



## Development of Strategies to Improve Sports Performance to Meet the Demand of Senior High School Entrance Examination

Liang SiHai<sup>1</sup>, and Nopporn Tasnaina<sup>2</sup>

Faculty of Sports Science and Technology, Bangkokthonburi University, Thailand

<sup>1</sup>E-mail: 37522462@qq.com, ORCID ID: <https://orcid.org/0009-0009-8013-9603>

<sup>2</sup>E-mail: aipia2489@gmail.com, ORCID ID: <https://orcid.org/0009-0001-6086-0657>

Received 18/04/2024

Revised 19/05/2024

Accepted 20/06/2024

### Abstract

**Background and Aim:** Enhancing the physical fitness of young people and promoting their healthy growth is a major concern for the future of the country and the nation. Young people represent the hope and future of the country. Chinese society attaches great importance to the all-round and harmonious development of young people. The purpose of this study was to develop strategies for teaching and learning in senior high school to improve the students' sports performance to meet the entrance examination standard.

**Methodology:** The samples were 399 students, 80 teachers, and coaches selected from 12 junior high schools. This study adopted a questionnaire survey method, expert interview, and Delphi technique. The data were analyzed by descriptive statistics. To ensure that the data collection process is efficient and accurate, we use a variety of data collection tools. Includes: Excel spreadsheet, Questionnaire Star, paper questionnaire, expert questionnaire. With such a diverse set of data collection tools, research can cover different environments and needs, and achieve both breadth and depth of data collection goals.

**Results:** (1) There were ten key factors affecting sports performance scores in senior high school entrance examination including "teaching quality and method factors", "student training and living habits factors", "examination environment and conditions factors", "training facilities and resources factors", "school support and atmosphere factors", "family support and education factors", "independent exercise and extracurricular training factors", "Education policy and reform factors", "student development constraints and obstacles factors", "project difficulties" Degree and strategy selection factor". (2) Key Points of Strategies for Improving sports performance to meet the senior high school entrance examination standard were: 1) Curriculum: According to the assessment standards to develop teaching plans, compulsory courses offer core physical education skills; electives enable the pursuit of specific sports interests. 2) Extra Curriculum: Work with sports clubs to plan and organize on-campus and off-campus sports events, and provide courses to enhance competitiveness and interest. 3) Special Events: Set up training camps, cooperate with community sports festivals, and expert-led tutorials to enhance learning. 4) Teaching and learning: Continued teacher development and facility improvements elevate the quality of physical education instruction. 5) Student development: Emphasize family involvement, expand sports experiences, and promote holistic physical and mental health.

**Conclusion:** Combining the characteristics of the physical education field, this study proposes a set of comprehensive strategies through an in-depth analysis of the needs and challenges of improving sports performance in the senior high school entrance examination. It aims to systematically improve students' sports performance through four management dimensions: Planning, Organizing, Leading, and Controlling. The Strategies for Improving Sports Performance in Senior High School Entrance Examination include) Curriculum; 2) Extra Curriculum; 3) Special Events; 4) Teaching and learning; and 5) Student development.

**Keywords:** Develop Strategies, Improve Sports Performance, Senior High School Entrance Examination

### Introduction

Physical health and fitness are increasingly recognized as critical elements for the youth's development in China due to their integral role in ensuring the vitality and future of the country. Despite the rapid advancements in China's society and economy, there has been a concerning decline



in the physical condition of young people, signaled by rising rates of obesity, myopia, and reduced exercise time (Pan, 2020). The "double reduction" policy, introduced by the General Office of the Communist Party of China and The General Office of the State Council in July 2021, signifies an educational shift towards reducing the academic burden and enhancing comprehensive quality, including physical health which is fundamental for developing strong and capable youths (Luo, 2023). Recognizing these issues, various government initiatives, such as incorporating physical education into high school entrance exams, are aimed at improving youth physical fitness and emphasizing lifelong exercise habits (Yi, 2020).

The integration of physical fitness within the educational curriculum reflects the Chinese government's intention to foster all-rounded successors characterized by intellectual, physical, and moral growth (Zhai, 2016). However, despite policies enacted over the past four decades, challenges persist in encouraging students to prioritize physical well-being over examination results, highlighting a disconnect between the intentions of these policies and their practical outcomes (Li, 2016). The physical education senior high school entrance examination, while initially introduced to elevate the importance of physical education alongside other subjects, has often led parents, teachers, and students to focus more on test scores rather than genuine health improvement, indicating a potential misalignment with the policy's foundational purpose (Wu, 2022).

Addressing the interplay between educational policies and physical health among youth necessitates consideration of examination mechanisms prevalent in Chinese basic education, known for their heavy emphasis on results—the so-called "exam-oriented education" system. The "double reduction" policy brings forth opportunities to reform the evaluation process within school sports and shift teaching and parental mindsets towards encouraging routine physical activity. A critical analysis of the impact of physical education on senior high school entrance examination results aims to improve physical training, student involvement in sports, and lifelong physical awareness, with a focus on enhancing the high-quality development of the educational assessment framework (Yu, 2020; Yi, 2020). This shift is essential for reconciling academic pressures with the need to promote sustained physical development among students in Dongguan City and beyond.

With the continuous deepening of the reform of the senior high school entrance examination, the physical education of the senior high school entrance examination has been paid more and more attention, and the student's physical health has become the focus of many concerns. With physical education as the baton, schools, teachers, and parents should pay more attention to students' physical health and cultivate students' physical exercise habits. The significance of the implementation of the physical education examination is mainly to ensure the smooth development of school physical education work, improve the physical quality of senior high school entrance examination students, promote the coordinated development of students' physical and mental health, and cultivate the socialist successor of the all-round development of morality, intelligence, body, the United States and labor, which is related to the powerful development of the motherland. Therefore, it is of great theoretical and practical significance to analyze and study the current situation of the physical education examination and its implementation process in Dongguan City, and to explore the factors that affect the improvement of performance: it is conducive to breaking the limitations of exam-oriented education, changing the understanding concept, and increasing the importance of physical education examination; It is helpful to find out the problems and drawbacks in the physical education senior high school entrance examination, to provide reference for the relevant functional departments to formulate reasonable senior high school entrance examination schemes. It is beneficial to provide scientific reference for the teaching and training of Dongguan physical education senior high school entrance examination, to perfect the system of physical education senior high school entrance examination, achieve the goal of physical education senior high school entrance examination, and provide theoretical and reference basis for promoting students' physical health and improving sports performance.

## Objectives

### 1. Main objective

To develop strategies to improve sports performance to meet the demand of senior high school entrance examination.

### 2. Subsidiary objective

1) To find factors affecting the sports performance for senior high school entrance examination.



2) To develop strategies for improving the sports performance of students in senior high school to meet the demand for sports performance tests.

3) To confirm strategies for improving PE scores in senior high school entrance examinations, and to provide help for PE teaching and training in schools.

## Literature Review

Although there is no research on the physical education senior high school entrance examination in foreign countries, it can be seen from the development of some physical tests and extracurricular activities that they attach great importance to the development of physical health of teenagers. As a pioneer in physical fitness testing in primary and secondary schools, the United States was the first to conduct a general survey and publicity for the physical fitness of young people in the country and to use various forms of publicity and popularization to train students to understand the importance of physical fitness assessment, from the negative state of "I want to test" to the positive attitude of "I want to test", so a lot of efforts have been made in the project and ideological training. Japan from 1879 to the present, through the continuous optimization of physical testing-related laws also created a good environment for sports; France not only evaluates the physical health of students at different peaks but also organizes various sports interest activities and cultivates the atmosphere of sports exercise by opening museums to young people for free. The United Kingdom not only adopts 2 hours of physical exercise every day in the physical education curriculum but also creates special physical education courses for students to actively participate in. It can be seen that some foreign developed countries pay more attention to adolescents' physical health, and some of their physical testing forms appear more flexible than domestic, the development of the project also took into account the students' interest in sports training, which can provide certain reference and reference for our country to optimize the reform of physical examination and comprehensive improvement of adolescents' physical health.

The research on sports in China's senior high school entrance examination shows that the inclusion of PE as a graduation subject since the 1990 release of the "School Physical Education Work Regulations" by The State Council has had a significant impact on student participation and physical fitness. Studies conducted by experts like Huang (2020), Yang (2015), and Niu et al (2018) reveal that continuous reforms have led to an increased emphasis on PE exams, affecting both students' physical health and the perceived value of physical education. For instance, Yang (2015) notes a marked increase in attention from students and parents following an increase in exam points in Taiyuan, while Huang (2020) acknowledges improved student physical abilities alongside remaining challenges. However, there are criticisms of the system's effects on PE teaching, with observations that exams drive a focus on test-related content, often compromising broader educational goals. Niu et al (2018) highlights issues like the diminished importance of PE in schools and the prevalence of exam-focused physical education that may run counter to broader educational objectives. Additionally, in the context of the "double reduction" policy, researchers such as Xu and Ma (2022) stress the need for an evaluation system that promotes active student participation in physical exercise by incorporating special sports skill testing and fostering good exercise habits. Overall, the research indicates that while the senior high school entrance PE examination in China plays a role in enhancing physical education's status and motivating students' physical involvement, it also necessitates ongoing reform to ensure it aligns with comprehensive education principles and addresses any emergent issues related to exam-oriented pressures.

Recent studies highlight the significant influence of senior high school entrance examination physical education (PE) reform on students' health, teaching practices, and student engagement in PE. Post-reform, the PE examination score has increased to 50 points, prompting schools to prioritize physical fitness and skill acquisition while elevating the role and workload of PE teachers (Yang, 2015). Despite this, concerns persist regarding the disproportionate focus on competitive sports, which may neglect cultural activities like martial arts, leading to a lack of diversity in PE content and diminished student enthusiasm (Zhang, 2011). The shift to a dual assessment model—process and outcome evaluation—presents challenges due to subjective grading by PE teachers and the absence of standardized criteria for process evaluation, potentially influencing fairness and accuracy of results (Hui & Li, 2009). To enhance student performance, it is suggested that there be a thorough understanding of the PE exam system among students, an enriched PE curriculum, and improved teaching methods, alongside strategies and extracurricular activity guidance (Luo & Luo, 2012). The

application of the general management "POLC" functions within school PE management can effectively facilitate progress (Wang & Hu, 2019). There's a need to develop engaging PE programs that foster active participation and improve physical fitness, ensuring students can leverage their full potential during the examination.

To sum up, the inclusion of physical education in the senior high school entrance examination system plays an important role in promoting the healthy development of the physical fitness of our young people. It can be seen from the increase in the score of the test items and the change in the attitude of parents that all walks of life give recognition to physical education in the senior high school entrance examination and pay more attention to the physical health of students. However, some problems have also emerged in the implementation process of the senior high school entrance examination. The proportion of students choosing test items is out of proportion, the phenomenon of exam-oriented education has appeared in school physical education classes, and the items selected in the process of the upper body strength test are mostly solid ball items, and the selection of pull-up items is less. There are not many references on the study of sports senior high school entrance examination under the background of double-reduction policy, but some well-known scholars believe that the study of sports senior high school entrance examination under the background of double-reduction policy has important research value. In particular, it can be used as a key research object in perfecting the evaluation content and mechanism, cultivating students' healthy physique, sports consciousness, sports knowledge, sports behavior, sports skills, and interests. The research of this paper is based on the key period of the reform of the senior high school entrance examination, seizing the weak items of the senior high school entrance examination, and studying the training scheme of the senior high school entrance examination.

### Conceptual Framework

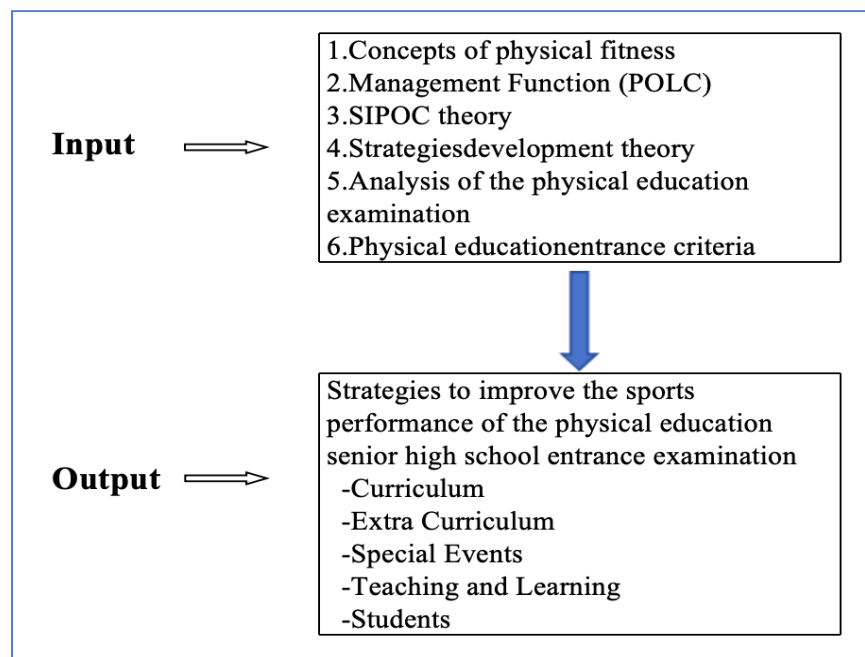


Figure1 Conceptual framework

### Methodology

**Participants:** The scope of this study is part of junior high schools in Dongguan City, including 6 areas: urban area, Songshan Lake area, Binhai area, Linshen area, water town area, eastern area, etc. The samples were 399 students, 80 teachers, and coaches selected from 12 junior high schools.

**Research Instrument:** (1) Structured interview forms developed by researchers for interviewing experts. (2) Researchers developed a questionnaire based on a review of data and literature to collect questions and suggestions from stakeholders. (3) Questionnaire developed by the



researchers based on stakeholder data and expert opinion, designed in 5 rating scale formats for use in the Delphi process. (4) Record sheets that summarize and conclude the results of connoisseurship.

**Data collection process:** (1) Identify the issues and needs related to the senior high school entrance examination on sports performance strategy. (2) Develop a draft concept paper and research design. (3) Develop research tools. (4) Questionnaire and Collect data. (5) Form the concept of strategy. (6) Delphi method. (7) Draft strategies to improve sports performance to meet the demand of senior high school entrance examinations. (8) Confirm the model by stakeholders with a connoisseurship method.

**Data Analysis:** In this study, SPSS 26 and EXCEL were used to process the data, and the statistical methods included descriptive analysis and factor analysis. Descriptive statistics were mean, standard deviation, perception, and coefficient variance. Consensus data from the Delphi process were analyzed by median, quartile range, and mean. This software is used to sort out data, process literature, questionnaire data, and interview data to determine the factors that affect sports performance in the senior high school entrance examination, and carry out factor analysis.

## Results

### 1. Factors affecting sports performance scores in senior high school entrance examination

Sports performance scores in senior high school entrance examinations are affected by many factors. Through questionnaire survey and expert interview, ten key factors are obtained by using statistical software to provide a comprehensive analysis perspective. It includes: 1)"teaching quality and method factors", 2)"student training and living habits factors", 3)"examination environment and conditions factors", 4)"training facilities and resources factors", 5)"school support and atmosphere factors", 6)"family support and education factors", 7)"independent exercise and extracurricular training factors", 8)"Education policy and reform factors", 9)"student development constraints and obstacles factors", 10)"project difficulties" Degree and strategy selection factor ". The characterization and scope of influence of each of these factors is well described, which helps to clarify the target in the in-depth analysis and design of interventions. Through the detection and optimization of these factors, we can more accurately find the core points that affect the sports performance of senior high school entrance examination, and formulate targeted improvement strategies accordingly.

### 2. Major Findings

The summary of strategies planned to improve sports performance to meet the demand of senior high school entrance examination in Dongguan City was as this figure.

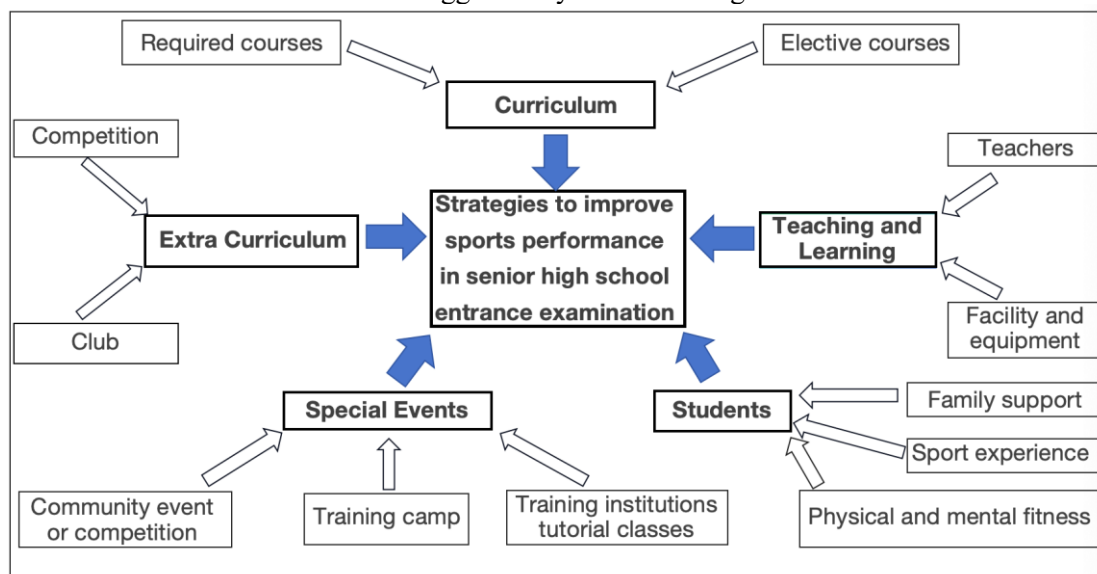


Figure 2 Strategies plan to improve sports performance to meet the demand of senior high school entrance examination

### 3. Key Points of Strategies for Improving sports performance in senior High School Entrance Examination

**1) Curriculum:** Based on the sports performance examination standards for senior high school entrance, the teaching plan of compulsory courses is formulated, and the progress of students is ensured through regular skill assessment. At the same time, a variety of sports electives are provided to encourage students to choose sports according to their personalities and promote their all-round development.

**2) Extra Curriculum:** Planning sports events inside and outside the school, making tactical and psychological preparations; Evaluating teaching effectiveness according to the results; In partnership with sports clubs, regular student leagues are held to provide skills upgrading courses to increase competitive level and interest.

**3) Special Events:** By setting up intensive training camps, inviting professional guidance, community sports festival cooperation, organizing volunteer services, introducing high-quality coach resources, providing customized counseling, and improving students' sports competition level.

**4) Teaching and Learning:** Regular training of teachers to promote external exchanges; Increase practical classes and competition activities; Invest in upgrading facilities and introduce smart equipment; Fair distribution of sports resources, comprehensively improve students' sports literacy.

**5) Students:** Educate parents, promote parent-child sports activities, build parent-child support network; Expand extracurricular sports and establish student sports archives; Increase actual combat opportunities; Comprehensive health education, psychological counseling, and rest recovery are combined to ensure students' physical fitness.

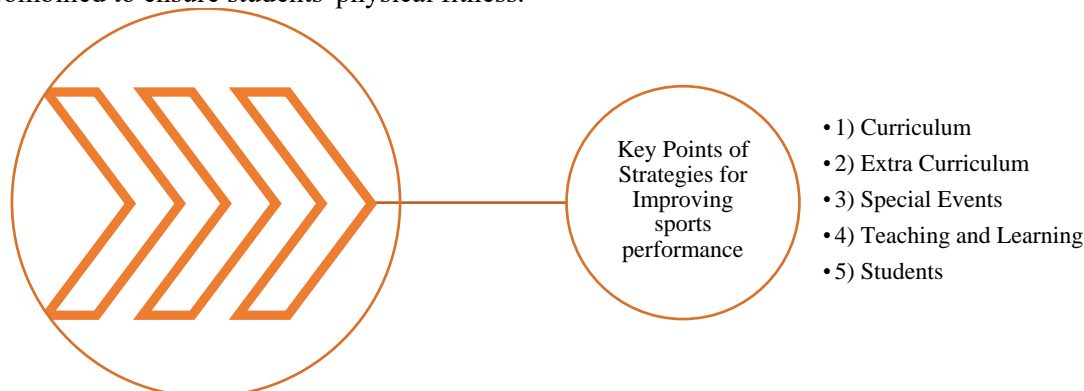


Figure 3 Key Points of Strategies for Improving sports performance in senior High School Entrance Examination

### Discussion

This study emphasizes the key role of sports performance scores in senior high school entrance examinations in students' all-round development and the importance of improving these scores to achieve educational equity and optimize students' physical and mental health. In short, the importance of improving sports performance in the senior high school entrance examination is far more than a single academic or sports achievement. It is related to the overall development of students, the development of healthy living habits, and the improvement of social adaptability. This requires educators, parents, and society to work together to create an environment conducive to physical exercise and all-round development for students.

Ten key factors, such as teaching quality and methods, students' training and living habits, examination environment, and conditions, are analyzed in detail to explain the influence of each factor on sports performance scores in the senior high school entrance examination. For each key factor, the main problems and challenges are analyzed, such as insufficient professional ability of teachers, improper training methods for students, and lack of training facilities. This paper puts forward a series of comprehensive strategies aimed at improving sports performance scores.



Through the detailed discussion of the above aspects, the thesis aims to provide a set of scientific and systematic strategies and methods for education administrators, physical education teachers, students, and their parents, to achieve the continuous improvement of sports performance results and promote the all-round development and healthy growth of students.

## Recommendation

The abstracted and optimized suggestions from the dissertation emphasize creating a supportive and sustainable environment for middle school sports education, specifically tailored to meet the dynamic needs of students, educators, and the community. Firstly, educational authorities should leverage research insights to craft a progressive sports examination blueprint for high school admissions, embracing a gamut of sports disciplines complemented by adaptable evaluation metrics to cater to varying student abilities. Schools must be equipped with comprehensive guides based on organizational management principles—planning, organization, leadership, and control—to refine physical education pedagogies. Furthermore, recognizing and propagating model cases that illustrate enhanced physical education outcomes can catalyze regional adoption of best practices. At the school level, establishing a robust framework for ongoing sports education quality assurance is crucial, as is aligning curricular structure and resource utilization to offer equitable access to training. Teacher training seminars should concentrate on stimulating student interest in physical activities and honing pedagogical skills. Home-school collaboration forums can foster an understanding of sports education's significance, contributing to a culture that values physical well-being.

Subsequent research avenues should explore broader contextual factors by investigating regional disparities in sports performance, considering how diverse cultural and educational landscapes shape student outcomes. Enhanced methodologies for data collection and analysis will bolster the precision of recommendations. The interplay between extracurricular pursuits and athletic achievement warrants detailed scrutiny to formulate nuanced strategic insights. Finally, interdisciplinary studies are essential to resolve the intricate nexus between sports education enhancement and maintaining educational equity. Research endeavors should strive for a harmonious balance across academic disciplines while promoting holistic development in students' emotional, social, and mental health, and stress management, ensuring endeavors in sports advancement do not overly burden or marginalize any student population.

## References

- Huang, Z. (2020). Play the role of "baton" in the senior high school entrance examination and strengthen the position of school physical education. *Chinese School Physical Education*, 2, 18-19.
- Hui, Z.D., Li, H., & Gu, M. (2009). *The system of high school entrance examinations in physical education should not be abandoned*. Meng Wenyan edited (eds.) Yearbook of Basic Education in China. Beijing Normal
- Li, C. (2016). *Analysis and research on the construction, implementation effect, and improvement measures of "Senior high School Physical Education Examination" in Fuyang City*. Master's degree thesis, Capital Institute of Physical Education.
- Luo, R., & Luo, R. (2009). *Some experiences on improving physical education scores in senior high school entrance examination*. Meng Wenyan edited (eds.) Yearbook of Basic Education in China. Beijing Normal University Publishing Group, Beijing Normal University Press
- Luo, Z. (2023). *Research on the Implementation Status and Development Strategies of the Sports Middle School Entrance Examination in Chengdu under the Background of the "Double Reduction" Policy*. Master's Thesis, Chengdu Institute of Sports.
- Niu, J., Niu, Z., Zhan, P., Liu, Y.X., Shao, N., & Zhang, X.Y. (2018). A comprehensive review of Xi'an Physical Education Senior High School Examination. *World of Sports (Academic Edition)*, 2, 99-100. doi:10.16730/j.cnki.61-1019/g8.2018.02.059.



- Pan, N. (2020). *Based on the physical examination grade sports teaching strategy research in Liaocheng City*. Master's degree thesis, Liaocheng University.
- Wang Zhen & Hu Xiao.(2019). Thinking on countermeasures of practical teaching management in Higher vocational Colleges based on the POLC concept. *Modern Vocational Education*, 2,152-153. doi:CNKI:SUN:XDZJ.0.2019-02-076.
- Wu, H. (2022). *Research on Pulling Up Training Program under the Background of Physical Education in the High School Entrance Examination*. Master's Thesis, Capital Sports University.
- Wu, J. (2022). In the era of "double reduction", it is urgent to scientifically design a new method for high school entrance examination. *China's national education*, 1, 40 - 42. Doi: 10.16855/j.carolcarrollnkizgmzjy.2022.01.014
- Xu, H., & Ma, L. (2022). Research on the development trend of the reform of sports senior high school entrance examination under the background of "double reduction". *Journal of Tianjin Sports College*, 1, 38 - 43. Doi: 10.13297/j.carolcarrollnkiissn1005-0000.2022.01.006.
- Yang, W. (2015). 2013 Taiyuan City mid-term exam sports reform on the research on the junior middle school sports teaching effect. Master's degree thesis, University of North.
- Yi, Y. (2020). *Yueyang sixth middle school sports examination achievement promotion strategy research*. Master's degree thesis, Human Institute of Technology
- Yu, B. (2020). *Jinzhou city mid-term exam sports project implementation and to promote countermeasures*. Master's degree thesis, Bohai University.
- Zhai, J. (2016). *Research on the Current Situation of Physical Education and Health Curriculum Teaching in Junior High School under the Background of Physical Education Examination for Junior High School Entrance*. Master's Thesis, Yangzhou University.
- Zhang, W.H. (2011). *Qingdao City research on the effects of physical examination for junior middle school sports teaching*. Master's degree thesis, Shandong Normal University.