

Retraction

Retracted: Importance of Integrating Traditional Physical Education into Physical Education Teaching Using Big Data

Mobile Information Systems

Received 25 July 2023; Accepted 25 July 2023; Published 26 July 2023

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation. The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

 G. Qiang, L. Ya-mei, and G. Li, "Importance of Integrating Traditional Physical Education into Physical Education Teaching Using Big Data," *Mobile Information Systems*, vol. 2022, Article ID 9534927, 11 pages, 2022.



Research Article

Importance of Integrating Traditional Physical Education into Physical Education Teaching Using Big Data

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Received 12 July 2022; Revised 14 August 2022; Accepted 17 August 2022; Published 30 August 2022

Academic Editor: Muhammad Zakarya

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In order to advance the assessment capability of the significance of integrating old-fashioned physical education into school physical education, an evaluation model of the significance of integrating old-fashioned physical education into school physical education founded on big data analysis of influencing factors of physical education quality is put forward. The big data analysis model of the significance of integrating old-fashioned physical education into school physical education was established, and the constraint parameter model was adopted to evaluate the significance of integrating old-fashioned physical education into school physical education by the method of objective elements collection of physical education teaching effect. Combined with the quantitative statistical analysis method of structural parameters of physical education system, the important parameter analysis model of integrating classical physical education into institution physical education was realized, and the inversion feature quantity of the significance evaluation of integrating classical physical education into institution physical education was extracted. Combining the questionnaire analysis method of influencing factors of institution physical education teaching quality, this paper realizes the piecewise linear estimation of the significance of classical physical education in institution physical education teaching, adopts the joint feature analysis method of quantitative rules, combines the quantitative analysis of indicators and the confidence test results of the significance of classical physical education in institution physical education teaching, and therefore realizes the fuzzy assessment of the significance of classical physical education in institution physical education teaching by fuzzy decision method. We realize the comprehensive evaluation decision of the significance of integrating classical sports into institution physical education. According to the big data mining results of the significance evaluation of integrating classical sports into institution physical education, realize the decision evaluation of the significance of integrating classical sports into institution physical education. The test outcomes express that this approach has good adaptability in evaluating the significance of integrating old-fashioned physical education into school physical education, and the confidence level of the evaluation results is higher than the other approaches.

1. Introduction

The concept of the specialty of classical ethnic sports can be found in the Brief Introduction to the First-class Discipline Award of Degree Granting and Talent Cultivation published by the Sixth Discipline Evaluation Group of the Academic Degrees Committee of the State Council in 2013, which clearly states that classical ethnic sports is a discipline that studies the essence, phenomenon, and law of Chinese martial arts, classical health-preserving sports, and Chinese folk sports. It takes Wushu, health-preserving, and other classical folk sports as the research objects, and is formed by the combination of Chinese classical culture and sports. Now, it has formed the research directions of Wushu theory and method, sports health-preserving theory and method, national folk sports development, Wushu culture and education, Wushu dissemination, etc. From the above concepts, it can be determined that the research objects of this discipline are martial arts, health preservation, and other national classical sports, and generally speaking, it is a

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discipline that takes all Chinese national sports as its research objects. Among them, Wushu has been attached great significance by the party and the people since the founding of New China. Experts and scholars have been organized for many times to dig, sort out, and compile vast volumes of Wushu into books, which has greatly developed Wushu and basically matured in the 1990s [1]. However, although classical national sports have been bred, developed, and inherited in thousands of years of history in China, compared with martial arts, classical national sports have not been "consciously" developed, and it was not until 1980s that it began to enter the research field of vision. The term "national classical sports" first appeared at the National Classical Sports Work Conference in September, 1981 [2]. At that time, it was put forward that the national classical sports work should be "actively advocated, strengthened in leadership, reformed and improved, and steadily developed". So far, the national classical sports have been more systematically and forcefully excavated and sorted out, and the term "national classical sports" has been used up to now. With the continuous rise of classical sports and classical sports culture, people attach significance to the integration of classical sports into institution physical education, and the significance of studying the integration of classical sports into institution physical education has attracted people's attention [3].

The classical sport is an intangible cultural heritage, reflecting different national and regional characteristics. Each nation has its own different regional environment, and its unique cultural traditions, production and lifestyle, religious beliefs, etc. in the regional environment have created their own characteristics of intangible cultural heritage. For example, in mountainous areas, ethnic minorities will carry out some ethnic projects about climbing and mountain climbing. In water towns, other ethnic minorities mainly carry out water sports such as dragon boat races and diving games. At the same time, based on their unique regional environment, each ethnic minority has gradually formed a relatively stable psychological structure, which permeates all the aspects of national cultures, and also inevitably permeates the intangible cultural heritage of sports, and each embodies the cultural and psychological characteristics of each ethnic group [4].

Through combining big data mining and statistical analysis methods, in this paper we explore the significance data of the integration of classical physical education into institution physical education by extracting the reflected fuzzy features, and build a big data exploration model of the significance of the integration of classical physical education into institution physical education [5]. This paper adopts statistical analysis and judgment methods to evaluate the significance of integrating old-fashioned physical education into school physical education. This paper establishes a big data investigation model of the significance of integrating classical sports into institution physical education, adopts the method of objective elements collection of physical education teaching effect to carry out the constraint parameter model of the significance evaluation of integrating classical sports into institution physical education, realizes

the significance parameter analysis model of integrating classical sports into institution physical education by combining the quantitative statistical analysis method of structural parameters of physical education scheme, and extracts the inversion feature quantity of the significance evaluation of integrating classical sports into institution physical education.

Furthermore, combining with the questionnaire analysis method of influencing factors of institution physical education teaching quality, this paper realizes the piecewise linear estimation of the significance of classical physical education in institution physical education, adopts the joint feature analysis method of quantitative rules, combines the quantitative analysis of indicators and confidence test results of the significance of classical physical education in institution physical education, and realizes the wide-ranging assessment of the significance of classical physical education in institution physical education, combining with the statistical analysis methods of Matlab and SPSS. The fundamental contributions of our research can be summarized as follow.

- (i) an evaluation model of the significance of integrating old-fashioned physical education into school physical education founded on big data analysis of influencing factors of physical education quality is put forward.
- (ii) The big data exploration model of the significance of integrating old-fashioned physical education into school physical education was established, and the constraint parameter model was adopted to evaluate the significance of integrating old-fashioned physical education into school physical education by the method of objective elements collection of physical education teaching effect.
- (iii) Combined with the quantitative statistical analysis method of structural parameters of physical education system, the important parameter analysis model of integrating classical physical education into institution physical education was realized, and the inversion feature quantity of the significance evaluation of integrating classical physical education into institution physical education was extracted.

The remaining sections of the manuscripts are structured as discussed in subsequent sentences. In Section 2, we deliberate an analysis of the important variable parameters of the integration of classical physical education into institution physical education. The model constraints along with parameters construction are deliberated in Section 3. In Section 4, we demonstrate the optimization of assessment prototype of the significance of integrating physical education into institution physical education. Simulation and empirical analysis of the suggested approach is demonstrated in Section 5. To summarize the paper, Section 6 concludes this paper and puts forward few directions for further research along with the limitations of current work.

2. Analysis of the Important Variable Parameters of the Integration of Classical Physical Education into Institution Physical Education

There are many factors from macro to micro that affect the integration of ordinary classical physical education into institution physical education teaching quality. From the macro level, the factors that affect the integration of ordinary classical physical education into institution physical education teaching quality involve a wide range, including social factors such as the guidelines and policies of relevant government departments, relevant laws and regulations, the truth orientation of the public, and market values. In addition, it also includes school factors, such as school teaching ideas, teaching funds, teaching infrastructure, teaching management, and training system. It can be seen from the macro level that the factors influencing the integration of classical physical education into institution physical education are a very large and complex system, and it is very difficult to sort out the relationship among the factors, and it is difficult to grasp the key factors if there are too many influencing factors. In addition, we should consider the feasibility of data acquisition and our own ability. This paper principally investigates the important factors of integrating classical physical education into physical education teaching in schools and institutions of higher education. The theoretical analysis grounded on this level can be more specifically applied to physical education and successfully progress the superiority of physical education [6].

Therefore, it cannot resonate with the students. It will also discourage students' enthusiasm for participating in the classroom, which will hinder students' acceptance of knowledge and make it difficult for them to develop healthily. On the contrary, if teachers hold a positive teaching attitude, the students' enthusiasm to participate in the classroom will be greatly improved [7]. In order to test the significance evaluation of the approach, as suggested in this paper, firstly, the big data sampling and explanatory variables analysis of the significance of the integration of classical sports into institution physical education are carried out, mainly referring to the specific factors that affect the physical education activities, such as teaching methods, teaching environment, teachers, and students. This should be noted that the explanatory variable model of the significance evaluation of the integration of classical sports into institution physical education is given away in Figure 1.

The correlation of each explanatory variable, taking correlation degree is analyzed, ambiguity degree, fitness degree, and matching degree as the constraint characteristic quantity [8], and the analytical distribution of variables is obtained, as shown in Table 1.

Bestowing to the correspondence of big data, we first determine the weight of each index, and initialize the clustering centers $F(x_i, A_j(L)), i = 1, 2, \dots, m, j = 1, 2, \dots, k$ of the significance evaluation classification of classical sports integration into institution physical education. In next steps, we extract the correlation characteristic components of the



FIGURE 1: The explanatory variable model of the significance evaluation of integrating classical physical education into institution physical education.

significance evaluation of classical sports integration into institution physical education, and, then institute a big data investigation model of the significance of classical sports integration into institution physical education. Finally, we use quantitative recursive analysis in order to acquire the distribution of control variables of the significance evaluation of classical sports integration into institution physical education, which is displayed in Table 2.

According to the above variable parameter analysis, the constraint parameter model of the significance assessment of the integration of classical physical education into institution physical schooling is in fact performed through using the method of objective elements of physical education teaching effect. Moreover, the significance parameter analysis prototype of the integration of classical physical schooling into institution physical training is, then, realized and understood through conjoining the quantitative statistical analysis method of structural parameters of physical education system [9, 10].

The significance of assessment of the integration of classical physical schooling into institution physical education mainly analyzes its influence from four aspects: teaching philosophy, teaching methods and means, physical education instruction quality assessment scheme, and physical education coaching hardware. Through combing the literature, it is found that no matter from what angle these researchers divide the features that disturb the quality of physical education, they are inseparable from the essential elements that constitute the physical education. The most imperative feature that distresses the result of things is the formation process of things [11-13]. Therefore, the important factor that affects the excellence of physical instruction schooling is the teaching procedure. Bestowing to the seven elements of teaching, that is, teachers, students, teaching purpose, curriculum, teaching approaches, teaching environment, and feedback, the three elements of teaching purpose, curriculum, and feedback are all related to the physical education administrators, who have the highest decision-making power and overall planning power.

As far as the teaching process is concerned, in fact the tutors and the pupils are the chief factors, while teachers can

Explanatory variable	Correlation degree	Equivocation	Fitness	Matching degree
Ability quality	0.835	0.587	0.782	0.161
Teaching idea	0.413	0.134	0.267	0.887
Teacher's personality	0.951	0.707	0.203	0.749
Teaching means	0.707	0.103	0.260	0.661
Physical education teaching quality evaluation	0.474	0.449	0.924	0.736
Innovation capacity	0.154	0.076	0.575	0.249
Teaching environment	0.652	0.067	0.831	0.809
Teaching infrastructure	0.869	0.249	0.956	0.322
Teaching management	0.590	0.335	0.250	0.923
Teaching thought	0.996	0.235	0.629	0.251

TABLE 1: Distribution of explanatory variables for the evaluation of the significance of integrating old-fashioned physical education into school physical education.

TABLE 2: The control variable distribution.

Control variable	Correlation degree	Equivocation	Fitness	Matching degree
Teacher	0.695	0.895	0.392	0.781
Student	0.407	0.402	0.585	0.238
Academic goal	0.192	0.716	0.516	0.876
Course	0.668	0.838	0.117	0.108
Teaching method	0.419	0.271	0.565	0.026
Teaching environment and feedback	0.108	0.676	0.546	0.125
Student factor	0.513	0.183	0.631	0.975
Teaching method	0.291	0.724	0.778	0.425
Teaching environment	0.791	0.621	0.157	0.618

only improve the teaching purpose, syllabus, and feedback from the microlevel. Although it is not denied that these three factors have an influence on the eminence of physical education schooling, they are not the core factors, so this paper will not explore them in depth [14]. Therefore, allowing to the seven elements of instruction, the tangible circumstances of teaching and the summary of literature, this paper divides the factors that distress the eminence of physical education in academies and institutions of higher education into four dimensions, including teachers' factors, students' factors, teaching methods, and teaching environment [15].

3. Model Constraint Parameter Construction

By using the visual dynamic feature analysis method [16], the factor weight distribution of the significance evaluation of integrating classical physical education into institution physical education is obtained as follows in (1):

$$G_{k+1} = P_{k+1|k}^{xz} \left(P_{k+1|k}^{z} \right)^{-1}, \tag{1}$$

wherein, $P_{k+1|k}^{zz}$ is the interactive factor between teachers and students in the integration of classical physical education into institution physical education, and $P_{k+1|k}^{z}$ is an imperative secondary parameter that distresses the eminence of physical education teaching. Combined with the relevant literature, this paper explains the teacher factor as follows: in teaching activities, according to the first-level classification of the evaluation system of physical education level, the fluctuation exploration approach of the significance distribution of the integration of classical physical schooling into institution physical education is adopted [17], and the statistical distribution set structure of the significance evaluation of classical physical education into institution physical education is obtained [18]. By using weighting coefficient and expert evaluation, the covariance characteristic distribution of computation fault is as given in (2):

$$P_{k+1|k+1} = P_{k+1|k} - G_{k+1} P_{k+1|k}^{z} G_{k+1}^{T},$$
(2)

wherein, $P_{k+1|k}$ is the influence factor of teachers' teaching attitude, G_{k+1} is the target evaluation index set of physical education teaching effect, G_{k+1}^T is the prior characteristic value of classical physical education integrating into institution physical education, n_z is the measurement of the feature set of the significance evaluation of classical physical education integrating into institution physical education. The statistical vector dimension of the significance evaluation of classical physical education integrating into institution physical education is analyzed, the state is corrected by using the correction function, and the fuzzy adjustment factor of the significance evaluation of classical physical education integrating into institution physical education is obtained by using the weighted coefficient and the statistical characteristic analysis results of expert evaluation, namely, as given in (3):

$$\varphi_{k} = L^{-1} \sum_{j=k-L+1}^{k} \tilde{z}_{j} \tilde{z}_{j}^{T} - (P_{k+1|k}^{z} + R_{k}),$$
(3)

wherein, L is the statistical characteristic quantity of the significance of integrating classical sports into institution physical education, \tilde{z}_i is the evaluation index set of the

significance of integrating classical sports into institution physical education, R_k is the two-dimensional characteristic quantity, and $P_{k+1|k}^{z}$ is the fuzzy degree of the significance evaluation of integrating classical sports into institution physical education. Then, the statistical characteristic of φ_k 's evaluation of the significance of integrating classical sports into institution physical education obeys the k distribution with freedom, and the values of n_z , χ^2 and q_k , Q_k , r_k are different at different times. The descriptive statistical feature distribution evaluation set of the significance evaluation of classical sports integration into institution physical education is S, $\{v_1, \dots, v_M\}$ represents the fuzzy set of the significance evaluation of classical sports integration into institution physical education, and the whole decisionmaking system is set [19]. Based on the feature factor analysis and piecewise regression analysis, the state estimation sum of the significance evaluation of classical sports integration into institution physical education is obtained as $\hat{q}_{k+1}, \hat{Q}_{k+1}, \hat{r}_{k+1}$ and \hat{R}_{k+1} , which is described as illustrated in (4) and (5):

$$\widehat{r}_{k+1} = (1 - d_k)\widehat{r}_k + d_k \left[z_{k+1} - m^{-1} \sum_{i=1}^m h_{k+1} (X_{i,k+1|k}, u_{k+1}) \right], \quad (4)$$

$$\widehat{R}_{k+1} = (1 - d_k)\widehat{R}_k + d_k [\widetilde{z}_{k+1}\widetilde{z}_{k+1}^T - m^{-1} \sum_{i=1}^m (Z_{i,k+1|k}^* - \widehat{z}_{k+1|k}) (Z_{i,k+1|k}^* - \widehat{z}_{k+1|k})^T],$$
(5)

wherein, \hat{r}_k is the research capability parameter of educational science, *m* is the marginal characteristic quantity that affects the quality of physical education teaching, $X_{i,k+1|k}$ is the prior probability density, and u_{k+1} is the unbiased estimation parameter. According to the unbiased estimation theory, this paper constructs a state parameter optimization planning model for evaluating the significance of integrating old-fashioned physical education into school physical education teaching, combining with the quantitative statistical analysis method of structural parameters of physical education system [20].

4. Optimization of Evaluation Model of the Significance of Integrating Physical Education into Institution Physical Education

4.1. Big Data Mining Model for the Evaluation of the Significance of Integrating Old-Fashioned Physical Education into School Physical Education. The four latent variables studied in this paper are: teaching environment, teachers' factors, teaching methods, and students' factors, but the latent variables cannot be directly measured and need to be explained by the corresponding observed variables. By summarizing the literature and experts' suggestions, the latent variables, explicit variables, and specific indicators in the model are obtained [21, 22]. Teachers' factors mainly include five observation variables: (i) teaching attitude, (ii) language expression ability, (iii) capability to detect and comprehend students, (iv) aptitude to organize, manage, and control teaching activities, and (v) ability to demonstrate actions. Teaching methods are mainly reflected by five indicators, which measure teaching methods from macro to micro. From the macro point of view, teaching method mainly refers to the big teaching strategy, which mainly means that teachers fully consider the effective combination of various teaching methods when designing teaching.

The second aspect mainly refers to the specific teaching methods used in class, mainly focusing on the diversity of teaching methods and arousing students' enthusiasm. The third aspect is to understand the teaching method from the micro level, which mainly refers to the teaching means, including the use of teaching AIDS, to effectively improve the learning effect. The student factor is mainly reflected by four indicators, the first one is the difference of students' sports foundation. Second is the difference of students' learning methods. The third and fourth indicators are students' learning interest and motivation. The teaching environment is reflected by three indicators, (i) the first is the venue, equipment, and facilities, (ii) the second is the correlation among teachers and students, and (iii) the third is the association among the students [23, 24].

A big data mining model of the significance of integrating classical sports into institution physical education is constructed, a mathematical model according to the expected evaluation indexes is established. The fuzzy association rule feature quantity adopts the distribution of the significance reliability indexes of integrating classical sports into institution physical education, and combines the fuzzy decision-making method to build an optimized decisionmaking model of the significance evaluation of integrating classical sports into institution physical education, and obtains the important parameter set of integrating classical sports into institution physical education as follows in the following (6) and (7):

$$\hat{q}_{k+1} = (1 - d_k)\hat{q}_k + d_k \Big[\hat{x}_{k+1|k+1} \\ -m^{-1} \sum_{i=1}^m f_{k+1} \Big(X_{i,k|k}, u_k \Big) \Big] , \qquad (6)$$

$$\hat{Q}_{k+1} = (1 - d_k)\hat{Q}_{k+1} + d_k \Big[G_{k+1} - \tilde{g}_{k+1} - \tilde{g}_{k+1}^T - G_{k+1}^T + P_{k+1} \Big]$$

$$Q_{k+1} = (1 - a_k)Q_k + a_k [G_{k+1}z_{k+1}z_{k+1}] - m^{-1} \sum_{i=1}^m (X_{i,k+1|k}^* - \hat{x}_{k+1|k}) (X_{i,k+1|k}^* - \hat{x}_{k+1|k})^T]$$
(7)

According to the data of classical sports integration into institution physical schooling instruction resources, rendering to various evaluation systems, and the identification prototype of the significance assessment of classical sports integration into institution physical schooling instruction is constructed. Furthermore, the information entropy of the significance evaluation of classical sports integration into institution physical schooling instruction is obtained conferring to the parameter adjustment method of the influencing factors. This relationship is mathematically illustrated as given in (8):

$$H_2 = -\sum_{i=0}^{N} (1 - p_i) \ln (1 - p_i),$$
(8)

wherein, p_i is the sample parameter of the influencing factors of teaching quality, and N is the sample data size. According to the big data mining results of information entropy, the fuzzy function of the comprehensive decision of the significance of integrating classical sports into institution physical schooling is analyzed by arithmetical examination approach, and the spreading of the significance characteristics of integrating classical sports into institution physical education meets $\|C(l) - C(l-1)\|$ - ξ . The membership degree of evaluating the significance of integrating classical sports into institution physical education is as follows:

$$A_{j}(L+1) = \frac{1}{n_{j}} \sum_{i=1}^{k} X_{i}^{j} (j = 1, 2, \cdots, k),$$
(9)

wherein, X_j^i is the function of fuzzy closeness to characterize the significance evaluation of classical sports integration into institution physical education, and k is the effective questionnaire size [22, 25]. According to the j characteristic factor, the joint characteristic parameters of the significance distribution of classical sports integration into institution physical education are $\{w_k\}$ and $\{v_k\}$, and the likelihood estimation parameter values of the significance evaluation of classical sports integration into institution physical education are given in (10):

$$\begin{cases} E[w_k] = q_k, & E[w_k w_j^T] = Q_k \delta_{kj}, E[v_k] = r_k, \\ E[v_k v_j^T] = R_k \delta_{kj}, & E[w_k v_j^T] = 0 \end{cases}$$
(10)

where, δ_{kj} is the segmented detection coefficient of big data mining on the significance of integrating classical sports into institution physical education [24, 26]. A fuzzy constraint parameter model for evaluating the significance of integrating classical sports into institution physical education is established, and a constraint state feature distribution set for evaluating the significance of integrating classical sports into institution physical education is obtained, which is described as follows in equations (11) to (15):

$$\max Z = \sum_{i=1}^{m} \sum_{j=1}^{m} x_{ij} c_{ij},$$
(11)

$$st = \sum_{j=1}^{m} x_{ij},\tag{12}$$

$$st = \sum_{i=1}^{m} x_{ij},$$
(13)

$$x_{ij} = 1, \tag{14}$$

$$st = 0, \text{ or, } 1.$$
 (15)

In the above equations, $x_{ij} = 1$ exemplifies the regression parameter of classical sports integration into institution physical education quality evaluation, designs the quantitative regression distribution set of the significance of classical sports integration into institution physical education, $x_{ii} = 0$ represents the significance of classical sports integration into institution physical education, patent achievements transform the training set of the significance evaluation of classical sports integration into institution physical education, and $x_{ij} = -1$ represents the statistics of the significance evaluation of classical sports integration into institution physical education under the autoregressive examination model, and therefore, building the index exploration model and technique of the significance for classical and traditional sports integration into institution physical education [25].

4.2. Hierarchical Analysis of the Significance Evaluation of Integrating Classical Physical Education into Institution Physical Education. Through combining with the questionnaire analysis method of influencing factors of institution physical education teaching quality, this paper realizes the piecewise linear estimation of the significance of classical physical education in institution physical education, adopts the joint feature analysis method of quantitative rules, and combines the quantitative analysis of indicators and confidence test results of the significance of classical physical education in institution physical education, establishes an expert system model for the significance evaluation of classical physical education in institution physical education, and obtains the joint distribution threshold H_0 . When $H_2 < H_0$, then it means that the statistical information feature quantity of widespread assessment of the significance of classical physical schooling in institution physical learning is described as follows in (16):

$$\max 1 - \sum_{i} \sum_{j} \alpha_{i} \alpha_{j} K(x_{i}, x_{j})$$

s.t:
$$\sum_{i} \alpha_{i} = 1 \text{ an } d0 \le \alpha_{i} \le A, i = 1, 2, \cdots$$
 (16)

wherein, $K(x_i, x_j) = e^{-\|x_i - x_j\|^2/2\sigma^2}$, the smaller of σ values, the improved the convergence of the widespread assessment of the significance of integrating old-fashioned physical education into school physical education. For that reason, the hierarchical exploration technique of the significance evaluation of the integration of classical physical education into institution physical education is constructed, and the TTD function of the significance evaluation of the integration and physical education into institution physical education into institution physical education into institution physical education into institution physical education and piecewise sample regression analysis is expressed in (17):

$$TTD = a_1 x_1 + a_2 x_2 + \dots + a_k x_k + \delta.$$
(17)

In the above (17), the parameter TTD indicates the relevant features of the significance evaluation of classical sports integration into institution physical education,



FIGURE 2: The optimization process of the significance evaluation algorithm of classical physical education into institution physical education.

namely, a_1 , a_2 , ... a_k . Using the weighting coefficient and expert evaluation system, the arithmetical characteristic measure of the significance assessment for classical sports integration into institution physical schooling is given by M^{β} , and the joint characteristic quantity of the significance distribution of classical sports integration into institution physical education is illustrated in (18):

$$M^{\beta} = \left\{ x \mid x \in M, \frac{|f(x) \cap Y|}{|Y|} \ge \beta, 0 \le \alpha \le \beta \le 1 \right\}.$$
(18)

The rough set algorithm with limited factors is used, $U(t) = \sum_{\substack{M \in E \\ M \in T}} P[M]$ represents the prior distribution function, $A_{st} \subseteq P \times T$, and a particular rule set for fuzzy association of the significance evaluation of the integration of classical

Conditional attribute						
Evaluating indicator	MH1	MH2	MH3	MH4	MH5	MH6
Significance	0.040	0.839	0.749	0.987	0.829	0.040
Weight index	0.704	0.712	0.294	0.781	0.021	0.704

TABLE 3: The list of conditional attributes for the evaluation of the significance of integrating old-fashioned physical education into school physical education.

TABLE 4: The outcomes of the optimization process for the constraint parameters of the significance of integrating old-fashioned physical education into school physical education.

Explanatory variable	Contribution index	Normalized error	Covariance
Teacher	0.153	0.751	0.740
Student	0.263	0.942	0.644
Academic goal	0.071	0.661	0.794
Course	0.201	0.861	0.900
Teaching method	0.347	0.996	0.242
Teaching environment and feedback	0.293	0.236	0.916
Student factor	0.951	0.417	0.423
Teaching method	0.703	0.416	0.120
Communication ability	0.098	0.910	0.702
Know-how	0.403	0.476	0.837
Political caliber	0.259	0.102	0.461
Academic degree	0.367	0.832	0.202
Business experience	0.413	0.532	0.171
Teacher's age	0.415	0.471	0.225
Health level	0.096	0.753	0.677
Teachers' gender	0.200	0.419	0.594
Performance	0.924	0.508	0.413
Professional technology	0.129	0.608	0.584
Degree of education	0.917	0.934	0.370

physical education into institution physical education is constructed. Based on fuzzy decision-making method, the fuzzy evaluation of the significance evaluation of the integration of classical physical education into institution physical education is realized, and the comprehensive evaluation decision of the significance of the integration of classical physical education into institution physical education is achieved. The decision model is expressed as given in (19) and (20):

$$\min F = R^{2} + A \sum_{i} \xi_{i} , \qquad (19)$$

s.t: $\|\phi(x_{i}) - o\|^{2} \le R^{2} + \xi_{i} \text{ an } d\xi_{i} \ge 0, i = 1, 2, \cdots$
$$\max \sum_{i} \alpha_{i} K(x_{i}, x_{i}) - \sum_{i} \sum_{j} \alpha_{i} \alpha_{j} K(x_{i}, x_{j})$$

s.t:
$$\sum_{i} \alpha_{i} = 1 \text{ an } d0 \le \alpha_{i} \le A, i = 1, 2, \cdots$$
 (20)

wherein $\sum \alpha_i = 1$, $K(x_i, x_i) = 1$, therefore, the hierarchical investigation technique and model of the significance assessment of the integration of classical physical schooling into institution physical education is established to comprehend the significance assessment of the integration of classical physical schooling into institution physical education, and the optimized realization process is shown in Figure 2.

5. Simulation and Empirical Analysis

The SPSS empirical analysis method is taken, and the significance of integrating old-fashioned physical education into school physical education is evaluated. The main purpose of descriptive statistics on the data is to understand the basic characteristics of the data and see if the data follow to the law of normal distribution mainly through a few simple statistical values to see the concentration and dispersion of a set of data [21]. Generally, the central position of the data is judged by the maximum, minimum, and average values. The standard deviation, kurtosis, and skewness are mainly used to judge the dispersion degree of a group of data. In this paper, the software of SPSs 25.0 is implemented to process the statistics, and the list of conditional attributes for the evaluation of the significance of integrating oldfashioned physical education into school physical education is shown in Table 3.

The result means that the answers of the people who fill out the questionnaire are different, indicating that the data have a considerable degree of discrimination. Judging from the degree of data distribution, the statistical deviation of the maximum dignified variables is a smaller amount than 1, which describes that the data are moderately focused. Kline RB (1998) mainly uses skewness and kurtosis to judge whether a group of data imitates to the law of normal distribution or not. The author thinks and claims that if the



FIGURE 3: Histogram of significance distribution of classical physical education integrated into institution physical education. (a) Sample 1. (b) Sample 2. (c) Sample 3.

absolute worth of skewness is a smaller amount than 3 and the absolute worth of kurtosis is a smaller amount than 8 hours, then the data basically conforms to the law of normal distribution. Therefore, very easily it can be understood and realized that the data conform to the normal distribution characteristics. According to the distribution of conditional attributes, the constraint parameters of the significance of integrating old-fashioned physical education into school physical education are optimized, and the optimized solution results are made known in Table 4.

Analysis from Table 4 shows that this method is castoff to appraise the significance of integrating old-fashioned physical education into school physical schooling, and the calculation results of contribution level of related indicators are accurate and reliable, with high confidence level and small error. The distribution histogram of the significance evaluation of integrating classical physical education into institution physical education is tested, as shown in Figure 3, and the error distribution is shown in Figure 4.

Based on the analysis and exploration of outcomes in Figures 3 and 4, it can be easily understood that the evaluation of the significance of integrating old-fashioned physical education into school physical education by this method shows that the distribution of the evaluation of the



significance of integrating old-fashioned physical education into school physical education is well balanced. The test accuracy is evaluated, and the comparison results are given away in Figure 5. In fact, the examination and exploration of Figure 5 confirms that the evaluation correctness of this approach is greater than other approaches, i.e., BP and PID.



FIGURE 5: Comparison of evaluation accuracy.

6. Conclusions and Future Work

In this paper, it is of prodigious importance to explore the assessment model of the significance of integrating classical sports into institution physical teaching, which is of prodigious implication to optimizing labor dispatch and enterprise employment management. In this paper, we aim to put forward an evaluation model of the significance of integrating classical sports into institution physical schooling which is founded on the big data investigation of influencing factors of physical schooling excellence. Moreover, the constraint parameter approach of the significance assessment of the integration of classical physical teaching into institution physical schooling is performed through using the method of objective elements of physical schooling coaching effect, and, thus, the significance parameter investigation model of the integration of classical physical schooling into institution physical learning is realized through conjoining the quantitative statistical analysis method of structural parameters of physical education system. It is found that the evaluation of the significance of integrating old-fashioned physical education into school physical education by this method has a high accuracy and a good convergence level.

The relationship among the four influencing factors is clarified as: teaching environment, teachers, teaching methods, and students. Therefore, to progress the superiority and eminence of the P.E. teaching in academies and institutions of higher education, it is necessary to regulate the whole, coordinate the relationship among various elements, and link them together. However, due to factors such as time and self-ability, there are still some inadequacies in the research process of this paper, which are predominantly replicated in the subsequent two characteristics: (1) The selection of influencing factors of physical education teaching quality has certain limitations. There is a lack of some objective arguments in the process of determining the influencing factors. Therefore, in the future research, besides theoretical analysis, objective demonstration should be strengthened to improve the scientific and rigorous research results. (2) The selection of samples also has certain limitations. Due to the limited personal ability, the subjects of this questionnaire are mainly from nine universities in Hubei Province, but students from other universities are not investigated. Therefore, in order to make the research more universal, the scope of investigation can be further expanded in the future research process.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

- Y. Hu, J. Zhou, and B. Gao, "Design and analysis of interactive multimedia online physical education platform considering moving object segmentation algorithm," *Advances in Multimedia*, vol. 2021, no. 7, 7 pages, Article ID 1220512, 2021.
- [2] J. Zhang and H. Mu, "Exploration and practice of flipped classroom in physical education teaching in vocational colleges," *Advances in Educational Technology and Psychology*, vol. 5, no. 11, pp. 2728–2736, 2021.
- [3] J. Pickett, "Threshold concepts in physical education: a design thinking approach," *Sport, Education and Society*, vol. 26, no. 9, pp. 1041–1043, 2021.
- [4] Z. Zheng and G. T. Reddy, "The importance of traditional sports into college physical education based on big data dynamic programming algorithm," *Wireless Communications and Mobile Computing*, vol. 2021, no. 4, Article ID 2996940, 13 pages, 2021.
- [5] Z. Jing and L. Chen, "Research on the innovative development of intelligent physical education teaching in universities," *International Journal of Higher Education Teaching Theory*, vol. 2, no. 4, pp. 1093–1098, 2021.
- [6] B. Dyson, "Quality physical education: a commentary on effective physical education teaching," *Research Quarterly for Exercise & Sport*, vol. 85, no. 2, pp. 144–152, 2014.
- [7] J. Shu, X. Shen, H. Liu, B. Yi, and Z. Zhang, "A content-based recommendation algorithm for learning resources," *Multimedia Systems*, vol. 24, no. 2, pp. 163–173, 2018.
- [8] L. F. Silva and M. d. P. Carnevali, "Noise and sleep quality: study among physical education instructors," *Journal of Physical Education*, vol. 31, no. 1, pp. 1–9, 2020.
- [9] H. Lv and H. F. Ma, "Research on application of quality development training in higher vocational physical education," *Journal of Human Movement Science*, vol. 2, no. 4, pp. 34–38, 2021.
- [10] L. Yu, Q. Lu, T. Yang, D. Wan, R. Xun, and F. Li, "On the influence of big data era on physical education teaching research," in *Proceedings of the 2021 International Wireless Communications and Mobile Computing (IWCMC)*, IEEE, Harbin City, China, July 2021.

- [11] K. Dong, "Research on introducing sports education model into college physical education," *Journal of Human Movement Science*, vol. 42, no. 4, pp. 93–98, 2021.
- [12] W. Xin and X. Fang, "Accurate analysis of big data assists teaching in situational teaching and quality development training of college physical education," in *Proceedings of the* 2021 2nd International Conference on Computers, Information Processing and Advanced Education, Ottawa ON Canada, May 2021.
- [13] H. A. Almusawi, C. M. Durugbo, and A. M. Bugawa, "Innovation in physical education: teachers' perspectives on readiness for wearable technology integration," *Computers & Education*, vol. 167, Article ID 104185, 2021.
- [14] J. Li, "Influence of big data technology on the diversity of college physical education teaching methods," *Innovative Computing*, pp. 629–637, Springer, Singapore, 2022.
- [15] J. Zhang, "Research on the situation teaching mode of primary school physical education under the concept of "consistency of teaching, learning and evaluation"," *Frontiers in Educational Research*, vol. 48, no. 5, pp. 247–253, 2021.
- [16] M. D. Ahmed and E. M. Kanaan, "Hybrid games teaching for enhancing students' motivation in elementary physical education," *Journal of Physical Education, Recreation and Dance*, vol. 92, no. 7, p. 56, 2021.
- [17] T. Xiong, "Research on the practice of big data in college physical education," *Journal of Physics: Conference Series*, vol. 1992, no. 2, Article ID 22131, 2021.
- [18] D. Huarong, "Research on the application and development prospect of network echnology in physical education teaching management of Higher Vocational Colleges," in *Proceedings* of the 2021 International Conference on Information Technology and Contemporary Sports (TCS), IEEE, Guangzhou, China, January 2021.
- [19] R. E. Rhodes, D. McEwan, and A. L. Rebar, "Theories of physical activity behaviour change: a history and synthesis of approaches," *Psychology of Sport and Exercise*, vol. 42, pp. 100–109, 2019.
- [20] H. Zhou, "Research on the function of computer aided teaching in college physical education," *Journal of Physics: Conference Series*, vol. 1992, no. 2, Article ID 22107, 2021.
- [21] H.-C. Jeong and Wi-Y. So, "Difficulties of online physical education classes in middle and high school and an efficient operation plan to address them," *International Journal of Environmental Research and Public Health*, vol. 17, p. 7279, 2020.
- [22] Z. Liang and A. You, "Design of performance evaluation system for transformation of patent achievements in colleges and universities based on AHP," in *Proceedings of the 2021* 2nd International Conference on Computers, Information Processing and Advanced Education, Ottawa ON Canada, May 2021.
- [23] W. Chen, "Diversification of physical education teaching resources in universities under the background of computer information technology," *Journal of Physics: Conference Series*, vol. 1992, no. 4, Article ID 42026, 2021.
- [24] S. Chen and L. Liang, "WITHDRAWN: online resource sharing of martial arts teaching based on 5G network and FPGA system," *Microprocessors and Microsystems*, vol. 41, Article ID 103447, 2020.
- [25] J. Guo, L. Yang, R. Bie et al., "An XGBoost-based physical fitness evaluation model using advanced feature selection and Bayesian hyper-parameter optimization for wearable running monitoring," *Computer Networks*, vol. 151, pp. 166–180, 2019.

[26] Yu Ding, Y. Li, and L. Cheng, "Application of Internet of Things and virtual reality technology in college physical education," *IEEE Access*, vol. 8, Article ID 96065, 2020.