Based on Big Data, College Physical Education Teaching Evaluation System Research

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Abstract: Without informatization, there will be no modernization. The data around us is influencing our life from the aspects of morality, culture, system, industry and life, and reconstructing the real society. Now all colleges and universities attach importance to talents, advocate and strengthen the importance of data culture for talent construction, so as to lay the theoretical foundation of big data education and management in Colleges and universities. In the era of big data, physical education in Colleges and universities is facing a change. In this paper, by using the questionnaire survey method, aiming at the teaching system of physical education in Colleges and universities, from the perspective of teachers and students, it is concluded that 34% of college students are very satisfied with the information application ability of physical education teachers, 40% of students are satisfied with the information application ability of physical education teachers, and 20% of students choose "general", 4% and 2% of the students are not satisfied with the information application ability of physical education teachers. On the whole, 74% of the students are satisfied with the application ability of PE Teachers' informatization, and 26% of the students hold a general and unsatisfied attitude towards the informatization application ability of PE teachers.

Key Words: Big Data Technology, University Teaching Evaluation, Physical Education Teaching, Questionnaire Survey

1. Introduction

Different from the information backward society in the past, we are now in a modern information developed society. We are experiencing great changes in human history and information technology revolution. People's way of life, education methods, communication methods are undergoing earth shaking changes. Big data is the product of the Internet development period. As an objective and quantitative existence, big data can provide powerful reference for people's decision-making and action. In many fields, the implementation of big data is in full swing. The benefits brought by the
implementation of sports departments and sports events, sports communication and competitive sports are increasingly obvious. Although big data is still in the stage of ignorance and ignorance in Physical Education in Colleges and universities in China, we are still groping for opportunities and challenges brought by big data to public sports in Colleges and universities. We all see it. This opportunity is to collect and analyze the data of students' sports behavior in public physical education courses.

Many scholars have conducted in-depth research on the evaluation system of College Physical Education Based on big data. MR. LIU In view of the problem of College Students' participation in extracurricular sports activities, this paper puts forward the establishment of a sound school physical education work system and the formulation of extracurricular sports activity plans, so as to innovate and develop the contents, forms and methods of students' extracurricular sports activities. Suggestions on the application of flexible teaching in physical education teaching. Lee's research results show that participation in extracurricular sports activities has a positive impact on the academic performance of higher education students, that is, participation in regular sports activities has a higher correlation with the university students' scores [2]. According to the research team of physical education teaching in Colleges and universities, sports activities can achieve the performance goals pursued by education, and are beneficial to the health of practitioners. For example, it systematically discusses the reasonable application of educational technology and the integration of curriculum and student services, and puts forward several measures for the application of information-based teaching: providing material foundation, facilities and technical support, improving the utilization rate of educational technology, and developing the sustainable planning system of educational technology [3]. In addition, some excellent scholars think that the current colleges and universities do not pay attention to the teaching of sports cognition, and the development and cultivation of students' motivation are also in place. China's college students have studied sports health and education for nearly 12 years, but few students know a series of basic knowledge of sports physiology and sports rehabilitation. They only know to complete the tasks in physical education according to the teacher's requirements, but they don't know why to do these exercises, what are the benefits of doing these exercises, or whether these exercises are suitable for them [4]. Although the research results of these scholars are very rich and diverse, but their research objectives have put forward some understanding and opinions for the physical education teaching mode, but they did not integrate the big data technology into the penetration.

Based on the evaluation system of college physical education supported by big data technology, this paper uses simulation method to establish the model of "big data sports" according to the investigation status and theoretical basis, and draws a conclusion by comparing it with the traditional college sports mode.

2. Method

2.1 Big Data Technology

Big data refers to the big data generated by the interaction and integration of "people, machines and things" in cyberspace and can be obtained on the Internet. The large-scale growth of network big data is like a double-edged sword. On the one hand, big data makes our life more convenient and convenient. We can use the Internet to get what we want through big data, but on the other hand, we can use the Internet to get what we want through big data. Big data has also brought us great challenges. In the era of big data, information leakage has become a common thing. China's research on big data started relatively late, and only in recent years did it show a sudden increase trend, especially in recent years, the research on big data has become a hot spot for experts and scholars. When searching on the topic of big data, we will find that the keywords that appear are generally co-occurrence, including "big data era", "big data technology", "enterprise management", "cloud computing", "big data analysis", "data processing", etc. The concept of "big data" is so vague that there is no exact and unified authoritative definition [6]. Some of these definitions give quantitative standards, while others emphasize the characteristics of data itself, such as large amount, variety and rapid growth. Although they are different, they all share the same connotation. First, the size of the data set that meets the big
data standard will change with time and technological progress; second, the size of the data set conforming to the big data standard in different departments is also different. At present, the application of "big data" in China is mainly concentrated in the fields of computer, finance, Internet, medicine, commerce, etc. in this paper, big data is defined as: the data generated in the process of PE teaching evaluation can be quickly collected, processed and analyzed by the database, so as to extract valuable information data [7].

2.2 College Physical Education

Everything has relativity, so does physical education in Colleges and universities. Based on a broad perspective, it refers to the sports that students exercise themselves in their spare time except physical education; in a narrow sense, it refers to the time that students stay on campus, in order to enhance their physique, relax their body and mind, and strengthen their sports skills, For college physical exercise, physical education is not only the main content of school physical education, but also the most important part of extracurricular sports activities [8]. Physical education in China's colleges and universities is not only limited to physical education, but also to improve the quality of personnel training, enhance academic status and strengthen the construction of talent echelon; the difficulties are to obtain high-level academic achievements, improve the quality of personnel training and refine the discipline characteristics. It reflects the importance of talent training quality and high-level research results to the construction of physical education discipline.

Physical exercise in Colleges and universities mainly includes these important factors: first, students in order to achieve the purpose of strengthening physique, activating body and mind, and improving skills; second, students use various physical exercises and means; third, enriching college sports cultural life. According to the above points, it can be found that most of the physical exercises carried out by college students in China are individual subjective behaviors and lack of organization. The physical exercise in Colleges and universities studied in this paper refers to the regular physical exercise in narrow sense, unorganized and subjective behavior. It is an important form for college students to develop sports activities and strengthen their physical fitness. It has strong subjectivity. According to the characteristics of each person, preferences can meet the exercise of students with different interests, different technical levels and different consumption levels [9].

2.3 Supply And Demand Model of Physical Education in Colleges and Universities

Generally speaking, the resource ownership of T cloud platform can be expressed by I(T), D(T) can be expressed as the demand for resources, or simply expressed as students' demand for courses and credits. R(T) refers to the amount of resources available from different resource platforms. From the perspective of the operation mode of resource service platform, the economic model should be considered. In other words, the cloud resource service platform is regarded as a resource flow service platform, so that all kinds of resources can be gathered, which can also serve students or teachers who are in need. In this sense, there is actually a relationship to be described, which is the balance of resource supply [10]. The equilibrium equation can be expressed as follows:

$$\frac{dI(t)}{dt} = R(t) - D(t)$$

(1)

For the convenience of research, we assume that T < 0, the resource ownership of cloud platform can be used $I_0$. At this time, the order quantity issued by the demand resource provider is consistent, that is:

$$D_O = O_0$$

(2)

In order to operate a resource platform, it is always necessary to have certain resources in advance to use 0d as reserve:
3. Experience

3.1 Questionnaire Survey Method
According to the research content and purpose of this paper, in view of the current situation of physical education in Colleges and universities, a questionnaire survey was taken. Ten physical education teachers were randomly selected from each school in Hunan Province, and 600 students were selected from each school. According to the proportion of male and female students and the grade difference, 300 were male and female students, Freshmen do not know the specific situation, so only the sophomores are given questionnaires, which can highlight the authenticity of the data.

3.2 System Approach
The systematic method takes the discipline of physical education in Chinese colleges and universities as a system. From the perspective of system operation, it investigates the evolution of its internal structure and function and the law of its development; from the perspective of interaction between the system and environment, it examines the social demand for the discipline of Physical Education.

4. Discussion

4.1 The Current Situation of The Facilities And Facilities for Extracurricular Physical Exercise
As shown in Table 1, through the questionnaire survey, it can be found that sports facilities can meet the needs of students' daily physical exercise, accounting for 18%; sports facilities can basically meet the needs of students' daily physical exercise accounted for 36%; sports facilities can not meet the needs of students' daily physical exercise accounted for 46%. Field visits found that in the spare time, there are as many as dozens of people in many colleges and universities in the hot areas of rotation competition. In this regard, to a large extent, it limits students' extracurricular exercise, and also affects their enthusiasm to participate in extracurricular physical exercise.

| Degree of satisfaction | number | Percent |
|------------------------|--------|---------|
| Cansatisfy             | 2      | 18%     |
| Basicallysatisfied     | 4      | 36%     |
| Notsatisfied           | 5      | 46%     |

4.2 "Big Data Sports Cloud" Teaching Audience analysis
As the users of "big data education cloud" are only for students in various colleges and universities temporarily, using high-capacity storage devices in university computer rooms as servers or renting small network servers can meet the hardware requirements of "big data sports education cloud". The software consists of several modules to run the system. Firstly, the database management software for managing the data of students and teachers is embedded in the server terminal; secondly, the client authorized to the teacher gives the teacher the corresponding operation authority; finally, the client authorized to the student also gives the corresponding operation authority.
As shown in Figure 1, the questionnaire survey focuses on the use of APP in physical education teaching. Students and teachers only need to download the system software on the corresponding intelligent devices and log in to the system with the given user name and password. The survey shows that among the 500 college students who fill in the questionnaire, almost everyone has a smartphone, and even some students even have extra mobile phones, and 95% of them are willing to app the teaching management system. In the results of the teacher questionnaire, 80% of the teachers agree with the application of teaching management system. Considering that some teachers are older and are not used to using modern digital products, the proportion of teachers who do not agree with the application of teaching management system is relatively large.

4.3 College Students' Demand for Information Sports Teaching

Physical education is a course based on practice teaching, and technical and tactical teaching is the focus of physical education teaching. The investigation of the needs of students in the form of information-based teaching is helpful for teachers to use information-based teaching methods reasonably and improve the effect of physical education teaching.

Table 2. Students' Demand for Information Teaching of Physical Education (n = 600)

| Media form | Video format | Picture form | Written form | Audio form |
|------------|--------------|--------------|--------------|------------|
| Number of people | 400 | 120 | 130 | 50 |
| Percent (%) | 60% | 20% | 21% | 8% |

It can be seen from table 2 that the media form most needed by students is video form, accounting for 60% of the total, indicating that video form is the most favorite and most acceptable form of information-based teaching media for students to accept and understand. Therefore, when teachers are teaching information-based teaching courses, the design of courseware should be mainly in the form of video, which is the most reasonable teaching choice. The courseware and materials in the form of video often contain audio interpretation, pictures and text, which can show the action and technology of physical education teaching more intuitively in front of students and express the content better.
4.4 Students' Evaluation of PE Teachers' Information Application Ability

![Chart showing evaluation](image)

Figure 2. Students' Evaluation of PE Teachers' Information Application Ability

Students' evaluation of PE Teachers' information application ability is an important index to evaluate teachers' information teaching level. According to the analysis in Figure 2, 34% of college students are very satisfied with PE Teachers' information application ability, 40% of them are satisfied with PE Teachers' informatization application ability, 20% of students choose "general", and 4% and 2% of students are not satisfied with and very dissatisfied with the informatization application ability of PE teachers. On the whole, 74% of the students are satisfied with the application ability of PE Teachers' informatization, and 26% of the students hold a general and unsatisfied attitude towards the informatization application ability of PE teachers.

5. Conclusion

No matter the university or the high school junior high school, the physical education teacher mainly uses the cramming teaching, which is equivalent to speaking, the students learn little and the effect is not very ideal. Under the background of big data era, college physical education teachers must make changes, innovate in teaching, stimulate students' spirit of participating in sports, improve their interest in sports learning, and cultivate students' lifelong sports potential, instead of taking classes for class and cultivating more comprehensive talents for social development. The ideal result of using big data in public physical education curriculum is to fully understand students' sports and health status, provide personal training formula, provide students' health and promote physical exercise. These data are just a reflection of the results of physical exercise. The main purpose is to supervise the students to have independent physical exercise after class. The intelligent management of extracurricular sports activities only plays the role of guidance and supervision, its purpose is to cultivate students' practice habits and strengthen their physical condition. In order to ensure good health, everyone can take the initiative to exercise if there is no incentive measures in terms of reward, scoring, abandonment and performance. Of course, the system of forcing students to exercise after school is no longer necessary. Behind the age of high-tech data is a complex and systematic problem. Extracting data and analyzing its objectivity, and effectively aiming at the characteristics of each student, is what college physical education should do.
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