Interpretation of the Paths Used in Aerobics in Colleges and Universities under the Background of Big Data

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Abstract. Sports is an important measure proposed by our country to enhance people's physical fitness. In order to improve the overall level of aerobics in colleges and universities, it is necessary to strengthen aerobics teaching, analyze the current situation of aerobics teaching in colleges and universities, and make full preparations for improving the overall level of aerobics for college students. In the context of the era of big data, micro-courses, as a modern teaching method, have a broad application space in college aerobics teaching. This article takes the design and application of a miniature aerobics teaching platform under the background of big data as the research object. Use HowNet's keyword search method to find the application path of big data, aerobics and micro-teaching in universities. From the perspective of the main body of the system, teachers can make micro courses, and teachers can also arrange tasks for students so that students can integrate the corresponding knowledge content. Use the overall data concept to propose an online public course content optimization mechanism, sharing mechanism and talent training mechanism. Big data thinking provides a new perspective and ideas for the construction of aerobics online open courses. The purpose is to improve the teaching quality of aerobics courses and the quality of aerobics training.

Keywords: The Era Of Big Data, Micro-Teaching; Aerobics Teaching, Path Innovation

1. Introduction

With the continuous popularization of education and the rapid development of society, university teaching has gradually changed from traditional elite teaching to popularization. Similarly, university teaching is no longer traditional teaching, not just imparting knowledge to students. In today's competitive society, the purpose of university teaching is still to improve the social competitiveness of students, pay attention to exercise and improve students' comprehensive literacy\textsuperscript{1,2}. The development
of aerobics courses in colleges and universities provides students with ways to exercise their physical fitness [3-5]. As a characteristic course of college aerobics, aerobics courses have a rich cultural heritage and a student foundation. The content of this course is vivid and interesting, and it is deeply loved by students with its unique charm. However, today's mobile Internet era has changed the way students learn, think and live [6]. Therefore, applying the micro-course aerobics aerobics teaching model in the context of big data to the aerobics course is the era, the necessity of curriculum and reform.

Under the data power strategy, the government actively promotes the integration of data and modern education. Use big data correlation analysis to predict problems in the aerobics teaching process and adjust teaching strategies [7, 8]. In traditional school aerobics, classroom teaching methods cannot take into account the differences in students' personalities. The teaching ability of teachers is limited by their professional level and teaching style. Students passively accept aerobic exercise learning [9]. The aerobics teaching under the guidance of big data adopts both online and offline teaching methods, and according to the needs of students' aerobic learning [10]. Through the establishment of the student's personal data information database, you can dynamically monitor the student's physical fitness, technical and tactical level, sports behavior and psychological characteristics.

The application of big data in aerobics teaching activities is multifaceted. Based on different data sources and analysis foundations, the application process is very different, and there are significant differences in the teaching evaluation and the guiding role of teaching activities. This requires relevant educators to fully understand the concepts and requirements of big data applications, and make scientific choices according to their needs to ensure that the application of big data can be close to its own teaching practice and provide an appropriate level.

2. Research methods of aerobics in colleges and universities under the background of big data

2.1. Connotation of big data

Big data needs a new processing model to have stronger decision-making ability, insight and process optimization ability to adapt to large-scale, high growth rate and diversified information assets. Big data is a collection of data whose size is large enough to exceed the functions of traditional database software tools in terms of collection, storage, management and analysis. It has four characteristics of massive data scale, fast data flow, multiple data types and low value density. The strategic significance of big data technology is not to master a large amount of data information, but to process these meaningful data professionally. In other words, if big data is compared with an industry, then the key to profitability in the industry is to improve the data processing power and realize value-added data through processing. Modern society is a fast-developing society, technological progress and information circulation are changing with each passing day, people are getting closer and closer, and life is more and more convenient. Big data is the product of this high-tech era. In this digital age, how to effectively analyze and use data, mine and obtain information, and discover the value of data is the key. If it can be effectively applied to the aerobics teaching field that we pay attention to, it will inevitably become a leap in the aerobics teaching field.

2.2. The purpose and direction of micro-aerobics education innovation of big data
In the process of school aerobics teaching, the aerobics teacher's understanding of students and their learning effect plays a decisive role in the quality of teaching. But for a long time, most aerobics teachers judge students' learning status based on their own experience and evaluation tests, and students only evaluate teaching based on subjective feelings or learning interests. Neither aerobics teachers nor students can objectively and accurately grasp the actual situation of teaching. This makes it difficult for students to provide timely feedback, and it is difficult for aerobics teachers to teach according to their abilities. The "big data" technology of sports in aerobics teaching is actually the process of data collection, data selection, data analysis and data representation, and ultimately the reform and optimization of aerobics teaching and sports skills learning. Some traditional aerobics teaching is gradually developing. Move towards science and visualization, and further promote the development of aerobics education.

3. The experiment method of aerobics in colleges and universities under the background of big data era

According to the research content of this article, I prepared an interview outline in advance, interviewed teachers who have been engaged in aerobics and related professional teaching for many years, aerobics education theory research experts and aerobics students. They obtained relevant information by interviewing the problems existing in the current aerobics teaching process, their views on Internet teaching, their understanding of the use of aerobics and other professional curriculum teaching platforms, and the feasibility of designing aerobics teaching platforms. To understand the needs of students, and to seek advice from teachers. It lays a good foundation for the research of this article, and provides ideas for module design and interface layout. By watching the design, production and application of teaching platforms in the era of big data of related courses, observe the online courses of aerobics offered by relevant schools, and teach micro-aerobics teaching platforms. Use logical analysis methods to organize, analyze and summarize the data related to big data, aerobics, teaching platforms, interface layout, etc., master the latest academic research results, and form a thesis framework based on previous research.

4. Research results of aerobics in micro-universities under the background of big data era

4.1. Survey results in the context of the era of big data

The key and core of big data thinking is how to analyze and process the huge online open course storage and the laws behind the huge data generated. If we understand and analyze fragmentation, fragmentation and partial integration through logic, we will find the intrinsic value of teaching hidden behind the data. Using data to speak is the scientific basis for optimizing the aerobics school curriculum resources, and it is also the new guiding ideology for aerobics school curriculum teaching. The use of "mobile teaching methods" in the classroom enables students to conduct self-study based on inquiry. Use the teaching method of "teamwork" in the proficient stage. In the self-editing stage, the teaching method of "innovative design" is used to improve students' subjective initiative. In after-school life, develop the idea of lifelong aerobics that adheres to sports, use the "sports punching" teaching method, and increase the density of student sports.
One of the important ways to increase the efficiency of micro aerobics in the context of the era of big data. The use of advanced aerobics sensing device technology in the aerobics teaching process enables students to master their own sports data, including recording students’ daily sports data, behavior habits and the degree of control of sports technology, thus enabling each aerobics class. Everyone and every student can clearly understand their movement status, and through a lot of data analysis, they can better grasp the individual movement status and behavior trajectory of each student. It will be more convincing to use data to guide students to actively achieve exercise standards, and students will also focus on improving their athletic performance and physical indicators, so as to achieve the purpose of improving the efficiency of aerobics teaching. Through an anonymous questionnaire survey of 489 students in two teaching classes, the results of the survey and analysis are shown in Table 1. According to the feedback from the questionnaire survey, it can be seen that the vast majority of students support the course. The support rate of micro-course aerobics courses under the background of big data is 82.4%. The results show that the teaching model has been recognized by students.

Table 1. Statistics of questionnaire survey of micro-course aerobics course under the background of big data

| content                                                                 | popularity/% | Opposition rate /% |
|-------------------------------------------------------------------------|--------------|--------------------|
| Do you support the teaching mode of big data micro-course aerobics courses? | 82.4         | 17.6               |
| Can you effectively mobilize the enthusiasm and initiative of classroom participation? | 70.6         | 29.4               |
| Can you broaden your horizons and improve your understanding and understanding of aerobics? | 58.4         | 42.6               |
| The curriculum teaching design is novel and                             | 70.3         | 30.7               |
Teaching feedback mainly includes teachers' evaluation of students and students' evaluation of teachers. In the process of evaluating students' learning status, teachers can play back the students' performance in the classroom through the teaching videos recorded in the classroom, and then discover the students' advantages and disadvantages in the classroom practice in time. In the next lesson, teachers can help students correct personality problems. For the personality problems existing in students, they can provide individual guidance for students, grasp the focus of the problem, and effectively improve the relevance of teachers' teaching. In the evaluation of teachers by students, because different students have different learning needs, and teachers organize teaching activities, the ultimate goal is to improve students' aerobics literacy. Therefore, if the teacher cannot meet the learning needs of the students, then the wonderful teaching activities are meaningless.

4.2. Innovation in the application of aerobics in college micro-classes in the background of big data era

The construction of micro aerobics in universities and the implementation of specific teaching activities need to rely on high-quality network teaching platforms. Universities should establish Internet teaching platforms and construct attractive course websites. The overall structure of the website is reasonable, the page information is clear, and the corresponding download speed, good search engine function, voice navigation function, and convenient information feedback are guaranteed. In this regard, colleges and universities can combine the construction progress of miniature aerobics and scientifically plan the corresponding website design. After construction, they must ensure that they are open throughout the day and update their knowledge in a timely manner. In addition, a perfect website should be able to meet the needs of micro-class construction and teaching, and be able to design and layout specific functions for different users such as teachers, students, and administrators. First of all, in the face of teacher users, the construction of the website should promote teachers' network aerobics teaching resources, and promote the uploading, deletion and updating of network teaching resources and the management of interaction with students and teachers. Assess the student's academic performance. Secondly, in the face of student users, the website construction must fully consider its learning needs to meet the actual needs of students for independent learning and exploration of aerobics, while providing students with a wealth of independent learning resources for design learning. Thirdly, in the face of user management, it is necessary to plan system management, user management, module management, information management and other functional modules in the process of website construction to facilitate website construction and management. In addition, with the rapid development of the mobile Internet, schools can develop mobile APP software related to micro aerobics. For specific functional design, you can refer to the idea of website construction, so that students can easily learn micro-classes according to the actual situation of mobile Internet.

In the past, the content of aerobics textbooks was static, and students may have many ways of thinking that hinder learning and understanding. Teachers can integrate dynamic and interesting teaching content into it to better stimulate students' interest and enthusiasm in aerobics courses. Aerobics teachers should set the specific content of micro-courses according to the teaching objectives
of the courses. Therefore, we must concentrate on strengthening the recording of video resources to decompose and explain technical actions so that students can observe the details of technical actions in more detail. At the same time, each technical action is dynamic to ensure that the uploaded video must fully record the action. There should also be pictures of muscle strength matching the pictures, text descriptions, etc. If necessary, students can be guided in real time through the online communication module. On the other hand, the construction of micro-classes should ensure fashion and novelty, and effectively supplement traditional teaching content.

5. Conclusion

When implementing micro-course aerobics courses in the context of the era of big data, students generally support this new teaching method. This is very helpful for learning aerobics courses, and can learn more knowledge and abilities in limited classrooms. Of course, I also found that the course is still immature and needs improvement. The era of big data informatization has arrived. Aerobics teaching should conform to the trend of the era of big data and establish a new information evaluation system to achieve the teaching purpose of training innovative sports talents. The application of big data technology will bring inestimable value to the future physical education curriculum design, methods and aerobics teaching management. It is of great significance for exploring the laws of physical education development, changing the internal concepts of aerobics teaching, and improving the level of physical education. The efficiency of aerobics teaching. Guiding significance. In short, the micro-course aerobics course in the context of the era of big data is a transformation from knowledge-based courses to ability-based courses. By satisfying the individual needs of students, it enriches the heuristic and exploratory learning experience and improves course participation. And improving teaching achievements is a useful attempt to reform the aerobics curriculum.

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