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The Infiltration and Practice of Engineering Quality for Specialty Cultivating in Environmental Engineering

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Abstract
It is determined the future of China's environmental protection for the quality of environmental engineering talent. By exploring the characteristics and contents of the engineering quality, analyzing the requirements of engineering quality of environmental engineering students, it is required to specify the objectives of the project, to reform the teaching content and methods, to carry out extracurricular research activities, to strengthen the students quality of the engineering quality education. In order to cultivate more high quality compound talents, which is needed by environmental engineering for strengthen the students' engineering quality education
Keywords: Environmental engineering, Engineering quality, Teaching practice

1. Introduction

Nowadays, education plays an important role in economic development, social progress and technological innovation, which has been highly recognized by all sectors of society. As China has developed into a major strategic opportunity period, the modernization of China will be accelerated greatly, and the demand for higher education for higher education will be increased, especially for the innovation of the talented engineering talents[1-3]. Institution of higher learn needs to attach great importance and strengthen the students' engineering quality education, and train the students to solve the problem of practical engineering, so as to meet the need of socialist modernization construction in the new century[4-6].

2. Overview of engineering quality

Engineering quality refers to one of engineering professional technicians engaged in engineering practice, which is the potential and adaptability for engineering practice activities. Characteristics of engineering quality: first, quick thinking, correct judgment and ability to find problems; Secondly, the integration of theoretical knowledge and practice; Third, the technical ability to turn ideas into reality; Fourth, the ability to make comprehensive use of resources, optimize the allocation of resources, protect the ecological environment, realize the sustainable development of engineering construction activities and achieve the expected objectives. Engineering quality with strong flexibility and creativity, which is basically a practical operation guided by correct thinking. Engineering quality mainly includes the following contents: first, extensive engineering knowledge quality; Second, good thinking quality; Third, engineering practical operation ability; Fourth, the quality of flexible use of human knowledge; Fifth, solid quality of methodology; Sixth, the quality of engineering innovation. It is not that simple and comprehensive knowledge that the engineer quality is formed, but a complicated and progressive course, integrate the knowledge of different disciplines and the quality elements into the project practice, so that the quality elements are integralize, integrated and targeted in the engineering practice. The cultivation of students' engineering quality, which is reflected in the whole course of education, is permeated to every link of the teaching, and the engineering quality of different engineering disciplines, with different requirements and different engineering environments, shall be cultivated in a comprehensive way for local conditions, appropriate requirements for each individual, and the differences in environment and conditions.

3. Engineering quality requirements for environmental engineering majors

Environment engineering is an interdisciplinary subject related to civil engineering, chemical engineering, biology, meteorology, management and sociology, through the evaluation of the impact of human production and social activities on the environment, environmental pollution control, protection of environment and resources by specific engineering, planning and management measures, environment and resources, and social, economic and environmental coordination. After China's entry into WTO, the environmental engineering industry is faced with huge business opportunities and challenges. Whether it is huge business opportunity or fierce competition, it is required to be familiar with engineering technology, pollution control process and equipment, understand the regulation and policies, manage the management, focus on the ecological environment, pay attention to the people's health and life safety, and have the high-quality composite and application talents with innovative ability. As the state pays more attention to environmental protection and law enforcement, more and more enterprises attach great importance to environmental construction and management, especially large and medium-sized

traditional enterprises with serious pollution, such as steel, metallurgy, petrochemical and machinery, have an increasing demand for students majoring in environmental engineering. Most graduates will move to the first line on pollution control of production enterprises and solve the practical problems of production. This type of employment determines that education of the environmental engineering profession must be closely combined with the production practice, which will strengthen the students' cultivation of engineering quality, so as to make them more adaptable.

At present, the state is very serious about environmental systems engineering and environmental pollution prevention and research, and it's the best way to achieve environmental, economic, social, and social efficiency. Therefore, the cultivation of engineering quality of environmental engineering students should start from the following four points.

(1)Provide students with a solid theoretical foundation for their majors

Students should master basic theoretical knowledge of water, gas, sound and solid waste prevention, water supply and drainage engineering, environmental planning and resource protection.

(2) Enable students to use theoretical knowledge flexibly

Students to make a pollution control has the ability of engineering design and operation management, develop the ability of environmental planning and environmental management, and environmental engineering aspects of the new theory, new technology and new equipment research and development ability.

(3) Enable students to have the awareness of engineers and transfer ability

It is that consciousness of the engineer that students have good sense of responsibility, cost consciousness and market awareness when they undertake specific engineer tasks. Professional migration capability is mainly defined by the engineers who have received higher education's ability to acquire knowledge and rapidly transform their careers in an era of increasing occupational change.

(4)Enable students to have engineering practice ability and the ability to communicate and cooperate with others. Students who have received education should have the ability to make technical decisions, handle multidisciplinary problems, handle practical operations, mobilize human resources and work with others.

4. How to improve the engineering quality of environmental engineering students

(1) Guide students to correctly understand and understand the training objectives of environmental engineering professionals and give play to their subjective initiative

Our new student of environmental engineering has made a professional education after school, so that the students know and understand "thick base, wide caliber, strong ability, and highly qualified", and introduce the status of environmental engineering in the country, foreign environment, the ability, quality, knowledge of the future engineer, etc. Through education, students can learn about this major, love this major, cognitive engineering, and understand what they need to learn and what they will do in the future. Improve students' interest in learning this major and maximize their subjective initiative.

(2) Combining with the new technology and engineering cases at home and abroad, the teaching content of specialized courses is enriched

In terms of teaching content of specialized courses, it is necessary to track the development of pollution control technology theories at home and abroad, increase the information of classroom teaching content, improve the efficiency of teaching, and stimulate students' interest in learning and enthusiasm for learning. At the same time, the content of the teaching can be further systematized in order to make the teaching content more systematic, so as to facilitate the students to understand the subject frontier and broaden the knowledge surface of the students. In the course of professional basic theory, the engineering case, which is closely related to the content of the classroom teaching, is interspersed with the engineering case closely related to the content of the classroom teaching, and in case of the condition, the part of the classroom teaching can be directly moved to the actual project site interpretation, the theoretical contact practice is increased, the students' awareness is increased, and the ability of the student to solve the problem effectively is improved.

(3) Implement the comprehensive guidance system for undergraduates, and encourage students to participate in extracurricular research activities

Extracurricular research activities are an important part of education innovation and students' engineering quality training. It can improve that comprehensive ability of student by implementing the system of integrative guide system for undergraduate students and teaching their teaching. From the third year, students were divided into the name of the teacher laboratory, and the teachers were responsible for guiding the students' professional learning, college life, graduation design, employment plan, etc., and participating in the scientific research of the teacher. In the process of participating in the research work of teachers, students can further understand the major, understand the application process of theoretical knowledge, and deepen their understanding of the society and national conditions, which is of great benefit to enhancing their dedication and sense of responsibility. At the same time, students can also deeply feel teachers' generosity, earnest and responsible work attitude, noble moral sentiment, and team spirit of scientific research groups, which are very important for them to reduce blindness,

enhance self-consciousness, and accurately evaluate and know themselves. In addition, students participate in practical production process, not only can consolidate and deepen the knowledge, but also makes the knowledge structure and the mastery of knowledge is expanded from two aspects, such as deep and wide, especially the important thing is to expand their knowledge, make the students' subjective initiative fully, personality and creative development, greatly cultivate the students' engineering quality and scientific literacy. For example, the teacher gives a small project to the student, and the student designs the experimental steps by learning to check the database and literature materials, and finally solves the problem under the guidance of the teacher. In this process, students learn to explore themselves and learn independently. In this process, a whole set of experimental habits and scientific research thinking has been formed gradually, which not only strengthens their thinking ability, but also makes them feel the charm of scientific research.

5. Conclusion

The environmental engineering education is a mission for the Chinese environmental protection program to nurture highly qualified engineering professionals, and the quality of environmental engineering talent will determine the speed and progress of the future of China's environment. Therefore, it is an important content of education in modern higher education to education students' engineering quality and enhance their engineering practice ability. In the future, we will continue to create conditions to increase the opportunity for students to participate in engineering practices, and to develop more high-quality, multi-talented people who need more environmental engineering.

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