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Exploring the Trajectory of Youth Physical Education Quality Cultivation Based on the WSR Model

--An Empirical Examination using a Middle School as a Case Study

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Abstract: **-** In the historical process of building a strong sports country and promoting the fitness of all people in China, the cultivation and improvement of the sports quality of young people bear the important mission of inheriting the national physique and realizing the country's development. At present, school sports should actively serve the function of educating people and promoting this historical process. Based on the WSR methodology, this study systematically explores the current situation of the cultivation of physical education quality of secondary school students in a certain region through empirical means and proposes a three-dimensional theoretical model, i.e., physical, rational and humanistic dimensions, to interpret the connotation system of physical education quality comprehensively. On this basis, this study actively explores effective ways to cultivate sports quality and proposes a set of improvement paths and countermeasures under the guidance of WSR methodology. This will not only further enhance the systematic, pertinence, and effectiveness of sports quality cultivation, but also provide scientific basis and practical support for China to comprehensively improve the sports quality of young people and accelerate the construction of a strong sports country in the new era. This study aims to provide certain theoretical value and practical reference for the construction of youth sports quality in China through the combination of theoretical discussion and empirical research.

Keywords: Youth physical literacy; WSR approach; quality development; multidimensional analysis.

1. Introduction

China has a clear strategy to build a strong country in education and sports by 2045, with a focus on promoting the goal of “strengthening youth sports and improving youth sports literacy”. Youth sports literacy covers a

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wide range of aspects such as sports awareness, physical health, sports behavior, and sports skills. Realizing the high quality of youth sports literacy is a comprehensive and long-term mission. However, the current development of youth sports is still relatively lagging, and problems such as insufficient sports and lack of sports awareness seriously hinder the pursuit of healthy development. In particular, the intrinsic level of youth sports literacy is far from reaching the proper standard and needs to be addressed urgently. Therefore, this paper takes the existing status quo of youth sports literacy development as the research object and utilizes the WSR methodology as the guide to construct a model of youth sports literacy cultivation from the three dimensions of physical, rational, and human nature. At the same time, combined with the orientation of the national strategy of sports power, it puts forward a path to realize the high-quality cultivation of youth sports literacy [1]. On this basis, it promotes the integration of the school sports talent training system, promotes the innovative development of school sports work, better realizes the coordination and integration of resources among multiple subjects, and promotes the improvement of the level of youth sports literacy from multiple aspects. At the same time, the efforts of maintenance, coordination, and unification will provide a solid theoretical foundation and intellectual support for the study of school sports to promote youth sports literacy.

WSR methodology, i.e., “physical dimension (W) - rational dimension (S) - human rational dimension (R)” methodology, is a soft system methodology proposed by Prof. Gu Jifa and Dr. Zhu Zhichang, the famous Chinese experts in system science, at the University of Hull, UK, in 1994. This methodology provides a powerful tool for solving complex problems and realizes systematic problem-solving by analyzing problems from multiple dimensions.

The core idea of the WSR methodology is based on the principle of holistic coherence, which helps to find ways of solving problems and overcoming difficulties based on a systematic analysis of the problem. The application of the methodology requires the consideration of three levels of the research object, namely the physical dimension (W), the rational dimension (S), and the human rational dimension (R).

Physical dimension (W): this dimension focuses on the problem or object of study itself, its characteristics, attributes, and related realities. When analyzing a problem, starting from the physical dimension, we can better understand the current status and actual situation of the problem.

Rational Dimension (S): the rational dimension deals with the principles, rules, and logic of the problem. When solving a problem, one needs to consider the principles applied to the problem, as well as the inherent characteristics of the problem in terms of rules and logic. Analysis of the rationality dimension helps to ensure that the solution to the problem is rational.

Human Rationality Dimension (R): this dimension focuses on human thinking, behavior, and attitudes and how best to utilize the solution to the problem. The analysis of the human rationality dimension can help to understand the impact of the problem on human beings and how to better match human needs and behaviors in solving the problem [2].

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By integrating these three dimensions, the WSR methodology allows problem analysis to unfold from multiple perspectives, leading to a more comprehensive understanding of the nature and complexity of the problem. This approach facilitates the search for practical solutions while ensuring that these solutions are fully coordinated and supported across all dimensions. In short, the WSR methodology provides an effective and systematic approach to systematically analyzing problems and solving complex issues.

2. Construction of Youth Sports Literacy Excellence Cultivation Model Based on WSR Methodology

2.1 Analysis of Factors of Youth Sports Literacy Excellence Cultivation Model Based on WSR Methodology

The concept of sports literacy has not yet reached a consensus in the academic world, however, scholars have drawn on domestic and international research results, such as Chen Sitong and Liu Yang, to define sports literacy as a multidimensional sports element that has a positive significance for human survival and comprehensive development. Numerous influencing factors are involved in the development of youth physical literacy, including physical education curriculum, physical activities, teaching mode, stadiums, and sports awareness. This paper takes the WSR system methodology as a guide and analyzes the key factors for constructing a high-quality cultivation model of youth sports literacy from the physical dimension, rational dimension, and human dimension[3].

In the physical dimension, attention is paid to the actual basis of the problem, emphasizing the objective nature of the problem to answer the “what” dimension of the problem. In the model of excellence in physical literacy, the quality of the sports venue, the completeness of the equipment and facilities, the quality of the teaching staff, and the feasibility of the sports program constitute an important physical foundation. Together, these factors create an implementation environment conducive to the cultivation of excellence in youth sports literacy, providing the necessary support and guarantee. The rational dimension involves the systems and operational methods used to solve problems, focusing on the management and operation of problems, and further exploring the issue of “how to do”. In the excellence training model, the rational dimension covers the choice of teaching mode, the construction of the management system, the formulation of policy guidelines, and other aspects. Scientific and rational teaching programs, innovative teaching methods, as well as relevant management systems and policies all play a key role in ensuring an efficient and effective cultivation process. As for the human dimension, the macro level of the WSR methodology is explored, which involves psychological factors such as the individual's consciousness, concepts, and attitudes in problem handling and how they are integrated with the cultivation model. In the cultivation model, an in-depth understanding of adolescents' sports awareness, motivation, and interest is provided, while individual differences are fully taken into account to stimulate the desire to actively participate in sports activities.

2.2 Dimension construction

Based on the dimensions of the WSR system methodology, combined with the characteristics of youth sports literacy, the content dimension model of the youth sports literacy cultivation system is constructed, as shown in

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Figure 1.

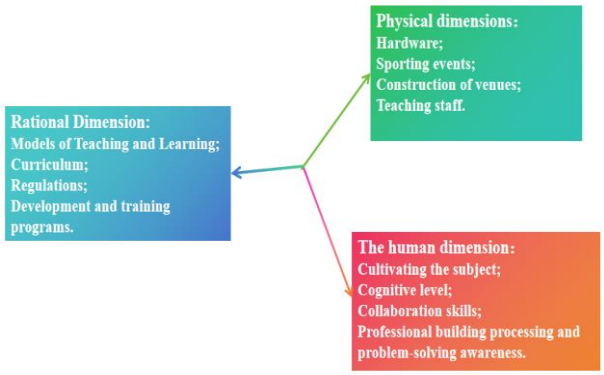

Fig. 1 View of the WRS model

The dimensional model of youth sports literacy development constructed in this study is an open system that is full of vigor and development potential. The physical, rational, humanistic, and other key indicators in the model will not remain unchanged but will continue to enrich their connotations with the deepening of research understanding and the advancement of practice. For example, the physical dimension can absorb more influencing elements such as venues, equipment, teachers, etc.; the rational dimension can add more institutional aspects according to the management needs; and the humanistic dimension can also incorporate more teaching methods and activity forms. Each indicator evolves in a more comprehensive direction under a relatively open framework. On the other hand, these indicators do not simply evolve linearly but are dynamically adjusted in response to strategic needs and environmental changes. For example, if there is a decline in teaching effectiveness in the humanities dimension, teaching methods or curriculum can be appropriately adjusted to cope with it. So this dimension model has a strong dynamic adaptability [4].

Within this dimensional system, there is a high degree of synergy in the connections between the physical, rational, and humanistic dimensions. The three dimensions are both interdependent and mutually constraining. For example, the design of the management system must be based on good site equipment, and the improvement of teaching methods needs to be supported by the management system. If there is a problem in one dimension, the whole body will be affected. At the same time, synergies and combination effects are created among the three dimensions. Good physical conditions help rational management, scientific management systems can promote the innovation of humanistic methods, and so on. The three should enhance the contact points to form an organic whole so that the dimensions complement each other and jointly promote the realization of goals. This requires the establishment of a coordination mechanism to regulate the relationship between the dimensions promptly during the operation process, solve the problem of incoherence, and make them develop harmoniously. The deviation of one part will affect the whole situation, only by taking into account the overall situation and coordinating the development, can we form a synergy and ensure the efficient operation of the system [5].

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In summary, the dimensional model of youth sports literacy cultivation is an organically linked system of engineering. It is characterized by openness and dynamism, and there exists a relationship between the dimensions and elements within it that you and I are in each other, and they are mutually conditional. It is necessary to start from the whole and do a good job of coordinating and promoting the synergistic development of all dimensions, to form an organic whole that promotes each other and complements each other and jointly promotes the continuous deepening and optimization of the system of youth sports literacy training.

3. An empirical study of youth physical literacy based on WSR methodology

3.1 Research Subjects and Instruments

In this study, we chose students from five first-year classes in secondary school A in a city, totaling 161 students, as the research subjects. Among them, 76 students (47%) were male and 85 students (53%) were female. The age of the students was centrally distributed between 12 and 13 years old, with an average age of 12.5 years old. To control the influence of regional differences on the results of the study, the study population was differentiated according to the registered domicile of the school, with 96 students (59.6%) of urban domicile and 65 students (40.4%) of rural domicile. Before the official administration of the test, the researcher randomly selected 2 classes with a total of 60 students to conduct a pre-survey, and the results of the pre-survey showed that the students were able to understand the questions in the questionnaire, and the time to complete the questionnaire was between 25-30 minutes, which was in line with the requirements.

Table 1 The process of developing a questionnaire on the quality of youth sports

Steps	Tasks	Specific content
Literature search	Domestic and international literature search	More than 80 references
Preliminary preparation	Title design	Design of 35 topics
Expert Evaluation	Expert evaluation	5 experts to evaluate the questions
Pre-test questionnaire	Pre-survey	with 60 individuals from 2 classes participating
Official questionnaire	Questionnaire development	with 12 questions on physical dimensions, 13 questions on rational dimensions, and 15 questions on humanistic dimensions, totaling 40 questions
Quality evaluation	Quality inspection	with Cronbach's α coefficient being 0.92, indicating good construct validity

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The research instrument was the Youth Physical Education Literacy Questionnaire (YPELQ) developed by the researcher. The process of questionnaire development followed scientific and rigorous steps: first, we conducted an extensive and knowledgeable search of domestic and international related literature, and designed preliminary questions based on a full understanding of the three-dimensional theory of WSR; then, we invited five experts and scholars in the field of physical education to evaluate the questions, and modified the language of some questions according to the experts' opinions to improve the accuracy; based on the experts' evaluations, we conducted pre-surveys on 30 students in one class, and analyzed the differentiation of each question using the question analysis method, and modified or eliminated some questions with weak differentiation. Based on the expert review, a pre-survey was conducted on 30 students in one class, and the differentiation of each item was analyzed using the item analysis method, some items with weak differentiation were modified or excluded; finally, the formal questionnaire was formed, which contained 3 subscales, 12 questions on the physical dimension, 13 questions on the rational dimension, and 15 questions on the humanistic dimension, and the Likert 5-point scoring method was used. The reliability analysis of the questionnaire showed that the Cronbach's α coefficient of the overall questionnaire was 0.92, the α coefficients of the subscales were between 0.80 and 0.85, which confirmed that the questionnaire had a good internal consistency of reliability; and the factor analysis showed that the three factors, namely, physics, rationality, and humanities, cumulatively accounted for 64.7% of the total variance, which confirmed that the questionnaire had a good validity of the concepts of composition.

Table 2 Basic information of youth sports quality research subjects

Grade	Class	Number of boys	Percentage of boys	Number of girls	Percentage of girls	Total	Number of urban households	Percentage of urban households	Number of rural households	Percentage of rural households
First year Grade	Class 1	13	43.3%	17	56.7%	30	20	66.7%	10	33.3%
First year Grade	Class 2	15	53.6%	13	46.4%	28	15	53.6%	13	46.4%
First year Grade	Class 3	14	48.3%	15	51.7%	29	18	62.1%	11	37.9%

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First year Grade	Class 4	17	54.8%	14	45.2%	31	22	71.0%	9	29.0%
First year Grade	Class 5	17	50.0%	17	50.0%	34	21	61.8%	13	38.2%
Total	/	76	47.2%	85	52.8%	161	96	59.6%	65	40.4%

3.2 Evaluation of rational dimension

In this study, a 13-item scale was used to evaluate the rationality dimension, and the results were analyzed using SPSS statistical software.

The first step is to test the reliability of the scale and calculate Cronbach's α coefficient. It was calculated according to the formula $\alpha=[k/(k-1)][1-\sum\sigma i2/\sigma 2]$, where k=13, i.e., the number of items, σi2 represents the variance of each item, and σ2 is the overall scale variance. The calculation result α = 0.84, which is greater than 0.8, indicating that the scale has good internal consistency.

Descriptive statistics were performed in the second step and the results showed that.

Mean rating of rationality dimension = 3.62

The standard deviation of the rationality dimension = 0.79

The mean value of 3.62 indicates that students' satisfaction with the management and teaching of physical education in schools is at a moderate level, with some distance from being very satisfied. The standard deviation of 0.79 indicates that there is some variability in students' ratings.

The third step for intergroup comparisons was performed by utilizing the t-test formula.

$t = (\mu 1-\mu 2) / (\sigma 1-\sigma 2)$

and the ANOVA formula.

F = between MS stages / within MS stages

The result of P>0.05 indicates that there is no significant difference. It indicates consistency in student evaluations across demographic variables.

The fourth step specifically analyzed each question item, and the results showed that although students were more satisfied with the teaching program, there was still a need for improvement in terms of updating the teaching methods and inadequate management systems.

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The process of calculating the alpha coefficient involves utilizing the variance of each question item and the variance of the entire scale. The alpha coefficient of the rationality dimension scale was finally obtained as 0.84, which is higher than the standard of 0.8, which proves that the scale has good internal consistency. That is, the 13 items on the scale can well reflect the unifying underlying construct of students' satisfaction with the management and teaching of school sports. Next, descriptive statistics of the total scale scores showed that the average satisfaction rating of the sample students was 3.62 with a standard deviation of 0.79, which indicated that the overall satisfaction of the students was moderate and fair but not high. To clarify whether demographic variables affect the evaluation results, independent samples t-test and ANOVA were utilized to test the differences in scale scores between different genders and urban and rural students, and none of the results were statistically significant. This indicates that there is no significant difference in students' ratings of the rationality dimension regardless of gender or region. Students' moderate evaluation of the rationality dimension reflects that although the school's teaching program is relatively reasonable, the teaching methods are not updated quickly enough, and there is still room for improvement in all management systems. Therefore, the school needs to continue to optimize the teaching mode, enrich the teaching content, and improve the implementation of the management system to better meet the learning needs of the majority of students. These statistics show that there is still room for improvement in the rational dimension, and the school needs to continue to optimize the teaching mode and management system to enhance student satisfaction.

Table 3 Ultra-detailed procedure for calculating the variance σ2 of the overall scale

Topics	Topic item content	The variance of the title term σi2
Item 1	The scientificity and rationality of the physical education syllabus	0.235
Item 2	Whether the physical education curriculum is in line with the characteristics of students' physical and mental development	0.198
Item 3	The feasibility and rationality of the PE classroom teaching program	0.176
Item 4	The reasonableness of the organization of the teaching content of physical education classes	0.211
Item 5	Whether the knowledge structure and content of physical education courses are rich and full	0.194
Item 6	Reasonable utilization of the opening hours of sports venues	0.205
Item 7	The design of the system for the use of physical education equipment and facilities	0.187
Item 8	The completeness of the safety system for physical education and sports established by the school	0.166
Item 9	Whether the reward system for sports competitions set up by the school is reasonable	0.243

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Item 10	Whether the procedures of sports competitions organized by the school are standardized	0.201
Item 11	The richness of the types of physical education elective courses offered by the school	0.159
Item 12	The diversity of the types of sports activities in the school's interest groups	0.149
Item 13	The frequency of regular sports activities organized by the school	0.182
Sum of variance of each question item $\sum\sigma i2$	2.506	/
Number of items k	13	/
Overall scale variance $\sigma 2$	$\sum\sigma i2/k = 2.506/13 = 0.193$	/

3.3 Evaluation of Physical Dimensions

The physical dimensions of this study were assessed using a self-administered questionnaire with 12 items on a 5-point Likert scale, with scores ranging from 1 to 5 representing from “very dissatisfied” to “very satisfied”. The 12 questions mainly assessed students' satisfaction with the hardware conditions of the school's sports facilities, equipment, and locker rooms.

To scientifically evaluate the results of the physical dimension, the reliability of the items was first analyzed using SPSS 22.0 statistical software. The results show that Cronbach's alpha coefficient of the physics dimension is 0.82, which is greater than 0.8, indicating that these 12 items have good internal consistency. Then the total scores of the physical dimension were analyzed by descriptive statistics, and the mean of the physical dimension was 3.51, and the standard deviation was 0.83, indicating that the students' satisfaction with the current hardware conditions of school sports was generally at an intermediate level, and there was still a certain gap from being very satisfied.

To clarify whether there are differences in the evaluation of physical dimensions among students from different demographic backgrounds, independent samples t-tests and ANOVA were conducted. The results showed that the differences in students' physical dimension scores were not statistically significant ($P>0.05$), regardless of gender or urban/rural domicile. This suggests that the problems presented by the hardware conditions of school sports are oriented to the entire student body in general and are not limited to a specific population.

When analyzing the distribution of scores for each question, 61% of the students thought that “the number of venues is sufficient”, which is a relatively satisfactory indicator. However, 50% of the students chose the options “do not really agree” or “strongly disagree” to express their dissatisfaction with the indicator “adequate facilities”, while 10% of the students were not satisfied with the indicator “good locker room facilities” and 10% of the students were not satisfied with the indicator “good facilities”. 10% of students were satisfied with the “good locker room facilities”, and 37% of students thought that the “equipment is not updated fast enough”.

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Students' feedback on these specific indicators shows again that the construction of school sports venues has made remarkable progress, but there is still much room for improvement in hardware equipment and public service facilities.

Data analysis shows that schools should speed up the investment in sports facilities and equipment, hire full-time maintenance personnel, and pay attention to the construction of public areas such as locker rooms, to further improve the overall quality of the environment and provide students with comfortable and high-quality conditions for sports activities.

3.4 Human Dimension Evaluation

In this study, the humanistic dimensions were evaluated using a scale containing 15 items related to students' interests, attitudes, and intrinsic motivation in sports. To check the reliability of the scale, Cronbach's α reliability coefficient was calculated as $\alpha=[k/(k-1)][1-\sum\sigma i2/\sigma 2]$, in which k represents the number of items, and $\sum\sigma i2$ represents the sum of the variance of all the items and the α coefficient of the scale was calculated to be 0.85, which is higher than the standard requirement of 0.8, which indicates that the scale has a good internal consistency. Then, descriptive statistics were applied to the total scores of the scale, in which the mean score of the humanistic dimension was 3.71 with a standard deviation of 0.93, which indicated that the student's interests, attitudes, and intrinsic motivation for physical education were at a moderate level in general. To clarify whether the demographic variables affected the assessment, independent samples t-test and one-way ANOVA were used to compare the samples of students of different genders and geographical areas. t-test was calculated as $t=(\mu 1-\mu 2)/(\sigma 1-\sigma 2)$, and ANOVA was calculated as F=MS inter-stage/MS intra-stage, and the results showed that there was no significant difference (p>significant difference) between the scores of the different groups, regardless of their genders or household registration. The results showed that regardless of gender or household registration, there was no significant difference in the scale scores of different groups (P>0.05). Finally, by carefully analyzing the scores of each item, it was found that although most of the students had a positive attitude towards physical education, there was still room for improvement in terms of their interest in physical education and intrinsic motivation to participate in physical education continuously, and it was necessary for the school to take measures to enhance the motivation in these two aspects.

Table 4 Statistical analysis process of human dimensions

Content of analysis	Calculation formula	Statistical parameters	algorithm
Reliability test	$\alpha=[k/(k-1)][1-\sum\sigma i2/\sigma 2]$	k=15 $\sum\sigma i2=13.02$	Bringing k and $\sum\sigma i2$ into the equation $\alpha=[15/(15-1)][1-13.02/\sigma 2]$ $\alpha=0.85$
Descriptive	/	Mean = 3.71	/

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Statistics		Standard deviation = 0.93	
T-test	t=(μ1-μ2)/(σ1-σ2)	μ1=3.70 μ2=3.73 σ1=0.92 σ2=0.91	Substituting the data into the formula t=(3.70-3.73)/(0.92-0.91) t=0.13
ANOVA	F = between MS phases/within MS phases	MS interphase = 0.125 Within MS phase = 0.087	/

3.5 Comparative analysis of the three dimensions

In this study, students' physical literacy was evaluated from three dimensions, physical, rational, and humanistic, through questionnaires, and a comparative analysis is needed to deeply understand the relationship between the three dimensions.

First, the internal consistency of the three dimensions was compared from the Cronbach's α coefficient. The results show that the physical dimension α = 0.82, the rational dimension α = 0.84, and the humanistic dimension α = 0.85, and the α coefficients of the three dimensions are all greater than 0.8, which indicates that all three dimensions have good internal consistency. The alpha coefficients of the three are very close to each other, indicating that there is no significant difference between the three dimensions in terms of internal consistency.

Second, the differences between the three dimensions are compared from descriptive statistics. The mean score of the physical dimension is 3.51 (standard deviation 0.83), the mean score of the rational dimension is 3.62 (standard deviation 0.79), and the mean score of the humanistic dimension is 3.71 (standard deviation 0.93). The mean values of all three dimensions are in the middle of the range, but the mean value of the humanistic dimension is slightly higher than the other two dimensions. The standard deviation results showed that there were large individual differences in the humanistic dimension and smaller individual differences in the rational and physical dimensions.

Finally, the comparison of between-group variability shows that there is no significant difference in the ratings of different demographic variables on the three dimensions, both in terms of gender and geography. This indicates that the three dimensions were rated with good consistency for the study participants.

In conclusion, the three dimensions have good consistency of evaluation in terms of internal consistency, rating level, and between-group variability comparisons. However, it can be seen from the mean value of the ratings that students' humanistic dimensions were rated slightly higher than the physical and rational dimensions, which may be related to the fact that students are more sensitive to the material conditions of the learning environment

and the management system. Schools should focus on enhancing students' interest and intrinsic motivation in sports as well as further improving physical and rational conditions.

3.6 Evaluation of the Effectiveness of WSR Methodology Utilization

This study utilizes the WSR (physical-rational-humanistic) methodology to evaluate youth sports literacy, based on the theoretical foundation that the methodology can comprehensively examine the research object from multiple dimensions. Using this methodology to conduct empirical research is of great significance in recognizing the research object.

First, the WSR methodology emphasizes the investigation of the physical, rational, and humanistic dimensions of the research object to make the evaluation framework more complete. That is, this study designs questionnaire scales from these three dimensions to evaluate school sports venues, management systems, and student's interests. Traditional research often focuses on only one aspect and ignores the multidimensional attributes of the object. Applying the WSR methodology can avoid this problem and conduct a more comprehensive investigation.

Second, the WSR methodology requires researchers to focus on the synergy of the three dimensions to discover the essence of the problem. This study found that although there is no significant difference in the evaluations of the three dimensions, in terms of the mean value, students' evaluation of the humanistic dimension is slightly higher than that of the physical and rational dimensions. This reflects that students as research subjects care more about their interests and motivations and do not have high expectations of the demands of the external environment. This finding highlights the critical nature of the humanistic dimension and prompts researchers to think further about how to improve students' intrinsic motivation.

Finally, the WSR methodology advocates that researchers adopt holistic thinking, emphasizing the use of psychological and humanistic orientations. This study found that the rational and physical dimensions are also problematic, but the humanistic dimension should be a priority to address. This reflects the humanistic orientation, which emphasizes the subjective position of human beings. At the same time, the researcher should consider each dimension as a whole and take targeted measures to form a synergy to promote the overall improvement of students' physical literacy.

In summary, using the WSR methodology to conduct empirical research makes the evaluation and analysis of problems more multidimensional, comprehensive, and in line with the nature of the object. It helps the researcher to adopt holistic thinking and discover the essence of the problem. This study proves that the WSR methodology provides a relatively complete framework of examination and analytical tools for the research object. In the future, the empirical research of WSR methodology can be further expanded to utilize its comprehensive advantages in education research and other fields.

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4. Strategies for high-quality cultivation of youth physical literacy based on WSR methodology

4.1 Quality Development Path in the Physical Dimension

In the physical dimension of promoting the comprehensive development of youth sports quality, the planning and construction of venues and the rational use of resources are the key. Localities can explore the allocation mode of stadium resources that is suitable for their regions. For example, by combining the development trend of school-enterprise integration, we can form strategic cooperation with enterprises to obtain their financial support for the construction of sports venues and realize joint construction and sharing. As the main user of the stadium resources, the school sports department can take the lead in formulating an open and shared operation program. At the same time, we can consider joint management with the community, clarify the functional positioning of all parties, form a synergy of work, and realize the optimal allocation of resources[6]**.** The management of the existing venues also needs to be modernized, using intelligent technology to improve work efficiency, and providing training programs tailored to the characteristics of young people to optimize the service functions of the venues in terms of both hardware and software. In addition, expanding the funding channels of the venues is an effective way to ensure the upgrading of hardware. The government can take the mode of purchasing services to purchase high-end equipment, or the preparation of the venue maintenance funds to realize the iteration of equipment renewal, to extend the service life. On this basis, it is also necessary to establish a regular quality monitoring and feedback mechanism, timely detection of problems, and optimization. Teacher team building is also crucial. Through professional training, the introduction of social teachers, and other ways to continuously improve the professionalism of teachers. At the same time, the establishment of a competitive mechanism carefully selected several excellent businesses, and a strong sense of responsibility of the teachers as the backbone of the school and the region [7]. In addition, a series of characteristic and contemporary physical education courses are developed to meet the age characteristics of different students and the needs of social development, to broaden students' horizons of physical education from the dimensions of knowledge and skills. In the process of curriculum development, a project management mode can be adapted to form a school-enterprise cooperation team and bring into full play the advantages of each party's resources. In general, the development of the physical dimension requires the integration of internal and external resources, optimization of the environment, strengthening of teachers, and enrichment of the curriculum content, so that sports activities have a stronger adaptability and relevance to the growth of students. This requires close cooperation between relevant departments to promote the comprehensive and harmonious improvement of students' physical education quality.

4.2 Quality development path in rational dimension

The development path of the rational dimension focuses on improving the sports management system and teaching mode to better serve the cultivation of sports quality. First of all, in terms of the construction of a management system, a special supervisory organization can be set up to supervise the whole process of school

sports work, identify problems in time promote rectification, and strengthen the implementation of work. At the same time, it is necessary to establish a networked communication platform to realize the information sharing between management departments and improve the synergy of work. In addition, it is also necessary to build a scientific and reasonable assessment system, and carry out regular quality assessments, according to the results of the assessment to optimize the deficiencies [8] . As for the teaching mode, project-based management can be adopted, in which the school and relevant enterprises form a working team to cooperate in designing curriculum programs suitable for students of different ages. In the teaching process, we should actively utilize high and new technology, develop virtual simulation teaching scenarios, and strengthen the combination of theoretical knowledge and practical skills. In addition, a teaching quality monitoring mechanism should be set up, regular evaluation should be carried out, students' feedback should be collected in time, and teaching strategies should be adjusted according to the results. In the construction of teaching staff, we should emphasize the cultivation of dual-teacher teachers, so that they not only have solid professional knowledge but also have practical guidance experience. It is also possible to hire part-time teachers to realize the flexible introduction of social professionals. Of course, the development of a rational dimension needs the close cooperation of many related departments to form a synergy of work, and jointly promote the continuous improvement of sports management level and quality of teaching, to provide a solid institutional guarantee and curriculum support for the enhancement of students' sports quality. We look forward to deepening the construction of the rationality dimension to help the comprehensive and harmonious development of youth sports quality cultivation.

4.3 The quality development path of the human dimension

The human dimension is the core of sports quality cultivation, which needs to start by stimulating students' intrinsic interest and motivation and taking various measures to form a good sports ecological environment. First of all, families should play a leading role, parents need to correctly recognize the importance of physical exercise and set a good example by creating a family sports atmosphere, guiding children to actively participate in sports activities, so that sports become part of their habits. Secondly, in schools, teachers should change their teaching concepts, adopt interesting interactive teaching, organically combine the learning of sports knowledge with practical skills training, and inspire students' interest in learning. Also need to organize a variety of forms of sports competitions both inside and outside the school, and strengthen the training guide, to help students experience the joy of success [9] . In addition, all walks of life should work together, sports-related departments should increase publicity, improve the awareness of the importance of sports, and create an environment of “sports for all, sports everywhere”; relevant enterprises can jointly carry out public welfare activities for young people's sports and provide venues, equipment, guidance, and other resources to support the program. Of course, the most crucial thing is to respect and pay attention to the needs of the students and provide sports programs suitable for their abilities according to the characteristics of different age stages and individual differences. Only when students have fun and a sense of achievement in sports activities will they have the intrinsic motivation to continue to participate, which requires the full cooperation of all parties to create a strong sports atmosphere, so

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that young people can be subconsciously cultivated and influenced in this environment.

To promote the development of the human dimension, it is also necessary to emphasize the inheritance and innovation of sports culture. Sports are inextricably linked with culture and education, and a rich sports culture can enhance the support of sports activities for the overall development of individuals. On the one hand, the essence of traditional sports culture should be explored and integrated into the teaching content, such as traditional Chinese children's games, martial arts, and boxing; at the same time, national traditional sports programs should be promoted to cultivate a sense of cultural identity. On the other hand, it is necessary to introduce advanced sports concepts and methods and support young people to participate in some emerging sports with contemporary characteristics to expand their horizons [10]. In addition, digital means should be used to enrich the expression and dissemination of sports culture, and a database of sports books should be established to facilitate students' access to information. Of course, the most important thing is to cultivate students' awareness of sports culture, so that they can understand the intrinsic connection between sports and traditional culture and national spirit, and improve their cultural self-confidence. It is necessary for schools, families, and all sectors of society to form a joint effort to enrich the connotation of sports culture and create a humanistic environment that supports the healthy growth of young people's bodies and minds. Only by immersing young people in a profound sports culture can we promote the overall sublimation of the human dimension, make them feel the cultural heritage and spiritual identity of the nation in the practice of sports so that they can more consciously and independently devote themselves to sports activities, and ultimately realize the comprehensive enhancement of the quality of sports.

5. Summary and Prospect: The Present and Future of Youth Sports Literacy Cultivation

The high-quality cultivation of youth sports literacy is the development requirement for the construction of a strong sports country, and it is also a key link in the work of school physical education, which is conducive to the promotion of the high-quality development of youth sports in China. Using WSR methodology to construct a three-dimensional model of high-quality cultivation of youth sports literacy[11], which provides multidimensional solutions for the high-quality cultivation of youth sports literacy, is of great theoretical and practical significance for the in-depth, systematic, and scientific development of youth sports literacy research. At the same time, in the high-quality cultivation of youth sports literacy, it is necessary to focus on building a systematic and feasible sports literacy evaluation system and building a multidisciplinary linkage mechanism. In the future, it is necessary to increase the on-site promotion and validation of the youth sports literacy cultivation model, to better form a multi-dimensional and effective docking between the youth sports literacy materials and people, and to improve the overall effect. The cultivation of youth sports literacy cannot be separated from the synergistic cooperation of multiple subjects. School sports should play their advantages in promoting youth sports literacy, combining internal and external sports resources, and comprehensively considering the three dimensions of physical, rational, and human nature, to jointly coordinate and promote the work of youth sports education, better realize the healthy development of youth sports, promote the construction of a strong sports

country, and achieve the goal of high-quality cultivation and development of youth sports literacy.

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