

# Performance Evaluation(PE) of Physical Education PA(PA) in Rural Schools in Hunan in the Post PA Era

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**Abstract:** *In recent years, rural school sports PA has become a new round of education reform in China and an important way to promote the realization of the goal of "building a well-off society in an all-round way". There are a series of problems in the current physical education teaching in primary and secondary schools. Taking a rural primary and secondary school in Hunan Province as the research object, this paper investigates, analyzes and evaluates the construction of middle school public course teachers under the background of post PA. The survey results show that the sports events of Rural Township Middle Schools in primary and secondary schools mainly include basketball, table tennis, badminton and aerobics, of which basketball accounts for 21%, table tennis accounts for 36%, badminton accounts for 24% and aerobics accounts for 19%. This shows that the primary and secondary school students' most sports are table tennis. Junior one students are more inclined to table tennis, accounting for 36%, junior two students are more inclined to badminton, accounting for 30%, and junior three students are more inclined to basketball. It accounts for 34%. Based on this investigation, this paper also puts forward some suggestions and measures to solve these problems and improve the quality level of post education, so as to further strengthen and improve the ability of rural school physical education and healthy development in Hunan Province, and promote the sound and rapid advancement of China's comprehensive education.*

**Keywords:** *Post Performance Evaluation Era, Hunan Rural Schools, Poverty Alleviation Performance, Performance Evaluation*

## 1. Introduction

With the development of China's economy, the reform of rural school physical education has become an important work, and the state pays more and more attention to education. In the new era of China, as a new way of PA, sports PA in primary and secondary schools has also been widely used in various regions. Sports PA is a policy aimed at ordinary rural education. Its purpose is to help more people in poor areas improve their own quality and living conditions in their daily life [1-2]. However, with the deepening of the state's attention to the "three rural" issues and the acceleration of the construction of a new round of well-off society in an all-round way. As a country with a large population and a developing country, this fact makes more and more "empty nesters" and even left behind children become one of the focuses of educational PA [3-4].

Many scholars have conducted relevant research on the PA PE of physical education in rural schools. Domestic scholars started late on the PE of sports PA in Colleges and universities, but they have made some achievements in theory and practice. Some scholars have analyzed and discussed the quality of education and teaching, style of study and teachers' enthusiasm in rural schools in China. He pointed out that strengthening government management is a very important link in the implementation of national policies. At the same time, we should also pay attention to the construction of physical education teachers, improve the professional level of college physical education teachers, and promote their own development and promotion [5-6]. Some scholars believe that school physical education curriculum is a systematic project, which needs to start from many aspects to achieve its goal. After an in-depth investigation into the implementation of "sunshine campus" in Colleges and universities, other scholars pointed out that there are many problems in China's primary and secondary school teaching management system. Firstly, the teacher assessment and evaluation mechanism is unreasonable, lack of scientificity and widespread unfairness. Secondly, school leaders and physical education teachers do not recognize

the law of students' physical and mental development and believe that "learning mathematics, physics and chemistry well is to make up lessons first" [7-8]. Therefore, the above research has laid a research foundation for this paper.

With the rapid development of China's economy and society and the implementation of educational reform policies, physical education teaching in rural schools coexists in public, private and other forms. However, due to the deep influence of traditional ideas and the lack of financial support, colleges and universities do not pay much attention to the physical education work of primary and secondary school teachers. Through the methods of literature and expert interview, this paper carries out a questionnaire survey on the physical education classroom in rural areas of Hunan Province, analyzes the current situation of PE of physical PA in primary and secondary schools in various regions of Hunan Province, and puts forward suggestions, countermeasures and relevant measures to improve the quality of preschool education.

## **2. Discussion on PE of Physical Education PA in Rural Schools in Hunan in the Post PA Era**

### **2.1 PA PE**

#### **2.1.1 Concept**

The theory of PE comes from enterprise PE. The concept of enterprise PE is to make an objective and fair evaluation of the operating benefits of an enterprise for a period of time by using quantitative or qualitative methods according to the set index system and unified evaluation standards according to the relevant theoretical knowledge such as mathematical statistics, operations research and system theory, And take the evaluation results as the main basis for enterprise management and enterprise development and reform. Therefore, the author can give the definition of PA PE according to the method of analogy. PA PE is to objectively and quantitatively evaluate the PA work of the government for a period of time according to the set PA PE index system according to certain evaluation standards and using qualitative or quantitative analysis methods according to the relevant theories such as mathematical statistics, operations research and system theory Accurate and impartial comprehensive evaluation, so as to provide reference basis for the implementation plan and work direction of the government's next PA work. PE means to evaluate specific objects and put forward relevant opinions, and use scientific methods and means to comprehensively and objectively investigate and analyze poor areas or countries in a certain period of time, so as to ensure that they can find deviations and improve objectives in time, so as to achieve the established task objectives. Determine the extent to which they can achieve PA results in the next period of time through the factors such as the work performance and contributions of the evaluated persons. Poor areas and poor people should jointly participate in the formulation of corresponding policies and measures to improve the allocation efficiency of educational resources. At the same time, we should also pay attention to the all-round development of students and the maximization of social benefits [9-10].

#### **2.1.2 Function**

Sports PA is a PA project. Its purpose is to help and support the education in poor rural areas and improve their living conditions. All kinds of "sunshine campus" and primary and secondary school campus activities carried out under the national policy are the integration and utilization of the existing resources in the school. The implementation of the PE system of college teachers can promote the improvement of physical education teaching quality and the development of students' comprehensive quality, provide a scientific basis for the connection between colleges and universities and social needs, and also play an important role in improving the efficiency of running colleges and universities, enhancing the competitiveness and sustainable development ability of colleges and universities. Sports PA is conducive to enhance students' awareness of physical and healthy development, help the poor change their ideas and establish the concept of sustainable development. By carrying out "Sunshine Sports" activities, we can help farmers exercise their muscle tissue ability and coordination function in their daily life. At the same time, we can also make children form good habits and form the concept of lifelong sports. Actively carrying out the publicity activities of physical exercise can enable more poor children to obtain fitness knowledge and skills through various channels, which is conducive to enhancing students' physique [11-12].

#### **2.1.3 Evaluation Index**

The poverty gap index refers to the average distance between the poverty population and the poverty

line in an area in a certain period. The specific manifestations are as follows:

$$P_1 = \frac{1}{n} \sum_{i=1}^n \left( \frac{y_i - z}{z} \right) \quad (1)$$

Where,  $Y_i$  represents the disposable income of the poor and  $Z$  represents the poverty line. This index can reflect the depth of regional poverty, but it is not sensitive to the number of poor people, which leads to the subsequent square poverty gap index. The calculation formula is as follows (2).

$$P_1 = \frac{1}{n} \sum_{i=1}^n \left( \frac{y_i - z}{z} \right)^2 \quad (2)$$

This indicator can solve the misleading problem of the incidence of poverty to government policies, and also solve the problem that the poverty gap is not sensitive to the number of people, but it overemphasizes the income gap between poor groups.

According to the description of the above single index poverty intensity index, it can be seen that the single index is simple to operate, but its shortcomings are also obvious. It cannot comprehensively and effectively reflect the degree of regional poverty. Therefore, many scholars began to study composite indexes to reflect the degree of poverty, such as Sen and FGT. At present, the FGT index is the most used and recognized, The index evolved from the poverty gap index in the following form:

$$FGT_a = \frac{1}{n} \sum_{i=1}^n \left( \frac{y_i - z}{z} \right)^a \quad (3)$$

$A$  represents the poverty aversion index. The larger  $a$  is, the greater the weight of the population with low income below the poverty line. When  $a = 0$ , the index represents the incidence of poverty, when  $a = 1$ , the index represents the poverty gap, and when  $a = 2$ , the index represents the weighted poverty distance ". The FGT index is characterized by giving a large weight to the group far from the poverty line.

## 2.2 PA through Physical Education in Rural Schools in Hunan

### 2.2.1 Development status

At present, the number of primary and secondary schools in China exceeds 4 million. Hunan Province is a large agricultural province in China. After the reform and opening up, the rural economy has developed rapidly. However, due to the influence of traditional ideas and the constraints of family environment, the structure of physical education teachers in rural schools is unreasonable. At present, the current situation of school physical education in Hunan Province is: first, the distribution of teaching resources is unbalanced, and there is a serious imbalance in many rural areas, especially in some poor counties, towns and other places. Second, the quality of teachers is not high, professional skills are poor, teaching quality is low, and the number of physical education teachers is limited and cannot meet the needs of students. Third, there are insufficient teachers and a sufficient number of full-time school level teachers, and the guidance force is weak. As a result, the sports PA projects in primary and secondary schools in Hunan Province cannot be carried out smoothly, and it is difficult to improve the enthusiasm and initiative of rural residents to participate in sports. In this case, and a series of reasons such as phenomenon lead to the backwardness of physical education in these areas, which leads to the lack of enough talents in schools to support the development and construction of schools.

### 2.2.2 Existing problems

There are also the following problems in the implementation of sports PA in rural schools in Hunan: first, there is a lack of effective incentive mechanism. On the one hand, the limited educational funds, insufficient teaching facilities and teacher resources restrict the interest and enthusiasm of college students in Hunan Province to participate in sports. On the other hand, the physical education teachers in Hunan are weak, lack of sufficient professional guidance talents and lack of corresponding system guarantee. These two aspects are not conducive to the smooth implementation of rural school sports PA in Hunan Province and promote the realization and development of its objectives. Second, there is a lack of effective incentive mechanism. There are deficiencies in the incentive mechanism of sports PA in rural schools in Hunan. When carrying out education, school leaders and teachers did not correctly, reasonably and effectively guide students, nor did they formulate corresponding reward and punishment measures

to encourage teachers to improve their ability level, so as to promote the comprehensive, balanced and sustainable development of students' body and mind, This has led to the phenomenon of "emphasizing intelligence over morality" in some rural primary and secondary schools.

### **3. Investigation on the PE of Physical Education PA in Rural Schools in Hunan in the Post PA Era**

#### ***3.1 Investigation Purpose***

With the advent of the post PA era, sports PA, as an important means of rural school education reform and development in the new era, is irreplaceable for improving the overall quality of our people. At a time when the state vigorously advocates the national fitness plan and speeds up the construction of a socialist well-off society. The same is true for Hunan Province. However, under the influence of factors such as the continuous improvement of economic level and the improvement of people's quality of life, people's increasing demand for spiritual culture and the increase of national policy support have led to a sharp increase in the number of poor rural students in Hunan in the post PA era, and the problems of school physical education have become increasingly prominent. Through the investigation of the current situation of the PA performance of rural school physical education in Hunan, to understand the development of extracurricular sports activities in primary and secondary schools of colleges and universities in Hunan Province, find out the current problems and put forward reasonable suggestions.

#### ***3.2 Respondents***

As the main body of educational activities, physical education teachers in rural schools in Hunan are the basis of other teaching work and activities. They are an indispensable factor in the process of realizing the goal of "educating people" and implementing the new curriculum standards. Physical education teachers in rural schools are the main body of education. They not only undertake the important tasks of teaching and educating people, cultivating students who are the pillars of society and maintaining the unified development of the country, but also provide comprehensive health services for the masses. Therefore, the research object of this paper mainly selects the primary and secondary schools in a poor area of Hunan Province as the survey sample, conducts questionnaire adjustment interviews with physical education teachers in rural schools in Hunan, and issues 200 valid questionnaires to the students of this middle school as the main subjects.

#### ***3.3 Investigation Contents***

Through the questionnaire survey of primary and secondary school teachers in rural areas of Hunan Province, this paper understands the strength and quantity of teachers of college sports in Hunan Province, and analyzes the factors affecting the poor effect of middle school moral education. The investigation contents of this paper are as follows: (1) the current situation of sports in rural township middle schools. (2) At present, rural primary and secondary school students' interest tendency in sports.

### **4. Investigation and Analysis on the PE of Physical Education PA in Rural Schools in Hunan in the Post PA Era**

#### ***4.1 Status of Sports in Rural Township Middle Schools***

Physical education is the basis of school education. It not only imparts cultural knowledge, but also cultivates students' physical quality. As can be seen from Figure 1, the sports events of primary and secondary schools and Rural Township Middle Schools in this survey mainly include basketball, table tennis, badminton and aerobics, of which basketball accounts for 21%, table tennis 36%, badminton 24% and aerobics 19%. This shows that the primary and secondary school students' most sports are table tennis.

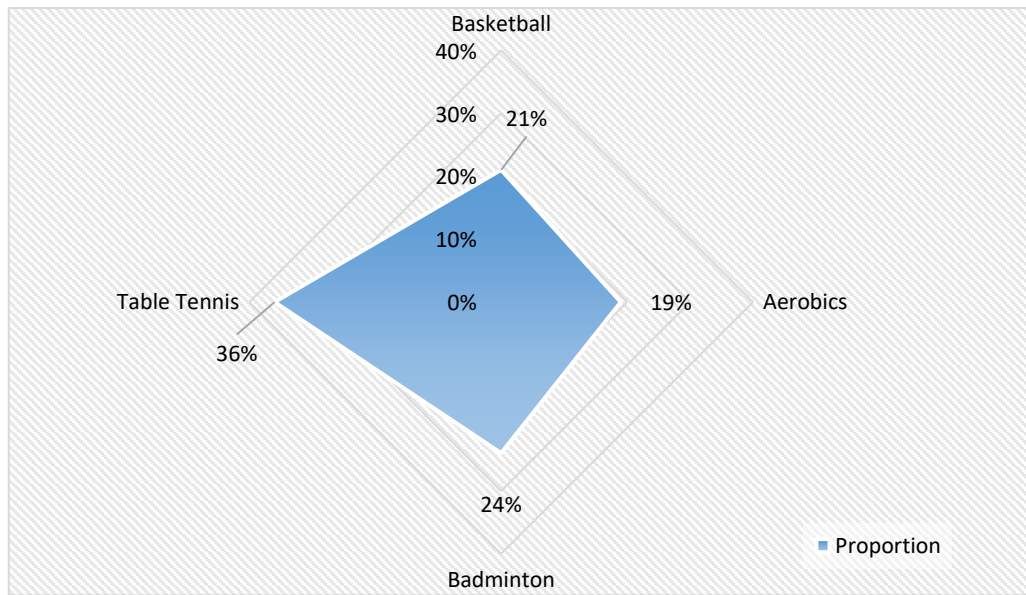


Figure 1: The status of sports programs in rural and township middle schools

4.2 Interest Tendency of Rural Primary and Secondary School Students in Sports

Table 1 shows the survey data of rural primary and secondary school students' interest tendency in sports in this survey.

Table 1: Rural primary and secondary school students tend to have an interest in sports

	Basketball	Table tennis	Badminton	Aerobics
The first year of junior high	14%	36%	20%	30%
The second year of junior high	27%	21%	30%	22%
The third year of junior high	34%	25%	17%	24%

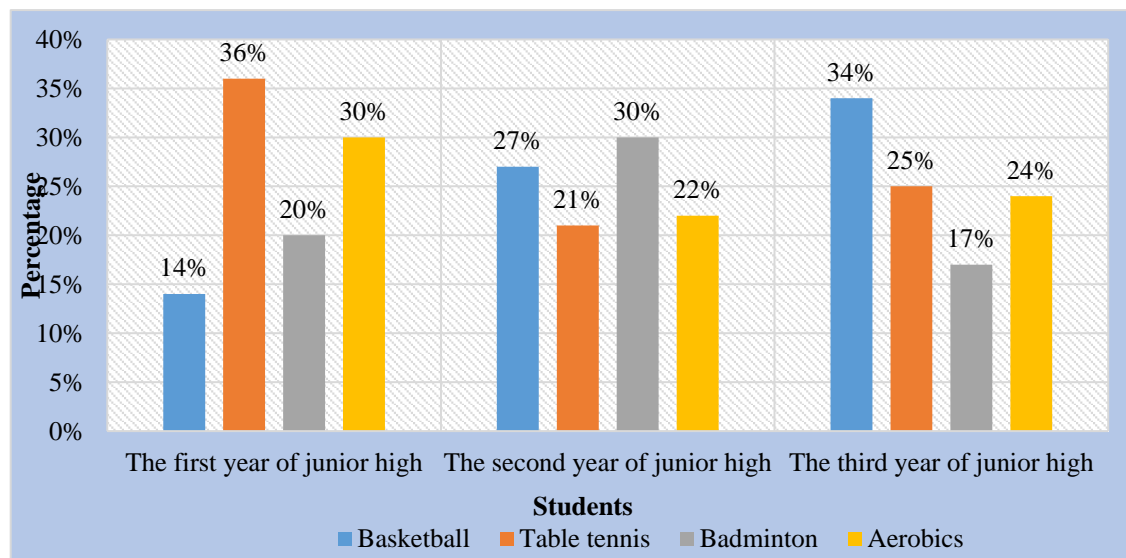


Figure 2: Rural primary and secondary school students tend to have an interest in sports

The survey shows that junior one students are more inclined to table tennis, accounting for 36%, junior two students are more inclined to badminton, accounting for 30%, and junior three students are more inclined to basketball. It accounts for 34%. This shows that most students still prefer to participate in various forms and rich and colorful activities. According to the survey results (as shown in Figure 2), it is not difficult to find from the data that most children are willing to participate in sports competitions that are characteristic, meaningful and highly recognized by everyone.

### 4.3 PE and Optimization Measures of Rural School Sports PA

First of all, we need to establish a complete, scientific, reasonable and effective assessment index system in line with the actual situation. When formulating indicators, we should take into account factors such as the quality of education, the level of social development and the orientation of national policies. At the same time, we should also consider the whole school as a system and adopt different quantitative standards for poor areas of different nature and scale. Strengthen the training of physical education teachers and improve the quality education of students in rural schools. In the process of teaching, we should pay attention to stimulating the enthusiasm and creative vitality of excellent talents, improve the evaluation mechanism, establish a scientific and reasonable PE system, and incorporate the extracurricular activities of rural primary and secondary schools into the annual work plan as an important content. At the same time, according to the physical and mental development characteristics of students of different ages, different levels and target assignment books are formulated to meet the needs of teachers, and sports projects with excellent performance are commended and rewarded.

## 5. Conclusion

The goal of China's education reform is to provide more and better basic public services for the broad masses of the people, realize the quality of talent training and the level of economic development by the state and society, and improve the national quality. Sports PA as a new era policy. It is of positive significance to carry out school physical education activities in rural schools. At present, the overall age of primary and secondary school teachers in Hunan is high and the phenomenon of aging is serious. At the same time, with the increasing number of rural poor people and the insufficient supply of educational resources, the problems have become increasingly prominent. In order to better solve these practical problems, we need to make a scientific and reasonable plan for the school running conditions and students' physique.

## Acknowledgements

The work presented in this paper is financed by General projects of Hunan philosophy and Social Science Foundation in 2020 (No.:20YBA194), and key scientific research projects of Hunan Provincial Department of education in 2020(No.:20A335).

## References

- [1] Oluwasefunmi Tale Arogundade, Bolanle Ojokoh, Mojisola Grace Asogbon, Oluwarotimi Williams Samuel, Babatope Sunday Adeniyi: Fuzzy Driven Decision Support System for Enhanced Employee Performance Appraisal. *Int. J. Hum. Cap. Inf. Technol. Prof.* 11(1): 17-30 (2020)
- [2] Don U. A. Galagedera, Hirofumi Fukuyama, John Watson, Eric K. M. Tan: Do mutual fund managers earn their fees? New measures for performance appraisal. *Eur. J. Oper. Res.* 287(2): 653-667 (2020)
- [3] Bhawna Chahar: Performance Appraisal Systems and Their Impact on Employee Performance: The Moderating Role of Employee Motivation. *Inf. Resour. Manag. J.* 33(4): 17-32 (2020)
- [4] Khomsun Lelavijit, Supaporn Kiattisin: An Integrated Conceptual Model of 360-Degree Performance Appraisal and Candidate Forecasting Using Adaptive Neuro-Fuzzy Inference System. *J. Mobile Multimedia* 16(4): 449-476 (2020)
- [5] Raman Kumar: Cryptanalytic Performance Appraisal of Improved HLL, KUOCHEN, GENGVRF, FENGVRF Secure Signature with TKIP Digital Workspaces: For Financial Cryptography. *Wirel. Pers. Commun.* 115(2): 1541-1563 (2020)
- [6] Girish Keshav Palshikar, Manoj Apte, Sachin Pawar, Nitin Ramrakhiani: HiSPEED: a system for mining performance appraisal data and text. *Int. J. Data Sci. Anal.* 8(1): 95-111 (2019)
- [7] Mehdi Salimi, Mahboubeh Khodaparast: Providing a combined model of fuzzy AHP and numerical taxonomy analysis for sport organizational ranking and performance appraisal. *Int. J. Syst. Assur. Eng. Manag.* 10(5): 1133-1144 (2019)
- [8] Vincenzo Uli: A co-evolutionary perspective on business processes: Evidence from the performance appraisal of a service firm. *Bus. Process. Manag. J.* 24(3): 652-670 (2018)
- [9] Jong Seok Lee, Mark Keil: The effects of relative and criticism-based performance appraisals on task-level escalation in an IT project: a laboratory experiment. *Eur. J. Inf. Syst.* 27(5): 551-569 (2018)

[10] António M. P. Silva, João Varajão, José Luís Pereira, Carlos Sousa Pinto: *Performance Appraisal Approaches and Methods for IT/IS Projects: A Review*. *Int. J. Hum. Cap. Inf. Technol. Prof.* 8(3): 15-28 (2017)

[11] Raju Ranjan, Jayanthi Ranjan: *Data analysis to uncover critical parameters for performance appraisal of students in higher education*. *Int. J. Netw. Virtual Organisations* 18(1): 30-50 (2018)

[12] Xin Gui: *Performance appraisal of business administration based on artificial intelligence and convolutional neural network*. *J. Intell. Fuzzy Syst.* 39(2): 1817-1829 (2020)