

## Research on Innovation and Reconstruction of Aerobics Teaching Materials in Colleges and Universities Based on Information Theory

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**Abstract:** Aerobics in colleges and universities are deeply loved and welcomed by the public, because aerobics combines sports, dance and music. It not only has beautiful movements and smooth rhythm, but also can enhance people's self-confidence in the process of practice. Aerobics is relatively difficult to start with and has an obvious effect on the coordination and flexibility of college students. Therefore, it is widely used as a form of physical exercise for college students. The innovation of teaching materials has become an important topic in the education and teaching of colleges and universities. As an important part of physical education in Colleges and universities, aerobics curriculum is loved and concerned by teachers and students, especially female students. Based on the information theory, this paper analyzes the main problems in the actual development of College Aerobics, and puts forward the innovation and reconstruction strategies of College Aerobics teaching materials, in order to better promote the innovation and development of College Aerobics Teaching.

### 1. Introduction

Physical fitness has become a part of college students' life and permeates the whole process of college education. With the improvement of knowledge level and the continuous updating of health concepts, college students are no longer satisfied with simple forms of physical exercise, but seek more scientific fitness methods, showing diversified and personalized development trends in fitness needs [1]. Aerobics is a new sports item which takes human body as the object, bodybuilding as the goal, artistic creation as the means, beautiful music rhythm as the melody, and integrates gymnastics, dance and music. In a period of time, sports teaching materials emerged one after another, with too many things to see. At the same time, there has also been a sharp increase in the number of various types of physical education teaching materials, while the teaching materials of various courses are superficial and of mixed quality [2]. Some students in public physical education classes use a large amount of professional descriptions of technical movements and specifications of competitive techniques in books, which can neither guide students to exercise well, nor attract students to actively participate in this exercise, and even feel stale and boring [3]. The development of aerobics in colleges and universities determines the important position of aerobics in college physical education, and reflects a deepening process of quality education reform. The aerobics course has been included in the physical education syllabus of colleges and universities in China and has become the main content of physical education in colleges and universities. It is loved by more and more college students for its unique charm and remarkable fitness value [4].

Aerobics is an important artistic crystallization of the development of college education, which can be integrated into aesthetic culture and mechanics. Therefore, the cultural heritage of aerobics has far exceeded the aerobics itself [5]. However, in college physical education, aerobics teaching only pays attention to imparting a single set of movement skills, and ignores the overall development of people. The teaching objectives of aerobics courses are not clear, and the teaching content is single [6]. Because college students do not have a perfect understanding of the sport of aerobics, and there is a subjective interpretation of the aerobics sport, there are obvious deviations in the development and positioning of aerobics in colleges and universities. The difficulty of

starting aerobics is low, and it has a significant improvement on the physical coordination and flexibility of college students. Therefore, it is generally used as a form of physical exercise for college students [7]. Although the aerobics course has been popularized in major universities, there is a lack of innovative research on the teaching model of the aerobics course. The aerobics teaching mode should be based on the aerobics teaching principles and aerobics teaching methods, through the teacher analysis of textbooks, re-creation of textbooks [8]. This article analyzes the main problems in the actual development of college aerobics, and puts forward the innovation and reconstruction strategies of college aerobics textbooks, in order to better promote the innovative development of college aerobics teaching.

## **2. The Current Situation of Aerobics Textbooks and Teaching Models in Colleges and Universities**

The educational concept of aerobics teaching materials in most colleges and universities has not kept pace with the requirements of the times, and the functional orientation of teaching materials is not very clear. In the process of calisthenics teaching in colleges and universities, it is easy to focus only on book content and action teaching, which makes the teaching content boring and loses students' applicability to calisthenics. Under the educational background of the new curriculum reform, the aerobics teaching in colleges and universities in our country has a good momentum of development, but from a microscopic point of view, there are still many constraints in the aerobics teaching in colleges and universities in our country, which have affected the development of aerobics in colleges and universities. While many calisthenics classes are being held in colleges and universities, due to the lack of expansion and guidance of students' knowledge, the teaching contents in many aspects have not been updated in time, thus causing the teaching contents of calisthenics in colleges and universities to be too monotonous and unable to attract students' interest. The teaching of calisthenics in colleges and universities in our country still relies on old methods such as external movements and attendance for teaching and assessment [9]. This not only does not fit the latest teaching methods and training forms, but also easily leads to errors in students' understanding of aerobics teaching. The textbook is not sufficiently connected with the current social life of the students. It neglects the guidance of students' actual life and the cultivation of practical ability, which makes it difficult for students to learn. The lack of systematic professional theoretical textbooks for aerobics courses makes the aerobics courses lose their knowledge carrier, it is difficult to form a professional discipline, which limits the development and improvement of aerobics courses. The new curriculum reform in education and teaching requires innovative teaching models to enable students to develop fully and learn independently.

The college aerobics course is one of the physical education courses. It is deeply shackled by the traditional teaching mode and there are many teaching problems. Bodybuilding operation is a new form of bodybuilding, and it still adopts the methods of the past primary and secondary schools in its promotion. In teaching, more emphasis is placed on movement and technology, while ignoring the education of basic theories. Most college aerobics teachers do not use textbooks for teaching in the teaching process. Most of them are based on online video movements, allowing students to imitate learning, resulting in students only learning movements but not understanding the essence. Most colleges and universities aerobics activities are usually dominated by action teaching, especially during the course of class explanations. Teachers pay too much attention to whether the students' movements are regulated, and do not regulate the rhythm and physical fitness training of students. The quality of teachers of aerobics courses in colleges and universities is low, and the routine action mode is mostly used in the teaching process, which makes the teaching content single and has limitations, which seriously hinders the development of students. Based on the reality of school sports, it fully reflects the diversified meaning of aerobics textbooks and focuses on the future and development of students. The content of its compilation should help students form the habit of conscious exercise and develop a lifelong sports awareness. In the teaching process of aerobics in China, some of the things learned are the knowledge in books, which are not well applied in actual life, which is not conducive to cultivating the students' correct concept of fitness,

making the study of aerobics insufficient Give play to its practicality and significance.

### **3. Ways and Methods of Innovation and Reconstruction of Aerobics Textbooks**

#### **3.1. Reflect the Characteristics of the Times and the Forefront of the Discipline**

Aerobics teaching materials should update the concept of modern education. On the basis of inheritance and development, the teaching materials should strive to reflect the characteristics of the times. On the basis of breaking through the traditional teaching material mode, the teaching materials should screen the items suitable for aerobics teaching according to the development trend of the diversity and individuation of contemporary college students' fitness requirements. The purpose of calisthenics teaching is to make college students realize the beauty of calisthenics and strengthen their body. However, due to the different constitutions of each person, the actual learning results and acceptance degree of calisthenics are not the same. The particularity of calisthenics teaching makes it impossible for students to take books to physical education classes every day. The contents taught by physical education teachers are novel and varied. Even if they learn them temporarily in class, they also need to practice repeatedly after class [10]. The compilation of teaching materials should be people-oriented and follow the students' physical and mental development rules and interests. It should not only meet the needs of students' personality development, but also meet the needs of modern social development. Aerobics teaching materials should reflect the frontier of disciplines in time. For students, first of all, they should cultivate good interest in learning, fully understand aerobics, and stimulate enthusiasm for learning in the process of practice. Only by actively understanding the history of this sport can the expressive force of aerobics be improved.

#### **3.2. Strengthening Skills and Practical Teaching**

The textbook strives to accurately reflect the new progress and achievements of calisthenics in content selection, highlight the important achievements in theory and practice of the discipline in various periods, enable students to understand the frontier knowledge of calisthenics in a timely manner, and make calisthenics a sports event that leads the trend of the times and meets the requirements of colleges and universities for modern talent training mode. Inquiry teaching method is applied to aerobics teaching in colleges and universities. Students will watch teaching videos, consult relevant materials, solve teaching problems, and create an atmosphere for students to participate in autonomous learning under the guidance of teachers. In the process of calisthenics teaching in colleges and universities, the cultivation of students' expressive force must be strengthened. Only by clarifying the important role of expressive force can students' calisthenics ability be effectively improved. The promotion and acceptance of aerobics are getting higher and higher, which means that a complete sports system will play an important role in the teaching of aerobics in colleges and universities. For students, it is necessary to enhance their personal appeal, so as to stimulate resonance with the appreciators, to fully display the profound artistic connotation of aerobics, and to enhance performers' self-confidence through the cultivation of personal charm [11]. In the future development process, students should be encouraged to show themselves and speak out their own understanding of aerobics, thus increasing students' creativity and acceptance of aerobics.

### **4. Conclusions**

Aerobics teaching is not only to let students learn aerobics movements, but also to cultivate students' correct concepts and self-confidence in fitness exercises and promote students' all-round physical and mental development. In the process of calisthenics teaching in colleges and universities, students' expressive force must be improved, which not only can help students develop good self-confidence, but also can make students' movements more relaxed and promote students' physical and mental healthy growth. In teaching, we should pay attention to students' initiative in learning, cultivate and encourage students' creativity, teachers should strengthen guidance, and in

aerobics learning, we should strengthen the infiltration of other disciplines, such as psychology and music, which are of great help to teaching. Because the influencing factors of students' expressive force in aerobics teaching are closely related to students themselves, it is necessary to improve students' interest in learning aerobics so that students can have a comprehensive understanding of the expressive force of aerobics. With the progress of science and technology in our country and the development of society, more and more college students have realized the importance of fitness. Aerobics, as a simple, aesthetic and rhythmic exercise method, will be accepted by more and more people.

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