

Original Research Article

## Research on Curriculum Reform of Physical Education Specialty in Colleges and Universities Based on OBE Concept

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**Abstract:** Physical Education Major in Colleges and universities is the main force to cultivate excellent physical education reserve talents in China. In order to improve the training quality of compound talents in physical education, this study takes the curriculum of physical education major in colleges and universities as the research object, and studies the curriculum structure, curriculum teaching mode, curriculum practice and curriculum evaluation of the curriculum of physical education major. The research shows that optimizing physical education curriculum based on OBE concept can meet the needs of physical education curriculum construction, deepen the curriculum reform of physical education, and help achieve the goal of training physical education professionals. However, based on the current research results, it is found that there are corresponding deficiencies in the implementation of each part. Therefore, this study puts forward the corresponding reform strategies according to the five contents emphasized by the OBE concept: everyone can succeed, personalized evaluation, proficiency, performance responsibility and ability standard. For the course structure, we should increase the types of elective courses and improve the proportion of technical courses; For the classroom teaching mode, adopt the flexible organization form of the course, update the design structure of the course and enrich the teaching methods of the course; For curriculum practice, we should pay attention to curriculum teaching practice and strengthen educational practice; For curriculum evaluation, comprehensive evaluation content and diversified evaluation methods are adopted.

**Keywords:** Physical education major, curriculum, overview, OBE concept.

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## INTRODUCTION

In the "National Undergraduate Curriculum Plan for Physical Education in Ordinary Higher Education Institutions" issued in 2003, it was pointed out that the training goal of physical education majors in universities is to cultivate composite physical education talents who are competent in school physical education, teaching, training, and competition work, and can engage in school physical education scientific research, school physical education management, and social sports guidance. Since the nationwide implementation of the "Teacher Qualification Examination System" in 2015, the "privileges" of the original teacher education major have been abolished, resulting in enormous pressure on the employment of students majoring in physical education. At the same time, universities have had to pay more attention to the cultivation of students' professional abilities, and improving the professional abilities of students in this major has become the most important goal of universities in cultivating physical education

talents. This is precisely in line with the OBE education philosophy. The OBE concept, also known as the result oriented education concept, refers to the goal of instructional design and implementation being the learning outcomes that students ultimately achieve through the educational process [1]. This concept focuses on cultivating students' abilities acquired after receiving education, cultivating what students can do, and emphasizing that all educational activities, processes, teaching, and curriculum design must revolve around achieving the expected learning outcomes for students. The OBE concept is closely related to the curriculum, and in order to achieve the goal of improving students' professional abilities, a reasonable curriculum is essential. Therefore, this study explores the training curriculum for sports education professionals based on the OBE concept, and reforms the talent training curriculum guided by the professional abilities and graduation requirements of graduates in this major,

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focusing on improving the quality of sports education professional talent training.

### **1. The Connotation and Application of OBE Concept**

In the 1990s, the renowned educator Spady first proposed the educational concept of "Outcome-Based Education" (OBE) in his book "Outcome-Based Education: Disputes and Answers" [2]. The OBE education concept is a typical "student-centered" teaching model that focuses on the three most core aspects, namely, all educational and teaching objectives should be arranged around the cultivation of students, and the second is to focus on the ultimate goal of education, which is the ability of students to obtain future work. The third is continuous improvement, forming a virtuous cycle of continuous improvement based on the evaluation results. This concept is in line with the current direction of higher education and teaching reform advocated in China, which emphasizes the combination of learning and thinking, advocates heuristic, exploratory, discussion, and participatory teaching. At the same time, it has guiding significance for improving the professional abilities of students majoring in physical education in Chinese universities and carrying out curriculum reform.

Since the concept of OBE education was proposed by the United States in the 1990s, it has been gradually applied and promoted in many foreign countries, and the feedback from practice has been excellent. Therefore, they regard it as a very advanced educational concept and have become the mainstream concept of education basic reform in some countries. The main types are: firstly, the United States and Canada attach importance to disciplinary function and outcome performance; secondly, Chicago and New York emphasize non structural performance; thirdly, the United States and Colorado focus on complex role performance and life role abilities [3].

Since the introduction of the OBE concept into China, it has been widely applied in various majors and stages of teaching. Especially on November 8, 2017, the Ministry of Education issued a notice on the Implementation Measures for the Certification of Teacher Education Majors in Ordinary Higher Education Institutions (Provisional), which clarified the basic concept of teacher education professional certification as "student-centered, output oriented, and continuous improvement" [4]. This concept coincides with the OBE concept, and various education majors pay more attention to results oriented education, resulting in a large number of research on teaching practices that are based on the OBE concept and clarify the teaching objectives of practical teaching based on training objectives. However, through literature review, it was found that there is relatively little research in China that combines the OBE education concept with physical education professional courses. Therefore, this article conducts research from four aspects: the curriculum objectives,

teaching models, curriculum practices, and curriculum evaluation of physical education professional courses, providing a certain theoretical basis for improving the teaching efficiency of physical education majors in universities.

### **2. The Necessity of Curriculum Reform in Physical Education Majors Based on OBE Concept**

#### **2.1 Meeting practical requirements and meeting the needs of physical education curriculum construction**

The main content emphasized in the construction of physical education courses includes the following aspects: advanced educational ideas, emphasis on the construction and reform of teaching content, continuous reform of teaching methods, and continuous deepening of exam reform. The OBE concept precisely meets these requirements. The OBE concept itself is an advanced educational ideology, which has received attention from multiple countries around the world and is being used for educational reform. The OBE concept emphasizes the ultimate learning outcomes that students obtain through education. In order to achieve this learning outcome, teaching content, teaching methods, and teaching evaluation are essential aspects. These three aspects are precisely corresponding to the construction of physical education professional courses. Therefore, curriculum reform based on the OBE concept can meet the needs of physical education professional course construction.

#### **2.2 Adapting to the Development of the Times and Deepening the Curriculum Reform of Physical Education Majors**

In keeping with the trend of the times, it is necessary to view problems from a developmental perspective, and universities must keep up with the times and deepen curriculum reform. Based on relevant documents released in China, it is required that Chinese universities should transform traditional teaching concepts and transform one-way knowledge transmission into a new form of thinking collision and mutual learning between teaching and learning; Continuously updating teaching content to meet the needs of social development, etc.; Update teaching methods, introduce information technology, and break traditional time and space limitations [5]. The OBE concept emphasizes student-centered, teacher assisted, and emphasis on learning outcomes. It originated from abroad and is an advanced educational concept. China has transformed its traditional educational concepts by introducing advanced educational concepts, which is in line with the direction of education and teaching curriculum reform advocated by China. Therefore, teaching based on the OBE concept can adapt to the current trend of development and deepen the curriculum reform in China.

### **2.3 Meeting professional demands and achieving the goal of cultivating sports education professionals**

The training goal of physical education major is to cultivate composite physical education talents, requiring noble professional concepts, rich professional knowledge, and systematic professional abilities. The emphasis of the OBE concept is on the ultimate ability obtained through the educational process. The noble professional concept requires students in this major to implement the concept of "learning high as a teacher and being a model". The rich professional knowledge requires students in this major to have sufficient knowledge reserves and broad humanistic literacy knowledge. The professional ability of the system requires that students in this major not only have corresponding imaging skills, but also have the ability to communicate, reflect, and develop. Based on the OBE concept, a reverse design of the training objectives required for this major is carried out. By reforming the curriculum through teaching methods, content, and evaluation, it helps to promote the cultivation of professional abilities for students majoring in physical education and achieve the training goals of this major.

## **3 Problems in the Offering of Physical Education Courses**

### **3.1 The imbalance of course structure and proportion hinders the achievement of training objectives**

Most physical education colleges and universities with physical education majors have deficiencies in the types of elective and compulsory courses offered, as well as the proportion of technical subjects and disciplines offered [6]. If the types of elective courses are limited and the content is relatively remote, it leads to insufficient market application of learning content and cannot meet the freedom of students' choices. In addition, with the implementation of a credit management system in schools, students are more focused on the credits they need to take, and the types of elective courses offered by schools are limited. In order to achieve the corresponding credits, students will choose almost all elective courses, making elective courses mandatory, while those with high market applications are not offered. Due to limitations in credit and the types of elective courses offered, most students do not pay attention to the content of elective courses, which potentially inhibits students' comprehensive development. In the four adjustments to the proportion of technical subjects and disciplines in physical education majors in ordinary universities in China, the proportion of technical subjects has shown an overall downward trend. The proportion of technical courses and subject courses has increased from 5.5:4.5 to the current 3.7:6.3, and in the questionnaire, most graduates believe that technical courses should occupy an important position in the curriculum according to employment needs [7]. Whether it is the types of courses in compulsory and elective courses or the proportion of technical and subject courses, if reasonable arrangements

cannot be made, it will hinder the achievement of teaching and training objectives.

### **3.2 The outdated teaching mode of the course hinders the diverse development of students**

There are several shortcomings in the current teaching mode of physical education majors in Chinese universities: the solidified organizational form of courses, the rigid design structure of courses, and the single teaching method of courses [8]. In terms of the organizational form of classes, China has always followed the class teaching system established by educator Comenius. When learning a certain content, the teaching object is a whole class, and it cannot be taught according to students' aptitude. Especially in technical courses, when learning sports skills, students' physical fitness and previous level of training vary, which leads to some students not being able to achieve the learning objectives of this course. In terms of course design structure, both technical and subject courses always follow a "three stage" structure in the teaching process: the preparation part, the basic part, and the ending part. This is based on the fact that the structure of physical education classes is determined according to the changing laws of human physiological function and activity ability, which must be followed in every physical education class [9]. The purpose of both technical and disciplinary courses is to impart knowledge and cultivate the ability to apply knowledge, and the design structure of courses cannot be generalized based on human physiological functions. In terms of teaching methods, especially in technical classrooms, the single teaching method of teacher demonstration, explanation, student practice, prevention and correction of errors, consolidation and improvement is still adopted. This teaching method excessively emphasizes the teacher's main position while neglecting students, which inhibits the development of students' learning and exploration abilities.

### **3.3 Insufficient emphasis on course practice hinders the generation of teaching abilities**

The course practice includes two main aspects: the practical teaching process and the internship process. Nowadays, the curriculum of physical education majors in universities places more emphasis on imparting theoretical knowledge and technical skills, but neglects students' comprehensive abilities and practical application abilities [10]. When teaching skills courses, most students are passive learners, which limits their ability to analyze and solve problems. Even if they master this skill well, they cannot teach this action skill to students. This leads to a situation where students majoring in physical education in universities only know how to learn but cannot teach. Even during the internship period, some schools will catch up with students' physical health tests, which further compresses the internship time. And this one-time internship model will prevent interns from promptly correcting and compensating for problems that arise during the

internship [11]. The above, whether it is a lack of emphasis on classroom teaching practice or insufficient internship time, will lead to limitations in the generation of teaching practice abilities for students majoring in physical education.

### **3.4 Incomplete course evaluation system hinders feedback on learning outcomes**

The current curriculum evaluation system for physical education majors in universities generally places excessive emphasis on students' academic performance, with a single, static, and summative evaluation method. Whether in the assessment and evaluation of technical subjects or disciplines, universities generally implement quantitative evaluation of academic performance, especially in technical courses, which evaluate the completion and achievement of students' technical actions, while neglecting the evaluation of students' learning attitudes, interests, emotions, and other aspects. The evaluation standards tend to be unified and cannot pay close attention to individual differences among students due to genetic, training environment, and psychological factors, thereby inhibiting their individual development, as well as their interest and autonomy in learning. The summative evaluation is significant, focusing only on whether students' academic performance meets the standards or how many scores they have achieved, leading to students only focusing on grades, which weakens students' interest and enthusiasm in the learning process and makes it difficult to implement and implement the concept of quality education.

## **4 Analysis of Curriculum Reform in Physical Education Majors Based on OBE Concept**

The OBE concept is a student-centered educational philosophy that emphasizes that everyone can succeed and that every student can achieve success through various learning methods; Emphasize personalized assessment and develop personalized assessment plans based on the individual differences of each student; Emphasize proficiency and provide different learning opportunities according to each student's learning situation during the learning process, so that each student can achieve a level of proficiency; Emphasizing performance responsibility, schools should pay more attention to learning outcomes than students, and propose specific evaluation and improvement criteria; Emphasizing the ability based approach and cultivating students' ability to adapt to society and future life through education, the educational objectives should list specific core competencies and arrange corresponding courses according to requirements.

### **4.1 Adjusting the proportion of course structure to promote the achievement of teaching objectives**

#### **4.1.1 Increase the types of elective courses**

At present, there are few types of elective courses and narrow content in both compulsory and elective courses. With the rapid development of society,

the updating speed of corresponding knowledge is also accelerating. As the main force in cultivating educational talents, physical education majors take elective courses as an important link to enrich and improve students' knowledge and skill levels, and to cultivate composite talents in physical education majors. According to the OBE concept emphasizing the ability based approach, the number of courses should be appropriately increased, especially the types and quantity of elective courses. So, in addition to increasing the corresponding elective courses, it is also necessary to scientifically design the teaching proportion of the courses, and add some emerging sports projects such as rock climbing, roller skating, directional sports, etc. as elective courses to ensure students' comprehensive and independent development and promote the generation of students' professional abilities.

#### **4.1.2 Increase the proportion of technical courses**

The proportion of courses offered in technical courses is decreasing in the current development state. For students majoring in physical education, sports technology is an important foundation for their teaching work. Even though teachers can use multimedia information technology to show students movements in teaching, it is only a means of auxiliary teaching, and most students majoring in physical education have gone through the ordinary college entrance examination. Most of them have only undergone one to two years of physical training, and passing the physical examination is only a temporary improvement in physical fitness, without truly mastering a certain or multiple sports skills. Based on the emphasis of the OBE concept on both ability based and proficient aspects, in the proportion of technical courses to subject courses, the proportion of technical courses should be appropriately increased to help students in this major accurately master at least one sports project and improve their employment confidence.

### **4.2 Optimize course teaching mode and cultivate students' innovative ability**

#### **4.2.1 The organizational form of flexible courses**

Nowadays, most universities still follow the classroom teaching system, which ignores the individual differences of students, especially for students majoring in physical education. Each student in the same class has their own technical expertise, and the existence of this technology can lead to differences in physical fitness among students. According to the OBE concept, which emphasizes the two aspects of everyone being able to succeed and personalized assessment, this teaching model should be reformed, and corresponding teaching content should be selected based on the existing level of students, in order to balance the needs of students at all levels and promote the comprehensive development of students' professional abilities.

#### **4.2.2 Update the design structure of the course**

In terms of course design structure, especially in the field of technical subjects, the physical education



majors in universities still continue the model of preparation part - basic part - ending part, and most insist that this course structure determined based on the laws of human physiological function changes is the most scientific way of course arrangement. According to the OBE concept, which emphasizes both ability based and personalized assessment, this pattern is unscientific because the design structure of the course should be based on three aspects: human cognitive patterns, skill formation patterns, and changes in human physiological functions. Using any one of them as a basis would be too one-sided and cannot effectively promote the comprehensiveness of student development.

#### **4.2.3 Enriching teaching methods for courses**

There are many teaching methods in class, but there are very few methods that have been truly applied in actual teaching. The most commonly used methods are the demonstration method and the prevention and correction of errors method. Therefore, now a teaching process with these two teaching methods as the norm has formed: demonstration - explanation - practice - prevention and correction of errors - consolidation and improvement. According to the OBE concept, which emphasizes personalized assessment and the ability of everyone to succeed, we should pay attention to students' subjectivity, respect their individual differences, and guide them to actively integrate learning and thinking. During the teaching process, we can arrange for students to first engage in exploratory learning, guide them to discover, raise, and solve problems, and finally guide them to summarize and summarize the problems. By making targeted learning or practice methods, it effectively improves the effectiveness of students' learning.

#### **4.3 Emphasize the practical aspects of the curriculum and promote the generation of teaching abilities**

##### **4.3.1 Emphasize curriculum teaching practice**

In the process of curriculum teaching, both technical and subject teaching should have a process of applying theory to practice. However, in the actual teaching process, especially in subject courses, most teachers only focus on imparting theoretical knowledge and neglect the application of theoretical knowledge. Based on the ability oriented approach emphasized by the OBE concept, in the teaching process, especially in the teaching methods of physical education textbooks for physical education majors, it is necessary to put forward requirements for students to simulate and flexibly apply teaching methods, and evaluate students' simulated teaching, rather than just explaining theory to students. This can improve students' ability to integrate theory with practice.

##### **4.3.2 Strengthen educational internship efforts**

In China, educational internships are arranged for 10-12 weeks, during which students are required to apply the knowledge and skills they have learned over the past three years as much as possible. However,

through investigation, it has been found that these hours do not meet the needs of some students [12]. Based on the OBE concept emphasizing the two aspects of proficiency and competency, the internship time should be appropriately extended and the internship guidance process should be standardized. In terms of internship time, a segmented approach can be adopted, which is not only for internships in the first semester of senior year, but also for assignments to sophomores, juniors, or seniors. This way, problems during the internship can be identified and corrected in a timely manner according to the guidance or assistance of the mentor, in order to obtain more valuable internship experience.

#### **4.4 Improve the course evaluation system to ensure the achievement of learning outcomes**

##### **4.4.1 Comprehensive evaluation content**

For the evaluation of students, most physical education majors in universities tend to implement summative evaluation, scoring students' knowledge based on exam standards, while neglecting their ability to apply the learned knowledge to practical situations. It is generally believed that credits are the only evaluation criterion for students. Based on the emphasis on performance responsibility and competency based aspects of the OBE concept, this study suggests that schools or teachers should not implement such a "separation theory" that limits students' practical application abilities, and that schools or teachers should place more emphasis on performance and abilities than students. When evaluating students, corresponding indicators should be set based on their comprehensive abilities for comprehensive evaluation and the results should be obtained. Schools or teachers should improve or improve the comprehensive evaluation of students based on the issues reflected in these indicators.

##### **4.4.2 Diversified evaluation methods**

Due to the current prevailing examination system, most schools evaluate all students based on a certain standard, without considering the individual differences caused by genetics and acquired environment. Therefore, for some students with limited innate conditions, even if they have put in more effort than other students, due to the drawbacks of the universal evaluation examination system, teachers overlook the efforts of these students, This greatly dampens students' enthusiasm for learning, and those with better conditions effortlessly achieve better results. In order to improve this phenomenon, based on the personalized evaluation emphasized by the OBE concept, this study suggests that schools should fully consider the individual differences of students when evaluating them, truly teaching students according to their aptitude, and selecting different evaluation indicators for students of different levels to enhance their interest and enthusiasm in learning

## **5. CONCLUSION**

At present, there are problems in the proportion imbalance of curriculum structure, outdated teaching

models, insufficient emphasis on curriculum practice, and incomplete curriculum evaluation system in some universities' physical education courses. Based on the emphasis of the OBE concept, specific improvement methods are proposed for each issue, including adjusting the proportion of course structure, optimizing course teaching mode, emphasizing course practice, and improving the course evaluation system.

Analyze the problems in current physical education courses in universities and propose corresponding improvement measures based on the OBE concept. During the course implementation process, schools or teachers should allocate course proportions reasonably based on the differences in students' physical fitness, choose innovative teaching methods, and attach importance to students' practical aspects in the classroom and the effectiveness and feedback of students' learning. Based on feedback from students on their learning outcomes, analyze emerging problems, propose new solutions, and continuously improve the rationality of physical education courses in universities.

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