

Improving Strategies of College Physical Education Teachers' Core Accomplishment under the Background of Internet⁺

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Abstract: With the rapid development of the "Internet +" model, it provides opportunities for the development of sports service platforms. As a sports classroom leader, what core qualities should a PE teacher have to better cultivate the core of the student's sports discipline Accomplishment has become a problem that needs to be solved urgently. This article mainly studies the strategies to improve the core literacy of college physical education teachers under the background of Internet +. This research takes the core literacy of college physical education teachers as the research object, and takes physical education teachers as the survey object. It mainly studies the structural model of the core literacy of physical education teachers in my country's colleges and universities and the investigation and analysis of the status quo based on the model construction, and formulates the improvement of the core literacy of physical education teachers in my country. This study uses the Delphi method to screen the indicators of the core literacy index system of ordinary high school physical education teachers in multiple rounds, combined with the basis and principles of the construction of the core literacy indicator system of ordinary high school physical education teachers, and preliminary drafts the core literacy indicator system of ordinary high school physical education teachers Basic framework. The questionnaire survey uses a stratified random sampling method. The questionnaire for physical education teachers is mainly designed from the aspects of school curriculum, teaching, evaluation and teacher ethics. The content validity of the questionnaire adopts expert evaluation method. Using independent sample T test and single factor analysis of variance, the impact of "Internet +" on the core literacy of college physical education teachers is analyzed. The data shows that many teachers have a better understanding of the principle of conscious initiative in physical exercise, and the proportion is the highest, accounting for 77.37% of the total surveyed. The improvement of the core literacy of physical education needs to improve the independent development mechanism of physical education teachers, so as to attract the attention of the government, schools and junior high school physical education teachers themselves, and effectively enhance the core literacy of college physical education teachers.

Keywords: Internet⁺ Background, College Physical Education Teachers, Core Literacy, Improvement Strategies

1. Introduction

With the popularity of the Internet, all countries and all walks of life in society have been affected by the Internet, and this impact is huge. As a new concept, "Internet +" will soon be implemented and implemented in all walks of life. This is a major trend in social development. For us educators, how to adapt to this development, how to make some changes and adjustments under the influence of the big environment. The core literacy of the physical education discipline is a part of the core literacy of the discipline, which has a strong significance for enhancing students' physical fitness, promoting students' physical and mental health, and for their lifelong development.

This article explores the strategy of improving the core literacy of college physical education teachers, and effectively improves the core literacy of college physical education teachers in practice. It helps to enhance the identity of physical education teachers in colleges and universities, and reflects the indispensability of the profession of physical education teachers; helps to improve the training content of physical education teachers in local education departments, so that the training and training process

of physical education teachers is more targeted; it is beneficial to improve colleges and universities the quality of physical education develops the core literacy of students and effectively promotes the physical and mental health of students; it is conducive to improving the overall level of the healthy development of school physical education and realizing the sustainable development of school physical education. Focusing on the core literacy of physical education from teachers' teaching behaviors to in-depth or put forward specific optimization strategies is also an innovative way to enrich the theoretical system of core literacy. It also provides a theoretical reference for the teaching design behavior, implementation behavior and reflection behavior of physical education teachers under the new education goal.

Sports core literacy has become a new research direction in the field of basic education in my country. Cho J H aims to explore how the teaching style of physical education teachers affects students' classroom mobility and satisfaction. His target group is those who study in Incheon's professional vocational high school. He used the convenience sampling method and distributed 350 questionnaires, of which 13 were exceptions. Finally, 332 samples were used for analysis. The questionnaire uses spssver21.0 for frequency analysis, correlation analysis and multiple regression analysis. Although his research has a certain effect, it lacks a specific discussion on the experimental results [1]. Ula M aims to explore the relationship between teacher teaching commitment, teacher effectiveness, marginalization and isolation of physical education teachers. 488 physical education teachers volunteered to participate. He used the one-dimensional goalless commitment scale compiled by Klein and others to evaluate the teaching commitment of physical education teachers by designing teaching commitment measurement items. He uses the Sports Marginalization and Isolation Scale to evaluate marginalization and isolation. The Ohio teacher efficacy scale was used to determine the level of efficacy beliefs. Although he found that teachers with effective sensibility would be more dedicated to teaching, his research lacks the necessary data [2].

The innovation of this research is based on the core literacy of ordinary high school physical education and health disciplines. In the process of the implementation of physical education and curriculum standards, the current ordinary high school physical education teachers should have the core abilities to be analyzed and researched, and countermeasures and suggestions for improving the core abilities of physical education teachers are put forward, so that physical education teachers can better adapt to the requirements of the new curriculum standards, so as to meet the needs of developing students' core literacy. Research on the core literacy of ordinary high school physical education teachers can play a reference role in the curriculum setting and training focus of physical education teacher students, play a certain guiding role in the post-service training of ordinary high school physical education teachers, and help ordinary high school physical education teachers themselves Professional growth and overall development.

2. Core Literacy of College Physical Education Teachers

2.1 Internet+

As the Internet+ era tends to be fair, flat and transparent, for sports consumers, it means that its status is getting higher and higher, from the passive acceptance in the past to the active demand, and the choices they have are more diversified [3]. For sports companies, if they want to survive and sustainably develop, they must abandon backward concepts. In the entire sports industry chain, they must create a brand-new thinking model centered on sports consumers. Listen to the voice of sports consumers, and improve sports products, services and sports consumer experience based on the feedback and suggestions of sports consumers, and meet or exceed their expectations. Only in this way, sports companies and others can obtain a broad space for survival and development [4].

Assuming that an $M \times N$ image $f(x, y)$ passes through an $m \times n$ (m and n are odd) weighted mean filter $w(s, t)$, the processing process is [5]:

$$g(x, y) = \frac{\sum_{s=-a}^a \sum_{t=-b}^b w(s, t) f(x+s, y+t)}{\sum_{s=-a}^a \sum_{t=-b}^b w(s, t)} \quad (1)$$

In the formula, $w(s, t)$ is the mask coefficient; the numerator is the template coefficient and

convolves with the pixel block centered on (x, y). The fusion of Bayesian principle and SVM produces RVM, whose expression is as follows [6]:

$$P(t | \lambda) = \prod_{i=1}^n \sigma y_i(x_i; \lambda)^{t_i} [1 - y_i(x_i; \lambda)]^{1-t_i} \quad (2)$$

Among them, λ is the weight vector. The expression of the similarity measure function SAD is as follows [7].

$$SAD(x, y, d) = \sum_{i=-m}^m \sum_{j=-n}^n |L(x+i, y+j) - R(x+i+d, y+j)| \quad (3)$$

In the formula, d is the limited parallax search range, m and n are the half-window size, and L(x,y) and R(x,y) respectively represent the gray value of the corresponding points of the left and right images [8]. The function expressions of the similarity measurement functions SSD and NCC are as follows:

$$SSD(x, y, d) = \sum_{i=-m}^m \sum_{j=-n}^n [L(x+i, y+j) - R(x+i+d, y+j)]^2 \quad (4)$$

$$NCC(x, y, d) = \frac{\sum_{i=-m}^m \sum_{j=-n}^n [L(x+i, y+j) - \bar{L}] \cdot [R(x+i, y+j) - \bar{R}]}{\sqrt{\sum_{i=-m}^m \sum_{j=-n}^n [L(x+i, y+j) - \bar{L}]^2 \cdot [R(x+i, y+j) - \bar{R}]^2}} \quad (5)$$

In the formula, \bar{L} , \bar{R} respectively represent the average gray value of the left and right image neighborhoods. SAD and SSD measures are difference measures. The d when the result is the smallest within a limited range is used as the calculated result disparity; the NCC measure is a similarity measure, and the d when the result is the largest within the limited range is used as the calculated result disparity [9-10].

Scale invariance is the most important feature of SIFT. It can simulate the scene where the human eye observes the same object at different distances. The large scale represents the overview of the image, which is equivalent to the fuzzy view at a long distance, and the small scale represents the details of the image. , Which is equivalent to seeing clearly at close range [11]. The definition of the image scale space is as follows:

$$L(x, y, \sigma) = G(x, y, \sigma) * I(x, y) \quad (6)$$

Where σ is the scale coordinate [12]. In order to obtain the extreme position of sub-pixel accuracy, curve fitting is performed on the scale space DoG function, and its extreme point is calculated, so as to realize the precise positioning of the key point. The fitting function is as follows [13]:

$$f(x) = f(x_0) + \nabla f(x_0)^T (x - x_0) + \frac{1}{2} (x - x_0)^T \nabla^2 f(x_0) (x - x_0) \quad (7)$$

Where f(x) is the corresponding value of DoG. The standard deviation can be used to adjust the segmentation threshold. Through this center of gravity, the central gray value moment is defined as [14]:

$$u_{p,q} = \frac{1}{a} \sum_{(r,c) \in R} g_{r,c} (r - n_{1,0})^p (c - n_{0,1})^q \quad (8)$$

The energy function is defined as the sum of single-point potential energy and paired potential energy, and its expression is as follows [15]:

$$E(x) = \sum_{i \in V} \psi_i(x_i) + \sum_{i \in V, j \in N_j} \psi_{ij}(x_{ij}) \quad (9)$$

In the formula, N_i represents the set of all points adjacent to the variable x_i [16]. The offset of

the signal phase can be expressed by the following formula.

$$s(x) = \sum_0^n \frac{1}{(2n+1)^p} \sin[(2n+1)x + \phi] \quad (10)$$

Among them, p is the amplitude attenuation coefficient of each Fourier component, and ϕ is the phase offset of the feature [17]. In order to evaluate the degree of phase consistency of different Fourier components, we define phase consistency in one-dimensional space as:

$$PC_{1D}(x) = \frac{|E(x)|}{\sum_n A_n(x)} = \frac{\sum_n A_n(\cos(\phi_n(x) - \phi_{mean}(x)))}{\sum_n A_n(x)} \quad (11)$$

Among them, $|E(x)|$ is the local energy, A_n and ϕ_n are the magnitude and phase angle values of the n -th order Fourier transform vector, and $\phi_{mean}(x)$ is the weighted average of the local phase angles of all Fourier components at position x value [18-19].

In the "Internet+" era, sports consumers' attitudes towards the products, services and experiences they provide directly affect the existence and sustainable development of sports companies. In the "Internet +" era, the thinking of taking the people as the dominant position has become the starting point and destination of the behavior of the industrial model. More sports products and service design, R&D and production will be integrated into the subjective opinions and feedback suggestions of sports consumers, to develop more humane products [20-21].

Among the curriculum resources, teachers are the most important curriculum resources. Under the "Internet +" vision, the teacher resources are integrated into several teaching teams, the team teaching power is exerted, and the ability, knowledge, quality, etc. of each teacher are promoted. The resources complement each other, give full play to their respective characteristics and advantages, and jointly promote the development of the curriculum. Therefore, the teacher team plays an extremely important role in the integration of curriculum resources [22]. In the process of curriculum resource integration under the "Internet +" vision, teachers should be the subject of the first priority. Teachers are not only participants in the entire teaching process, but also guide students in the entire learning process during the teaching process. It is very important for teachers to make good use of various emerging Internet technologies to guide and inspire students to learn. Therefore, strengthening the construction of teacher teams is the primary task of teaching resources integration [23].

2.2 Core Literacy

Through the study of the three dimensions of the core literacy of physical education and health, the semester teaching plan is drawn up after an in-depth analysis of a series of teaching media such as student characteristics, teaching materials, regional requirements, and teacher abilities. On the one hand, the semester teaching plan is the refinement of the school year's teaching plan, and on the other hand, it also leads the unit teaching plan. The semester teaching plan requires specific division of the content of the school year's teaching plan. According to the actual situation of each semester, the teaching content is divided into several unit teaching plans for teaching [24].

The model constructed by the OECD core literacy theory is shown in Figure 1. The OECD core literacy model can realize interaction with heterogeneous groups. Specifically, it can be divided into: analyzing one's own situation in advance, envisioning possible future events, clarifying appropriate behaviors in a situation with many factors; establishing appropriate schedule behaviors, and the form is planned; clarifying the concept of individual rights and obligations, in society To make standardized rights and interests behaviors in China. Teachers participating in the core literacy training of physical education and health can improve their professional ability, better adapt to the setting of teaching content and changes in teaching methods under the core literacy model of physical education and health, and guide students to establish physical education with more scientific and correct teaching methods [25].

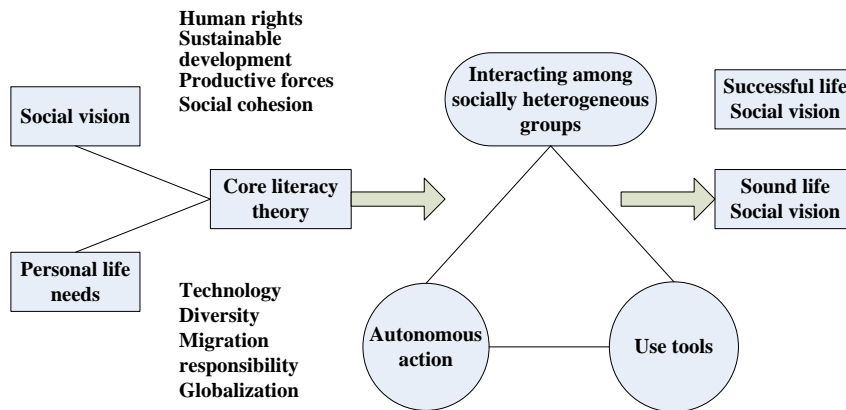


Figure 1: The model of OECD core literacy theory construction

2.3 Core Qualities of Physical Education Teachers

At present, many people have different views and understandings on the cognition of the professionalization of physical education teachers. There are two main points of view. One is that the professionalization of physical education teachers is the professional growth process of how teachers become a good physical education teaching worker throughout their careers; the other is that the professionalization of physical education teachers is a state and another process. Pure sports can't create a cultural circle for us. How to use the curriculum correctly, optimize the curriculum, perfect the curriculum, so that students can really learn something, and learn something is our primary responsibility [26-27].

Teachers should improve their cultural literacy by letting students feel the beauty of sports and sports beauty in the teaching process. The particularity of the physical education discipline is different from other disciplines. To achieve better educational effects and development prospects, a good sports environment and sufficient sports equipment must be provided. Therefore, a good sports environment and sufficient school material resources will have a positive effect on the cultivation of students' sports ability. The training effect of students' athletic ability mainly depends on the development of abundant physical education curriculum resources and school-based physical education curriculum resources. Therefore, in order to realize the sufficiency of school material resources, the development of material resources and curriculum resources must be put in the first place [28].

3. Strategy Experiment of Improving the Core Competence of Physical Education Teachers

3.1 Subjects

This research takes the core literacy of college physical education teachers as the research object, and takes physical education teachers as the survey object. It mainly studies the structural model of the core literacy of physical education teachers in my country's colleges and universities and the investigation and analysis of the status quo based on the model construction, and formulates the improvement of the core literacy of physical education teachers in my country.

3.2 Core Literacy Index System of Physical Education Teachers

In this study, the Delphi method was used to screen all levels of the core literacy index system of ordinary high school physical education teachers in multiple rounds. At the beginning of the construction of the index system, a large number of relevant documents and works were collected, and they were sorted and sorted. On this basis, when interviews with multiple experts, they listened to their valuable opinions and suggestions, combined with ordinary high school physical education teachers. The basis and principles for the construction of the core literacy index system have preliminarily drawn up the basic framework of the core literacy index system of physical education teachers in ordinary high schools. The preliminarily drafted index content is made into an expert questionnaire for the construction of the core literacy index system of ordinary high school physical education teachers. The relevant experts are asked to score and screen the indicators at all levels in the order of effective value 1-5, and the scores are based on the basic standards of social measurement Indicators below 3 points

are defined as low indicator effectiveness, and will be deleted. The revised opinions proposed by experts in each round of screening will be sorted out, and the questionnaire will be adjusted appropriately and the next round of index screening will continue until the opinions of the experts tend to be unified.

3.3 Questionnaire Survey

The questionnaire survey adopts a stratified random sampling method, and selects 50 physical education teachers in colleges and universities as the survey objects. They are 10 freshman teachers, 23 sophomore teachers, 7 junior teachers, and 10 senior teachers. The questionnaire for physical education teachers is mainly designed from the aspects of school curriculum, teaching, evaluation and teacher ethics. The content validity of the questionnaire adopts expert evaluation method, including 17 professors, associate professors, senior middle school teachers and first-level teachers. The results of the teacher questionnaire evaluation validity test are shown in Table 1. Among them, 17.6% of experts believe that the questionnaire is very effective, 47.1% of experts believe that the questionnaire is valid, 29.4% of experts believe that the questionnaire is basically valid, and 5.9% of experts believe that the validity of the questionnaire is low. The validity of the questionnaire is relatively good and can be used after appropriate adjustments. In order to test the reliability of the questionnaire, SPSS22.0 software was used to calculate the Cronbach's Alpha coefficient (Cronbach's Alpha). The test results showed that the Cronbach's alpha coefficient result of this questionnaire was 0.812, indicating that the reliability of the questionnaire was good. The test results the reliability is high and the questionnaire is acceptable.

Table 1: Test results of the evaluation validity of the teacher questionnaire

Evaluation	Very effective	Effective	Basically effective	Not very effective	Invalid
Number of people	3	8	5	1	0
Percentage	17.6%	47.1%	29.4%	5.9%	0

3.4 Mathematical Statistics

The processing of questionnaire data mainly relies on IBMSPSS20.0 software. Enter the valid questionnaire data into SPSS and establish a database for statistical analysis. Using independent sample T test and single factor analysis of variance, the impact of "Internet +" on the core literacy of college physical education teachers is analyzed. Among them, Cohen's d test and effect size calculation were carried out on the significant effects of multiple comparisons. And using SPSS software as an auxiliary tool to make three-line tables, histograms and area charts, etc., showing the relationship between the various dimensions of the core literacy of college physical education teachers.

$$Cohen's d = (M_1 - M_2) / \sqrt{(S_1^2 + S_2^2) / 2} \quad (12)$$

$$Es = \frac{d}{\sqrt{(d^2 + 4)}} \quad (13)$$

4. Results and Discussion

4.1 Core Literacy of College Physical Education Teachers under Different Characteristics

Table 2 shows the fit test of the four structural models of the core literacy of college physical education teachers. From the data in the table, it can be seen that the RMSEA value of modified model 3 is lower than that of modified models 1 and 2, which is 0.010; its NFI value, NNFI value, CFI value and GFI value are higher, respectively 0.997, 1.000, 1.000, 0.994. Therefore, the revised structural model of sports core literacy has construct validity.

Table 2: Fit test of four structural models of core literacy of college physical education teachers

Model	RMSEA	NFI	NNFI	CFI	GFI
Initial model	0.058	0.991	0.989	0.994	0.984
Modified model 1	0.039	0.994	0.995	0.998	0.989
Modified model 2	0.039	0.994	0.995	0.998	0.989
Modified model 3	0.010	0.997	1.000	1.000	0.994

The degree of preference for sports activities inside and outside the class is shown in Figure 2. In terms of the degree of preference for physical education, the results show that most people still like physical education. Among them, 34.1% like physical education very much, 41.3% like it, and the total percentage of the two items accounted for 75.4%, accounting for the vast majority. most people. Among them, 18.8% think they are general, 4.3% do not like them, 1.6% do not like them at all, and the total percentage of the two items accounted for 24.6%, indicating that some high school students do not like physical education so much. In terms of the degree of enjoyment of extracurricular activities, the results show that most people still like extracurricular activities. Among them, 34.1% like extracurricular activities very much, 41.3% like them, and the total percentage of the two items accounted for 75.4%, accounting for the vast majority. people. Among them, 18.8% think that they are general, 4.3% do not like them, 1.6% do not like them at all, and the two total percentages account for 24.6%, indicating that some high school students are not so interested in extracurricular activities.

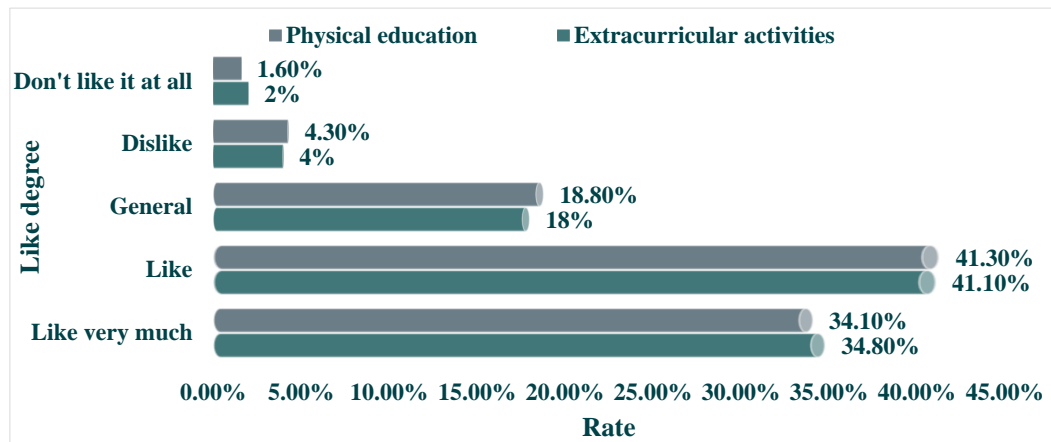


Figure 2: Like degree of activities inside and outside physical education class

The situation of physical education teachers' cognition of professional skills is shown in Table 3. The top three are exercises, ball events, and track and field events, accounting for 83.33%, 79.17%, and 75%. This is because the exercises, ball events, and track and field events are taught in college physical education. Traditional projects and main projects are the main content of the physical education curriculum. Therefore, most physical education teachers have a relatively high awareness of professional skills. They also pay attention to the training and improvement of these professional skills in peacetime. This is to improve the physical and mental quality of students. And the necessary skills for the development of students' sports core literacy.

Table 3: Physical education teachers' cognition of professional skills

Professional skills awareness	Number of people	Proportion
Exercise project	80	83.33%
Ball games	76	79.17%
Athletics	72	75%
Emerging projects	44	45.83%
Other	26	27.08%

Cultivating students' core literacy in physical education is not only the focus of education and teaching reform, but also an important way to promote the physical and mental health of students. Only when college physical education teachers are familiar with the nine elements of the student's core literacy can they be realized in the teaching process in a targeted manner. Figure 3 shows the statistical results of the survey on the degree of familiarity of physical education teachers with the nine elements of sports core literacy. To improve cognition, there are 6 teachers who are very familiar, accounting for 3.85% of the total number of surveys; 31 teachers are more familiar, accounting for 19.87% of the total number of surveys; 88 teachers are generally familiar, accounting for 56.41% of the total number of surveys; There are 20 teachers who are not very familiar, accounting for 12.82% of the total number of the survey; 11 teachers are unfamiliar, accounting for 7.05% of the total number of the survey. In the use of skills, there are 13 teachers who are very familiar, accounting for 8.33% of the total number of surveys; 51 teachers are relatively familiar, accounting for 32.70% of the total number of surveys; 72 teachers are generally familiar, accounting for 46.15% of the total number of surveys there are 11 teachers who are not familiar, accounting for 7.05% of the total number of the survey; 9 teachers are unfamiliar, accounting for 5.77% of the total number of the survey. Adaptability, 2 teachers are very

familiar, accounting for 1.28% of the total number of the survey; 35 teachers are more familiar, accounting for 22.44% of the total number of the survey; 99 teachers are generally familiar, accounting for 63.46% of the total number of the survey; There are 13 teachers who are not very familiar, accounting for 8.33% of the total number of the survey; there are 7 teachers who are unfamiliar, accounting for 4.49% of the total number of the survey.

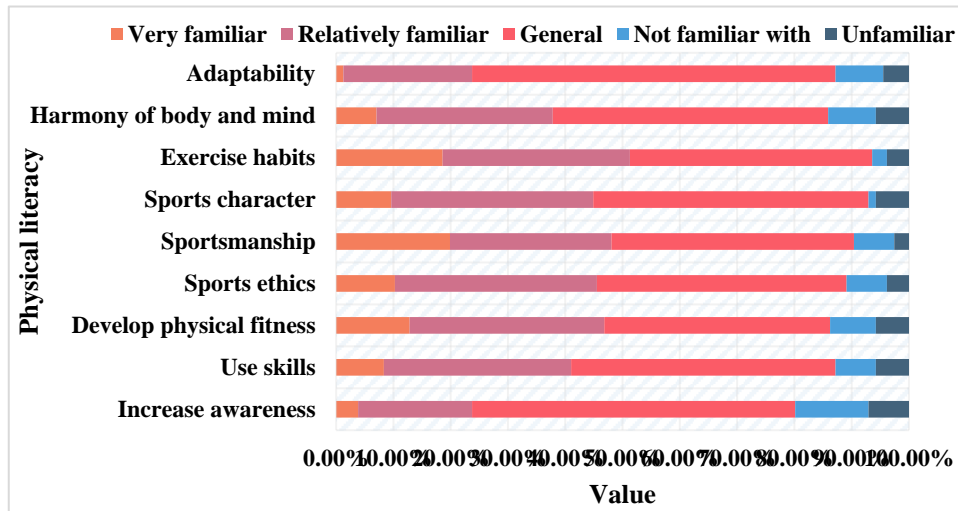


Figure 3: Statistics results of the survey on the degree of familiarity of physical education teachers with the nine elements of core physical literacy

4.2 Sports Core Literacy Model

Table 4 shows the use of venue equipment by physical education teachers in classroom teaching. From Table 4, we can see that there are 48 physical education teachers who indicated that they could use the equipment reasonably in classroom teaching; 15 physical education teachers indicated that they could use the equipment well in classroom teaching; only 3 (4.48%) physical education teachers said that they barely used the field equipment in classroom teaching; 1 (1.49%) physical education teacher said that the use of field equipment in classroom teaching was improper; it can be seen that 94.03% of physical education teachers can use the field equipment in a better and more reasonable way. A small number of physical education teachers' improper use of venues and equipment has a certain relationship with the integrity of the school's venues and the degree of damage to the equipment.

Table 4: Physical Education Teachers' Use of Field Equipment in Classroom Teaching

Options	Number of people	Percentage (%)
Won't use	0	0
Improper use	1	1.49
Barely use	3	4.48
Better use	15	22.39
Reasonable use	48	71.64

Figure 4 shows the statistics of sports majors' preference for their own majors. Sports majors like their majors relatively well, 19.19% of them choose very consistent, 57.17% of them choose to comply, and 86.36% of the people who love sports and their majors. There are 6.39% of people who choose not to meet, 0.86% choose not to meet, and those who do not like their profession account for 7.25% of the total number, which is relatively small.

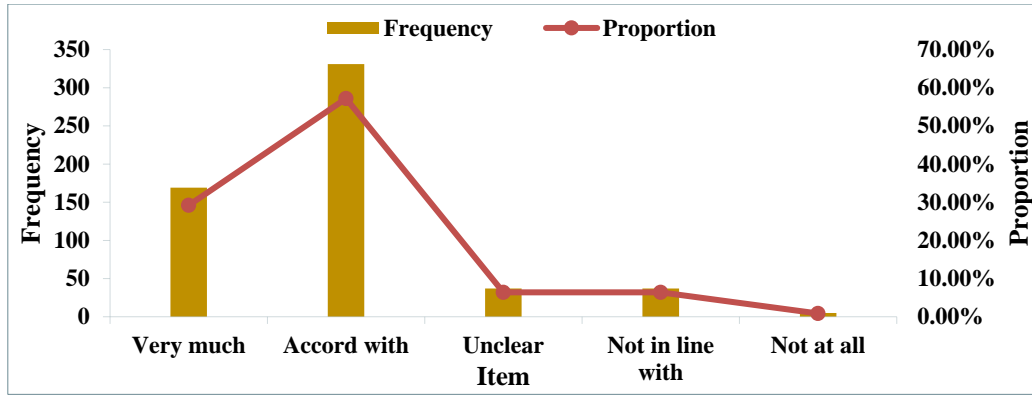


Figure 4: Statistics of the degree of preference of physical education students to their own majors

Table 5 shows the evaluation statistics of the physical fitness of college students. The statistical results show that the excellent rate and good rate of college students are 1.5% and 22.7%, respectively. Among them, the excellent rate of sophomore students is 0.4% and 0.3% higher than that of freshman and third year students, and the good rate is higher than 4.3% and 10.4%, the excellent and good rate of college students is lower, and the passing rate is higher.

Table 5: Statistics on the evaluation of physical fitness and health of college students

Grade	Physical fitness rating (%)			
	Excellent rate	Good rate	Passing rate	Fail rate
Freshman	1.7	23.3	72.3	2.7
Sophomore	2.1	27.6	69.1	1.2
Junior	0.8	17.2	78.9	3.1

The effectiveness scores of independent evaluators of physical education and research activities are shown in Figure 5. Independent evaluator reliability. When four different evaluators use the sports discipline core literacy system to test scores, it is necessary to judge the consistency of the evaluators. The method of estimating the reliability of independent evaluators is related to the number of evaluators. There are 4 evaluators in this study, which can be estimated using the Spearman rank correlation method. After calculation, 4 independent evaluators are obtained in teaching and research activities. The reliability coefficient is 0.816, and the reliability coefficient in physical education activities is 0.833, indicating that the four independent evaluators have high consistency when using the core literacy system of physical education disciplines for practical operations, that is, using this system to develop student physical education disciplines the judgment of core literacy is effective and reliable.

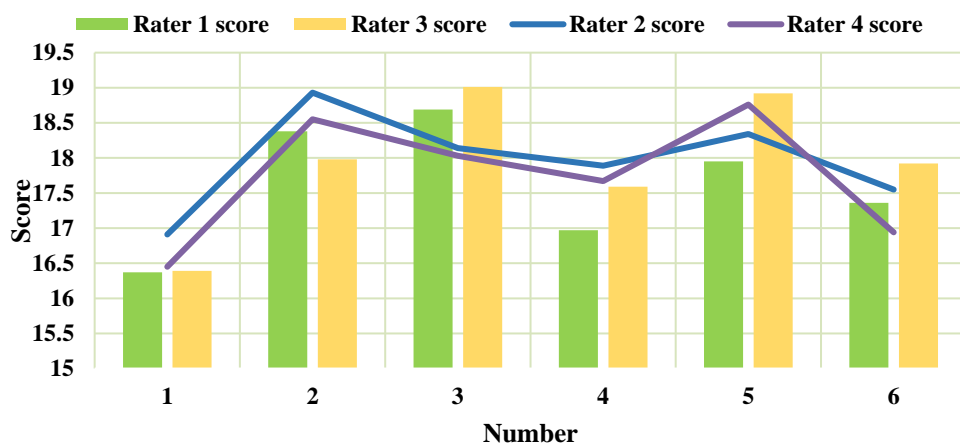


Figure 5: Effectiveness scores of physical education and research activities of independent evaluators

The situation of college physical education teachers arranging students to do warm-up activities before and after exercise is shown in Figure 6. Before the exercise, only 142 students and 244 students did and often do warm-up activities each time, accounting for 43.2% of the total. There are 249, 217, and 42 students who do occasionally, rarely do or never do warm-up activities, respectively, accounting for 27.9%, 24.2%, and 4.7% of the number respectively. It shows that some students recognize the

importance of preparatory activities, but most students do not pay enough attention to preparatory activities, and have a poor understanding of the necessity and importance of preparatory activities. After exercise, only 109 students did relaxation activities after each exercise, 191 students often did relaxation activities, students who did it every time and often accounted for 33.6% of the total number, and 301 students occasionally did relaxation activities, accounting for the total number of 33.7%, 210 students rarely do relaxation activities, 83 students never do relaxation activities, more than 30% of students rarely or never do relaxation activities after exercise.

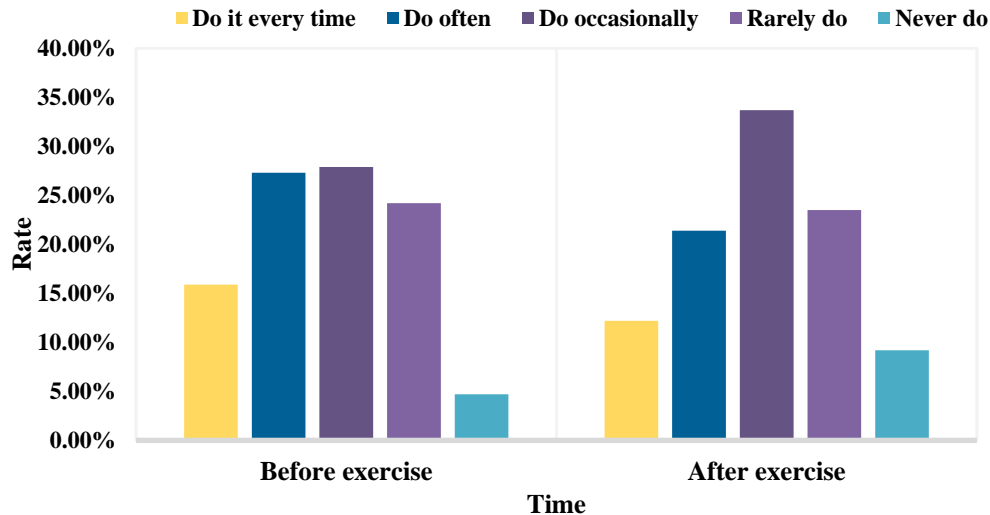


Figure 6: Physical education teachers in colleges and universities arrange students to do warm-up activities before and after exercise

4.3 Improvement of Core Literacy

Teachers' understanding of physical exercise principles is shown in Table 6. The data shows that many teachers have a better understanding of the principle of conscious initiative in physical exercise, with the highest proportion, accounting for 77.37% of the total surveyed people. Compared with the principle of conscious initiative, teachers have relatively poor understanding of other principles, and teachers can recognize the principle of gradual and orderly progress is only 30.66%, which accounts for the lowest proportion. The principle of perseverance is 44.65%. They have relatively good understanding. Many teachers understand the principles, but the understanding is relatively vague, and the specific operations of some principles are relatively poor. The basic principles of physical exercise are the basic requirements for teachers to arrange physical exercise and the basis for students to exercise. Many teachers have relatively little understanding of the principles of physical exercise. It can be seen that teachers' knowledge in physical exercise needs to be strengthened.

Table 6: eachers' understanding of physical exercise principles

Options	N	Percentage (%)
Conscious initiative principle	376	77.37
Step-by-step principle	149	30.66
Perseverance principle	217	44.65
The principle of total exercise	172	35.39
Specific targeting principles	195	40.12

Figure 7 shows the comparison of the physique level of college teachers. It can be seen from the figure that the physical level of college teachers varies. The lowest strength of the selected teachers is 17.29%, the highest is 51.99%; the lowest speed is 13.46%, the highest is 50.27%; the lowest endurance is 15.09%, the highest is 48.41%; the lowest flexibility the highest is 12.96%, the highest is 48.65%; the lowest sensitivity is 13.28%, the highest is 46.98%; the lowest coordination is 15.26%, and the highest is 49.88%. In the actual teaching process, many physical education teachers still use the past methods, and the students are not motivated and interested. It does not combine the actual development situation and ignores the real needs of students. This approach is also contrary to the teaching content and guiding direction stipulated in the latest curriculum reform.

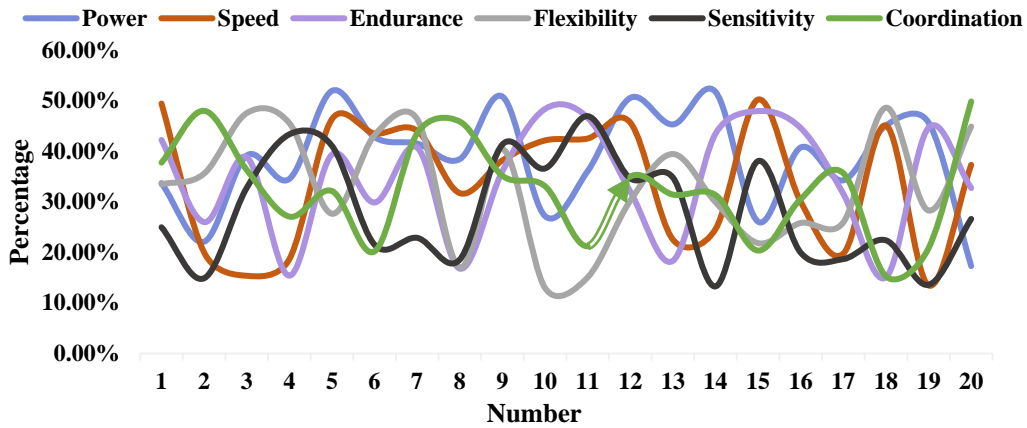


Figure 7: omparison of physique level of college teachers

Common college students' sports health knowledge, sports skills, and skills training forms are shown in Figure 8. Student sports and health knowledge and sports skills and skills originate from different organizations, and the proportions of each organization are different. It mainly comes from schools and individual students, which account for the largest proportion. Schools play a leading role in the training of students' sports health knowledge, sports skills and skills. Most of the students' sports health knowledge, sports skills, and skills come from the school. Learning, accounting for 78.60% of the proportion, 82.51% of students believe that sports skills and skills are obtained through teachers' teaching; on the other hand, they are derived from students' self-learning, and 56.37% of students believe that they have gained knowledge of sports health. Based on my hobby of sports, I usually study myself, read sports-related books, and watch sports games in leisure time.

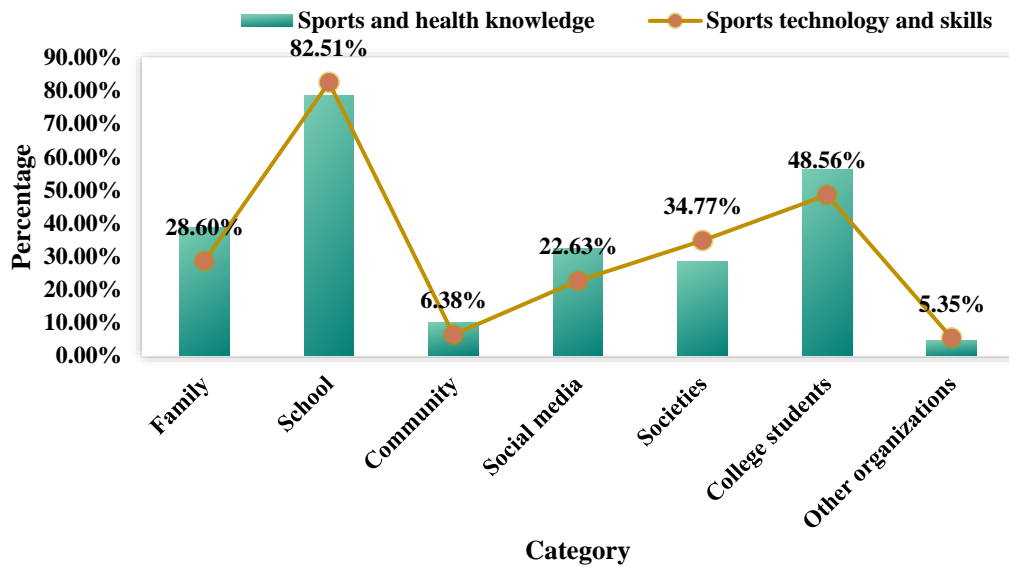


Figure 8: Ommon college students' sports health knowledge, sports technology, and skill training forms

The descriptive statistics of different types of physical education teachers' pre-class design behaviors are shown in Table 7. According to the test result of Shapiro-Wilk Sig=0.000<0.05, it can be seen that the study of three types of track and field teachers' pre-class teaching behavior in physical education major cannot use analysis of variance, so non-parametric test is used. In the Jonckheere-Terpstra test, the asymptotic significance (two-sided) P is 0.168>0.05, which can significantly accept the null hypothesis, that is, there is no difference in the pre-class design behavior of the three types of track and field teachers in the physical education major under the core literacy education concept. But from the descriptive statistics, we can see that in the pre-class design behavior of the three types of teachers, expert teachers lead, skilled teachers second, and novice teachers last. We can simply think that this is the result of their indistinguishment of core literacy and the experience and experience of teachers.

Table 7: Descriptive statistics of pre-class design behaviors of different types of physical education teachers

Teacher type	Mean	Standard deviation	Minimum	Maximum
Novice teacher	55.10	7.327	40	67
Proficient teacher	55.74	6.786	38	70
Expert teacher	56.53	8.925	23	67

5. Conclusions

In physical education, physical education teachers must fully respect the individual differences of students, grasp the internal logic of the teaching materials, establish the important and difficult points of learning content, set the learning goals that students can achieve, achieve personalized teaching design, and diversify practice methods and methods. The evaluation feedback is diversified, and it is necessary to watch more lessons, talk more and reflect more. College students can obtain the reasonable information flow they need through the "Internet + public sports information" platform, which will lead college students to move in the right direction, make college students' participation in sports activities more accurate, and maximize the saving and utilization of social resources. It has a positive effect on promoting the physical health of college students, making up for the lack of school physical education resources, and promoting the development of social sports.

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