

# Current Application Status of Differentiated Teaching in High School Aerobics Education in China

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**Abstract:** Along with the progress of quality education, nourishing the comprehensive development of high school students with excellent skills, consensus in education, has been reached. Previous methods, which were borrowed from traditional aerobics instruction, were not responsive to the heterogeneous nature and physical fitness levels of students. Consequently, high school teachers must embrace varied teaching techniques in aerobics education in order to support individualized development, which in turn would help students unleash their own learning abilities and talents. Even though the system of classroom teaching is limited and the model of examination-oriented education does not allow differentiated teaching in aerobics classrooms fully. The present research explores implementation of differentiated teaching through literature analysis, questionnaire surveys, expert interviews, and mathematical statistical methods. The research will also investigate the challenges teachers have faced in differentiated teaching, student evaluation, as well as student learning motivation and evaluation. The purpose is to assess the implementation level of heterogeneous teaching in high school aerobics instruction. Finally, the study may suggest some effective measures for enhancing students' aerobics learning abilities and represent thorough evidence for the development of various forms of personalized teaching in high school aerobic education.

**Keywords:** Quality Education; Differentiated Teaching; High School Aerobics Curriculum; Application Status; Strategy Research

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## 1. Introduction

With China's quality education initiatives constantly progressing, differentiated instruction is now the norm as education method. Differentiated instruction is designed to create instructional strategies that are responsive to different students, and in that sense, is directly relevant to the practical demands of education in China. Although differentiated instruction is widely used in academic subjects from primary school to secondary high school, it is less common in physical education and aerobics classes, particularly in high school. Presently, aerobics activities in China are usually carried out in and around the school campuses, but the unevenness of the development of high schools is felt acutely. The elective aerobics subject generally requires the teacher to deliver 20-30 classes in a week, which puts a heavy load on the teacher and hence, stops him/her from differentiating his/her teaching. Hence, examining the present state of differentiated teaching in high school aerobics curriculum and suggesting strategies is important.

In a class of high school aerobics students, which involves notable individual differences among the learners, teachers must be polite enough to discover these differences and craft appropriate teaching approaches. Differentiated teaching is a new teaching method, which is dedicated to designing personalized teaching strategies on the basis of student differences to specific instructional needs of students. The main objective of this article is to discuss the issues in high school aerobics instruction and it will also offer solution on how quality of teaching can be enhanced. Consequently, this paper looks at how differentiated teaching can be put into practice in aerobics courses to ensure a multi-dimensional growth in students as well as enhancement of teaching quality and teacher skills.

While a lot of practical or research work has been done by scholars and teachers, most of it remains theoretical, and does not provide tangible evidence. Consequently, this study adopts a questionnaire survey to explore the current scenario of secondary school aerobics teaching, which is important to understand how differentiated teaching can have a positive impact on the learning outcomes

of these students and also provide theoretical support and practical advice.

Next, the teachers need to develop specific teaching strategies that are suitable for the student differences in aerobics instruction to sustain attention and eventually improve learning. Hence, the use of differentiated instruction strategies as a physical education teacher becomes vital, as it can upgrade teaching quality and productivity.

## 2. Literature Review

The basis of differentiated instruction can be traced back to the end of the 19th century in the United States, when compulsory education was introduced, and the idea of “student diversity” appeared. After that, by way of gradual development, “individualized instruction” gave rise to “multicultural perspectives,” which then changes into “differentiated instruction.”

Renowned American physical education educator Reynolds once pointed out: “As everybody is unique, individual programs for education and sport must be designed for each student. Educators, based on students’ conditions, should design differentiated teaching plans in order to improve the quality of education and to increase enthusiasm for learning.”

In her work “Differentiated Instruction: Diane Heacox, in “Helping Every Student Succeed,” says, “Differentiated instruction is defined as teachers who change the pace, difficulty or method of teaching based on the learning styles, interests or abilities of learners. For this reason, every student can feel good about the learning process.

In the Western world, since the quality education has been introduced early into the system, the implementation of differentiated instruction began earlier. Moreover, most of the Western countries embrace small class sizes, whereby teachers may teach fewer students while adopting differentiated instruction methods. Therefore, in contrast to China where the majority of aerobics teachers deal with 150 to 180 or even more students, this creates an extraordinary difference in the research and practice in comparison to that of the Western countries. Consequently, borrowing experiences from abroad and adding the reality in China for dialectical analysis will be rather essential, which is one of the purposes of differentiated instruction.

## 3. Methods

To explore the current application status of differentiated instruction in Chinese high school aerobics, “Student Questionnaires” and “Teacher Questionnaires” were designed, and 36 ordinary high schools nationwide were selected for the survey. Two methods, offline distribution and online mini-program questionnaires, were used for questionnaire distribution and collection. A total of 80 teachers and 2000 students participated in the questionnaire survey. The distribution and collection results are as follows:

Table 1 Overview of Questionnaire Distribution and Collection

Questionnaire Type	Distribution Quantity	Collection Quantity	Effective Questionnaire Quantity	Validity Rate (%)
Teacher Questionnaire	80	8	8	100
Student Questionnaire	2000	1960	1920	96

## 4. Results

### 4.1 Analysis of the Current Situation of High School Aerobics Teaching

#### 4.1.1 The inconvenience of differentiated instruction.

The survey results reveal that most teachers have some knowledge of differentiated teaching, but only a few teachers implement it in their teaching. When some instructors choose to apply differentiated instruction principles in aerobic teaching, however, they encounter a number of obstacles in reality. First of all, workload of differentiated instruction is enormous as the number of students is numerous and it is challenging to implement while at the same time preparation of the lesson becomes difficult. The large number of students is thought by 50% of aerobics teachers to be the most significant barrier to adopting the differentiated instructions. For instance, at Linyi First High School, mainly one teacher has to take charge of several classes ranging from 50-60 students and it is not easy for her to pay attention to each child individually. Besides, teachers usually teach various classes every week which is burdensome and is hard to carry out differentiated instruction that puts more workload on teachers.

#### 4.1.2 Challenges in Teaching Evaluation

Besides the challenges in implementation, teachers also face difficulties in the assessment of students. One of the most frequently asked question by aerobics teachers is how to evaluate students. The survey indicates that the teachers are a lot worried about classroom teaching rather than individual student development. 75% of the teachers consider that subjects and classes are more important, while only 25% of the teachers go for the developmental changes of the students. Now high school aerobics courses deal with preparation for the exams, and students are assessed primarily based on course content and final exams. However, the differentiated instruction focuses on teaching according to students’ ability, whereas the current examination assesses them all the same making it harder to track

their unique progress. This situation makes teachers wonder about how to assess their students adequately.

## **4.2 The Present State of High School Aerobics Learning**

### **4.2.1 Bad Learning Habits among Students**

Classroom efficiency is directly affected by the level of student engagement, while their attitude towards learning determines this engagement. The survey shows that there are major variations in high school students' attitudes towards aerobics learning. Most of the students experience the fear of learning aerobics that hands them over to passivity instead of participation which reduces the learning effectiveness. Traditional aerobics pedagogical methods may be helpful in raising students' skills, but they frequently cause them to lose interest in the sport. The efficacy of students' aerobics learning in Linyi First High School was low prior to the differentiated instruction; students did not show much enthusiasm.

### **4.2.2 Poor Learning Motivation of Students**

The learning motivation of students is largely influenced by the teaching style and evaluation methods of teachers. It is evident that only 28% of high school students primarily learn aerobics because of passion while 47% do it for the purpose of education and 25% are made to take aerobics courses by the schools or parents. Among such students with the lack of learning motivation, who also hardly respond to the teachers' designed differentiated instruction.

### **4.2.3 Routine Student Evaluation Strategies**

While test grades are vital, diverse evaluation tools have a greater potential to improve the all-round development of students. Some high schools have diversified evaluation methods, in which students' daily performance is combined with exam scores to create a comprehensive grading system. Despite that, many schools still stick to the traditional evaluation procedures using only the exam scores to decide on students. Thus, students start focusing just on exams, ignoring their overall growth. The current evaluation methods bypass the diversity of students, and hence, the students are deprived from the well-rounded development. Teachers are required to explore students' differences, provide targeted teaching according to their individual traits, and carry out a thorough assessment to facilitate their all-round growth.

## **5. Conclusion**

The issue of differentiated instruction in high school aerobics has numerous obstacles. To begin with, the teachers confront a huge student population thus making the provision of personalized teaching almost impracticable. As the number of students per class goes up, teachers have to deal with each student's learning needs within a limited time frame, making it even harder to teach. Furthermore, teachers are compelled to shoulder a great deal of lesson planning pressure with differentiated instruction. As teachers are expected to teach 20-30 lessons weekly, they have to customize personalized teaching plans for every student, and this requires their time and energy. Not only that, but traditional student evaluation methods cannot enable differentiated instruction. At present student grading are primarily on the basis of exams, which does not consider students individuality and holistic growth. Hence, teachers are usually unable to quickly assess the students' level and their understanding of the subject when they grade them.

Considering these problems, there are some ideas that deserve attention. The first step will be to engage teachers in more specialized teacher training to enhance their skills in differentiated teaching. Mentoring programs can include the basics of differentiation, such as theories and practical skills, helping teachers to better understand and apply differentiated strategies. Also, schools may change student evaluation techniques and implement a multi-method evaluation system. Finally and most importantly is the strengthened communication and cooperation between schools and parents for the mutual goal of students' development. Therefore, students will have a better learning environment and support.

In general, to solve the issues of differentiated instruction in high school aerobics teaching, schools, teachers, parents and other participants should collaborate. The upgrading of teacher's training, the reforming of student evaluation methods, and the optimization of the teaching environment can certainly help enhance the quality and effectiveness of high school aerobics teaching and promote students' holistic development.

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