Research on the Introduction Path of Traditional Minority Sports in Physical Education Teaching Based on Big Data of Internet of Things

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Abstract. Physical education teaching is one of the important contents of teaching activities, which is conducive to promoting students' overall development and improving students' comprehensive quality. And traditional minority national sports teaching activities is there are many problems to be solved, this paper aimed at the importance of traditional minority national sports teaching reform and the present problems existing in the traditional minority national sports teaching reform, at the same time using big data means to explore the path, introduced traditional minority national sports, in order to offer reader reference.

Keywords: Comprehensive Quality, Interesting, Physical Education, The Teaching Reform

1. Introduction
In the physical education activities of ethnic minorities in China, although the physical education of ethnic minorities has the characteristics of nationality, interest and diversity. However, the problems existing in the reform of traditional physical education of ethnic minorities hinder the development of minority physical education [1]. Therefore, the following research is carried out on the introduction path of traditional minority sports in PE teaching by means of big data.

2. The importance of the reform of traditional physical education of ethnic minorities
The traditional sports of ethnic minorities in China are mainly originated from the daily activities of ethnic minorities, such as production and life, customs and religious sacrifice, and are obviously affected by regional factors. Positive, reasonable traditional minority national sports teaching reform helps to improve teaching quality, change the traditional teaching concepts and teaching methods, to create high-quality learning environment for students, penetration and realization of minority cultural heritage, speeding up the reform of education, based on the concept of new curriculum reform, build a high quality of ethnic sports curriculum, to adapt to The Times development, cultivate sports talents [2].
3. Problems existing in the reform of traditional physical education of ethnic minorities at the present stage

3.1. Some teachers have low professional level
Teachers fail to adapt to the network background, which is affected by the nature of traditional minority sports, and the content of sports items is relatively special, which is quite different from traditional sports in form [3]. Therefore, it requires higher professional quality of teachers. However, at the present stage, some teachers' professional quality level is low, which makes it difficult to adapt to the network development background, lack of understanding of the sports culture of ethnic minorities, and it is difficult to carry out practical teaching of sports knowledge in teaching, which affects the teaching quality.

3.2. Teaching philosophy and teaching mode tradition
Teaching concept and mode of traditional is at this stage the main problems of traditional minority national sports teaching, the teachers in the teaching process is still choose the traditional teaching concept, teaching model of a single, because of the traditional minority national sports and the traditional difference is bigger, in the practical application of the whole teaching process, students' learning interest is not high, learning effect is not obvious kicking shuttlecock) (FIG. 1 for the sports teaching).

![Figure 1. Shuttlecock kicking in physical education teaching](image1.jpg)

3.3. Inadequate infrastructure and unreasonable curriculum setting
The effective development of traditional physical education of ethnic minorities is based on the premise of perfect infrastructure, especially all kinds of sports equipment, which has positive promoting significance for teaching. In the process of infrastructure construction, some schools have high requirements on facilities due to the numerous traditional sports of ethnic minorities, and even some equipment need to be made by hand, which makes it difficult to purchase on a large scale and restricts the development of teaching (Figure 2 is outdoor sports teaching).

![Figure 2. Outdoor physical education](image2.jpg)

4. Significance of using big data in traditional physical education teaching of ethnic minorities

4.1. Multimedia technology can improve students' enthusiasm to participate in classroom teaching
In the traditional physical education teaching process, teachers usually demonstrate and explain some
actions in the teaching process, and then students have comprehension training. During the training, the teacher will correct some of the students' actions. The main problem under this teaching method is that students' wrong actions are not corrected in a timely manner or they miss to be corrected. Including the students themselves do not have a deep understanding of the problems. Use of multimedia technology, in the process of sports teaching, the teacher to the students' action and recording student specific action play to the students view, watching a video at the same time to correct some wrong action and explain not only can greatly save time error correction and let the students for their wrong action can have a more in-depth understanding of improve the efficiency of student learning. In addition, in the daily teaching process, teachers can also explain the key points of movements to students through video display or pictures, so that students can have a more profound understanding of the key points of movements, deepen students' impression of sports movements, and improve their learning efficiency.

4.2. The application of multimedia technology can increase the trust between students
Sports is a team fighting project. Before the teaching starts, teachers can use the Internet information technology to download more appropriate teaching videos and teaching papers for students to increase their enthusiasm for sports learning. In the activity link, the students were trained in groups and the process of group training was filmed through video shooting technology. Comments were made after class to analyze the problems and advantages of cooperation, communication and other aspects between students, so as to help students establish efficient communication channels

4.3. The application of multimedia technology can increase the intuitiveness of teaching
In the sports teaching in higher vocational schools, there are a lot of sports action is difficult to use language to describe and express, in particular the consistency of action, in the traditional way of teaching, the teacher is very difficult to for behavioral essentials and accurate expression of the essence, however, if the use of new media technology through slow play, such as pictures show it's easier to achieve for example for some difficulty of high consistency can be through the computer multimedia courseware important action points to suspend or through the way of text editing, to mark the key action, let the students to the important difficulty action can have a clear understanding of helping students to come in Practice and imitate intuitively and effectively.

4.4. The use of computer multimedia technology can improve the interaction between teachers and students
With the assistance of computer new media technology in teaching, teachers and students are both participants and video recorders of sports activities. In the whole teaching process, students can become models of teaching cases and interpreters of physical education activities, which has narrowed the distance between teachers and students. For example in the video teaching every student in the sports action in the video can fully play their own opinions, put forward the understanding of the behavioral essentials this greatly improve the quality of the teacher's teaching to promote students' thinking at the same time due to the increasing maturity of the development of computer information technology to physical education teaching material is also increasingly rich, the teachers and students to obtain equal opportunity of sports material is by introspection on put students can search information to a large number of sports teaching [4]. Therefore, in the process of physical education teaching. For the learning and understanding of sports actions, teachers can use the methods of group discussion and group competition. Let students find teaching materials independently to improve their initiative in physical education learning (Figure 3 is multimedia physical education teaching).
5. Introduction path of traditional minority Physical Education based on big data of Internet of Things

5.1. Accelerate the upgrade and renovation of existing equipment
Big data technology is an advanced information technology. Its application in the field of physical education is mainly reflected in the collection, processing and storage of sports information and specific data of sports conditions. Currently, more commonly used exercise information acquisition devices, such as exercise bracelet, body fat scale, heart rate tester, etc., often need to match with the information acquisition terminals in the special App to realize the processing, storage, tracking and monitoring of users' health information and data [5]. Therefore, colleges and universities in sports teaching design, for the student movement data collection and applications often require the independent research and development design, or to cooperate with the third party platform for health monitoring equipment of open and reform, the application of the big data technology to increase the degree of precision equipment speed, data analysis and data transmission speed and efficiency of data calls made great contributions.

5.2. Comprehensively guide students to exercise independently
The ultimate significance of physical education is to cultivate students' exercise habits and enhance their awareness of autonomous exercise. However, increased awareness of the cultivation of the habit and rely solely on the classroom training together for a short period of time is not enough, but need to continually repeating and strengthen, guides the student to look at the role of health monitoring equipment correctly in the life, regular exercise, the mentality, cultivate independent exercise consciousness, thus have subtle influence on students' living habits. Therefore, the application of big data technology in college physical education often needs to be combined with the cultivation of students' autonomous exercise consciousness, so as to maximize the positive impact of big data technology and health failure monitoring equipment on students' exercise time, ways and even exercise methods.

5.3. Fully mining the big data of students' sports and health
In addition to the single information collection, data storage and invocation, big data technology also plays a role in digging the association and relationship between data and discovering the common characteristics and rules of data and information.
At present, the application of big data technology in physical education in colleges and universities in China generally focuses on the collection and storage of data, without fully presenting the connotation and deep meaning behind the data to the adjustment of teaching work. In fact, the big data technology in not only confined to the application of physical education in colleges and universities student health information and exercise condition monitoring and statistics, based on the students
exercise frequency, active time, exercise intensity and the change of physical indicators such as track and analyze data, to provide students with more practical, healthy physical training plan, and the need to improve or strengthen links are personalized adjustment and targeted training [6].

6. Conclusion
To sum up, in the physical education activities of ethnic minorities, the application of big data technology to transform and upgrade the existing teaching equipment, mining the big data of students' physical health, and comprehensively guiding students to take exercise independently is conducive to expanding the content of physical education and improving the quality of physical education of ethnic minorities.

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