

# Innovative Teaching Models for Endurance Quality for Female Students in Vocational Education under Modern Educational Concepts



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**Abstract:** With the deepening of the concept of equality in education, physical education for girls in higher vocational colleges is gradually gaining more attention. However, girls' participation and endurance quality in sports activities are often underdeveloped, partly due to the disconnection between traditional teaching mode and modern education needs. Modern educational concepts emphasize individualized teaching and gender equality, requiring educators to not only provide skills training but also to stimulate students' intrinsic motivation and provide them with opportunities for all-round development. In this context, the endurance quality teaching model for senior girls is facing an important need for innovation. Based on this, this paper aims to explore the innovative path of endurance quality teaching for female students in higher vocational colleges and universities, including increasing the investment in sports facilities, developing comprehensive training courses, updating teachers' educational concepts, and enhancing students' motivation to participate. Through these measures, not only can the sports participation and physical performance of female students be improved, but also the comprehensive development of female students and the realization of gender equality education can be promoted.

**Keywords:** modern education concept; senior girls; endurance quality; teaching mode

## Introduction

Against the background of the widespread promotion of modern education concepts, more attention in school education has shifted from simple knowledge transfer to the cultivation of students' comprehensive abilities. Especially in higher vocational colleges and universities, the goal of educating people emphasizes not only cultivating students' vocational skills but also focusing on the improvement of their comprehensive quality, which includes the quality of sports. For female students, the cultivation of endurance quality is particularly important, which is not only related to their health and physical fitness but also an important source of their self-confidence and self-efficacy, which implies that higher vocational colleges and universities need to develop more inclusive and targeted teaching and

learning strategies to inspire female students to participate in and fully utilize their sports potential. Therefore, exploring innovative endurance quality teaching models suitable for higher vocational female students is not only in line with the requirements of modern education but also a key pathway to realizing educational equity and promoting students' all-around development.

## 1. The Significance of the Innovation of Endurance Quality Teaching Mode for Higher Vocational Girls under the Modern Education Philosophy

### 1.1 Improve girls' physical health and psychological well-being

Endurance training improves overall physical fitness by enhancing cardiorespiratory function, muscle strength, and endurance. For senior girls,

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regular participation in aerobic dance, yoga, and other activities can not only effectively increase the heart rate and strengthen the function of the heart and lungs, but also increase muscular endurance and flexibility, and all-round physical exercise can help to reduce the risk of chronic diseases such as heart disease and diabetes, and also improve blood circulation and body metabolism, and promote the maintenance of a healthy body weight (Jin , 2019). Endurance training is not only a physical activity but also an effective way to release stress and improve mood. By participating in team sports or interesting fitness classes, senior girls can release stress in life and study and reduce anxiety and depression. In addition, physical movement during endurance activities can promote the secretion of endorphins in the brain, which helps to enhance the sense of self and happiness.

### **1.2 Motivate girls to break through as well as strengthen self-confidence**

Endurance training is a kind of activity that challenges the individual's limit, through continuous physical exercise, students can gradually understand their limit in physical ability. For example, in running or aerobic dance, continuous progress and reaching new milestones (e.g., running farther, holding on longer) can make it clear to students that they are progressing and strengthening, and this experience feeds directly back into their understanding of their abilities, thus enhancing their ability to understand their potential. Sustained endurance training improves physical form and enhances fitness, which often has a positive impact on students' body image. In modern society, body image is often closely related to self-esteem, and for girls in particular, endurance training helps to build a positive self-image by improving physical health and appearance, thereby increasing self-esteem and self-confidence (Liang & Shi, 2018).

### **1.3 Cultivate girls' teamwork and social skills**

Group endurance activities such as relay races, group running, or team athletics require effective communication between participants, who need to discuss strategies, assign tasks, and continuously

exchange information during the activity, this communication process trains students to express their ideas and listen to others, which are indispensable skills in the workplace and daily life. In team endurance training, the common goal is that individuals must collaborate with others and work together to achieve a goal. This activity will help students understand the role and importance of each member of the team, learn how to support each other and share successes and failures. Students learn to put the interests of the team above the individual, and also learn by doing how to think quickly and work collaboratively to solve problems, an ability that is highly valued in all career fields.

### **1.4 Catering to gender equality and diverse educational needs**

In the traditional view, sports activities are often regarded as the domain of men, while women are considered to be less capable in certain sports. This gender stereotype can be effectively broken by designing special endurance quality programs for senior female students, such as training that focuses on physique building and physical challenges. By participating in these trainings, female students will not only be able to demonstrate their athletic abilities, but also enhance their self-confidence and gradually change society's inherent perception of women's abilities in the field of sports. Through endurance training designed for women, more girls can also be motivated to actively participate in sports activities, increasing their visibility and influence in the field of sports, this participation not only promotes women's health but also provides a platform for women in sports and even wider social activities, promoting the practical realization of gender equality (Wei & Tang, 2017).

## **2. Problems in the Teaching of Endurance Quality of Higher Vocational Girls at this Stage**

### **2.1 Deficiencies in sports facilities and resources**

The financial budget constraints faced by higher vocational colleges and universities are an important reason for the insufficiency of sports facilities and resources. Due to the limited funds, the schools are

unable to carry out the construction of new facilities or the maintenance and upgrading of existing facilities. Common sports facilities such as running tracks and gymnasiums often lack equipment specifically designed for women, such as strength training equipment that is not suitable for women or fitness equipment that is not adapted for women's body types. As well as the lack of private spaces specifically for female students, such as changing rooms and bathing facilities, which can affect the comfort of students participating in high-intensity sports activities. Existing sports facilities are often poorly maintained, with aging or damaged equipment not being repaired promptly, which affects the safety and effectiveness of the facilities. Some facilities are unable to meet the needs of modern physical education due to a long-term lack of necessary upgrades, such as worn-out running tracks and outdated fitness equipment.

## **2.2 Unitary curriculum design content and training methods**

Some physical education teachers lack sufficient opportunities to update their education in their professional development and fail to follow up on the latest physical education teaching concepts and methods, resulting in teaching content and methods remaining at the traditional level. For example, physical education courses usually focus on traditional endurance training programs, such as long-distance running or swimming, which are beneficial for endurance enhancement but do not meet the interests and physical conditions of all students, especially for some female students (Zhao, 2022). There is a lack of innovative and fun physical activities, such as aerobics, dance, or group exercise, which can better motivate girls to participate and interact socially. Teaching methods tend to take a traditional, directive approach to training, which lacks interactivity and participation and is not conducive to active learning and experience. There is a lack of adaptive training for students of different fitness levels to meet the specific needs of individual students, resulting in some students feeling too challenged or not challenged enough.

## **2.3 Gender bias in physical education for female students**

Socio-culturally entrenched concepts of gender roles often influence the thinking of teachers and educational decision-makers, and these concepts assume that women are naturally weaker than men in terms of physical fitness, and therefore should also be reserved in physical training. In some higher vocational colleges and universities, physical education teachers intentionally or unintentionally reduce the intensity and requirements of endurance training because of preconceived notions about female students' physical ability and endurance, resulting in female students receiving insufficient training to adequately improve their endurance qualities. Alternatively, teachers were more inclined to schedule low-intensity physical activities for girls, such as jogging rather than speed running, or more stretching activities rather than strength training. The general underestimation of girls' physical fitness and endurance ignores the high potential and individual differences that girls exhibit in physical activity, and this practice can prevent girls with high physical potential from being appropriately challenged and developed (Yang & Wei, 2021).

## **2.4 Lack of interest in regular physical activity among students**

If the content of physical education lacks interest and relevance, or if teachers fail to effectively communicate the benefits of physical activities, students may not be able to easily build interest and buy-in to these activities. Lack of interest in physical education courses and endurance training among senior female students is manifested in low participation, poor attendance, and low motivation shown in the courses. In endurance training, which requires intense physical commitment, girls showed avoidance or negative attitudes, such as choosing not to participate or participating with minimal effort in running or group athletic events. In addition, senior female students fail to understand the long-term significance of endurance training for health and personal development and thus lack intrinsic motivation for sustained participation in physical

activity, coupled with the fact that students' attitudes towards physical activity may be limited to coping with the requirements of the curriculum rather than being motivated by the pursuit of health or personal achievement.

### **3. Innovative Path of Endurance Quality Teaching Mode for Higher Vocational Girls under the Concept of Modern Education**

#### **3.1 Increase the investment in sports facilities to maintain the diversity and effectiveness of training**

By providing diversified sports facilities and activities, the different interests and physical fitness needs of senior girls can be better met. Diverse training options can attract more girls to actively participate and increase their overall interest and enthusiasm for sports activities. High-quality and diverse sports facilities enable all students, especially female students with diverse physical abilities and interests, to find suitable training options for themselves, and this inclusiveness and accessibility are also very important in the modern concept of education and contribute to the realization of educational equity (Du, 2020). The investment should take into account the diversity of facilities, including not only traditional sports such as running tracks and gyms but also dance studios and yoga studios suitable for female students, etc. Diverse configurations are needed to meet the fitness needs and preferences of different female students.

Institutions can organize questionnaire surveys and group discussions to collect the needs and interests of students, especially female students, in sports activities. The survey includes preferred sports programs, the use of existing facilities, and facilities that female students think are missing. Experts in sports facility planning and physical education were then hired to develop a preliminary plan for facility investment and upgrading based on the survey results and the actual conditions of the school. New yoga and dance studios will be added to the gymnasiums, equipped with equipment designed specifically for women, such as fitness and aerobic equipment

suitable for female use, and locker rooms and bathing facilities will be improved to increase privacy and safety, encouraging girls to be able to use them conveniently after participating in high-intensity training. Tracks and open sports areas should also be upgraded to ensure safety and suitability. Physical education teachers should be retrained in the effective use of new facilities and how to design more inclusive and attractive programs for girls.

#### **3.2 Develop comprehensive training programs and innovate training content and methodology**

By innovating teaching content and methods, combining traditional endurance training with modern fitness trends, and introducing aerobic dance, Pilates, cross-training, etc., the interest and participation of the program can be significantly increased, attracting more girls to actively participate. For example, by providing beginner courses for weaker students and more challenging training for stronger students, such stratified teaching can effectively promote the participation and progress of all students. It should be noted that the design of the courses should be centered on the needs and interests of the students, with due regard to their physical conditions and health status, to ensure that each student can derive maximum benefits from the courses.

Yoga and Pilates are popular activities among women, which not only help to improve physical flexibility and core strength but also enhance mental balance and reduce stress. Teachers offer different levels of classes depending on the student's level of proficiency in yoga, from basic asanas and breathing techniques (Pranayama) to more advanced meditative and mind-body integration exercises. Yoga classes with specific themes such as "Yoga for Stress Relief" and "Yoga for Menstrual Relief" are designed to meet the specific needs of girls with different physical and psychological demands. Interactive sessions are included in the courses to allow students to share their feelings and experiences, and teachers will adjust the teaching progress and content according to the feedback. The Pilates program focuses on strengthening the core muscles, improving body stability and postural control, and is suitable for girls to strengthen their abdominal, back,

and pelvic floor muscles. The use of Pilates machines (such as Reformer) and machine-less training can be combined to make the course richer and more adaptable to different training needs. It is also taught in a group setting to ensure that each student receives individualized instruction to enhance learning.

### **3.3 Increasing gender awareness and recognizing women's potential in physical activity**

When teachers realize that women also have the potential to excel in all types of physical activity, they are more likely to design lessons that are both challenging and in line with girls' interests, thereby increasing girls' participation and athletic performance. Physical education is also an important part of promoting students' physical and mental health, and by increasing girls' self-confidence and competence in physical activities, it can help students present a better version of themselves in their academic, professional, and social lives (Guo, 2019). Higher education institutions should organize regular educational training focusing on gender equality and women's roles in sports, which can be conducted by gender research experts or physical education specialists, covering the latest research findings, case studies, and practical teaching strategies. Actively develop a clear gender equality policy to ensure that all physical education curricula and activities comply with the principles of gender equality, including the provision of equal resources and opportunities and the reflection of gender sensitivity in curriculum design and teaching methods. It should also advocate and promote a gender-equal campus culture, and enhance awareness of the potential of women in sports by organizing public lectures, seminars, and publicity activities. Successful cases and examples of women in sports are displayed on and off campus to inspire students and change traditional gender perceptions. Teachers themselves should take the initiative to participate in training on gender equality and physical education to update their educational concepts and teaching methods, including learning how to effectively address gender issues in teaching and how to motivate and develop female students' participation in sports activities. When designing physical education curricula and activities, they should also take into account women's physiological characteristics and psychological needs, and design teaching contents and activities that are more inclusive and supportive of female students.

### **3.4 Enhance students' motivation to participate and increase the personalization and practicality of the courses**

Students are more likely to participate actively when the curriculum content meets their interests and needs, which not only enhances motivation to learn but also improves sustained participation in physical activity. Individualized learning plans can be tailored to a student's specific abilities and rate of progress so that each student can maximize development at his or her level, thereby improving overall learning outcomes (Zeng & Yang, 2024). Therefore, teachers' curriculum design must be student-centered, with course content and teaching methods designed from the perspective of students' needs, interests, and life experiences, including regular communication with students to understand their feedback and adjust the curriculum accordingly. Provide a variety of curriculum content and activity options to allow students to choose the programs that best suit their interests and fitness levels. For example, introduce elective and modularized curriculum in physical education courses.

Institutions can design different levels of achievement badges for students based on their frequency of participation and performance in sports activities. For example, students who participate in 10 team sports activities can earn the "Teamwork Badge", and those who complete individual training tasks of a certain intensity can earn the "Individual Challenge Badge", etc. The badges not only symbolize honor but can also be exchanged for small gifts or extra credits. Regular health challenges, such as the "January 10,000 Steps Challenge" or "Gym Challenge," encourage students to participate and track their activities regularly. Successful students can post their results on the school's Physical Activity Board, win prizes, and receive recognition at the end-of-year Sports Awards Ceremony. Sports Awards Ceremony. A student athletic committee could also be formed to plan and organize athletic activities on campus. Members of the committee would be volunteered by students and selected through a brief interview, and the committee would be responsible for surveying students about their athletic interests and planning activities based on the results of the survey, such as dance classes, yoga sessions, basketball tournaments, and so on. Feedback on sports programs and activities is also

collected through regular student meetings or online surveys, and the types and times of activities are adjusted based on the feedback to ensure that they meet the needs of the majority of students.

### Conclusion

In conclusion, it is a complex but necessary task to innovate the teaching of endurance quality for senior girls under the modern education concept. The specific measures proposed in this paper can not only improve girls' sports participation and health but also help them build positive self-perceptions and enhance self-confidence. In addition, these measures help build a supportive and inclusive learning environment, promote gender equality, and ultimately realize the social function and humanistic value of education. In future educational practice, teachers need to continue to explore more innovative paths to adapt to changing educational needs and social development.

### Conflict of Interest

The authors declare that they have no conflicts of interest to this work.

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