Research Article

Development of Physical Education Network Course Resources Based on Intelligent Sensor Network

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Judging from the current online teaching practice of higher physical education basic theory courses, there are many problems such as lagging theory, unclear models, confusing mechanisms, outdated methods, and lack of resources, resulting in the low interest of students. Basic theory courses are studied. The phenomenon of skipping class and being late is common, which seriously affects the improvement of the comprehensive quality of physical education students. Therefore, it has become an urgent problem for the majority of higher sports workers to develop learning resources for basic physical education courses and realize the innovation and application of the teaching mode of higher sports online courses. Compared with the traditional teaching method, the students' physical education teaching performance is improved by about 30%, and their personality is fully developed. Linking teacher performance to changes in student performance parameters can effectively improve teacher motivation. This shows that under the background of intelligent sensor network, the physical education network course can effectively improve the teaching efficiency.

1. Introduction

With the accelerated pace of educational informatization, the ability to be familiar with modern educational technology, personal information, and information literacy has become a must-have quality for people. As a reserve force for future social development, students urgently need to improve their educational level [1]. Colleges and universities have begun to focus on improving students' educational technology capabilities. Starting from the enhancement of physical fitness, it should be combined with the "National Physical Exercise Standards"; it should conform to the students' understanding and the law of growth and development; according to the actual situation and the needs of future development, pay attention to training modern sports techniques. At the same time, it is necessary to focus on cultivating students' comprehensive quality, innovation ability, and information ability, so that they can adapt to new teaching methods; modern educational technology should be integrated into

teaching to help students develop good information literacy. The ability to develop information-based teaching enables them to actively use the concepts of modern educational technology after entering the society and to improve the ability and practical ability to use information technology [2, 3].

Smart sensors are devices with information capabilities. Smart sensors with multiple processors capable of receiving, processing, and exchanging information are the product of the integration process of sensors and microprocessors [4]. Compared with traditional sensors, smart sensors have the following three characteristics: use software processes for high-resolution information retrieval at low cost; measure the performance of training programs; and have multiple functions [5]. Smart sports are to use smart sports equipment to make traditional sports intelligent or online games real. Compared with simple sports, the blessing of smart equipment can make sports experience more data-based, professional, and entertaining.

For online jobs, there are also many training jobs for domestic and foreign professionals. Based on the research and analysis of the current situation of online and offline, Zha and Zhang [6] proposed an online and offline training mode based on the mobile social network. This model deepens the relationship between teachers and students. Communication and collaboration also promote the implementation of online and offline training standards [6]. When implementing the offline e-learning model, Yue and Zhou [7] use WeChat as a forum, combine modern information technology with traditional training methods, and explore offline writing exercises. The offline teaching method is implemented with the support of WeChat school guidelines [7]. It is considered that integrated learning is a new learning mode, which can not only overcome some shortcomings of online learning but also break the existing traditional academic mode and make the two learning modes merge with each other [8]. Effective analysis of student performance data to understand the characteristics and weaknesses of student learning was pioneered by Chen and Chen [9], providing a scientific basis for teachers to better understand students and apply knowledge to instructional management systems. While these studies add to our understanding of e-learning on the one hand, our understanding of the test data is still insufficient. Findings from small samples of researchers and policymakers are not generally credible enough. Therefore, we optimize sports network course resources based on intelligent sensor network research.

The network-based learning method has been accepted by people and has even reached the point where it is impossible to live, produce, and learn without the network. The article establishes a network teaching platform to realize the complementation of "in-class" and "out-of-class". In the process of implementing physical education courses, teachers are required to upload various teaching documents, courseware, and assignments to the online teaching platform and make full use of the school's online teaching platform to implement teaching, which can not only enrich classroom information but also allow students to learn outside of class. Self-study provides a network environment for teachers and students to interact with teachers and students in basic theoretical courses and expands the teaching space. Various forms of online teaching activities are carried out to achieve "online" and "offline" interaction. In the implementation process of sports theory, the online classroom is fully used for online learning, and representative questions are answered "online" through "forum", "Q&A," and other columns, so that students can learn in time and answer through QQ, e-mail, MSN, and other methods. The problems of individual students make students feel that the teacher is around at any time, shorten the distance between teachers and students, provide students with timely and rich information under limited time and limited teacher conditions, and make up for the shortage of teachers. Online course resources are developed to realize the combination of "theory" and "practice". According to the characteristics of physical education, with the help of modern teaching technology, we develop and update teaching resources and enrich teaching content. In the teaching of sports theory, the use of sports technical action pictures, animations and videos, or multimedia materials of experimental operations visualizes the boring theory, increases students' interest in learning, increases teachers' teaching fun, and extends the deficiencies of teaching materials.

2. The Entry Point of Resource Development and Its Management Performance Evaluation Research Method

2.1. Online Courses. With the rapid development of online learning and the deepening of online interpersonal communication training exchanges, a large amount of structured data–also available–are available on many training platforms [10]. There are different types of data. People use submissions in lieu of allegations behind it [11, 12]. Educational data mining refers to extracting unique academic data, making complex academic data useful information that students can better understand, make course decisions for us, and improve vocational training. Let's be better [13]. Carrying out online physical education can effectively develop the physical quality of students, cultivate students' good exercise habits, and enhance their awareness of actively participating in physical exercise.

The control system considers the controller's self-efficacy and control method to be improved relative to the control level [14]. The scale of control is limited, and the number of directors who can effectively and directly control its headquarters is also limited [15]. Any control system has a certain controller. In an organization, the control system obeys the controller, and the control system and the controller complement each other. If the control area is expanded, the administrator shall prevail; that is, the control level shall be reduced. If the control size is reduced, performance will be degraded, and the control size must be increased to improve performance [16].

Figure 1 shows the different assessment methods for students. The so-called flat housing means that the steering system has fewer control levels and a wider control range. The flat housing features a refined control hierarchy. It is a "one-to-many" organizational structure in which the controller directly faces the system. The correct way is the opposite.

$$M = \frac{x}{(x + i + 1)},$$

$$P_{LA} = L_A + \left[\frac{D_A - (L_A + 1)}{C_{\text{skip}}(d)}\right] \times C_{\text{skip}}(d) + 1, \quad (1)$$

$$d(x_i, x_j) = \sqrt{\left(\left|x_{i1} - x_{j1}\right|^2 + \left|x_{i2} - x_{j2}\right|^2 + \ldots + \left|x_{in} - x_{jn}\right|^2\right)}.$$

Among them, M refers to the performance evaluation system, PLA refers to the performance evaluation organization, and d (x_i, x_j) refers to the performance evaluation index.
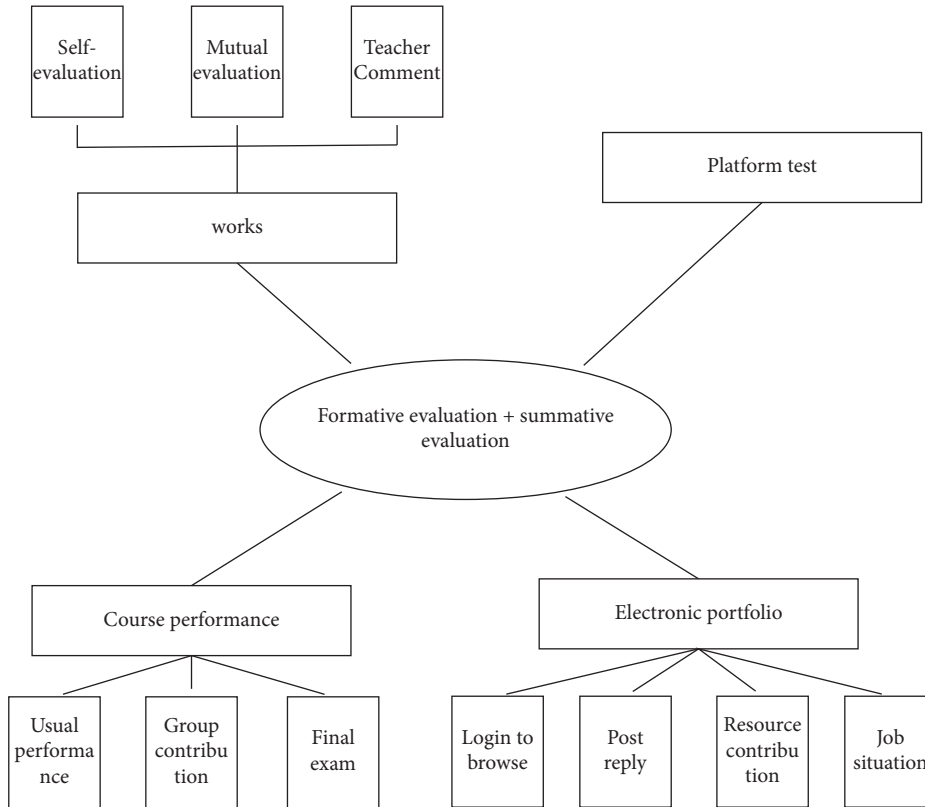
FIGURE 1: Multiple assessment methods.

Combined with the characteristics of the performance evaluation system, promote relevant statistical functions

$$W = \frac{N_1 r_1^2}{2} + \frac{N_2 r_2^2}{2} + N_2 d_2^2 + \left(\frac{N_3 r_3^2}{2} + N_3 d_3^2\right) * 0.1 + \frac{2}{3}N. \quad (2)$$

Therefore, the range of control and the level of control show an inverse relationship when confirmed by the controller. The key is the management recommendations adopted by the company's top management and the management model determined by the company. Leaders have high personal strengths and strong combined skills. They can quickly get the gist of a situation, give appropriate guidance on contextual requirements, and keep authorities informed, reducing the number of contacts with each supervisor. Over time, its management scope will continue to expand.

2.2. Online Sports Courses. With the progress of science and technology in our country, the compilation of educational information sources has been paid more and more attention, which is also the reason for the continuous change of the current curriculum model. In the teaching of sports online, teachers should make reasonable use of information technology to make students have a more profound grasp of sports theory. Therefore, online services are of great interest to educators. So what is an online service? How should the concept of online work be defined? The authors suggest a

number of relevant resources to ensure that online services are also built into the curriculum, allowing students to experience training beyond the interaction of the learning community. However, online services have unique advantages over traditional educational services. They are based on modern technology and spread over the Internet to achieve educational goals.

Online services are the result of modern curriculum development and an important introduction of information technology in the field of curriculum technology. It is an online education model created by the combination of network technology, multitechnology, and digital technology. Such educational activities can be done in a one-to-one or one-to-one learning program. Multiparty sharing of resources is conducive to making full use of materials. This method is more innovative and has rich educational content, which can increase students' interest in writing. Most importantly, such educational activities are not just for students. It can benefit more people and is an important way to learn new teaching methods. At the same time, we use multimedia development to create learning content, teaching methods, and teaching space for sports activities. With the help of the Internet, audio, video, games, pictures, etc. are shared with students. The large capacity, rich and diverse forms, and high sharing characteristics of network information resources can play an important role in college education, especially physical education, which has important and unique significance. Therefore, the sports

network service introduces a new way of sports training, introducing the characteristics of modern information technology.

(1) The transmission speed is fast, and the distribution is strong. Implement online training services and determine distribution. If the network is available and mobile, you can also learn about useful educational activities for students to train outside of school hours to help students manage their time.

(2) Strong communication skills, easy to learn and communicate: Communication means that students can exchange knowledge with each other on the Internet. Even two strangers can still discuss and exchange knowledge over the Internet. This is an important part of online education services.

(3) Virtual, long-term: In the traditional course model, students and teachers stay in the same classroom to study and communicate, which limits the number of students who take the course, hoping that more students will learn more. Teachers need to lecture frequently, which increases the effectiveness of teachers' teaching.

(4) Improve information sources: In today's information age, students can gain understanding from many aspects. The source of knowledge no longer comes from textbooks or teacher lectures as it once did. Multimedia can be used as other means of acquiring knowledge from many sources. Due to the development of modern technology, the diversification and rich applications of these information sources have been developed.

(5) Can meet the individual requirements of students: Students can choose according to their preferences or training time. They are not limited to the only educational activities ordered by the school. Online services can provide comprehensive rewards for students' freedom. When studying, it is more important to choose training activities according to your own preferences, which can improve the academic performance of the class, and also help students to a certain extent, and help students develop personal training plans.

Table 1 shows the differences between online learning and traditional learning. An online learning environment may also be referred to as an online learning environment. It is based on computer technology and usually comes with training resources and online training forums. Compared with the local offline classroom, the online learning community of the learning community is more free in time and space, and these learning resources are rich and can be distributed quickly. Different platforms and resources provide a platform to help teachers and students practice online.

2.3. Teaching of Sports Online Courses. Sports' networking is a topic where science and practice are closely integrated. Therefore, teachers should choose issues closely related to students' learning and lifestyle for online education, so as to improve students' understanding of information technology and work knowledge. At the same time, teachers should encourage students to apply technology to life coaching or learning other subjects, so that students can apply powerful knowledge, exert their problem-solving ability, and lay a foundation for the cultivation of students' life. Learn the ability to climb. For the analysis, judgment, and optimization of the motion network algorithm, we use the following equation to calculate

$$t(s) = \exp\left(-\int_0^s \kappa(t)dt\right), \qquad (3)$$

as we can see

$$\partial = 1 - t(s) = 1 - \exp\left(-\int_0^s k(t)dt\right). \qquad (4)$$

When Δs approaching zero,

$$\frac{dI}{ds} = T(s) * \rho(s) * A = T(s) * \kappa(s),$$

$$I(s) = I_0 + \int_0^s g(t)dt. \qquad (5)$$

The general formula we use for this is as follows:

$$x(k+1) = Ix(k) + Jv(k), k = 1, 2, \ldots \qquad (6)$$

The power has the following performance indicators:

$$K = \sum_{k=1}^{\infty} \left[x^i(k)Jx(k) + r^i(k)cJ \right], \qquad (7)$$

where the power matrix Q is

$$Q = \frac{1}{2a^2r^{-1}}\left(\frac{2b^2}{a^2r^{-1}}p - t\right)^{-1}\left[a^2r^{-1}t^2 + 2(1-b^2)t\right],$$

$$Q = \frac{1}{2a^2r^{-1}}\left(\frac{2b^2}{a^2r^{-1}}t - L\right)^{-1}\left[a^2r^{-1}L^2 + 2(1-a^2)L\right]. \qquad (8)$$

Introducing the parameter and power weighting factor Q gives

$$\left(\frac{2b^2}{a^2r^{-1}}I_x - t\right)Q = \frac{1}{2}t^2 + \frac{1-b^2}{a^2r^{-1}}t. \qquad (9)$$

Delivered by recipe

$$Q^2 + \frac{2(1+b^2)}{a^2r^{-1}}Q + \frac{(1+b^2)^2}{(a^2r^{-1})^2}I_x = \left(Q + t + \frac{1-b^2}{a^2r^{-1}}I_x\right)^2. \qquad (10)$$

3. Research Experiment on the Entry Point of Resource Development and Its Management Performance Evaluation

3.1. Subjects. The six classes were selected according to the physical education level of a university in the city and were

TABLE 1: The difference between online learning and traditional teaching.

1	Number of learners	Basically unlimited	Limited by the environment
2	Study location	No space restrictions	Fixed study place
3	Actual	Comparing men to start hands-on activities	Easy to carry out practical activities
4	Learning feedback	Multi-channel	Single mechanism
5	Study time	Flexible	Fixed time
6	Learning resources	Multimedia	Easier
7	Learning evaluation	Easy-to-implement processes and summative assessments	Summative evaluation

divided into traditional teaching groups, general e-learning groups, and e-learning groups based on electronic sensors. When students teach online through e-learning, each group selects a group leader and creates a message group to facilitate learning and discussion among group members. Teachers publish this handbook prior to the start of the course and provide students with related microvideos, training pages, and other resources.

3.2. Data Preprocessing.

For the test system and the tutorial, the integration method is used for clustering, and the k value and dk = 2, 3, 4, and 5 are selected, respectively, and then, the clustering is performed in turn. The results are shown in Table 2.

It can be seen that when k is 3, the GA arrow reaches its maximum value. So the optimal number of clusters for this dataset is 3. This clustering model currently has high overall performance and is an ideal compiler for this dataset.

3.3. Entry Point for Students.

At the same time, through the construction of curriculum resources, it can better encourage students to learn actively and independently, encourage teachers to learn new knowledge, expand teaching space and time, and solve problems such as insufficient teachers and insufficient facilities.

4. Experimental Analysis of Resource Development Entry Point and Management Performance Evaluation Research

4.1. Students Understand.

The statistics are based on the knowledge base of physical education. The sports knowledge and sports identification data system consist of 343 instances, with a sample size of 6 and a total of 2 classes; the data system for practice techniques consists of 762 examples, with a sample size of 8 and the correct number of classes of 2. The motion parameter data system consists of 702 samples, with a sample size of 9 and a maximum number of classes of 2. The results are shown in Table 3.

Comparing the performance with the experimental results shown in Table 3, it can be seen that for all three datasets, the GA ratio can find the exact number of clusters, while the traditional DBSCAN index cannot find the exact number of clusters. The CLIKU index of each dataset can only find the number of clusters of the motion knowledge dataset but not the ideal motion parameters and the number of clusters of the motion knowledge dataset.

TABLE 2: GA indices at different K values.

K	N	Number of samples	Genetic algorithm
2	175	265	0.664
3	263	265	0.989
4	227	265	0.858
5	235	265	0.564

The most important athletic ability knowledge is sports-related knowledge, that is, understanding athletic ability. The knowledge most relevant to athletic ability is exercise-related knowledge, that is, understanding athletic ability. Ten relevant topics were randomly selected, namely "health," "physical exercise," "physical fitness," "lifestyle," "aerobic exercise," and "lack of physical exercise," "Conclusion" and "Conclusion," "BMI," "Health Equivalence," and "Physical Activity Guidelines"—these terms are very similar to those used in sports. Therefore, studying students' attitudes towards their use can show their knowledge of sports. The result is shown in Figure2.

Figure 3 shows that 55.2% of the respondents understood the term "health," followed by "exercise" at 46.2%, "body" at 45.6%, and "lifestyle" at 39.2%. The three least understood terms were "obesity," "fitness," and "inactivity," accounting for 33.0%, 24.2%, and 28.8%, respectively. Not everyone understands these terms because all of them are business rules. Conscious memory is not easy to understand.

An important role of exercise is to maintain good health, and physical fitness plays an important role in health. The 20 questions on physical fitness are multiple-choice questions, each correct answer will score 2 points, and no wrong answers are allowed. The total score is 40 points. To better analyze the students' grades, their scores were converted to 100 points, and the results are shown in Table 4.

4.2. Student Differences.

Statistics are based on the sports lives of nonformal students and disaggregated by gender for women and men to understand current understanding of sports network activity. The size of the male head is shown in Figure 4.

As can be seen from Figure 4, the ability of boys before the multifunctional vocational training is not deep, and the average is 2, which does not meet the requirements of art students. To judge whether students meet the requirements, we also calculated student performance at the following six levels, as shown in Figure 2.

As can be seen from Figure 2, there is no significant difference between the student's control and the male

TABLE 3: Experimental comparison solution results.

Data set	Sample	Sample size	Correct number of classes	Optimal number of clusters		
				DBS scan	Group	Genetic algorithm
Grade	3 52	5	3	1 7	1	5
Consciousness	754	7	4	18	18	4
Participate	702	10	2	17	6	2
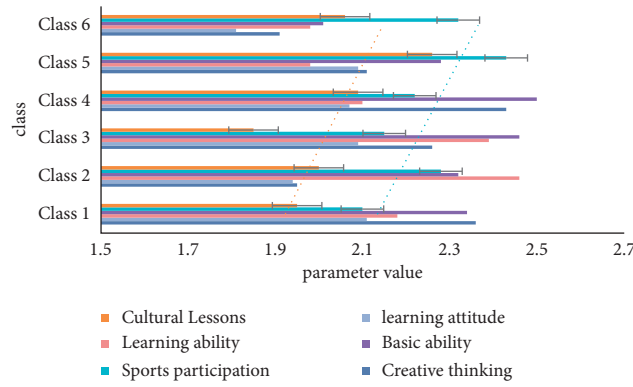
FIGURE 2: Schoolgirl's mastery.
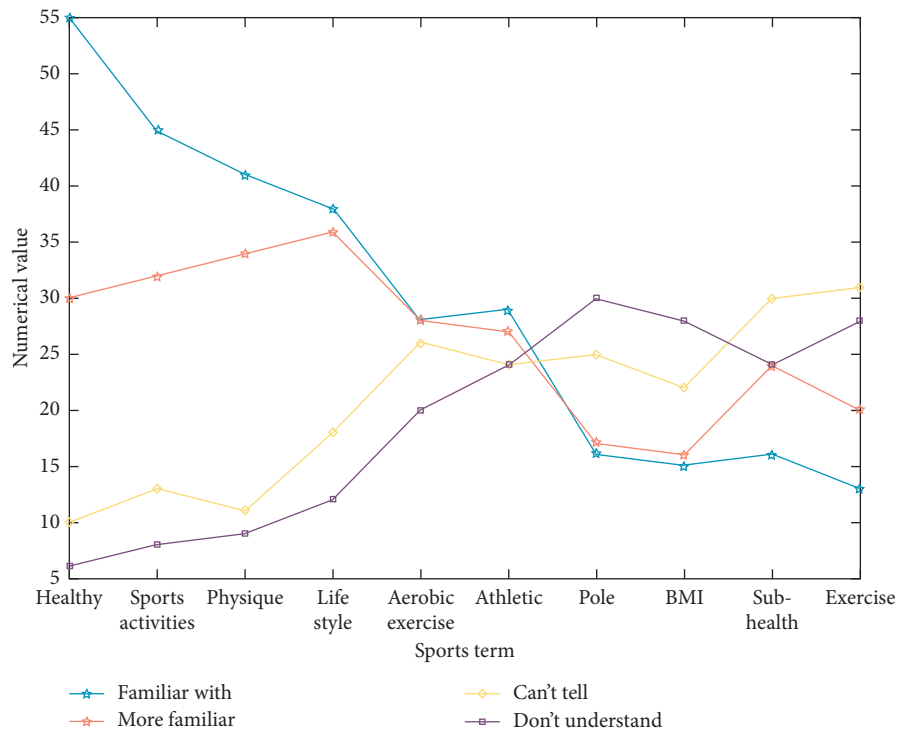
FIGURE 3: Cognition of sports terminology.

TABLE 4: College students' awareness of sports knowledge.

	90–100	80–89	70–79	60–69	<60
Number	45	324	421	256	68
Percentage	3.54	36.5	42.65	21.65	6.51
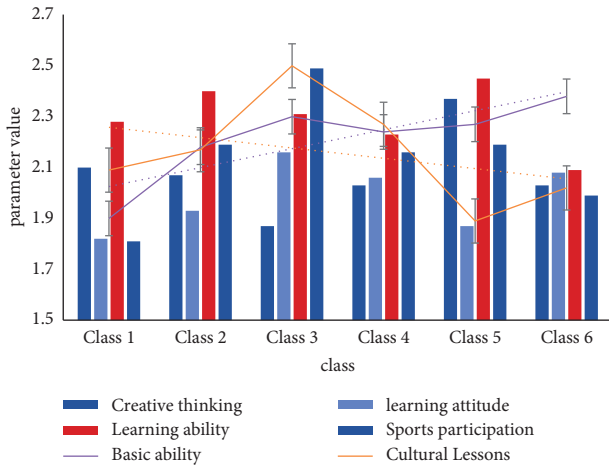
FIGURE 4: Male students' artistic mastery.

FIGURE 6: Changes in student interests.

FIGURE 5: After learning the parameters.

FIGURE 7: Students' sports scores before and after the experiment.
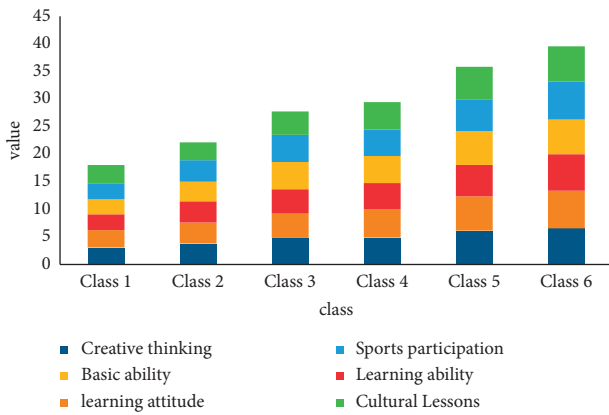
student's control, and the mean is around 2. The data after the study are shown in Figure 5.

As can be seen from Figure 5, we can confirm that after training, students' athletic ability has made good progress, and sensor-based online learning can achieve better results than these two teaching methods. It can be seen that if you want to create a good entry point for online sports service resources, you can start from the places that students are interested in.

4.3. Parameter Changes. The specific data are shown in Figure 6.

Course quality statistics are also provided, as shown in Figure 7.

At the same time, through the construction of curriculum resources, it can better encourage students to learn actively and independently, encourage teachers to learn new knowledge, expand teaching space and time, and solve problems such as insufficient teachers and insufficient facilities. Network teaching research is to realize the combination of "teaching" and "research". In order to better explore the laws, principles, and methods of physical education theory of the teaching practice and solve the problems
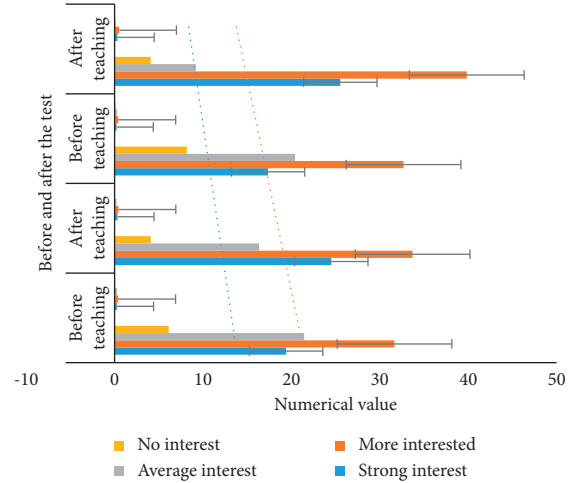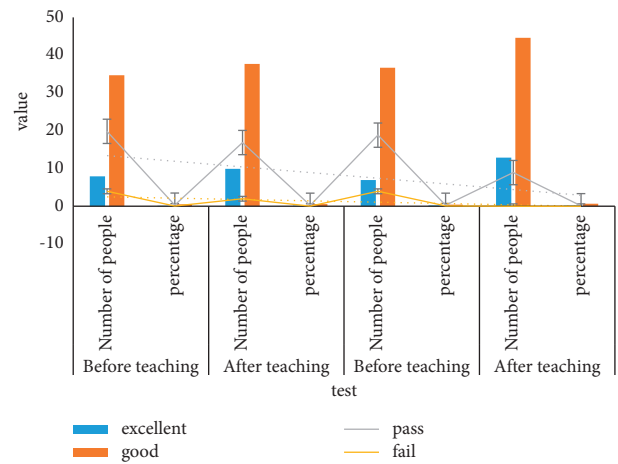
that need to be solved in teaching, we have carried out a lot of "curriculum construction" in the teaching process of physical education theory. Exploration and research were carried out, and the results were applied to the teaching practice of physical education theory courses, helping teachers to better carry out network teaching, allowing students to better use the network for autonomous learning, and improving teaching quality [16].

5. Conclusion

Develop online teaching resources for sports theory courses to enrich teaching content. Its experimental data showed that 55.2% of the respondents understood the word "health," followed by 46.2% "exercise," 45.6% "body," and 39.2% "lifestyle." It can be seen that at present, the theory course teaching team of our school has integrated the advantages of traditional classroom learning and online self-study, constructed the network teaching mode of sports theory course, and developed multimedia courseware and video of sports theory course. The school network platform implements

online teaching and realizes the complementation of "in-class" and "extra-curricular", the interaction between "online" and "offline", and the combination of "theory" and "practice" to maximize the sharing of high-quality teaching resources. It solves the problem of insufficient learning interest of teachers and students, expands the time and space of students' learning, overcomes the contradiction between "learning and training" to a certain extent, fully embodies "people-oriented", and realizes personalized and autonomous learning. Teaching and learning improve the learning effect of physical education students. The combination of "theory" and "practice" is the key to the teaching of theory courses in sports majors. In the process of the construction of sports theory curriculum resources, relevant teaching reform research should be actively carried out, and the ways of opening high-quality curriculum resources and quality sports products to the society should be analyzed. The effect of the course, the implementation of the online course construction project, and the update and maintenance of the course network resources have accumulated valuable practical experience, promoted the sustainable development of online teaching, and promoted the combination of teaching and science. Research and realize that the teaching reform project originates from teaching practice, and the teaching reform results serve the virtuous circle of teaching practice.

Data Availability

No data were used to support this study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

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