

# Research on Physical Education Teaching Environment in institution of higher learning Based on Innovation

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**Abstract.** College physical education teaching environment is a basic element of teaching activities. Any teaching activities are carried out in a certain teaching environment. The operation of physical education teaching system is carried out in a certain time and space, which is what we call the teaching environment system. The operation of physical education teaching system is restricted and affected by many environmental factors. Compared with the teaching of other disciplines, the impact of physical education teaching environment on physical education teaching in institution of higher learning is more direct, timely and explicit. In order to make these influences develop in favor of promoting students' health and improving teaching efficiency, we must timely understand and grasp the current situation and development of physical education teaching environment in institution of higher learning. This paper studies the physical education teaching environment in institution of higher learning from the perspective of innovation. Through the research on the physical education teaching environment under the concept of innovative education, it can not only mobilize the transformation of physical education teachers' teaching concept and the replacement of roles, but also create a learning environment for students to think independently, have their own ideas and innovate constantly, and help students master autonomous learning methods Form lifelong independent sports values.

**Keywords:** Innovation angle, institution of higher learning, physical education teaching environment.

## 1. Introduction

Physical education teaching environment is the synthesis of objective conditions necessary for schools to achieve physical education teaching objectives. Physical education teaching environment mainly consists of physical environment, institutional environment and psychological environment. Just as any social activity can't be separated from the environment, so can physical education in Chinese universities as a social activity. Physical education teaching environment in institution of higher learning is a basic element of teaching activities, and any teaching activities are carried out in a certain teaching environment [1]. The operation of the physical education teaching system is carried out in a certain time and space, that is, the operation of the teaching environment system is restricted and influenced by many environmental factors. If we regard the teaching environment as a whole, then the teaching environment of ordinary institution of higher learning is one of the components [2]. If we regard it as a system, then the teaching environment of institution of higher learning is one of the subsystems. Physical education teaching environment has an important influence on every link of physical education teaching activities in institution of higher learning, as well as students' intellectual development, learning motivation, learning effect, physical and mental health, ideological quality and aesthetic concept. The whole teaching process always keeps the exchange of material energy and information with the environment, or the teaching environment is the sum of many objective conditions and forces necessary for school teaching activities. Studying the physical education teaching environment can make us deeply understand and discover the physical education teaching environment.

The internal mechanism affecting physical education teaching activities and students' physical and mental development, so as to create and optimize physical education teaching environment and improve physical education teaching quality [3]. Compared with the teaching of other disciplines, the impact of physical education teaching environment on physical education teaching in institution of higher learning is more direct, timely and explicit. In order to make these influences develop in favor of promoting students' health and improving teaching efficiency, we must timely understand and

grasp the current situation and development of physical education teaching environment in institution of higher learning. This inevitably involves the problem of evaluation, and the selection of appropriate evaluation indicators and methods is the key to effectively construct the evaluation system of physical education teaching environment in institution of higher learning. In the context of the new curriculum reform, students' physical and mental health has become the focus of quality education, making physical education more and more valued by people. According to the requirements of quality education, PE teachers should actively innovate teaching methods, strengthen communication with students, mobilize students' subjective initiative, effectively improve the effect of PE teaching and promote the improvement of students' physical quality [4]. Through the research on the physical education teaching environment under the concept of innovative education, it can not only mobilize the transformation of physical education teachers' teaching concept and the replacement of roles, but also create a learning environment for students to think independently, have their own ideas and constantly innovate, help students master autonomous learning methods and form lifelong autonomous physical education values [5].

## **2. Concept and elements of physical education teaching environment in institution of higher learning**

### **2.1 Concept of physical education teaching environment**

Physical education teaching environment is a special living environment for human beings. It is an activity space field of physical education organized according to the requirements of developing people's physical and mental education. It is to actively use the environment for people to better carry out physical education, physical exercises and sports competitions [6]. As the product of adapting to and transforming the environment, the physical education teaching environment is closely related to natural and social environment factors, which forms the complexity and diversity of the physical education teaching environment. The construction of the evaluation standard of physical education environment is based on a certain theoretical research. The main content is the present situation and problems in the research of physical education environment in schools in China. Combining with the local characteristics, a series of expert interviews and questionnaires, the factors and indicators that affect its optimization are determined. And the factors are comprehensively analyzed from the perspective of system and whole, so that each component index can be more objective and more practical, and the components of physical education environment can be improved [7]. The teaching environment can be divided into two levels, namely, physical environment factors, such as the construction of school stadiums, the setting and distribution of physical education class and physical exercise equipment, various natural environments suitable for physical exercise, etc. The second level is the social and humanistic environmental factors, which is the atmosphere that can motivate students to actively participate in physical education activities and consciously and independently exercise and cultivate themselves. The key to implement the teaching reform of physical health care course under the network environment is the change of teaching concept. To truly implement the teaching reform of physical education and health care, we must abandon the traditional "teacher-centered" teaching concept.

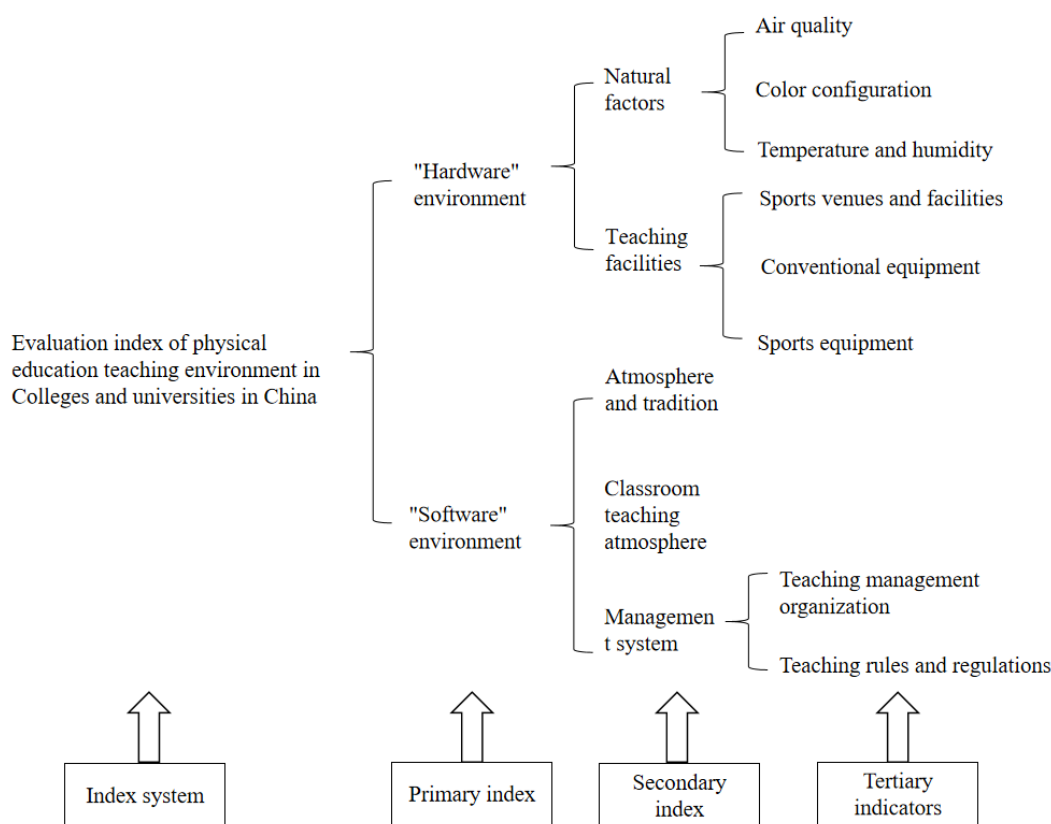
### **2.2 Factors of physical education teaching environment**

Physical education teaching environmental factors can be divided into material and social factors, and material factors can be divided into natural and man-made factors. The physical factors of nature are diverse, such as the impact of terrain environment, mountains, hills, deserts, lakes and oceans, biological environment, forests, grasslands, climatic environment, atmospheric temperature, rain and snow, the main factors are air pollution, water pollution and sound pollution on Physical Education Teaching [8]. Human and material factors are also complex and diverse, such as various factors of physical education teaching places and venues, the size and combination of sports venues, the

suitability of lighting and light, the color matching around classrooms and venues, space combination, air fluency, ground softness and smoothness, and the arrangement, completeness and use efficiency of sports equipment and facilities. When selecting the evaluation indicators of physical education teaching environment, we should comprehensively consider the theoretical and practical basis, comprehensively investigate the preliminarily selected indicators, comprehensively analyze the information related to the indicators in all aspects affecting the teaching environment, and finally comprehensively analyze the selected indicators to finally determine each indicator [9]. The school is a complex system. All material, social, tangible and intangible factors in the school can be said to be the content of the teaching environment. According to expert research, the environmental factors that have a great impact on the physical education teaching system should be summarized into the following material factors, such as air, temperature, light, sound, color and smell. A variety of physical education teaching venues, facilities and material foundation, Social information, interpersonal relationship, classroom teaching atmosphere, school spirit, class spirit, etc. Under the network environment, the innovation of the teaching mode of physical health care course is based on the network teaching platform, guided by the requirements of physical skills and the conditions of disabled college students, changing the original "authority dependence" relationship between teachers and students, focusing on the development of disabled college students and giving full play to the dominant position of students.

### 3. Innovate and optimize the school physical education teaching environment.

#### 3.1 Innovation of curriculum setting



**Fig.1** Evaluation index system

The setting of physical education environment should respect students' personality characteristics. Different personality characteristics of teenagers, different class culture atmosphere and sports group consciousness have different requirements for physical education environment. With the deepening of the new curriculum reform, more and more teachers are beginning to realize the importance of innovative teaching methods, in which situational teaching method can enhance students' learning

experience, let students enjoy the process of knowledge exploration, and effectively mobilize students' subjective initiative, thus improving the teaching effect [10]. From the perspective of teaching management institutions, institution of higher learning should set up departments such as physical education teaching, physical research, venues, students' physique testing and so on to manage physical education hierarchically; Among them, institution of higher learning should selectively set up the physical education department into several teaching and research sections according to different curriculum items. From the point of view of the establishment of rules and regulations, the rules and regulations of physical education should cover the teaching routine of physical education class, the system of teachers' watching, checking and evaluating classes, the system of equipment and facilities management, the system of teaching supervision, the system of teachers' professional learning, the system of physical education curriculum safety management, the system of young teachers' tutors and so on. From the above analysis, it can be seen that the physical education teaching environment in Chinese institution of higher learning is a complex system, and its structure is multi-index, with multi-level tree structure as shown in Figure 1.

In order to understand the main research countries in the field of physical education, the research results in the field of physical education are classified according to countries. The results show that a total of 65 countries participated in the research in this field, including 15 countries with one article and 10 countries with two articles. The country with the largest number of documents is the United States, which accounts for 26.87% of this field. It lists the top 10 countries with the highest number of documents issued in this field. The research achievements in the field of physical education in these countries account for 88.56% of the total, which leads the research trend and direction in this field. As shown in Table 1.

**Table 1.** Distribution of top10 countries in the field of physical education

Serial number	Country	Send a document	Percentage (%)
1	United States of America	474	26.654%
2	Britain	211	11.896%
3	Brazil	205	11.55%
4	Spain	195	10.998%
5	Australia	185	10.437%
6	Turkey	80	4.544%
7	Canada	69	3.927%
8	Ireland	60	3.425%
9	New Zealand	51	2.948%
10	Belgium	51	2.917%

For students at different stages, the physical education environment should also be set according to their age and psychological characteristics. Physical education teachers should set the physical education environment according to the needs of teaching, so as to make it conform to students' general learning rules, arouse their learning desire and generate their learning motivation.

### 3.2 Innovation of teaching means

Teachers should establish a new and flexible educational concept. In the teaching process of design course, they should set reasonable sports rules according to students' actual sports ability, and should not rigidly implement the rules of international or national operation. Experts agreed with the "material environment" and "institutional environment", and one expert suggested changing the "social psychological environment" to "educational environment". After discussion and comprehensive analysis with experts, the "social psychological environment" will not be changed. Therefore, the primary indicators are finally determined as "material environment", "social psychological environment" and "institutional environment", as shown in Table 2.

**Table 2.** Investigation results of experts on secondary indicators

Evaluating indicator	Agree with		Suggested modification		Suggested deletion	
	Total number of people	Column (%)	Total number of people	Column (%)	Total number of people	Column (%)
Environment of physical education facilities	18	100	0	0.0	0	0.0
Physical education natural environment	18	100	4	0.0	0	0.0
Space-time environment of physical education	13	73.6	4	26.2	0	0.0
School sports tradition and ethos	13	73.6	3	26.2	0	0.0
Physical education classroom teaching atmosphere	15	84.1	2	15.7	0	0.0
Interpersonal relationship in physical education teaching	15	84.1	0	15.7	0	0.0

For the "time and space environment of physical education" included in the "material environment", experts believe that it is more appropriate to adjust this index to the "social and psychological environment", so we should adjust it. The classification of the secondary indicators "school sports tradition and atmosphere", "physical education classroom teaching atmosphere" and "interpersonal relationship in physical education" included in the primary index of "social psychological environment" is vague. Experts believe that it is necessary to classify them again. After analysis and exchange with experts, the secondary indicators contained in "social psychological environment" are divided into "professional quality of physical education teachers", "personal quality of students' Physical Education Learning", and "interpersonal relationship in physical education teaching" is revised to "interpersonal communication in physical education teaching". Reasonable sports rules should be the height that students can reach on tiptoe to improve their sense of sports achievement, so as to stimulate their sports potential. In the process of practice, with the acquisition of sports skills, students can be allowed to change the practice equipment and venue according to the specific practice situation.

#### 4. Conclusions

Optimizing the sports environment from an innovative point of view requires us to constantly innovate teaching ideas, teaching strategies, teaching modes and teaching means from three aspects of physical environment, institutional environment and psychological environment of the sports teaching environment. We should pay attention to the long-term development of students and reasonably create and optimize the sports teaching environment. Setting up the whole or all-round idea of physical education will expand the vision of higher physical education to college students' physical life to create a social factor of good physical education teaching environment. The general physical education teaching environment in institution of higher learning is the synthesis of all the conditions needed to carry out physical education activities. It is an important part of the teaching environment in institution of higher learning, and it is a relatively microscopic, dynamic, special and complex teaching environment. Its constituent elements are constantly changing with the teaching reform and the requirements of the times, so its structural indicators are also dynamically changing. Better serve students, teaching and schools, so that every student can really enjoy the health and happiness brought by sports.

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