

Research on the strategy of digital enabling high school physical education teaching

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Abstract: With the rapid development of information technology, digitalization has become an important force to promote the educational reform. As a key link in the comprehensive development of students, high school sports is also faced with the opportunities and challenges of digital transformation. Based on the current situation of digitalization of high school physical education, this paper analyzes the problems such as the lagging construction of digital infrastructure of physical education, the lack of digital teaching ability of teachers, and the limited utilization of classroom digital resources in detail. On this basis, the application strategies such as building intelligent teaching platform, innovating digital teaching mode and improving digital evaluation system are put forward, in order to inject new digital momentum into high school physical education and promote the all-round development of students. Only by seizing the digital opportunity and deepening the reform of physical education teaching, can we cultivate the new talents of the times with the all-round development of morality, intelligence, physique, beauty and labor.

Key words: high school physical education teaching; digital empowerment; strategy research

1 Introduction

Physical education is an important part of students' all-round development, and it plays an irreplaceable role in promoting students' physical and mental health and improving their comprehensive quality. At present, digital technology is deeply affecting all fields of education and bringing new opportunities for the reform of subject teaching. However, due to the constraints of traditional teaching concepts, lagging digital infrastructure construction and other factors, the digital process of high school physical education is still facing many difficulties. Therefore, how to solve the current problems and promote the deep integration of physical education and digital technology has become a realistic topic to be solved urgently. On the basis of analyzing the digital situation of high school physical education, this paper explores the effective strategies of digital enabling physical education, and provides new ideas for promoting the reform of high school physical education.

2 Analysis of the digital status quo of senior high school physical education teaching

2.1 The construction of digital infrastructure for physical education teaching is not perfect enough

PE teaching facilities are the material basis of carrying out teaching activities, and their digital transformation process directly affects the innovation of teaching mode. At present, the intelligent level of most high school stadiums is not high, lacking necessary information teaching equipment, and the digital teaching environment has not been fully constructed. At

the same time, there is a lack of physical education auxiliary training systems, and most schools are not equipped with VR, AR and other equipment, so it is difficult to provide students with immersive and interactive learning experience. In addition, the development of the physical teaching management platforms lags behind, and the teaching organization, process monitoring, effect evaluation and other links lack the necessary digital support. The lack and backwardness of the information infrastructure for physical education have become important factors restricting teaching innovation and quality improvement, and schools still face many challenges in this field.

2.2 The digital teaching concept and application ability of teachers

Teachers are the key subjects of physical education teaching, and their digital teaching concept and technology application ability directly affect the effect of teaching reform. According to the survey, some high school physical education teachers still adhere to the traditional teaching concept, and have a biased understanding of digital teaching, believing that technical means will weaken the interaction and sense of participation in physical education classroom. At the same time, many teachers lack systematic information technology training, and their theoretical literacy and practical ability of digital teaching need to be improved. In teaching practice, teachers have insufficient ability to select and use digital teaching resources, and it is difficult for them to flexibly design and implement information teaching according to teaching needs [1]. In addition, the digital interaction between teachers and students is not in-depth enough, and teachers need to strengthen their control and guidance over students' online learning status. It can be seen that the improvement of teachers' digital teaching ability is the key to promote the reform of high school physical education teaching.

2.3 The development and utilization of digital resources in physical education classroom are limited

High-quality digital resources are an important prerequisite for developing information teaching. However, as far as the current high school physical education is concerned, the professional digital resources available are relatively scarce, and the development of high-quality resources such as teaching animation and micro video is insufficient. At the same time, the existing physical education teaching resources need to be improved, as they are difficult to effectively stimulate students' interest in sports. In teaching practice, the integration of physical education digital resources with classroom teaching and extracurricular exercise is not close enough, failing to give full play to the advantages of information technology [2]. In addition, the sharing mechanism of high-quality resources is not perfect, the high-quality resources developed by backbone teachers and renowned teacher studios have not been promoted and applied in a larger scope, and the efficiency of resource utilization needs to be improved. Therefore, to accelerate the research, development and aggregation of high-quality digital resources and improve the utilization level of resources is the inevitable requirement of deepening the reform of high school physical education.

3 The application strategy of digital enabling high school physical education teaching

3.1 Build an intelligent sports teaching platform to optimize classroom teaching

To promote the digitalization of high school physical education, it is necessary to build an intelligent teaching platform integrating teaching, training, management, evaluation and other functions, so as to provide a new information environment for teaching and learning. First of all, it is necessary to accelerate the digital transformation of stadiums, build intelligent sports venues integrating the Internet of Things, big data, artificial intelligence and other technologies to realize the interconnection and data perception of sports facilities and equipment, and provide convenient fitness guidance and data analysis services for teachers and students. Secondly, it should build an integrated teaching platform integrating lesson preparation, teaching, homework, evaluation and other links to support online lesson preparation, resource push and teaching feedback, as well as support pre-class preview, after-class review and online self-evaluation, so as to realize the whole-process and all-round teaching management and supervision. Thirdly, based on the big data analysis of the platform,

teachers can have a scientific insight into students' learning situation, teach students in accordance with their aptitude, provide students with personalized exercise prescription and health guidance, and effectively improve the scientific level of physical education teaching. At the same time, the inter-school teaching and research cooperation mechanism can be established to promote the joint construction and sharing of high-quality teaching resources, and realize the overall utilization of physical education teaching resources in the region. Through the comprehensive construction of an intelligent sports teaching platform, the organic integration of teaching resources, teaching process and teaching evaluation can be realized, so as to provide a strong boost for the high-quality development of physical education teaching [3].

3.2 Innovate the digital teaching mode to improve the teaching effect

The digital age calls for the reform and innovation of the physical education teaching mode. Contemporary education needs to actively follow the development trend of informatization, deeply integrate advanced digital technology with physical education teaching, constantly optimize the teaching process, enrich the teaching content, innovate the teaching organization form, and create an immersive, interactive and personalized learning experience for students. In the teaching process, teachers should make full use of online learning resources such as MOOCs and micro-courses to realize the organic combination of pre-class knowledge and key explanation in class, use virtual reality and augmented reality to enhance the intuition of demonstration and learning participation, and record students' sports data by sports application to adjust the exercise load according to individual conditions and optimize the physical training effect. At the same time, schools can actively carry out the online and offline mixed teaching, with a focus on teaching basic knowledge online, and conducting practical skills training offline, so as to break down the learning barriers inside and outside the class. In addition, an open and interactive classroom atmosphere can be created in the teaching organization, using group cooperation, horizontal competition and other ways to cultivate the sense of cooperation and collective honor in sports games and team competitions, so as to deepen students' understanding and mastery of sports skills. Through the innovative practice of the new digital teaching mode, the attraction and effectiveness of physical education classroom teaching can be effectively improved.

3.3 Improve the digital evaluation system to promote students' development

Scientific evaluation mechanism is the key to ensure the teaching quality and lead the development of students. Traditional sports evaluation focuses on result orientation and ignores process management. Therefore, it is difficult to fully reflect students' athletic ability and habit formation. Digital evaluation provides a new path to solve the above problems. On the one hand, it is necessary to establish a comprehensive evaluation index system covering physical fitness monitoring, sports load, competition performance and other dimensions, and use wearable devices and digital applications to continuously collect students' sports data, objectively present their movement state and progress track, and stimulate the drive of self-transcendence. On the other hand, the evaluation subjects should be enriched, and teacher evaluation, student mutual evaluation and parent feedback should be comprehensively used to dynamically evaluate the learning effect of students' learning from the multidimensional analysis of knowledge and skills, process participation, affection and attitude. The evaluation results are intuitively presented by digital visualization means, combined with growth files and comprehensive quality evaluation, which helps students master their own development status and clarify the direction of improvement [4]. At the same time, the application of big data evaluation can also provide detailed data support for teaching diagnosis and improvement, helping teachers to accurately grasp the learning situation and adjust the teaching strategies scientifically. Through the continuous improvement and optimization of the digital evaluation system, the guiding role of evaluation in the overall development of students can be fully played.

4 Conclusion

The digitalization of high school physical education is an inevitable requirement of the development of education in the new era. In the face of the many challenges of digital transformation, only by focusing on teaching needs, consolidating the foundation, updating concepts, optimizing mode, innovating evaluations and other aspects, can we cultivate a fertile soil for digital development. Looking forward to the future, high school physical education needs to constantly strengthen digital thinking, make good use of digital technology, speed up the construction of an open, integrated, shared and intelligent modern teaching ecology, drive the all-round development of students with digital new driving energy, and make sports contributions to cultivating builders and successors of socialist modernization construction.

Acknowledgments

Project: Shaanxi Provincial Sports Bureau's 2024 Regular Project "Research on the Practical Value of Xi Jinping's Important Discourse on People's Health" (20240145).

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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