

Research on the transformation and development of college physical education under the background of artificial intelligence

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ABSTRACT

With the rapid development and application of artificial intelligence technology, the development of physical education in colleges and universities has ushered in new challenges. To this end, the paper adopts the method of literature and other research methods to study the transformation and development of college physical education in the era of artificial intelligence. Based on the analysis of the current problems in college physical education and the significance of the transformation, innovation and development of college physical education in the era of artificial intelligence, this paper puts forward the implementation path of the transformation, innovation and development of college physical education in the era of artificial intelligence, aiming at promoting the innovation and development of college physical education and comprehensively improving the quality of college physical education.

KEYWORDS

Artificial intelligence; College physical education; PE teaching innovation

1 Introduction

With the rapid development of artificial intelligence technology, physical education in colleges and universities is facing many new opportunities and challenges. In order to better adapt to this new era, physical education in colleges and universities needs to constantly innovate and transform the traditional teaching mode, strengthen the training and management of teachers, train students' theoretical knowledge of physical education through the development of unified curriculum setting standards for physical education, and use artificial intelligence technology to make physical education in colleges and universities more adaptable to the needs of The Times. To provide better support and guarantee for students' comprehensive quality and future sports career development. At the same time, it is necessary to establish a scientific and effective evaluation and feedback mechanism to promote the integration of sports and other disciplines, so as to better promote the physical and mental health development and overall quality improvement of students.

2 Analysis of the present situation of physical education in colleges and universities

2.1 The quality of teaching varies greatly

Because of the difference in the quality and teaching level of physical education teaching staff in colleges and universities, the teaching quality is unstable. Some teachers lack enthusiasm for physical education, only regard it as a job to complete, lack of attention to the individual differences of students and unique opinions on physical education. First of all, in the physical education teaching team of colleges and universities, some teachers may lack in-depth learning and continuous updating of professional knowledge, and only stay on the surface of knowledge, without systematic research and exploration of physical education. As a result, it can not provide the latest theories and methods in teaching, and can not meet the needs of students for sports skills and knowledge. Secondly, some teachers do not really take the responsibility of educating and cultivating students in mind, but only teach according to the textbooks and teaching plans, lacking personalized guidance and guidance for students' individual differences, resulting in students' lack of learning interest and motivation in sports learning, which is not conducive to the improvement of teaching quality.

2.2 The teaching content is not rich enough

Due to the lack of diversity and unified management of college sports curriculum, many college sports courses only pay attention to the training of sports skills, ignoring the teaching of sports theoretical knowledge, which makes students' understanding of sports only stay on the surface. First of all, the gap between universities is very obvious. Although some colleges and universities can provide comprehensive physical education, some colleges and universities only set a few courses related to sports, which makes the choice of students limited, and it is not conducive to students' understanding of different sports fields. Secondly, under the influence of traditional sports teaching concepts, college teachers tend to

pay too much attention to the training of students' sports skills, while ignoring the teaching of sports theoretical knowledge. As a result, students cannot deeply understand and correctly understand sports, and often can only stay in the learning and training of sports skills, and it is difficult to obtain a more comprehensive physical education.

2.3 Lack of teaching evaluation mechanism

At present, there is a common problem that many colleges and universities pay more attention to the performance of students in sports activities, while ignoring the evaluation of students' comprehensive quality. As a result, when students participate in sports, they tend to only pay attention to their scores in competitions, rankings and other results, ignoring the overall development of personal sports literacy. In addition to the limitations of physical education teaching, teachers often lack understanding of students' personality differences when giving feedback and evaluation to students, and can not give guidance and help according to students' personality, resulting in poor teaching effect.

2.4 Lack of effective integration with other disciplines

At present, the teaching of physical education in colleges and universities is relatively independent from that of other subjects, and the students cannot combine physical education knowledge with other subjects organically. For example, when students learn the basic concepts of motion mechanics and biomechanics, they have few opportunities to apply these knowledge to physics or biology courses, and it is difficult to establish the connection between different subject knowledge, which is not conducive to the development of students' comprehensive ability and innovative thinking.

3 Significance of transformation and development of college physical education in the era of artificial intelligence

3.1 Get rid of the traditional teaching mode

Physical education in colleges and universities should make full use of the advantages of artificial intelligence technology to help teachers better understand students' learning characteristics and needs through big data analysis and machine learning. For example, the personalized learning recommendation system provided by artificial intelligence technology is used to tailor appropriate physical education courses and training plans for students, or the use of virtual reality and augmented reality applications to provide students with a more real and immersive physical education teaching experience. At the same time, AI technology can also help students better improve and enhance their sports skills by monitoring students' sports data and performance, providing immediate feedback and guidance. Under the guidance of artificial intelligence technology, physical education in colleges and universities has gradually gotten rid of the traditional teaching mode and turned to a more personalized and flexible teaching method.

3.2 The teaching content is more diversified

The demand of society for students is not only to master sports skills, but also to combine sports with health, psychology, management and other fields to cultivate students' comprehensive quality. By offering health education courses, students can understand health knowledge and develop good living habits; By offering sports management courses, students can cultivate their teamwork and management ability, and make full preparation for their future career development. The application of artificial intelligence technology has created more abundant and diversified learning resources for college physical education. Teachers can easily obtain multi-disciplinary teaching resources, including teaching videos, textbooks, case studies, etc., and combine physical education knowledge with them to realize the integration of multi-disciplinary knowledge from the aspects of classroom content and course design, and broaden students' knowledge and vision. At the same time, students can also obtain rich learning materials and reference materials through the scientific use of artificial intelligence technology, which is conducive to the cultivation of their independent learning ability.

3.3 The teaching evaluation mechanism is more comprehensive and effective

The application of artificial intelligence technology provides a more comprehensive and accurate evaluation and evaluation means for college physical education. The traditional PE teaching evaluation mainly relies on the subjective evaluation of teachers, which has certain limitations. Artificial intelligence technology can conduct objective assessment and evaluation by analyzing students' movement data and performance, combined with professional algorithm models. This can not only provide more accurate and objective evaluation results, but also provide students with more

personalized learning advice and guidance.

3.4 Promote the rapid development of school-enterprise cooperative artificial intelligence industry

In the era of artificial intelligence, colleges and universities can establish cooperative relations with artificial intelligence enterprises to jointly carry out research and practical activities. Through school-enterprise cooperation, colleges and universities can better understand the latest development and application of artificial intelligence in the field of sports, obtain more teaching resources and technical support, and enterprises can also obtain more talent resources, which is conducive to the healthy development of artificial intelligence industry.

4 Research on the path of transformation and development of college sports in the era of artificial intelligence

4.1 Strengthen the innovation and transformation of physical education teaching content

In the era of artificial intelligence, in the process of innovation and development of college physical education, the application of virtual reality, augmented reality and other technologies can break through the limitations of the real environment and set up more diversified physical education courses. In addition to traditional volleyball, basketball, soccer and other sports, we can also introduce ice and snow sports, water sports, combat sports, etc., so that students have more choices and opportunities to try. This can not only meet the different interests and strengths of students, but also broaden the horizon of students, so that students have a broader space for development in the field of sports. Teachers should also pay attention to the cultivation of students' theoretical knowledge of physical education, help students understand the scientific principles and laws of physical education, deeply explore the impact of sports on the body and how to scientifically train and adjust. In this way, not only can improve students' sports skills, but also cultivate their sports wisdom and sports science literacy, laying a solid foundation for them to become coaches and sports scientists in the future. In addition, diversified physical education can also provide more opportunities for interaction and cooperation. For example, through team sports competitions, students learn to cooperate with others, coordinate and communicate, cultivate students' team spirit and leadership skills, let students learn and grow in competition, and cultivate their winning and losing mentality and adaptability.

4.2 Improve the comprehensive quality of PE teachers

In the era of artificial intelligence, it is particularly important to improve the quality of PE teachers. As physical education teachers, they should recognize the importance of professional knowledge and take the initiative to learn and apply artificial intelligence technology to pay more attention to and guide students in detail. Only in this way can we really improve the quality of physical education in colleges and universities, and train more excellent sports talents for the country. In the process of improving the quality of physical education teachers, it is necessary to strengthen teachers' learning of artificial intelligence technology. For example, learning how to apply artificial intelligence algorithms to analyze students' movement data to better understand students' training needs and potential; Learn how to use virtual reality technology to provide a more authentic and interactive physical education teaching experience, thereby enhancing student engagement and interest; Learn how to individually design physical education teaching programs through artificial intelligence technology, and make corresponding teaching plans according to the needs and abilities of each student. Secondly, artificial intelligence technology can also help physical education teachers better evaluate the performance of students. The use of big data analysis and machine learning can more objectively evaluate the performance and progress of students in physical education courses, reduce the interference of subjective factors, provide more accurate and comprehensive evaluation results, and help students and parents better understand the development of students.

4.3 Establish effective physical education teaching standards

In order to enable students to get a more comprehensive and in-depth experience and understanding in physical education, and lay a solid foundation for future sports career development, we need to take a series of measures. First of all, we should develop a unified physical education curriculum standards, clear the curriculum requirements and content of each subject. Through this standard, we can ensure that students are able to comprehensively and systematically acquire knowledge and skills in various fields during their learning process. In the process of cultivating students' physical education theory knowledge, college physical education needs to adapt to the new development trend and demand, use innovative and scientific theoretical course materials, and cultivate students' critical thinking ability. In addition, schools

need to integrate classroom teaching with extracurricular and out-of-school sports activities. The purposeful, planned and organized extra-curricular physical exercise should be incorporated into the physical education curriculum to form a curriculum structure with organic links between inside and outside the class and inside and outside the school.

4.4 Organic integration across disciplines

In the era of artificial intelligence, through the organic integration of physical education courses with other disciplines, it can not only improve students' comprehensive ability and innovative thinking, but also enrich students' learning experience, cultivate students' interests and creativity, so that students can better understand and apply what they have learned. For example, introducing the knowledge of mathematics and physics into the physical education curriculum can make students have a deeper understanding of the movement laws in sports, and verify and apply these knowledge through practical sports practice. Combining physical education with biology allows students to better understand the impact of human structure and physiological functions on athletic performance. When combining sports with arts, music and other disciplines, students can express the beauty of sports through dance, music and other forms, but also stimulate students' interest in art and creativity.

4.5 Pay attention to the cultivation of students' comprehensive quality

In the era of artificial intelligence, colleges and universities should pay attention to the cultivation of students' comprehensive quality in physical education, not only their performance in sports activities, but also their understanding of sports and their health. Colleges and universities should change their teaching concepts, focus on cultivating students' interest and love for sports, guide students to pursue their own progress and development in sports activities, rather than just pursuing good grades and honors, and cultivate excellent talents with good physical and mental health and excellent comprehensive quality. Teachers should also pay attention to the understanding of students' individual differences, understand students' confusion and needs in sports learning through interaction and communication with students, and provide personalized guidance and assistance according to students' individual needs, so as to help students overcome difficulties and improve their ability and level in sports.

5 Concluding Remarks

To sum up, the development of artificial intelligence technology has brought great opportunities and challenges for the innovative development of college physical education. Physical education in colleges and universities can use artificial intelligence technology to realize personalized teaching, enrich learning resources and accurately evaluate students' learning effect, so as to further improve teaching quality and students' learning effect. At the same time, we should also realize that there are certain limitations of artificial intelligence technology. In the innovation and development of college physical education in the era of artificial intelligence, we should make full use of the advantages of artificial intelligence technology, pay attention to cultivating students' comprehensive quality, and strengthen cooperation with artificial intelligence industry.

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