

Building a "Four Layers and Seven Dimensions" Teaching Quality Assurance System: a Research on Construction Modes

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Abstract. Objective: To study the construction mode of "four layers and seven dimensions" teaching quality assurance system. Methods: First of all, the concept of teaching guarantee system is explained, and the problems of lack of attention to school teaching and lack of equipment construction are analyzed. This paper expounds the importance of constructing school teaching guarantee system from meeting the development of The Times and enhancing students' interest in learning. This paper puts forward the strategy of constructing the school teaching quality assurance system from four aspects: innovating the teaching form, establishing the people-oriented teaching concept, improving the teaching environment and perfecting the construction of teachers. Results: The strategy of constructing the school teaching quality assurance system. Conclusion: The study of "four layers and seven dimensions" teaching quality assurance system is necessary to gradually improve the teaching quality of schools.

Keywords: school; teaching quality; assurance system; construction mode

1 Introduction

The Education Law emphasizes the need to cultivate specialized talents with creativity and strong practical skills. Against the backdrop of the rapid development of the world economy and technology, along with the continuous deepening of China's employment system reform, society requires higher quality talents. Under this premise, it is essential to explore methods for cultivating talents, identify an effective path for talent cultivation in new situations, and continuously enhance the employment rate of professional talents. This would ultimately achieve the goal of education and learning.

2 Overview of the "Four Layers and Seven Dimensions" Teaching Quality Assurance System for Science Subjects

The design principle of the curriculum system's educational tasks is to consolidate the foundation, improve the subject, integrate and innovate scientifically. The course tasks are divided into four levels in the vertical structure, including the theoretical-practical teaching level, professional knowledge-practical teaching level, comprehensive practice teaching level, and scientific innovation experimental teaching level. Each level of basic knowledge structure

contains basic knowledge points in fields such as general education, professional education, innovation knowledge, and entrepreneurship, achieving the goal of combining theory and practice in teaching and integrating the "public foundation" → "disciplinary foundation" → "professional" → "professional and innovation" stages of comprehensive talent training [1]. On the basis of retaining the necessary verification experiments for this course, the proportion of comprehensive and design experiments is increased to systematically cultivate students' basic knowledge and skills. Innovative experiments can also be appropriately developed to better inspire students' creative thinking. To solve the problem of the current "one-to-one" closed mode of professional course experiments still remaining in theoretical courses, this project aims to break down the barriers between disciplines, construct a system connection between professional courses, and integrate the experimental contents within and between disciplines to achieve a reasonable allocation of related basic theories for verification, design, and comprehensive experiments [2]. Fully utilizing practical resources inside and outside the school, the recognition internship is used as an in-school mode, and the graduation design is used as an outside practical project to organically combine the two [3]. This achieves the goal of improving students' understanding of engineering in teaching practice. From production practice to graduation practice, the emphasis is on the integration of application and creativity. Students can be arranged to practice at off-campus practice bases in a centralized or group-based manner, as shown in Figure 1.

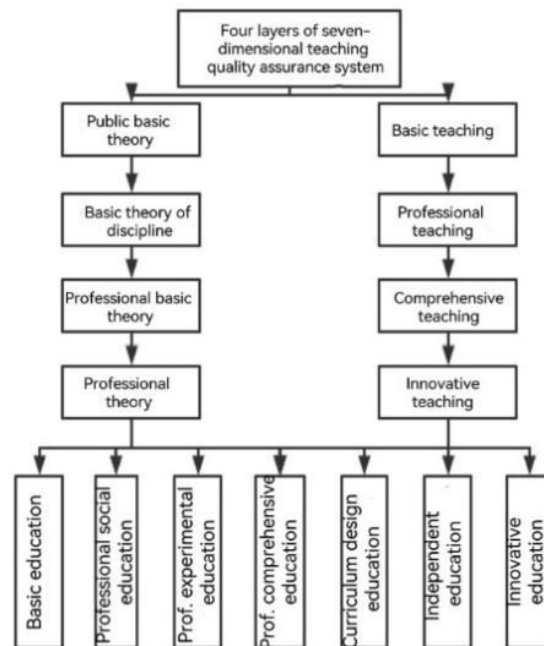


Fig. 1. Construction mode of the "four layers and seven dimensions" teaching quality assurance system

3 Significance of Building the "Four Layers and Seven Dimensions" Teaching Quality Assurance System for Science Subjects

3.1 In line with the development of the times

The construction of a school teaching assurance system is in line with the development of the times. According to the definition of the role of school courses in the "National Curriculum Teaching Guidelines for General Schools" document, the important function of teaching has been clearly defined [4]. The development of education in China is unified with the development of the times and social progress. In the context of the times, education only played its fundamental educational role. With the rapid development of China's social economy, the requirements for education have also changed. Education's mission to cultivate talents for the country is still the focus of education in practical work today [5].

3.2 Enhance students' interest in learning

The application of the school teaching assurance system in schools has greatly promoted the development of school teaching. Adding elements that interest students to the evaluation system forms a teaching mode that combines happiness and effectiveness. Students in schools face great learning pressure and cannot relax their tense nerves during class. Some students may even choose to study other subjects during class. Therefore, establishing a happy learning system is very important for teaching. Only by enhancing students' interest in learning can teaching quality be effectively improved. Happiness also hopes that students can release learning pressure, feel the joy of sports, and satisfy and develop their body and mind through classes, which is of great significance in stimulating students' participation in classes and cultivating lifelong abilities and habits [6].

4 Strategy for Building the "Four Layers and Seven Dimensions" Teaching Quality Assurance System for Science Subjects

4.1 Establishment of Science Teaching Objectives System

Under the influence of China's education policies, politics, economy, science and technology, and other factors, schools across the country are constrained by various factors, such as their strategic position in China's higher education system, educational philosophy, and teaching conditions. While establishing a responsibility management system for science teachers, on the one hand, specific tasks and phased tasks should be combined. When adhering to national policies, the political, economic, and cultural trends of the country should be considered. At a specific time, the development trends of the country's politics, economy, and culture, as well as the special needs for the talents to be cultivated by the school, should be taken into account. To ensure the efficient operation of teaching objectives, the most important thing is to make the phased goals specific, that is, to determine the specific sub-goals that each goal needs to achieve. Strengthening the foundation construction of teaching quality is the core content of the school's teaching quality assurance system [7].

4.2 Establishment of Science Teaching Evaluation System

The construction of a school's education and teaching evaluation system affects the quality of education and teaching, and the factors affecting it are multidimensional. Every aspect of the education and teaching process is evaluated as shown in Table 1.

Table 1. Student Evaluation Activities Conducted by the School

Evaluation of the project	Evaluation indicators	Total point	Score
Ethics	Strong sense of responsibility, love and patience for students	20	
	It is both teaching and educating, paying attention to the education and guidance of students, and leading by example.	20	
	Observe teaching discipline, do not arrive late or leave early	20	
Teaching the basics	Be a teacher, have enthusiasm for work, and have a proper appearance	20	
	Clearly organized and logical	20	

4.3 Student Aspect

The scope of educational objectives is too narrow. With the advent of the knowledge economy, the demand for talents is becoming more diversified and comprehensive. However, the current learning objectives of college students are still simply pursuing academic progress, ignoring the comprehensive development of individuals, as shown in Table 2. In addition, many schools currently do not have a clear positioning of their educational objectives, blindly follow the trend, implement a one-size-fits-all approach, and confuse teaching objectives with training objectives, which are not conducive to ensuring teaching quality [8].

Table 2. Teaching quality assurance monitoring points and specifications

Student development						
Talent development				Employment		
Classroom teaching				Practical training	Graduation project	Quality of employment
Curriculum	Staffing	Teaching process	Classroom assessments			

5 Conclusion

Through an in-depth exploration of the school's teaching quality assurance system, this article finds that there are problems with the lack of emphasis on teaching in schools. By innovating

teaching methods, establishing a student-centered teaching philosophy, improving the teaching environment, and enhancing the construction of the teaching staff, an effective teaching quality assurance system can be established in schools, making teaching in line with the development of the times, enhancing students' interest in learning, and promoting their comprehensive development.

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