering the school and the families of primary and middle school students at the same time is a problem that needs to be solved in the application of the "MOOC+Flipped classroom" model to physical education in primary and secondary schools.

2.3 Lack of instructional videos and misunderstandings caused by teachers' teaching

From the perspective of teaching theory, MOOC is based on behaviorist theory "Stimulus-response" Theoretical teaching has exposed the shortcomings of lack of teaching design, teaching mode, the hierarchy of teaching goals, and targeted teaching objects, and cannot adapt well to the specific

requirements of many disciplines and different types of courses[5]. Although the flipped classroom can make up for the lack of targeted teaching objects in MOOC videos to a certain extent, due to regional and urban-rural differences, physical education teachers and students have different perceptions of physical education. Students at different stages and different projects have different curriculum settings. There will be big differences in the above, so the general MOOC content is difficult to take into account in all situations. In addition, teachers rely too much on ready-made network resources and fixed processes when they are able to make MOOC videos, and ignore the cognitive abilities and behavior characteristics of students in specific fields. It will still lead to a lack of directionality in the flipped classroom process. At the same time, "MOOC+Flipped classroom" model, online videos have almost completed all the work of teachers at the level of professional skills, which can easily lead to deviations in the teaching process of teachers in the field. If you let go of them in the classroom, you only need to give an order to let students directly enter the technical exercises. The key link for teachers' tour guidance and error correction is actually the "MOOC+Flipped classroom" serious misunderstandings arising from the formula. Thus, in "MOOC+Flipped classroom" Although the main position of the physical education teacher is shifted to the students under the model, the dominant position of the physical education teacher should still be affirmed during the implementation of the flipped classroom.

3. The innovation path of "MOOC+Flipped classroom" model in physical education class

3.1 Reasonably locate the role of MOOC, prepare appropriately and strengthen review

Because the development of information education has just started, and the current technology of converting or recording all Moocs into three-dimensional video through large-scale video data processing is not mature and popular, VR technology cannot be widely used in online education. On the whole, the conditions for the teaching of physical skills to fully rely on the network platform are not mature enough, but information education has begun to impact the sports field. Therefore, under the situation that the network platform must be accepted and adapted to the physical. Reasonable positioning is the first task of physical education in the era of information education. In the initial stage of applying the "MOOC+Flipped classroom" model to physical education, teachers and students should be aware that MOOC is only a tool to assist learning and practice under the classroom, and cannot completely replace the teaching by the classroom teacher, flipping the field teaching in the classroom Should be the focus of its education model. At the same time, teachers need to pay attention to the guidance of students' MOOC learning after class, informing students that physical practice is necessary for physical education, guiding students to explore the explanation of technical actions in related videos, and actively communicating the problems found during MOOC learning with teachers communicate in the classroom, emphasizing the auxiliary role of MOOC and the decisive role of classroom and after-school exercises. After conducting field teaching to make a comprehensive analysis of the questions and important and difficult actions raised by the students, students are required to review relevant MOOC videos after class, and fully understand and master the technical actions in their spare time. In general, when using the "MOOC+Flipped classroom" model in physical education, the deviation between the two-dimensional video and the three-dimensional body can easily lead to improper understanding of the active display and wrong practice. Therefore, the MOOC cannot be overstated. The role of pre-class preview, and the need to pay full attention to the continuous auxiliary role played by MOOC in the review after the field teaching.

3.2 Improve the platform network environment and popularize the awareness of movement concepts

In an environment where educational methods are ushering in information and technological changes, the network environment has an increasing degree of influence on the physical and mental development of primary and middle school students. Therefore, when primary and secondary school students use MOOC for learning, specific methods should be adopted to avoid possible adverse effects. 1) Strengthening information control, especially in the MOOC platform, the display of public information must be viewed as primary and secondary school students, strengthen the control of inappropriate speech and other behaviors, and improving the control standards. 2) Establishing a fixed online class group for the flipped classroom teaching class, and carry out real names, while allowing parents and teachers to enter the online class group to play a certain supervisory role. 3) The school can build MOOC resources in its own local area network, and students can only access the school's intranet

to learn on the MOOC platform to avoid interference from other network information. 4) Strengthening the guidance and ideological and ethical construction of parents and teachers on the Internet use of primary and middle school students, and form a good network behavior standard. In strengthening the level of cognition of movement concepts, we should give full play to the role of Moocs in disseminating knowledge. In the course of MOOC explanation, the knowledge of biomechanics, physiology and anatomy is interspersed for rational understanding, for example: in the teaching of forehand picking in the teaching of badminton, the linkage sequence of body coordination and force when performing the action, shoulder and elbow the movement direction and law of the joints and wrist joints. At the same time, in the design and production of the sports MOOC, we should not only introduce related technical training methods and plans but also involve health care and basic exercise knowledge, such as bandaging, extreme points, secondary breathing, delayed soreness, lactic acid accumulation and related knowledge of heart rate monitoring. Such a form of teaching helps to make physical education truly move from subject to science at the school classroom level. At the same time, MOOC teaching can also spread relevant theoretical knowledge to families and communities, and use the family as a medium to gradually improve society's renewal of physical education classes. Cognition promotes the physical education curriculum from the "physical" in the concept of people to a form that fully combines physical education and intellectual education.

3.3 Strengthen the pertinence of videos and reshape the new concept of "teaching" and "learning"

Although the technical actions involved in sports events have fixed standards, students of different ages have different levels of mastery of the same technical movement standard, and the learning time consumed is also different. Therefore, two aspects of pertinence should be strengthened when making sports Moocs. On the one hand, the pertinence of teaching objects: In the process of physical education, students of different ages are divided into levels. For different levels, the types of PE MOOC should be more sufficient, which fully reflects the dispersion and aggregation of PE MOOC courses. On the other hand, which is the pertinence of teaching content. Under specific technical action standards, appropriate simplifications and adjustments can be made according to the specific conditions of the learning object, so as to increase the popularity of teaching implementation and the realization rate of teaching goals, thereby enhancing students' participation in physical education satisfaction and gain in the classroom. In addition, when making MOOC courses, teachers can combine regional characteristics and some problems existing in the actual physical education process to make targeted and teaching videos that can fully promote learning, focusing on people-oriented teaching in accordance with local conditions, and cultivating students' personality development and physical function. From the perspective of field teaching, Under the "MOOC+Flipped classroom" model, the physical education teachers' self-cognition in the classroom plays an extremely important leading role in physical education. Teachers and students should realize that in the process of physical education, without the on-site guidance of physical education teachers, it is impossible to achieve the teaching goals by relying only on MOOC learning and untargeted exercises. "teach". The process should be correctly established in "MOOC+Flipped classroom". New teaching concepts and professional ethics awareness under the model, realizing that oneself is not only the producer of teaching videos and the publisher of homework, but also the creator and introduction of teaching situations in the classroom, and the organizer and planner of teaching activities before class to during class to after class, the responsibilities of physical education teachers are getting bigger and bigger, not smaller. Students on the other hand "learn" Teachers' help should be actively sought in the process, and it is necessary to fully realize that learning after class is not a one-time-and-for-all study. On-the-spot exercises in class and teacher's answer guidance are the key to mastering technical movements and related knowledge. Therefore, in the flipped classroom, both teachers and students should establish correct classroom concepts and jointly complete the physical education curriculum. "teach" versus "learn", then achieving the teaching goal.

4. Conclusion

In the era of informatization of education 2.0, informatization teaching is the only way for all groups, schools, and disciplines to continuously improve the education level, and is the main way to realize the comprehensive popularization of modern education. Although physical education has its own characteristics such as practical participation, it still has strong feasibility in informatization teaching. The combination of physical education and informatization is not only the performance of the sports discipline to pursue the development of the educational era and enhance its own value, but also

to strive to achieve the basic tasks of "Three Alls, Two Highs and One Big" in the "Education Informationization 2.0 Action Plan" are embodied in concrete terms. Specifically, physical education needs to find a path suitable for its own development in the context of the rapid development of educational informatization. On the one hand, it must combine the characteristics of disciplines and rationally endow the unique value of informalized teaching resources such as flipped classrooms and Moocs to enable students make full use of online education resources for learning; on the other hand, sports itself must also break the conceptual barriers of "sports uselessness" through the Internet and other channels, and lay a solid foundation for the further integration of physical education into information teaching; finally, students still cannot lose sports. The essential characteristics of the training must be truly invested in the exercise, and at the same time, physical education teachers must do a good job in the transformation from the teaching function to the combination of supervision and guidance functions.

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