Region - Educational Research and Reviews, 2025, Volume7, Issue3
DOI: 10.32629/rerr.v7i3.3690
ISSN Online: 2661-4634
ISSN Print: 2661-4626

Paths and mechanisms of digital empowerment to help high quality development of college sports

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Abstract: The Party's 20th National Congress clearly pointed out that it is necessary to "promote the digitization of education, and build a learning society and a learning power for lifelong learning of the whole people." College sports should also conform to the reform requirements of digital education, strengthen the reform and innovation of digital physical education resources and teaching models, so as to improve students' sports skills, information literacy, innovative spirit, sports ethics, etc., and promote the high-quality development of college sports. This study will combine the support provided by digital technology for college physical education to explore the optimal path and mechanism of high-quality teaching development, so as to cultivate more high-quality sports talents.

Key words: digital technology; college sports; high quality development; path; machine made

1 Introduction

According to the provisions of the "Digital Enabling High-quality Development of Higher Education" and other documents, it is necessary to "build a global higher education community of digital transformation, promote the innovation of digital education model oriented to comprehensive development, and deepen the application of technology to cultivate new forms of higher education." In order to improve the teaching efficiency and quality, the paper puts forward the requirements of the digital reform of the teaching of college physical education, and constructs the digital teaching system. However, the road of digital empowerment for the high-quality development of college sports is not smooth sailing, and it also puts forward new requirements for physical education teaching, which no longer simply attaches importance to the teaching of skills, but puts forward higher requirements for students' moral education, innovation ability, information literacy and other diversified abilities, so as to promote the comprehensive, personalized and diversified development of students. By relying on digital technology to reform the teaching system of college sports, we aim to promote the high-quality development of college sports.

2 Characteristics of college physical education under digital technology

2.1 Expansion and sharing of teaching content

With the application of digital technology, college sports teaching can rely on a wide range of teaching resources under digital platforms, media and other technologies to enrich and expand teaching content. College sports teaching no longer simply attaches importance to the training of sports skills, but can make use of digital audio-visual resources and

online courses to provide students with more diversified teaching content. For example, the application of digital sports competition videos, sports action detail videos, sports moral education content, etc., can expand the content of sports teaching, and provide students with more diversified resource choices. The application of digital technology can also realize the sharing and integration of teaching resources, especially the use of digital smart education platform to integrate diverse content under different sports teaching topics and realize long-distance resource sharing, which can strengthen the sharing of resources between students and teachers, students and students, schools and schools, and improve the utilization efficiency of educational resources [1].

2.2 Three-dimensional and repetitive presentation of content

The continuous update of digital technology provides technical support for the three-dimensional and repetitive presentation of college physical education teaching content. Teachers can use digital software to make three-dimensional presentation of motor skills, refine the essentials of movements, and make students grasp the technical points of sports movements more clearly and accurately by slowing down and highlighting details. The three-dimensional presentation of abstract sports concepts and complex sports actions can effectively improve the teaching effect. Under the digital technology, students can also utilize the repetition of teaching resources to review and consolidate the sports movements and skills at any time and improve the learning effect.

2.3 Immersive and experiential teaching modes

Immersive and experiential teaching modes are important supports provided by digital technology for education optimization, which have changed the problems existing in traditional physical education, such as inadequate understanding caused by boring explanation of sports techniques and skills and unclear mastery of skills caused by a large number of students. Through the application of digital technology such as virtual reality technology and simulation technology, sports actions are simulated and visually presented, allowing students to experience immersive sports competitions and sports skill learning scenarios, enhancing their sense of participation and experience, stimulating their learning motivation, and improving learning outcomes.

3 Digital empowerment helps optimize the path and mechanism of high-quality development of university sports

3.1 Update the teaching content based on the demand of talents

As the basic position for training high-quality talents and socially demanded talents, colleges and universities must be guided by the needs of society and workplaces, and provide corresponding teaching content. College physical education teachers should combine students' career development plans and society's requirements for talent quality, and use digital technology to enrich and classify physical education teaching content. At present, college physical education mainly includes majors such as physical education, sports human science, martial arts, traditional national sports and various sports skills. Therefore, it is necessary to combine the requirements of professional sports skills, job skills, and professional qualities to explore and update teaching content. It is also necessary to conform to the requirements of quality education and the cultivation of high-quality talents, and strengthen the exploration of comprehensive literacy training contents such as moral education, cultural confidence education, mental health education and innovation education. For example, the major of martial arts and ethnic traditional sports should strengthen the exploration of traditional culture inheritance and protection, as well as innovation and entrepreneurship education, so as to build a high-quality professional teaching system and improve the quality of personnel training [2].

3.2 Innovate teaching mode with the support of technical function

Digital technology has provided important support for the innovation of physical education teaching methods in

colleges and universities, especially changing the traditional offline sports skills face-to-face instruction mode, forming a mixed online + offline teaching mode, which includes online teaching, online resource sharing, virtual situation simulation presentation, offline skills instruction, practical activities and other teaching methods. To enhance students' learning outcomes in sports knowledge and skills, teachers should strengthen the functional analysis of digital technology and continuously improve and innovate the teaching mode. For example, teachers can use technologies such as AR and VR to provide students with immersive sports training scenarios, allowing them to experience sports events, training, and other scenes. Especially through the standard data setting of skills, it helps students discover their deviations or problems in sports movements, skills, and other aspects in a timely manner, thereby deepening their understanding of skills and movements.

Teachers can also use online courses to strengthen the teaching of sports competitive spirit, rule awareness, professional ethics and other theoretical knowledge. They can also carry out one-on-one instruction on skill movements, online discussion, real-time interaction of courses, etc., thereby changing the problems of unclear observation and insufficient skill mastery caused by the large number of students in the classroom.

3.3 Strengthen digital technology management on the basis of high-quality development requirements

With the deepening of the concept of digital education, colleges and universities are actively equipped with digital technical equipment and build digital intelligent education platforms to provide support for the high-quality development of teaching. Colleges and universities should strengthen the equipment of digital devices, platforms and other management personnel, clarify management processes, standards, etc., to ensure the orderly use of platforms, software, etc. Physical education programmes in higher education should be equipped with professional digital technicians to provide professional digital skills application guidance and information literacy training for college sports teachers, so that teachers can better utilize digital platforms for higher education sports teaching. Technical personnel should also strengthen the management of the resource library, optimize its development and management functions, such as through the management of the resource library to classify and share data, which can classify the content of the physical education curriculum, training methods, expand resources, etc., to help students efficiently achieve the retrieval of learning resources and improve the efficiency of resource use.

In addition, the security of data and information should be strengthened to ensure the safety of students' private information, platform teaching resource information, and the platform itself through the use of antivirus software and information security early warning mechanisms; and the use of data backup and encryption technology can avoid the loss of information.

3.4 Promote teaching improvement with the support of digital assessment technology

With the development of digital technology, many technologies such as human health monitoring, exercise habit monitoring, movement monitoring and evaluation have been derived, which can effectively change the problems of unscientific and incomplete evaluation caused by human viewing and subjective judgment in traditional sports. Relying on digital monitoring technology, students' sports performance and physical condition can be monitored and evaluated more comprehensively and accurately. Once problems are discovered in students' skills, techniques, and physical functions, they can give early warning in time to reduce exercise and safety risks, and relying on digital technology analysis, evaluation and other functions, they can comprehensively and effectively evaluate students' learning outcomes, providing students personalized and accurate evaluation feedback and promoting students' targeted improvement.

4 Conclusion

Digital technology has effectively changed the traditional mode of physical education that simply attaches importance

to skill training. By fully exploring teaching content and innovating teaching methods, various activities such as immersive sports experience activities and training activities are created for students. Moreover, digital evaluation and monitoring technologies are used to comprehensively analyze students' health status and exercise habits, providing personalized training programs for students to promote the high-quality development of university sports.

Conflicts of interest

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

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