

# Exploration on Teaching Adaptability of Construction Engineering Technology Specialty in Higher Vocational Colleges under the Background of Industrialization

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**Abstract:** Constructing and improving the curriculum is the key and center to improve the quality of education. For the purpose of professional education, this paper will carry out in-depth exploration and evaluation, and design a new teaching mode to improve the key skills in the workplace. The new teaching system emphasizes on improving students' vocational skills and occupational quality, and attaches importance to the educational concept of taking workplace work flow as guidance, taking vocational skills as the center, and taking professional practice skills and on-the-job internship training as the core link. Therefore, this paper briefly analyzes secondary vocational English teaching strategies with the aim of cultivating professional quality, so as to put forward specific solutions.

**Keywords:** Occupational quality; Secondary vocational English; Teaching strategy

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## Introduction:

The rapid progress of modern construction projects not only provides a good space for the progress of the technical specialty of construction projects in higher vocational education, but also causes some problems. Therefore, how to enhance students' ability to innovate, hands-on and ability and ability to obtain employment and start an undertaking in this specialty has become the main issue of higher vocational education. This paper focuses on the challenges faced by the teaching mode of engineering practice in the construction engineering technology specialty of higher vocational colleges at this stage, and gives the appropriate solutions.

## 1. Training Objectives and Characteristics of Construction Engineering Technology Specialty in Higher Vocational Colleges

The core mission of higher vocational colleges is to provide excellent skills and practical abilities in the fields of manufacturing, service and business. The specialty of construction engineering technology is regarded as the core course of higher vocational education, and also the key specialty of construction industry. The purpose of the training is to create technical and practical professionals who can meet the needs of the economic construction of our country, improve Enhance students' morality, knowledge, body, and aesthetics, have working skills and professional technologies related to the field of construction engineering, and also meet the technical and management needs of construction sites. In addition to having a deep understanding of the basic concepts of the profession, those who study construction engineering technology should also have excellent engineering operation skills, rich basic knowledge of construction engineering, and excellent teamwork and communication skills. In order to cultivate such talents with advanced practical ability, higher vocational education institutions must make appropriate adjustment to the course content of construction engineering technology specialty. The core of teaching should be the application ability and basic quality of construction engineering technology, and attention should be paid to engineering practice teaching, so as to improve the practice and innovation ability of students majoring in construction engineering technology.

## 2. A Brief Analysis of Secondary Vocational English Teaching Strategies with the Aim of Cultivating Professional Quality

## **2.1 Strengthen the construction of practical training bases for construction engineering technology Specialty in vocational colleges**

When teaching construction engineering technology courses, the external training place will directly affect the effectiveness of the actual operation of the project. Higher vocational colleges need to pay attention to and strengthen the construction of off-campus practice and training places, and build a series of relatively stable off-campus training places according to the core concept of win-win, so as to provide engineering practice education for students majoring in construction engineering technology. However, in the process of selecting training sites, it is necessary to think comprehensively and choose suitable training sites according to the characteristics of various courses, so as to ensure that students majoring in construction engineering technology can fully receive engineering practice education. In addition, vocational colleges also need to pay attention to the establishment of their own engineering practice education places. For example, regular allocation of funds to these places is used to continuously improve the practical operation and training environment of students. Appropriate allocation and optimization of existing resources can fully develop practice places and laboratories of various professions. Making timely updates on the latest processes, technologies, standard charts, new rule guides, and related literature materials is to ensure high-quality support for engineering practice education in vocational colleges' construction engineering technology specialties. In recent years, the reform of engineering practice teaching of construction engineering technology specialty in many higher vocational colleges has achieved remarkable results. At the same time, the integration of "work and study" in the practical training bases inside and outside the college has also made greater progress.

## **2.2 Rely on industry and enterprises to build school-enterprise cooperation guarantee mechanism**

Under the guidance and cooperation of industry supervisory bodies, the Department of Civil Engineering is actively creating practice venues and striving to invite experts in related fields to teach in the College. In addition, it is also possible to establish a steering committee specifically responsible for construction engineering technology to provide comprehensive guidance and suggestions in the whole process of specialty setting, training objectives, teaching programs, practical training, graduation design, graduation employment, teacher training and other links, so as to jointly cultivate high-quality and high-level technical application talents with innovative thinking and ability. The specialty has built a solid off-campus internship base to create an excellent internship atmosphere for students, and provide them with a high-quality living, learning and activity environment. In addition, there are professional part-time teachers responsible for teaching professional courses, guiding students to practice in employment units, complete graduation papers, and conduct graduation internships. The two departments share responsibility for the quality of talent development. In order to realize the three directions of school-enterprise cooperation, a special management team of industry-university cooperative education has been set up in the college, whose responsibility is to ensure the corresponding support of cooperative education. Within the system, we have set up a working group of colleges and enterprises to carry out education and teaching tasks. At the same time, we also set up a joint teaching and research office with the participation of professional teachers from the college and engineering and technical personnels from the enterprise, which is responsible for specific teaching and student management tasks.

## **2.3 Actively carry out engineering practice teaching, and make strict requirements on students**

The implementation of engineering practice teaching can effectively enhance students' practical skills, integrate practical operation and theoretical knowledge, and then cultivate students' ability to analyze and solve problems as well as rigorous scientific spirit, so that they can better adapt to their career needs after graduation. When conducting practical operations in construction engineering technology courses, students need to be encouraged to understand and engage in this process from a psychological perspective. They need to actively participate in this process in order to maximize their enthusiasm and innovative spirit. For example, the teaching task of engineering practice is entrusted to the management of special teaching and research institutions, and special instructors are designated to conduct in-depth review, guidance and cooperation on the content and process of practice, and at the same time, the training base is allowed to send personnel with higher qualifications to provide on-site guidance. Some professional and technical personnels with rich experience, such as specialized design units, construction enterprises and scientific research units can be hired by higher vocational colleges as a part-time internship or training instructors, and then form a full-time, professional and part-time construction engineering practice education team. Once the practical course in construction engineering technology is completed, students are required to upload their practice logs and practical reports so that they can make detailed records of their work experience, insights and gains. Next, according to the performance of the students in the practical operation stage and the real results, the instructor of the practice base will make an assessment, and then submit it to the relevant supervision organization for seal. In construction engineering technology courses at higher vocational colleges, teachers need to set up an evaluation team to calculate scores based on the performance of college students during the project implementation phase, and then classify them into four grades, excellent, good, qualified, and

unqualified, according to the scoring order, and finally incorporate these scores into their academic outcomes.

## **2.4 The construction of teaching environment has achieved significant results, and the management of practical teaching links has been strengthened**

The professional institutions of construction engineering technology cover building materials laboratory, mechanics laboratory, civil engineering laboratory, surveying laboratory, drawing room, budget training room, bidding simulation office, CAD room, building information room, CAD printing room and spray sketch room. This specialty has the skills to handle projects such as building quality inspection and civil engineering test reports, and is also equipped with a variety of training environments, such as providing outdoor training space for masonry and painting personnel and training environments for rebar, bracing and model making personnel. In addition, this specialty also has the ability to provide students and the society with a variety of vocational and technical assessment services. While improving the practical education environment of the college, we also maximize the use of various social resources to enhance the establishment of our extracurricular practice places in accordance with the needs of the cultivation of students' professional skills. In order to ensure that students can get technical support and safety in the off-campus training base, we have set up corresponding protection strategies in the management and operation process, and have reached cooperation agreements with enterprises. Before starting the internship, we will plan a specific internship program for them and provide corresponding safety protection measures. At the same time, we have clearly defined the role of the instructor and their job responsibilities, and have clearly defined the internship tasks of the students. In addition, we have established strict discipline and the way in which results are assessed. All teachers are required to complete the actual teaching log, and all students are required to complete the internship diary and the internship report. At the end of the internship, the students will have a rigorous graduation thesis defense, and invite mentors from inside and outside the college to discuss together to summarize and find existing problems, so as to continuously improve the quality of the internship. In this process, the management of internship teaching has been enhanced, so that students can seek solutions during the internship according to their own tasks and solve various problems they encounter in practical operation.

### **Conclusion:**

In short, the progress of China's construction industry is closely related to the quantity and quality of construction engineering and technical talents. Therefore, the construction engineering professionals cultivated by higher vocational education must be able to meet the needs of China's current rapid development. Higher vocational colleges should take cultivating talents with advanced technology application ability as the educational goal, improving students' professional technology application ability and basic quality as the core, and theoretical education and engineering practice education as the main content. And through school-enterprise cooperation and industry-university integration, an education model and education system with professional characteristics will be created to cultivate more high quality, high level of professional and technical application talents for China's construction engineering industry.

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