Theoretical Research on the Construction of College Physical Education System from the Perspective of Big Data

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ABSTRACT. The information age has arrived. The lack of correct understanding and understanding of the use of big data, the lack of professional application and management talents, and the immaturity of the big data application system in the overall construction of the college physical education system. Optimizing teaching content and improving The construction of the four aspects of teaching quality, effectively increasing the proportion of college sports population, expanding the education function of college students' physical fitness test, and conducting scientific research on teaching.

KEYWORDS: Big data, college, physical education; system

1. Introduction

The times are developing and technology is advancing. The influence of modern information technology led by networking, digitization and intelligence is increasingly infiltrating into new age, learning and work. The successful applied of big data in education has brought certain challenges and challenges to traditional college education Opportunity [2]. Big data is both a resource and a method of research. It needs to analyze massive data and quickly obtain valuable data, dig out the value hidden behind big data, convert signals into data, analyze data into information, and refine information into Knowledge, use knowledge to promote decision-making and action, so make good use of these big data resources. This content and method innovation of physical education, physical fitness promotion, group second classroom and extracurricular exercise management, scientific training of athletic teams, optimization of physical education management methods, etc. Aspects have created positive conditions.

The university physical education is one of the cornerstones of the development of physical education. Due to the predictability of big data and the effectiveness of information transmission, more and more universities have begun to focus on accumulating and using big data resources in education. Some college physical education Workers began to pay attention and study the practical application of big data in college physical education [1]. If universities and colleges have mastered the methods and methods of big data processing and analysis in physical education, so that big data can be successfully used in physical education in colleges and universities, they can enrich and expand the physical education teaching model to a certain extent and teach students according to their aptitude. It is conducive to continuously improving students' sports literacy, can effectively improve the effect of physical education, and is more conducive to college physical education management.

2. The main problems of big data physical education system

In recent years, physical education has accumulated some experience in using big data resources, showing a upward trend. Included data on students 'extracurricular physical exercise into the physical education curriculum assessment system, and some colleges have tested students' physical fitness. The data is compared with the training of different professional talents to improve teaching and so on. However, due to the relative lack of big data awareness and thinking, there are still problems such as systematization and incompleteness On the whole, there are three major problems: fragmentation, silos, and bottlenecks.

2.1 Fragmentation

At present, the fragmentation of college physical education is more common. Physical education teaching in major universities in China has precipitated such factors as the annual student's physical fitness test results, track and field games inside and outside the school, physical education theory, physical education test results, the number of students taking different physical education courses each semester, and the students' extracurricular sports activities. Big data resources such as time and frequency. These resources exist separately because of different needs, but there is no special person or team to further summarize and analyze them. The use of big data technology in physical education in colleges and universities has a negligible impact. Therefore, we must make full use of big data to make the distance between educators and educators as close as possible, and understand the differences between different types of students , To further improve the quality of physical education and better guide students to participate in sports.

2.2 Crysis

The phenomenon of internal data silos in college physical education is relatively common. It is difficult to integrate cross-domain and cross-industry data with students education management data. Due to the differences in authority between various departments and units in colleges and universities, the methods, content, and information systems for obtaining information will be very different. Therefore, in the process of internal information management in schools, many data islands appear and cause an "island phenomenon." At present, major universities have not established a good mechanism and platform to cope with this problem, and cannot effectively integrate related data islands through certain data flows and channels. This has deepened the application of physical education. Very unfavorable. There is also an island phenomenon in between universities. There is no perfect data collection and management platform between colleges and universities, colleges and colleges, it is not possible to achieve data sharing within and outside the school, and it is impossible to thoroughly mine valuable data information in order to explore these data. The underlying connotation behind it provides strong data support for the reform of college physical education.

2.3 Bottlenecks

There is a "bottleneck" in the use of big data in college physical education, such as low utilization efficiency, immature method and technology applications, and low digitalization. For example, there is a huge amount of student-related physical and health data, but the utilization efficiency is low. It exists only as a student's performance assessment and reporting to higher authorities. However, it does not extract and dig out valuable information from these data. The quality and characteristics of exercise methods and contents vary from person to person, and targeted teaching is carried out according to their aptitude to comprehensively promote students' physical health. According to the students 'hobbies and physical fitness characteristics provided by big data, they can grasp the physical education needs of students at any time, adjust and optimize physical education courses in a timely manner, and provide individual guidance to individual students of different qualities and exercise needs to make students' physical health Quality has been balanced.

3. Theoretical analysis of the construction of big data in college physical education system

3.1 Lack of correct knowledge and understanding of the use of big data

For big data to be used in physical education, all relevant data must be collected, screened, and analyzed and integrated to achieve the goals of reforming and optimizing physical education and motor skills. In addition, whether the collection of data is complete and accurate determines the effect of the application of big data, and its data content can include the basic information of students,

physical conditions, physiological conditions, etc. In the process of applying big data to physical education in colleges, teachers can make predictions and judgments based on real-time data, which is conducive to the adjustment and optimization of the content of physical education courses, and gradually develops traditional collective teaching towards a more scientific and personalized teaching direction. However, most college physical education teachers are relatively unfamiliar with the concept and application of big data, and have a poor ability to actively use the data. They are even more limited in their ability to screen massive amounts of data and information. Less, which is different from the expectations of PE teachers on the application of big data, and thus lacks a correct understanding and understanding of the application of big data in the field of physical education.

3.2 Colleges lack professional big data application and management talents

This is an emerging industry, so there is a lack of related talents in China, and the training system for reserve talents and the conditions of software facilities still have a large gap with foreign countries. This is also the main problem of the lack of application and management talents in China. [3] . Therefore, cultivating excellent big data application and management talents is a long-term and arduous task, and the mission has a long way to go. On the other hand, the weak foundation of the use of big data technology also reflects to a certain extent the lack of talents in this area in China, which is also the main reason for the lack of professional big data application and management talents in universities.

3.3 Immature big data application system related to physical education

Although the application of big data in some fields and industries has been very successful, and its application system is relatively complete, it is an emerging application field, and college physical education teachers lack sufficient knowledge and understanding of it to a large extent. This restricts the rapid development of big data in the field of physical education. Basically, many colleges and universities have not formulated relevant rules and regulations on data collection, collation, management, etc., and the big data application system related to physical education is not mature enough. Big data Limited utilization.

4. Theoretical exploration of the construction of big data in college physical education system

Big data has been applied in college physical education. In western developed countries, many well-known colleges and universities have started research on big data in education. In recent years, China has also attached great importance to the informatization of education and highly supported the in-depth integration of education and information technology. The "Key Points of Educational

Informatization in 2019" clearly states that to continuously provide accurate data support for educational decision-making, we must strengthen the integration of relevant data resources, do dynamic monitoring, strengthen decision-making applications, and provide educational forecasts. The construction and use of smart campuses, and the popularization of new forms of education such as MOOCs, micro-lessons, flipped classrooms, and teaching platforms have all sent strong signals to the use of big data and informatization in college physical education.

4.1 Optimize teaching content and improve teaching quality

The difference in teachers' ability and teaching experience determines their teaching effect in the classroom to a certain extent, and the mastery also vary wonderful. They can combine the advantages of many teachers to achieve The optimization and integration of resources allows teachers to fully grasp the teaching effect. It provide teachers with different teaching methods to teach according to their aptitude, which is more conducive to optimizing teaching plans and content. In classroom teaching, making the classroom more a place for summarization, communication, and display. The targeted and diverse physical education model will gradually be accepted and recognized by students and parents. Therefore, actively promoting and using can more effectively, extracurricular sports activities, and sports training, and improving the physical fitness in all aspects.

4.2 Effectively increasing the proportion of college sports population

According to statistics, the proportion of college sports population is not optimistic, accounting for only 30% -50% of the total number of people. Although college students have received school physical education in primary and secondary schools, their athletic abilities are still generally average, and they lack the thought of physical fitness. And correct education of competence education. It can be found in the sample survey of physical education teachers that most students still have a high level of awareness of physical education in middle school after entering university. Students' athletic ability is decreasing year by year, and they lack the necessary physical education theory and technical guidance. It is also one of the main obstacles encountered in the reform and development of college physical education. However, by collecting big data such as sports cognition, sports common sense education, and sports participation frequency of college students, analysis and extraction of sports education-related content such as projects and time periods for college students to participate in, and training them to develop better sports Attitude, good exercise habits, mastering the basic common sense and basic techniques of sports, become a member of the real sports population.

4.3 Extending the Educational Function of Physical Health Test for College Students

China has formulated many different standards of physical fitness evaluation systems for primary, middle, and primary schools. From this we can see that the country attaches great importance to the physical fitness of adolescents. However, these have not completely changed the weak physical health of our students. At present, there are still many problems in the student's physical fitness test in China. First, the physical fitness test of each student will cost a lot of human in the region and the school. Colleges, universities, and elementary and middle schools do not take students' mental health issues into consideration, and nowadays, mental health problems have greatly limited the development of students; again, in a sense, most of the current school physical fitness testing work only deals with national Many teachers and students did not really attach great importance to the physical health test according to the instructions and tasks given by their superiors. However, students' indicators can be understood in a timely and effective manner.

In addition, the application of big data can also conduct comprehensive and objective physical tests on psychological factors such as personality, interpersonal relationships, willpower, and judgment of students. Therefore, reasonably and effectively to the process of students' physical education has become an urgent need for schools to overcome. For example, through big data to understand the interests of students and the characteristics of related physical fitness, and then optimize and adjust the relevant content of physical education courses, and provide targeted guidance to students' physical fitness in all aspects.

4.4 Conduct teaching scientific research

With the development of scientific and systematic research on physical education in colleges and universities, researchers put physical education research in the perspective of big data, using traditional data and network platforms, mobile terminal devices, and wearable devices. Big data analyzes, evaluates, intervenes, guides, and predicts the learning process and behavior of students. However, many college physical education educators still use old ideas to view college physical education issues. Therefore, we carry out regular modern information technology training and learning for college physical education educators, and instill advanced teaching concepts and models. It accepts new ideas in the context of the development of the new era, and then changes its traditional, outdated series of teaching and evaluation concepts.

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