### Research on the Reform of PE Teaching Evaluation System in Colleges and Universities

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#### **ABSTRACT**

With the development of Internet technology and the arrival of the era of big data, traditional evaluation methods of PE Teaching no longer adapt to the development of the times. The methods of college sports evaluation must be done with the help of the big data technology. The benefits and shortcomings of the big data technology in the evaluation system should be fully affirmed, so as to establish a more perfect evaluation system.

**Keywords:** PE teaching, Evaluation system, Reform.

#### 1. INTRODUCTION

In today's society, with the continuous development of Internet technology, people's production activities, business operation mode and education mode are all affected by the era of big data to varying degrees. For physical education in colleges and universities, the development of big data era has a great impact on the evaluation system of traditional teaching quality. The deficiencies of the evaluation system of traditional teaching quality up, which gradually show restricts comprehensive development and improvement of physical education in colleges and universities to a certain extent. Therefore, in the context of the wide application of big data, we should base ourselves on the physical education in colleges and universities, and gradually build the quality evaluation system of physical education in colleges and universities. We should apply the use value of big data scientifically to the quality evaluation of physical education in colleges and universities, so as to reflect the quality of physical education and learning effect in colleges and universities.

#### 2. ANALYSIS OF TRADITIONAL PE TEACHING EVALUATION SYSTEM IN COLLEGES AND UNIVERSITIES

#### 2.1 Analysis From the Perspective of Evaluation Subject and Evaluation Mode

At present, in the whole PE teaching evaluation system of colleges and universities, the main body of evaluation is mainly involved in two dimensions: students and teachers. From the perspective of the evaluation on teachers, in most colleges and universities, department leaders, students and teaching supervisors are mainly involved in evaluating teachers' performance. Such evaluation is too subjective, lacking objective models and standards. In this evaluation system, the lack of mutual evaluation and self-evaluation of teachers further aggravates the traditional administrative problems of teachers' teaching evaluation and causes the irrationality and unfairness in the evaluation course, forming a vicious circle of teaching evaluation. And from the perspective of evaluation on students, it is teachers who usually evaluate students' performances in most colleges and universities sports teaching. This kind of evaluation mode ignores the students' selfevaluation as well as mutual evaluation, which is too single, not giving full play to the role of

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students in evaluation system and fully motivating students' learning initiative and enthusiasm.

## 2.2 Analysis From the Perspective of Evaluation Index and Content

The purpose of physical education in colleges and universities in China is no longer to only improve students' physical performance, but to exercise their physical and mental quality, improve their physical literacy and physical awareness, guide students to establish the spirit of sports and form the habit of physical exercise, and protect students' physical and mental health. However, in view of the current college physical education teaching, sports skills still occupy an absolute position in teaching evaluation, while the comprehensive development of students has not got enough attention. The evaluation of teachers is not specific, and the grade evaluation of "excellent, good and poor" seriously restricts the progress and development of teachers, and also affects the enthusiasm of teachers for PE teaching.

From the point of evaluation content, the current evaluation system mainly involves teachers' attitude, method, sports ability, moral quality, teaching achievements, scientific research ability, innovation ability, classroom atmosphere. The evaluation of students needs to cover the students' physical quality, sports skills, engagement, classroom performance, theory of knowledge, interest in sport, innovation ability training and some other aspects. Actually, teachers mainly highlights students' theoretical knowledge, sports skill and physical quality training, but they do not focus on the students' innovative ability and interest in sport. In the evaluation system, more attention is paid to the common evaluation of the student group, and there are deficiencies in the individual difference evaluation of the student.

## 2.3 Analysis From the Perspective of Evaluation Means and Methods

At present, the college PE evaluation system mainly adopts artificial evaluation methods and means, which are time-consuming, laborious, and prone to errors. In terms of evaluation methods, first of all, excessive emphasis is placed on final evaluation, ignoring the progress of each individual at all stages of learning; secondly, quantitative evaluation is emphasized, ignoring qualitative evaluation. The times are constantly changing and our society is making progress. As a place to foster

talents for society, colleges and universities should keep pace with the times, grasp the new elements and technologies of the times, and integrate them into all aspects of the school, so as to ensure the healthy development of teaching.

## 3. THE FEATURES INVOLVED IN THE NEW EVALUATION SYSTEM IN PE TEACHING

With the implement of quality education reform in our country, as well as the advent of the era of big data, new requirements have been put forward for college PE teaching evaluation, and many reform conditions have been created. On the basis of the presence of big data, a new sports teaching evaluation system will be built up, which will help boost sports teaching.

#### 3.1 More Data-oriented Evaluation System

With the advent of the era of big data, it has become possible to combine data with the evaluation of physical education in colleges and universities. The addition of big data brings better development opportunities and more advantages for the evaluation system of physical education in colleges and universities. The digitalization of physical education teaching evaluation system in colleges and universities makes the evaluation of physical education become more objective and more scientific compared with the traditional subjective evaluation. The traditional teaching evaluation system is highly subjective. Students are evaluated mainly by their grades, while teachers are evaluated mainly by their own subjective feelings. Therefore, the evaluation system is comprehensive and objective. However, with the advent of big data, every index of evaluation can be accurately recorded, and then be used as the basis for evaluation, so that people can have a more objective and accurate understanding of themselves.

#### 3.2 More Diversified Evaluation Content

In the traditional PE teaching, the final examination result is the only standard to measure and evaluate students, which is not conducive to the overall development of students. The application of big data allows schools to assess each aspect of students and teachers, rather than just one aspect. For example, when students are evaluated in sports, their sports ability should not be only assessed, but their sports ability, physical fitness, theoretical knowledge, learning attitude and progress should

also be comprehensively scored and assessed. When evaluating the teachers, the test results of the students taught by the teachers can not be only referred to, but also the teachers' classroom effect, record work, etc. In short, the emergence of big data has enriched the assessment content of schools.

#### 3.3 More Intelligent Evaluation Means

In the past, among the traditional PE evaluation methods in colleges and universities, most of them are artificial operations when they are used to assess and evaluate students and teachers. When people operate, they are prone to mistakes or calculation errors, and they need to consume a lot of manpower and material resources. It is also common for people to be thankless. However, if you apply the big data intelligent technology to the sports evaluation system, it is not only convenient and fast, but also involves no mistakes. And this intelligent technology can quickly collect, count, sort out and analyze students' data. Intelligent processing of the same workload will save a lot of time, and the number of errors will be reduced.

# 4. PRINCIPLES OF THE REFORM OF PE TEACHING EVALUATION SYSTEM IN COLLEGES AND UNIVERSITIES

## 4.1 To Evaluate Teachers and Students by Using Big Data

There are two main sources of PE teaching quality evaluation in colleges and universities: teachers' teaching and students' learning. By using the big data evaluation index to carry on the weight analysis, the college PE teaching quality evaluation system can be built. The data sources of teacher evaluation can be mainly divided into three parts: teachers' self-evaluation, peer evaluation and students' evaluation of teachers' teaching quality. The self-evaluation of PE teachers is conducive to teachers recognizing their shortcomings in teaching and making timely corrections. Teachers can log in to their own teacher management system for selfevaluation and the evaluation of other peers. Students can log in to their own evaluation account to evaluate their PE teachers' class, so as to help their teachers adjust the course content. The source of evaluation data for students can also be divided into three parts: self-evaluation of students, mutual evaluation of students, and evaluation of students' learning. Students' self-evaluation refers to

students' self-recognition of the completion degree of their own learning process after the teacher completes the teaching task. Students can also evaluate other students' performance in class, completion of learning tasks, and so on. PE teachers can also give unified marks on their own teacher management platform according to students' learning conditions.

#### 4.2 To Evaluate the Quality of PE Teaching by Using Big Data

The selection of teaching quality evaluation index directly affects the quality of the whole teaching quality evaluation results. In the past, the analysis of weight mainly relied on experts' intuitive scoring, which resulted in strong subjectivity and dependence of the results, and the difference between the evaluation results and the actual results was very large. Nowadays, colleges and universities can use the analytic Hierarchy Process (AHP) to calculate the weight coefficient when carrying out the weight distribution of the evaluation index system. This method is to compare the correlation between the evaluation indexes and finally quantify the final result to get the weight coefficient. After data collection and data processing analysis, the evaluation structure should be publicized in a timely manner for teachers and students to give feedback. When giving feedback, teachers and students should evaluate calculation results through network clients, mobile phone clients, etc., taking advantage of the convenience of the big data era. Finally, whether the construction of this quality evaluation system is reasonable and effective can be known through the evaluation terminal, so that an improvement suggestion for the builders of the evaluation system can be provided and the purpose of physical education teaching evaluation can be achieved.

#### 4.3 To Institutionalize PE Teaching Management by Using Big Data

For college physical education, in order to fully guarantee the perfect operation of teaching quality evaluation system under big data, it is necessary to fully guarantee the institutionalization of data management. First of all, PE teaching groups in colleges and universities need to actively mobilize their own teaching teams to ensure that everyone is clearly aware of the role and value of institutionalized data management, recognize their responsibilities in institutionalized management, and actively invest in the institutionalization of data

management to ensure the institutionalized cyclical management and whole process monitoring of data management. Secondly, colleges and universities sports teaching group need to actively gain support and help from the school information department, so as to realize the control of data management system and ensure the real-time monitoring of the data of college PE teaching practice process and the establishment of the PE teaching quality evaluation system based on big data. Then, the collection and application of data needs to be careful to ensure that appropriate institutional regulations are in place. In the process of data collection, it is necessary to strengthen the audit and monitoring of data sources, pay attention to the application logic and application scope of big data, build corresponding institutionalized rules, and ensure the whole process of big data application. For physical education in colleges and universities, in order comprehensively build a teaching quality evaluation system based on big data, it is necessary to comprehensively promote the wide application of big data itself in physical education and integrate the use value of big data into the practice of physical education in colleges and universities.

#### 5. CONCLUSION

The advent of the era of big data has brought a lot of new development opportunities for evaluation of the university sports teaching; at the same time, it has also ushered in the new requirements and new challenge. The construction of PE teaching evaluation system must be connected with the big data application, following the development trend of era, innovating the evaluation form and content, enriching the evaluation subjects, and perfecting evaluation system, to promote the smooth realization of physical education goals in colleges and universities.

#### **AUTHORS' CONTRIBUTIONS**

Gaosheng Li wrote the script, and Yijun Gu is responsible for revising and editing.

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