Hindawi
Wireless Communications and Mobile Computing
Volume 2022, Article ID 7124632, 13 pages
https://doi.org/10.1155/2022/7124632

Research Article

Inheritance of Sports Intangible Cultural Heritage and the Construction of Physical Education in Colleges and Universities under the Wireless Communication Microprocessor

Mingdan Deng,[1] Xianjie Zheng,[1] and Li Chen [2]

[1]*College of Physical Education and Health, Chongqing College of International Business and Economics, Hechuan 401520, Chongqing, China*
[2]*College of Physical Education and Health Science, Chongqing Normal University, Gaoxingqu 401331, Chongqing, China*

Correspondence should be addressed to Li Chen; 20132168@cqnu.edu.cn

Received 16 December 2021; Revised 5 January 2022; Accepted 21 January 2022; Published 11 March 2022

Academic Editor: Haibin Lv

In the past decade, the global recognition of traditional sports intangible cultural heritage (ICH) assets has been increasing. The main purpose of this paper is to explore the inheritance of sports ICH and the construction of characteristic physical education (PE) in colleges and universities. The rapid development of wireless communication technology requires wireless communication digital processors to have higher processing efficiency and faster response time. In the application of wireless communication digital signal processing equipment, compared with the traditional central processing unit, the microprocessor has the advantages of rapid processing response time and small size. It is a high-tech application instrument widely used in the field of industrial control. This paper mainly introduces the concept and characteristics of sports ICH and introduces the characteristics of college sports. In this study, we randomly selected 500 students from different majors and classes of 2019 grade in our university. The 500 students were divided into two groups: one group for a semester of traditional PE and the other group for a semester of college characteristic PE. After the semester, the two groups of students' mastered sports ICH skills, physical fitness exercise methods, and physical fitness test scores were compared and analyzed. The experimental results show that after a semester of PE, the number of students in the college characteristic sports group who master three and four sports ICH skills has increased by 12% and 4.8%, respectively, compared with the traditional sports group. The average scores of physical fitness test of college students in characteristic sports group and traditional sports group were 79.39 and 69.85, respectively. In this paper, the inheritance of sports ICH and the construction of college characteristic sports curriculum and college characteristic PE rather than traditional PE can promote students' interest in sports, so as to master more sports ICH skills, with better inheritance of sports ICH.

1. Introduction

In the environment of higher education, the concept of PE is widely offered to promote a healthy lifestyle. Sports ICH is an important part of sports, which plays an inestimable role in the evolution of human civilization. Only attaching importance to the economic benefits of intangible cultural heritage while despising the inheritance of cultural heritage and only attaching importance to the performance of external technology and lacking the spiritual promotion of cultural heritage have severely restricted the inheritance and development of sports intangible cultural heritage; standardization leads the development of society today; low-level, low-efficiency, and low-value-added protection methods restrict the sustainable development of sports intangible cultural heritage under the current situation.

The necessity of sports intangible cultural heritage protection has increased. The standardization of sports intangible cultural heritage protection can regulate the orderly development of various protection methods and improve the efficiency and quality of protection. Through the standardized construction of sports intangible cultural heritage

protection, it is possible to establish a full-process controllable protection management procedure and to construct specific and clear work quality evaluation standards for each work link and protection details, which not only will be effective for the sports intangible cultural heritage protection process monitoring, but also can strictly control the quality of protection.

Promoting the standardization of sports intangible cultural heritage protection provides an objective basis for the evaluation. The evaluation system can detect problems in the protection of sports intangible cultural heritage, then analyze these problems, and readjust and change strategies to form new standards. With the improvement of standards and the upgrading of the evaluation system, the quality of protection will also be greatly improved. Therefore, the standardization of sports intangible cultural heritage protection is a necessary way to improve the quality of protection. Kogiso examined the spread of pelota mixteca in the United States and emphasized the specific cultural aspects of displaying traditional and indigenous sports as ICH [1]. Sasaki investigates them with reference to some frameworks proposed in the past and extracts from each type of discussion the arguments proving their definition of sport. By classifying these assertions as a new framework, all discussions are categorized. Finally, some difficulties in the study are pointed out from the characteristics of each class discussion, and the incomplete common points in the discussion are pointed out. According to the historical and social background, "sports" has different meanings. However, in the discussion, one meaning is proved to be legitimate, while others are considered inappropriate [2]. Aimin aimed at solving a series of outstanding problems existing in traditional basketball teaching, discussing the application value and effect of inquiry teaching in college basketball teaching [3, 4].

To solve these problems, it is necessary to clarify the government's rights and responsibilities, regulate protective action measures, and establish reasonable evaluation standards, in order to achieve the goal of sports intangible cultural heritage protection. Through the standardization of sports intangible cultural heritage protection, the establishment of scientific standards and codes of conduct to achieve the standardization of sports intangible cultural heritage protection is an effective solution to protect against nonstandard phenomena and enrich the protection system. Jes ú s Viciana raised some issues related to students' learning, such as the duration of traditional teaching units and the total time and allocation of students' learning. On the basis of previous psychology and learning theory, combined with the practical experience of in-service teachers, this paper puts forward four suggestions for innovative teaching unit. It is not easy to provide students with meaningful learning opportunities in PE. Jes ú s Viciana analyzed the intermittent, alternate, irregular, and intensive teaching units [5]. Petherick La aimed to explore the racial and cultural issues in health education in secondary school health and PE curriculum in Ontario, Canada. Taking Ontario's secondary school curriculum as an analysis point, Petherick La defined the orientation of cultural and racial identity in contemporary health education documents from the perspective of critical racial theory and white people [6]. Both Chinese and Australian PE curriculum standards reflect the development trend of emphasizing the health function of PE curriculum. Therefore, Chen L made a comparative study on the curriculum of social sports major between China and Australia. By introducing the main problems existing in the curriculum design of higher vocational education, this paper makes a comparative analysis of the curriculum design between China and Australia and points out clearly that the higher vocational curriculum must be ability oriented [7]. Liu et al. aimed to explore the effect of CPE on health-related fitness (HRF) level of freshmen [8]. The lack of protection awareness of any level or protection department will restrict or even destroy the sustainable development of sports intangible cultural heritage. The protection of sports intangible cultural heritage is a long-term and systematic cultural project. Whether it is a vertical upper-level department or a horizontal implementation issue, it needs to coordinate and cooperate with each other to form a joint force scientific management at the level.

The protection of intangible cultural heritage has two goals: one is the cultural goal, that is, for the inheritance and continuation of the national culture; the other is the economic goal, that is, to promote the benign transformation of cultural resources and economic benefits, through the improvement of intangible cultural heritage. After a semester, the two groups of students' mastered sports ICH skills, physical fitness exercise methods, and physical fitness test scores of comparative analysis were compared. In this paper, the inheritance of sports ICH and the construction of college characteristic sports curriculum and college characteristic PE rather than traditional PE can promote students' interest in sports, so as to master more sports ICH skills, with better inheritance of sports ICH.

2. Sports ICH and Characteristic PE in Colleges and Universities (CAU)

2.1. Sports ICH. There are three types of ICH: (1) cultural expression through body expression or traditional community lifestyle; (2) individual or collective cultural expression that does not need to be expressed in body form; (3) symbols and metaphors of things. Sports ICH is a concept that extends downward from ICH [9].

For sports ICH, the state's awareness and protection level have gradually improved. However, as an important part of Chinese traditional culture, the concept of sports ICH is vague due to unclear definition and inaccurate classification, which seriously affects the research and protection of sports ICH. Sports ICH refers to various forms of sports activities left by people mainly for entertainment, fitness, competition, sacrifice, and other purposes, as well as various tools, related goods, and space skills used in the process of implementing these skills [10].

2.1.1. Types of Sports ICH. Due to the particularity and comprehensiveness of sports, the forms of sports ICH are various [11]. According to the classification of the national ICH list, China's sports ICH is mainly divided into the following ten categories [12]: acrobatics (Qiaoqi, diabolo, line lion); martial arts (school Kung Fu, boxing, palm techniques, shooting, equipment); equestrian (horse racing); healthcare (Wuqinxi); dance (drum dance, dragon dance, lion dance, gaoxiao, Nuo dance, Yangko dance); ball games (hockey, pearl, whip, Polo); water sports (dragon boat, sheep skin search); entertainment (springboard, swing, lunziqiu); mental sports (go, chess); strength confrontation (wrestling, guanniu) [13, 14]. Before the line lion performance, the stage production, lighting effect configuration, and rope layout are all manually operated. The lion's body is made of a variety of materials, with bamboo stalks as the frame, filled with cotton, cloth, rubber, etc., and the lion hair is made of special colored plastic threads. Through the reforms of folk artists in the past dynasties, the size of the line lion has grown from as small as a puppet to huge and heavy, the structure has changed from simple to complex, and the production process has also been greatly developed and improved. The ball held by the line lion is exquisite and dexterous, and the large net basket is covered with a freely rotating ball and equipped with lights.

2.1.2. Characteristics of Sports ICH

(1) Regionalism. Due to the differences in geographical location and ecological environment, people in different regions have different understanding of culture in different cities and counties in China. The resulting sports ICH also highlights the regional characteristics [15, 16]. Minority traditional sports not only have distinctive national characteristics, but also have strong performance, entertainment, and physical fitness. They greatly enrich the cultural life of ethnic minorities and are also an important content of ethnic festivals. Minority traditional sports reflect the national characteristics, national psychology, national spirit, and aesthetic concept and value orientation of each nationality and fully demonstrate the spiritual outlook of the various nationalities in China.

(2) Nationality. China is a country with 56 ethnic groups [17]. Influenced by different factors such as living habits and geographical environment, all ethnic groups have distinctive national characteristics, which also form the national characteristics of China's sports ICH [18]. In the inheritance of sports ICH, ethnic minorities enjoy a high reputation [19]. The ICH of ethnic minorities in China plays an important role in inheriting items and inheritors [20, 21] and also reflects the national characteristics of sports ICH [22, 23].

(3) Inheritance of Sports ICH. The inheritance of sports ICH is mainly through the platform of CAU to add sports ICH to the PE teaching curriculum, so that these treasures of sports ICH can be preserved [24, 25]. The purpose of inheritance teaching of sports ICH generally includes enriching the teaching content of PE curriculum, activating campus culture [26], cultivating national spirit, inheriting traditional culture, entertaining students' emotion, and improving sports quality [27]. The inheritance of sports ICH aims mainly to cultivate national spirit and heritage of traditional culture as the theme; in the case of students mastering the same skills, it provides certain needs for college teaching. Only in this way can the two achieve the goal of win-win situation. The inheritance of sports ICH has the inheritance value of cultivating national spirit, inheriting and spreading traditional culture, enriching PE curriculum teaching content, activating campus culture, promoting physical and mental health, and improving social adaptability, which can guide the development of PE and the inheritance of ICH of PE in CAU [28, 29]. With the change of modern lifestyle and the intrusion of foreign culture, many traditional skills are on the verge of disappearing, so the nationwide demand and protection work are carried out like a fire. With the advancement of the protection process, some inconsistent notes have been highlighted: the protection of sports intangible cultural heritage started late, and the research on protection theory is fragmented and has not yet formed a system to fully guide the protection practice.

2.2. Characteristic Education in CAU. In college PE teaching planning, it generally refers to the arrangement of training objectives, training specifications, curriculum system design, and teaching content of a certain type of professional talents. This prescriptive talent training mode along with its expected effect is called teaching plan. The emergence of teaching plan further standardizes the course structure, teaching content selection, class hours, and credit allocation of specialty setting and provides guidance plan and programmatic document for corresponding professional personnel training institutions. According to the classification of different types and nature of schools, there are differences in the setting of teaching projects. University teachers are the main executors of the teaching plan, and students are the beneficiaries of the teaching plan [30].

2.2.1. Courses. Curriculum design is the focus of school teaching plan, according to the set curriculum design to teach students. The concept of curriculum can be divided into broad sense and narrow sense. The broad sense of curriculum concept is understood as the influence of students' activities in professional training and educational institutions. In a narrow sense, it refers to the way students learn in a certain professional discipline or a certain course. Curriculum design is an educational system designed by special education institutions to enable educatees to learn better. Educators have specific plans for students' learning content. Within a certain range of restrictions, they systematically arrange the course content by using certain educational methods and means. In this process, the purpose of curriculum design is an important plan for educators to achieve teaching objectives. The main task of education is to cultivate more application-oriented talents for the society, and the teaching method still occupies the leading role in

school teaching, which seriously hinders the development and improvement of school teaching level. Therefore, teachers and students must change their talents, update concepts, improve quality, boldly innovate, and promote the application of project teaching methods to meet the needs of current social development and educational development.

2.2.2. Campus Culture. Cultivating healthy, lively, and characteristic campus sports culture has become one of the important contents of campus culture construction in CAU. Sooner or later, the campus is rippling with the melody of national traditional sports. From the playground to the trees and beside the flower beds, there are groups practicing traditional healthy sports. The characteristic PE curriculum promotes the establishment of harmonious campus and the development of campus sports culture. Strong Chinese sports campus culture promotes the growth of students, improves the cultural quality of teachers and students, and improves the physical quality, aesthetic taste, and spiritual outlook of all teachers and students.

2.3. Combination of Inheritance of Sports ICH and Characteristic Education in CAU. The purpose of inheriting the ICH of sports is to integrate the ICH into the teaching content of college PE and protect it. The inheritance value of sports ICH includes cultivating national spirit, inheriting and spreading traditional culture, enriching PE curriculum teaching content, activating campus culture, promoting physical and mental health, and improving social adaptability, which can guide the inheritance of sports ICH.

2.4. Wireless Sensor Network Algorithm Based on Wireless Communication Microprocessor. All the previous schedulers decrement the slice in the interrupt, when the time runs out, electricity adjustment and rescheduling will be triggered, as shown in Figure 1.

As shown in Figure 1, the execution time of the processor that has been occupied by the process has the greatest impact on the key value. It can be simply considered that the key value is basically the same as the processor time occupied by the process. Therefore, the longer the processor time occupied by the process, the larger the key value, and the current process will gradually move to the right of the red and black wood.

According to the BSIM third-order model, the subcurrent of the MOS tube can be obtained as in the following formula:

$$I_{\text{Dstrb}} = I_0\left(1 - e^{-v_{ps}/r}\right) \bullet e^{v - v_{ps}/r}. \tag{1}$$

When the triode is turned off, it is shown in the following formula:

$$I_{\text{Dstrb}} = \frac{Q}{L}. \tag{2}$$

The evaluation influence factors of the transistor series effect in circuits of different topologies are different, and the leakage current of this section of the circuit is

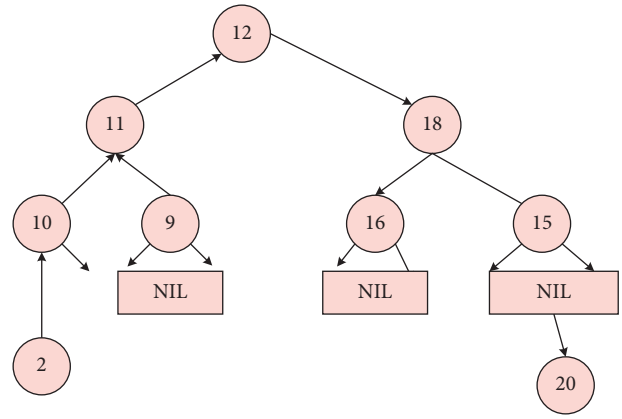

Figure 1: Schematic diagram of CFS red-black tree data structure.

$$I_{\text{leakage}} = \sum_{i}^{n} \text{Idsub} = N \cdot I_{\text{dsub}}. \tag{3}$$

Correspondingly, the leakage current power consumption is

$$p_{\text{STATIC}} = V_{aa} \cdot N_{aa}. \tag{4}$$

Note that N here is the number of transistors in the circuit unit, which is

$$P_{\text{design}} = \frac{I_{\text{leakage}}}{N \cdot I_{\text{leak}}}. \tag{5}$$

Two independent parameters, N_i and N_p, are used for the N tube and the P tube. The leakage current of the circuit unit can be expressed as

$$I_{\text{leakage}} = N_i \cdot I_n + N_p. \tag{6}$$

Correspondingly, the total leakage current of the circuit can also be divided into two groups as follows:

$$K_N = \left(I_1 + I_2 + \cdots I_N\right). \tag{7}$$

The intangible cultural heritage of sports was created in the history of mankind and has been passed down to the present in a living form. It has important traditional sports activities that are equivalent to strengthening the body, fitness, and artistic appreciation. It is closely related to the production and life of various nationalities and is national wisdom crystallization. However, with the change of modern lifestyles and the intrusion of foreign cultures, many traditional skills are on the verge of disappearing. Temperature and voltage are shown in Tables 1 and 2.

As shown in Tables 1 and 2, the leakage current and power consumption of each component in the microprocessor can be estimated by using the HotLeakage model.

At present, there are very mature dynamic power consumption models, such as watch model, which classifies the circuits in the processor into five structures: RAM, cam, combinational logic, transmission line, and clock. The dynamic power consumption of CMOS circuits can be expressed as

Table 1: N_i and N_p experimental values of typical circuits.

Circuit unit	N_i	N_p
1	1.2	0.9
2	1.5	0.5
3	1.7	0.8
3	1.3	0.5
4	1.6	0.7
5	1.8	0.3
6	1.1	0.2

Table 2: Circuit parameters of the process in the model.

Circuit unit	N_i	N_p
1	3.4	0.6
2	3.2	0.4
3	5.7	0.8
3	4.3	0.7
4	6.2	0.6
5	4.8	0.5
6	3.1	0.4

$$P_{\text{dynamic}} = b C_L V_{xx} f. \tag{8}$$

It is a simple processor parameter, and the architecture level dynamic power consumption model is mainly modeled for P_{dynamic} and C_L. After merging the first detected data, the sensor node adds its own location information, sends information to the node in the form of multihop transmission, and finally sends monitoring data to the end user using satellite and Internet, as shown in Figure 2.

As shown in Figure 2, the node capacity is limited. Generally speaking, sensor nodes can only use the battery once to supply working energy, and the function will disappear without electricity. Therefore, in network design, it is an important topic to often improve energy utilization and prolong the service life of nodes.

Usually, the normalized positioning error is used to measure the positioning accuracy. The positioning accuracy is defined as the ratio of the positioning error of the node to the communication radius, as shown in the following formula:

$$\text{Error} = \frac{\sqrt{(a - a_i)^2 + (b - b_i)^2}}{r}. \tag{9}$$

The transmitting end sends RF signals and ultrasonic signals at time a and time b, respectively, and the receiving end receives these two signals at time a and time b, respectively. The distance d between these two ends is as shown in the following formula:

$$d = (a_4 - a_2) - (a_3 - a_1) * d_1. \tag{10}$$

At present, the precision measuring equipment can make the error caused by the clock negligible, as shown in Figure 3.

As shown in Figure 3, the main ranging error comes from the multipath effect of propagation and the delay caused by non-line of sight.

According to the channel model, the power loss between the transmitter and receiver is transformed into distance information:

$$Q_R = f(Q_r \cdot d). \tag{11}$$

Finally, the distance from the unknown node to any anchor node is the product of the minimum hops and its own average hop distance:

$$Q_i = \frac{\sqrt{(a_i - a_j)^2 + (b_i - b_j)^2}}{q}. \tag{12}$$

The sum of the shortest path distances is taken as the estimated distance, as shown in Figure 4.

As shown in Figure 4, the distance between them is

$$AL^2 = AC^2 + CI^2 - 2AC. \tag{13}$$

We have

$$\cos\alpha = \frac{ab^2 - ac^2}{2 \cdot ac \cdot ab}, \tag{14}$$

and

$$\cos\beta = \frac{bl^2 - bc^2}{2 \cdot cl \cdot bc}. \tag{15}$$

The cyclic iteration method is used to improve the proportion of locatable nodes, and the ranging accuracy is high, as shown in Figure 5.

As shown in Figure 5, the algorithm estimates the distance between nodes by the product of signal propagation distance and minimum hops, and the ranging error is very large:

$$D_{\text{hop}} = R(1 + e^{-n})^2. \tag{16}$$

The number of hops from the anchor node to the unknown node is

$$H_i = h_i + \sum_{j=1} h_j. \tag{17}$$

On a plane, if the distance from the unknown node to the three anchor nodes is given, a unique coordinate value can be determined by trilateral measurement, which is

$$d_{ai} = \sqrt{(a_{i-}a_n) + (b_{i-}b_n)}. \tag{18}$$

Linearize (18) to obtain the linear equation as follows:

$$AY + N = B. \tag{19}$$

The coordinate of I obtained by standard minimum mean square error estimation method is

$$Y = \left(B \times B^T\right)^{-1} B^T A. \tag{20}$$

The trilateration positioning is shown in Figure 6.

As shown in Figure 6, triangulation method uses AOA method to measure the relative angle between unknown nodes and anchor nodes and converts the angular relationship into the relationship of edges as follows:

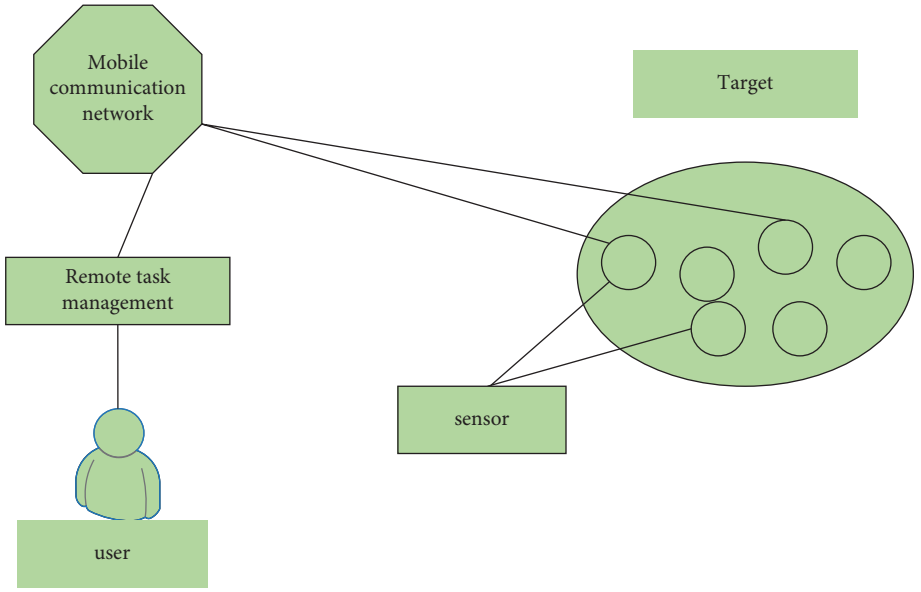

Figure 2: Wireless sensor network architecture.

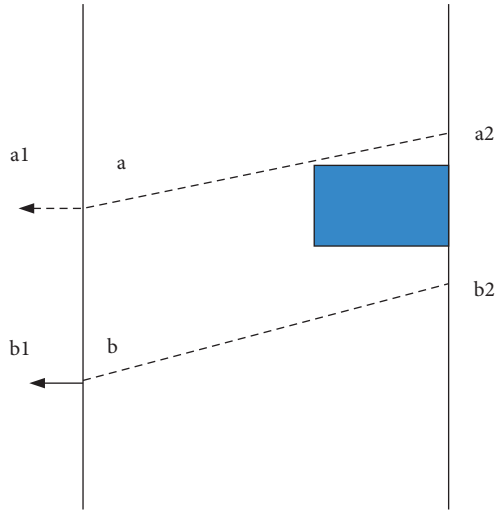

Figure 3: The schematic diagram of measuring distance.

$$\sqrt{(a_1 - a_2) + (b_1 - b_2)} = r_i. \quad (21)$$

The coordinates of the three anchor nodes and the distance to the unknown node are shown in Figure 7.

As shown in Figure 7, the distance from the anchor node to the node to be located is the shortest.

The closer the anchor node is located, the greater the weight is given to improve the negative impact of uneven distribution of anchor nodes on positioning accuracy, as shown in Figure 8.

As shown in Figure 8, although the centroid location algorithm is simple and easy, its location effect depends heavily on the distribution of reference nodes. When the nodes are sparse and unevenly distributed, the location effect is not ideal. It is a coarse-grained location method.

The basic principle of APIT algorithm is that the placed nodes randomly select three locking nodes. According to the best internal point test method, determine whether the point is located on the inside of the triangle formed by three locked nodes. If it is on the inside, it is marked with 3 locked nodes, as shown in Figure 9.

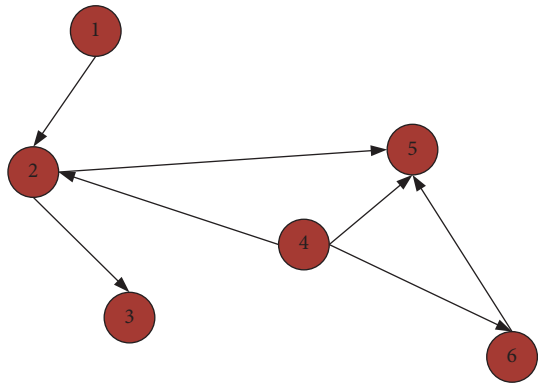

Figure 4: Ranging diagram of Sum-Dist algorithm.

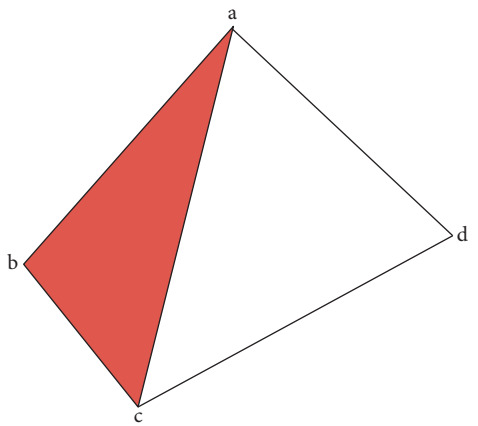

Figure 5: The schematic diagram of Euclidean algorithm to measure distance.

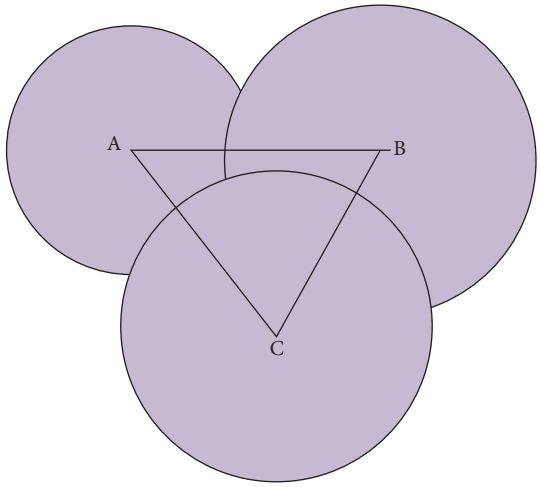

Figure 6: Trilateration positioning diagram.

As shown in Figure 9, find the triangle composed of all anchor nodes that meet the benchmark, calculate their overlapping parts, and use the center of gravity coordinates of this part as the estimated coordinates of the nodes to be placed. The coordinates of the node to be located are obtained as follows:

$$r_k = \|a - a_i\| \geq R_k. \tag{22}$$

The average hop distance of each anchor node is estimated as follows:

$$A_i = \frac{\sum_{j=1}^{k} (a - a_i)^2}{\sum_{j=1}^{k} h_{ij}}. \tag{23}$$

The number of hops between nodes is multiplied by the average hop distance instead of the real distance, as shown in Figure 10.

As shown in Figure 10, as the number of hops increases, the cumulative error increases faster.

The nodes located in the overlapping communication area of two nodes are called their common neighbor nodes, as shown in Figure 11.

As shown in Figure 11, 10 groups of networks are randomly generated, and the average hop quantization error of these 10 groups of nodes is taken; then, the estimated distance error is equal to the product of hop quantization error and communication radius.

Since the sensor nodes in the monitoring area are randomly distributed, the distribution of each node in the two-dimensional plane follows Poisson distribution, which is

$$S(X) = 2R^2 F(X). \tag{24}$$

Therefore, the number of quantization hops between neighbor nodes is as shown in Figure 12.

As shown in Figure 12, in the process of quantifying the hops of neighbor nodes, the error is caused by fitting univariate quadratic function with linear function.

The ratio of normalized average ranging error to communication radius is

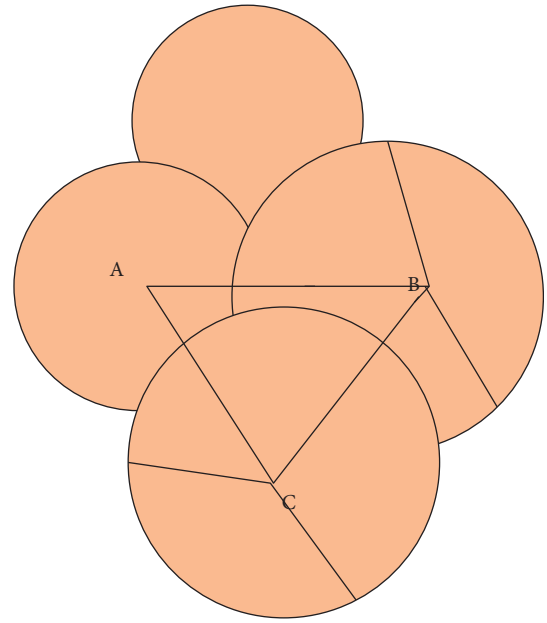

Figure 7: Triangulation positioning.

$$Q = \frac{Q^{-1}}{R}. \tag{25}$$

The shortest broken line distance is used to replace the real straight line distance. This ranging method is only applicable to networks with evenly distributed nodes, as shown in Figure 13.

As shown in Figure 13, when nodes are randomly distributed, the error between the shortest path distance and the actual distance seriously reduces the positioning accuracy.

3. Experimental Design

3.1. Experimental Data Collection. The data comes from different majors and classes in our university in 2019, with randomly selected 500 students as the survey objects. The 500 students were divided into two groups for a semester of PE. One group is for one semester of traditional sports, and the other group is for one semester of college characteristic sports. After the semester, the two groups of students' mastered sports skills, physical fitness exercise methods, and physical fitness test scores were compared and analyzed.

3.2. Experimental Steps. The construction of characteristic PE curriculum in CAU is as follows.

(1) The purpose of college characteristic PE curriculum is mainly divided into the following three points:

  (1) Respect students' interest, develop sports skills, master exercise methods, form the habit of consciously participating in exercise, and form a healthy psychological quality.
  (2) Understand the basic knowledge of physical exercise and the general rules of sports competition, and learn the methods of improving physical fitness.

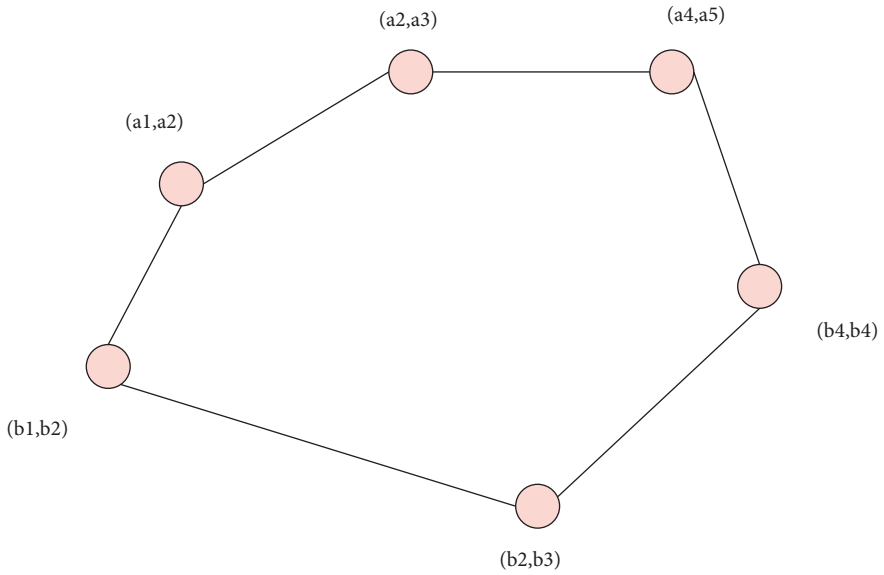

Figure 8: Schematic diagram of centroid positioning.

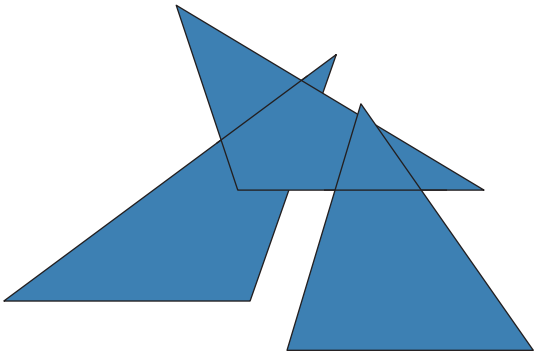

Figure 9: APIT positioning diagram.

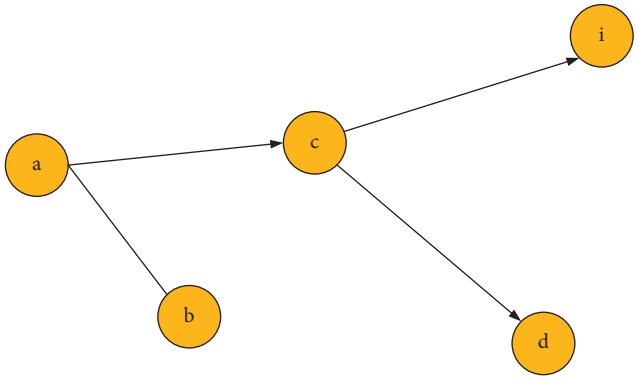

Figure 10: Schematic diagram of DV hop algorithm.

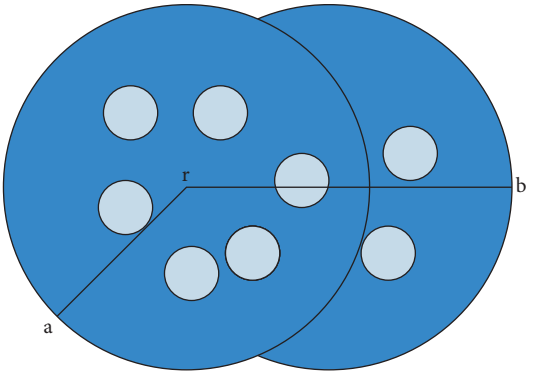

Figure 11: Relationship between common neighbor node and distance.

(3) Make a simple exercise plan and improve physical fitness by using the sports knowledge learned. Master one or two sports ICH skills, so that you can skillfully use them. Meet the needs of daily exercise, and form lifelong sports consciousness. Have certain sports appreciation ability, and master common sports injury treatment method.

(2) The content of sports ICH should be inserted into the characteristic PE curriculum of CAU, and the class hours should be allocated as much as possible.

(3) The contents of characteristic PE courses in CAU are mainly divided into the following aspects:

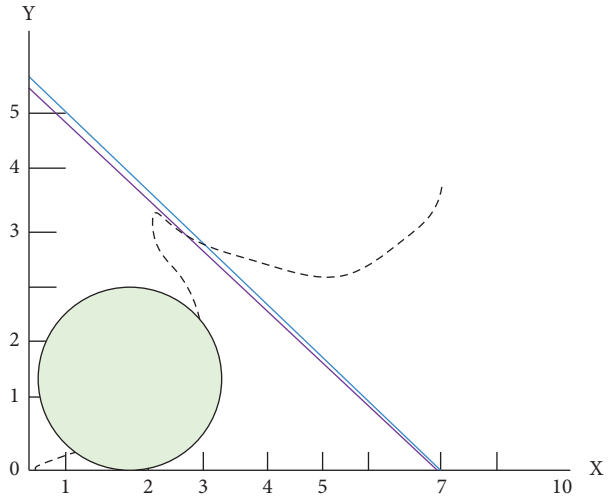

Figure 12: Function image.

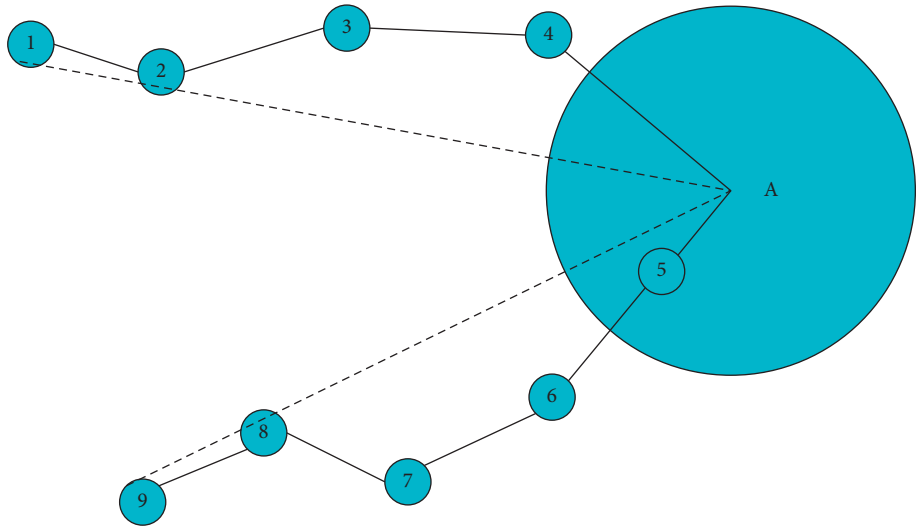

Figure 13: Schematic diagram of location estimation propagation.

(1) There are general exercise programs and theoretical studies on research and training sports intangible cultural heritage items.
(2) Students choose sports ICH according to their own interests, and combine it with professional physical training and related theoretical knowledge.

(4) Results of PE Curriculum are divided into the following aspects:

(1) Teaching performance (70%): mainly divided into learning attitude, classroom behavior, classroom attendance, theoretical work, etc.
(2) Physical fitness test (30%): PE for one semester, followed by physical test for students.

4. Analysis of Experimental Results

4.1. Unreasonable Structure of Teachers. In terms of professional title structure, there are 6 professors, accounting for 10.52% of teachers; there are 19 associate professors, accounting for 33.3% of teachers; and there are 25 lecturers, accounting for 43.8% of teachers. In terms of education structure, there are 12 doctors, accounting for 21.05% of the teachers; 39 are masters, accounting for 68.42% of the teachers; and 6 have bachelor's degrees, accounting for 10.52% of the teachers. The specific data are shown in Table 3.

As shown in Table 3, there are 57 PE teachers in our university. Among them, 10 are under 35 years old, accounting for 17.54% of teachers. There are 19 teachers aged 36–45, accounting for 33.33% of the teachers; 28.07% of the teachers are aged 46–55; and 12 teachers are aged 56 and above, accounting for 21.05% of the teachers, as shown in Figures 14 and 15.

As shown in Figures 14 and 15, the age distribution of 36–45 years and 46–55 years accounts for a large proportion, which is the mainstay of sports CAU. From the distribution of professional titles and degrees, there are more master's degrees and fewer doctor's and bachelor's degrees, and more lecturers and fewer associate professors and professors, which shows that teachers have higher

Table 3: Number of teachers in each age, educational background, and professional title category.

Number of people	Age			
	Less than 35 years old	36 to 45 years old	46–55 years old	Above 56 years old
Master	10	15	9	5
Doctor	0	3	5	4
Bachelor	0	1	2	3
Assistant	7	0	0	0
Lecturer	2	15	5	3
Associate professor	1	3	9	6
Professor	0	1	2	3

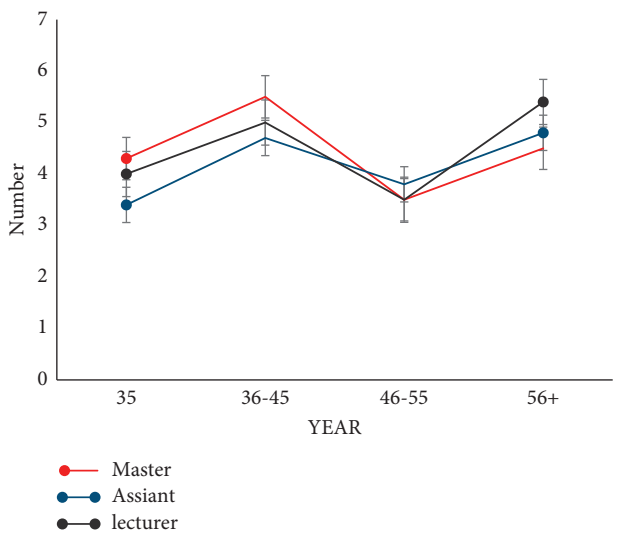

Figure 14: Differences in the professional titles of teachers in different age groups.

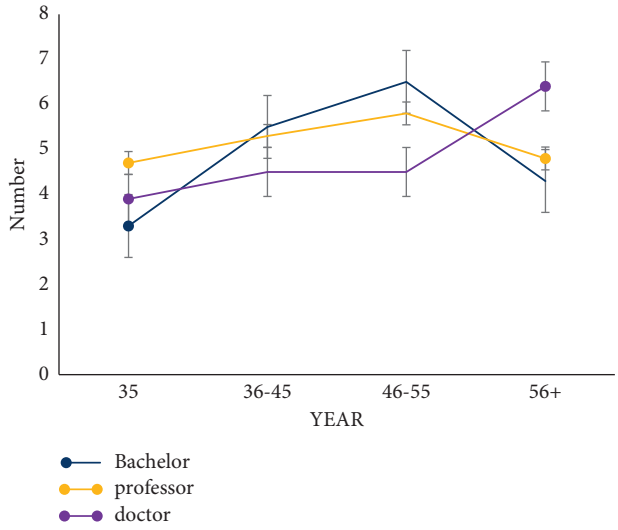

Figure 15: Occupational differences among teachers of different age groups.

education and lower professional titles. However, there are more masters aged from 46 to 55, but few doctors and associate professors. The number of professors and lecturers is small, which shows that teachers have higher professional titles and lower education. In the 36–45 year old and 46–55 year old teachers, one is a high education and low professional title, the other is a low education senior title.

4.2. Comparison of Students' Mastery of Motor Skills. The specific data of college students' mastery of sports ICH skills is shown in Table 4.

As shown in Table 4, the ideal state should be high education, high title, and have strong scientific research ability and teaching ability. But the opposite is true, as shown in Figures 16 and 17.

As shown in Figures 16 and 17, after a semester of PE, 67.2% of the students in the college characteristic sports group have mastered 1–2 sports ICH skills, 26% of the students have mastered 3 sports ICH skills, and 6.8% of the students have mastered more than 4 sports ICH skills. In the traditional sports group, 8% of the students did not master one sports ICH skill, 75.6% of students mastered 1–2 sports ICH skills, 14% students mastered 3 sports ICH skills, and 2% students mastered more than 4 sports ICH skills. The number of students who master 0 and 1–2 sports skills in college characteristic sports group is lower than that in traditional sports group, but the number of students who master 3 and 4 sports ICH skills is 12% and 4.8% higher than that of traditional sports group. After learning sports for one semester, 67.2% of the students have mastered 1–2 sports ICH skills, which is consistent with the expected mastery of 1–2 sports ICH skills in the characteristic PE curriculum objectives of CAU. This achieves the expected effect of training and improving curriculum skills and establishes the technology of "I can do sports" basics. It can be seen that college characteristic sports can promote students' interest in sports and this group master more sports skills of ICH than traditional sports group.

4.3. Comparison of Physical Fitness Exercise Methods. The mastery of physical fitness training methods of college students in characteristic sports group and traditional sports group is as shown in Figure 18.

As shown in Figure 18, after a semester of PE, 98% of the students in the characteristic sports group of CAU have mastered the professional physical fitness training methods to a certain extent, and they can be applied to the actual work and life and targeted exercises, with the ability to prevent occupational diseases and strengthen practice. However, only 84.4% of the students in the traditional education group have mastered some professional physical training methods.

Table 4: Number of students mastering motor skills.

group	Number of people			
	0 items	1–2 items	3 items	More than 4 items
Traditional sports group	0	168	65	17
College characteristic sports group	10	189	35	16

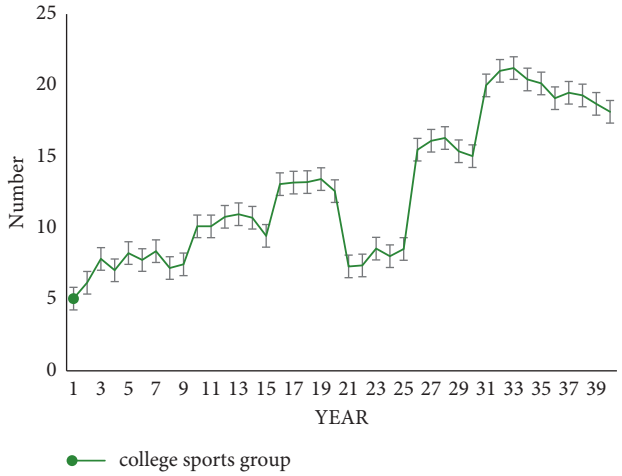

Figure 16: Students mastery of motor skills.

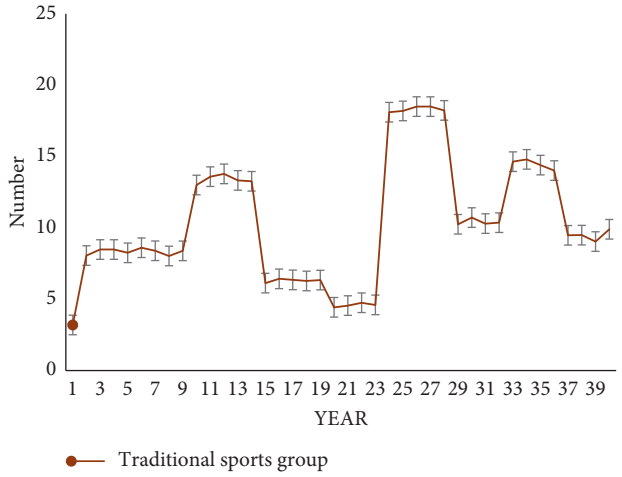

Figure 17: Students mastery of motor skills: traditional.

The number of students in the characteristic sports group and the traditional sports group in CAU are 138 and 45, respectively, accounting for 55.2% and 18% of the students, respectively. It can be seen that the students of the characteristic sports group in CAU recognize, affirm, and accept the arrangement of teaching contents after learning the characteristic PE courses.

4.4. Comparison of Physical Fitness Test. The comparison of physical fitness test scores between the characteristic sports group and the traditional sports group is shown in Figure 19.

As shown in Figure 19, after one semester of PE, the number of students with physical fitness test scores above 90, 80–89, and 70–79 in the characteristic sports group of CAU are 19, 51, and 95, respectively. In the traditional sports group, 8, 45, and 75 students scored above 90, 80–89, and 70–79, respectively. The number of students whose physical fitness score is more than 90 in college characteristic sports group is higher than 11 students in traditional sports group. The number of students with physical fitness test scores of 80–89 in the college sports group was higher than the six in the traditional sports group. The average scores of physical fitness test of college students in characteristic sports group and traditional sports group were 79.39 and 69.85, respectively.

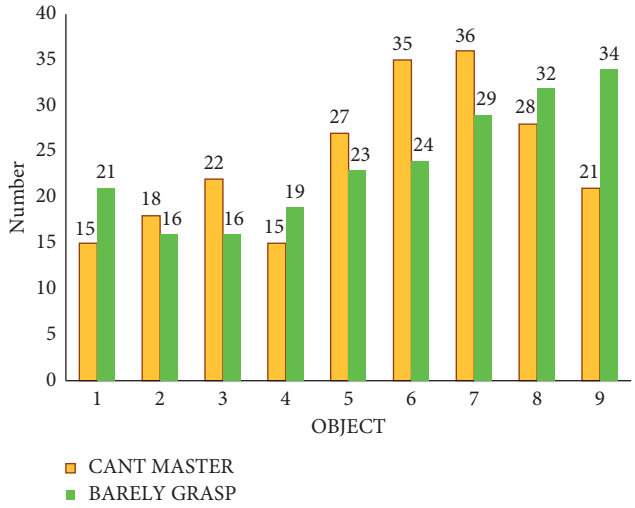

Figure 18: Students' mastery of physical fitness training methods.

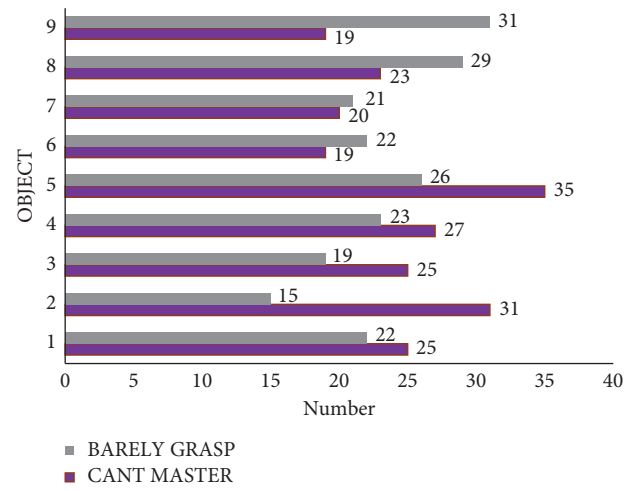

Figure 19: Comparison of students' physical fitness test scores.

The results show that after a semester of PE, the number of students in the characteristic sports group of CAU is lower than that of the traditional sports group in mastering 0 and 1–2 sports skills. The number of students in the characteristic sports group who master 3 and 4 sports ICH skills is 12% and 4.8% higher than that of the traditional sports group, respectively. The number of students in the characteristic sports group and the traditional sports group in CAU are 138 and 45, respectively, accounting for 55.2% and 18% of the students, respectively. It can be seen that college characteristic sports can promote students' interest in sports and this group master more sports skills than traditional sports group. After learning the characteristic PE course, the students in the characteristic sports group of CAU recognize, affirm, and accept the arrangement of teaching contents. Students' internal acceptance of PE is the key to improving their learning confidence. Positive learning attitude is the psychological basis for enhancing learning motivation, which is conducive to improving learning effect.

5. Conclusion

The concept of the construction of characteristic PE curriculum in CAU is taking the sports teaching and scientific research as the guide, deepening the characteristics of college PE curriculum construction as the center, focusing on the rich and colorful sunshine sports activities, and emphasizing the inheritance of sports ICH. In the physical education class, students can not only master and use two or more intangible cultural heritage sports skills and establish the concept of lifelong sports but also become active participants in sports intangible cultural heritage and social sports.

Due to the lack of experience and samples, the results of the course may have some limitations. The next step of the research content is in-depth analysis of the inheritance of sports ICH and the construction of college characteristic PE in practice teaching.

Data Availability

This article does not cover data research. No data were used to support this study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

This work was supported by 2021 Higher Education Teaching Reform Research Project of Chongqing Education Commission: research on the strategies of hybrid teaching mode to relieve the physical health crisis of college students in the postepidemic era (213133); Humanities and Social Sciences Research Planning Project of Chongqing Education Commission in 2020 (20SKGH052); and Chongqing Education Science Planning Project: an empirical study on physical activity intervention of bullying in primary and secondary schools (2020-GX-013).

References

[1] K. Kogiso, "Intangible cultural heritage and sport anthropology: consideration of Pelota Mixteca as a traditional and indigenous sport in Mexico," *Taiikugaku Kenkyu (Japan Journal of Physical Education, Health and Sport Sciences)*, vol. 62, no. 1, pp. 115–131, 2017.

[2] K. Sasaki, "A critical review on fundamental principle of physical education," *Journal of the Philosophy of Sport and Physical Education*, vol. 37, no. 1, pp. 1–13, 2015.

[3] L. Aimin, L. Jianjun, T. Ganchen, C. Yuanping, and W. Shaoyong, "Research on the inquiry teaching model of men's basketball teaching in college physical education based on network information technology," *International Journal of Smart Home*, vol. 9, no. 10, pp. 169–178, 2015.

[4] J. Maclean, R. Mulholland, S. Gray, and A. Horrell, "Enabling curriculum change in physical education: the interplay between policy constructors and practitioners," *Physical Education and Sport Pedagogy*, vol. 20, no. 1, pp. 79–96, 2015.

[5] J. Viciana and D. Mayorga-Vega, "Innovative teaching units applied to physical education," *Kinesiology*, vol. 48, no. 1, pp. 142–152, 2016.

[6] L. Petherick, "Race and culture in the secondary school health and physical education curriculum in Ontario, Canada," *Health Education*, vol. 118, no. 2, pp. 144–158, 2018.

[7] L. Chen and Y. Li, "A comparative study on the currency of social sports major between China and Australia," *Management Science and Research*, vol. 8, no. 1, pp. 46–48, 2019.

[8] J. Liu, R. Shangguan, X. D. Keating, J. Leitner, and Y. Wu, "A conceptual physical education course and college freshmen's health-related fitness," *Health Education*, vol. 117, no. 1, pp. 53–68, 2017.

[9] F. Dai and B. Chen, "The lake and construction of teaching communication in physical education in CAU," *International Technology Management*, vol. 12, pp. 45–47, 2016.

[10] H. Xin, C. Yijian, and A. Jie, "Study on the construction of the mathematical model of the influence factor of lifelong physical education for college students," *International Journal for Engineering Modelling*, vol. 31, no. 1, pp. 111–117, 2018.

[11] D. Landi, K. Fitzpatrick, and H. Mcglashan, "Models based practices in physical education: a sociocritical reflection," *Journal of Teaching in Physical Education*, vol. 35, no. 4, pp. 400–411, 2016.

[12] Z. Lv, "The security of Internet of drones," *Computer Communications*, vol. 148, pp. 208–214, 2019.

[13] S. E. Erfle and A. Gamble, "Effects of daily physical education on physical fitness and weight status in middle school adolescents," *Journal of School Health*, vol. 85, no. 1, pp. 27–35, 2015.

[14] L. Suzanne, "Physical literacy in the field of physical education–a challenge and a possibility," *Journal of Sport & Health ence*, vol. 2, pp. 113–118, 2015.

[15] R. Merino-Marban, D. Mayorga-Vega, E. Fernandez-Rodriguez, F. V. Estrada, and J. Viciana, "Effect of a physical education-based stretching programme on sit-and-reach score and its posterior reduction in elementary schoolchildren," *European Physical Education Review*, vol. 21, no. 1, pp. 83–92, 2015.

[16] J. L. Hollis, A. J. Williams, R. Sutherland et al., "A systematic review and meta-analysis of moderate-to-vigorous physical activity levels in elementary school physical education lessons," *Preventive Medicine*, vol. 86, no. 1, pp. 34–54, 2016.

[17] H. Larsson and I. Karlefors, "Physical education cultures in Sweden: fitness, sports, dancing, learning?" *Sport, Education and Society*, vol. 20, no. 5, pp. 1–15, 2015.

[18] M. A. Solmon, "Optimizing the role of physical education in promoting physical activity: a social-ecological approach," *Research Quarterly for Exercise and Sport*, vol. 86, no. 4, pp. 329–337, 2015.
[19] S. Wan, L. Qi, X. Xu, C. Tong, and Z. Gu, "Deep learning models for real-time human activity recognition with smartphones," *Mobile Networks and Applications*, vol. 25, pp. 1–13, 2019.
[20] H. Song and M. Brandt-Pearce, "A 2-D discrete-time model of physical impairments in wavelength-division multiplexing systems," *Journal of Lightwave Technology*, vol. 30, no. 5, pp. 713–726, 2012.
[21] S. Wan, Z. Gu, and Q. Ni, "Cognitive computing and wireless communications on the edge for healthcare service robots," *Computer Communications*, vol. 149, 2020.
[22] R. T. Iaochite and R. A. D. Costa Filho, "Teacher efficacy beliefs during the practicum experiences in physical education classes," *Motriz: Revista de Educação Física*, vol. 22, no. 3, pp. 183–189, 2016.
[23] P. Ward, I. Kim, B. Ko, and W. Li, "Effects of improving teachers' content knowledge on teaching and student learning in physical education," *Research Quarterly for Exercise and Sport*, vol. 86, no. 2, pp. 130–139, 2015.
[24] L. Goossens, G. Cardon, E. Witvrouw, A. Steyaert, and D. De Clercq, "A multifactorial injury prevention intervention reduces injury incidence in Physical Education Teacher Education students," *European Journal of Sport Science*, vol. 16, no. 3, pp. 365–373, 2016.
[25] A. Bekiari and T. Tsaggopoulou, "Verbal aggressiveness and affective learning in physical education," *Advances in Physical Education*, vol. 06, no. 4, pp. 406–418, 2016.
[26] W. Li and H. Song, "ART: an attack-resistant trust management scheme for securing vehicular ad hoc networks," *IEEE Transactions on Intelligent Transportation Systems*, vol. 17, no. 4, pp. 960–969, 2016.
[27] P. A. Di Tore, R. Schiavo, and T. D'Isanto, "Physical education, motor control and motor learning: theoretical paradigms and teaching practices from kindergarten to high school," *Journal of Physical Education and Sport*, vol. 16, no. 4, pp. 1293–1297, 2016.
[28] D. Parnell, S. Buxton, D. Hewitt, M. J. Reeves, E. Cope, and R. Bailey, "The pursuit of lifelong participation: the role of professional football clubs in the delivery of physical education and school sport in England," *Soccer & Society*, vol. 17, no. 2, pp. 225–241, 2016.
[29] K. FröMel, Z. Svozil, F. Chmelík, L. Jakubec, and D. Groffik, "The role of physical education lessons and recesses in school lifestyle of adolescents," *Journal of School Health*, vol. 86, no. 2, pp. 143–151, 2016.
[30] R. Kretschmann, "Physical education teachers' subjective theories about integrating information and communication technology (ICT) into physical education," *Turkish Online Journal of Educational Technology*, vol. 14, no. 1, pp. 68–96, 2015.