

Based on the Construction of First Class Civil Engineering Specialty Group in Local Universities

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Abstract: The comprehensive evaluation of undergraduate civil engineering specialty in colleges and universities of Yunnan Province in 2018 is C +, which won the national first-class specialty construction site in 2019. This major focuses on cultivating high-quality application-oriented talents with innovative spirit and practical ability, and takes into account the cultivation of interdisciplinary, research-oriented, innovative and entrepreneurial talents. Based on one belt, one road and one western region, Yunnan will serve the development of the regional economy and civil engineering. The pillar industry of the national economy is the construction industry, and the civil engineering specialty group of construction contains a lot of related professional types. To do a good job in the construction of the first-class civil engineering specialty group of local undergraduate colleges and universities is in line with the needs of the new era society and the training goal of talents.

Keywords: Civil Engineering Specialty; High Quality Applied Talents; Development Strategy

1. Introduction

With the continuous development of China's economy and the continuous expansion of the market scale, the talents cultivated by undergraduate colleges need to be seamlessly connected with the market, that is, the graduates need to be competent for their assigned work as soon as they arrive at the enterprise, which requires that the undergraduate colleges should pay attention to the cultivation of their professional ability. The construction of first-class civil engineering specialty group in local undergraduate colleges should adapt to the trend of social and economic development, meet the needs of market development, and adjust the talent training objectives of civil engineering specialty group.

2. The existing foundation of building civil engineering specialty group

Civil engineering specialty has the main characteristics and advantages at present: It has the first-class discipline doctoral point, the master's degree point of the first level discipline and the degree authorization point of civil water conservancy specialty, and has formed a complete talent training system of Bachelor Master Doctor; In 2007, 2012 and 2017, they passed the national civil engineering professional (RE) assessment (certification); The school has a long history, trained a large number of professional talents, and contributed a lot to the promotion of local social and economic development.

The current construction results of civil engineering specialty group: This major is the key construction specialty, characteristic specialty, excellent engineer education and training program specialty, regional characteristic and high-level university brand construction specialty, professional service industry capacity construction specialty in colleges and universities, engineering construction unit for undergraduate practical teaching ability promotion, and training base for innovative talents of civil engineering, the base for the education and construction of civil engineering excellent talents,

the National Engineering Practice Education Center (jointly built with the Provincial Construction Group); It has Yunnan civil engineering experimental teaching demonstration center, civil engineering construction management virtual simulation experimental teaching center, seismic engineering technology research center, civil engineering disaster prevention key laboratory.

The current construction of civil engineering specialty group: Teachers have received more than 30 National Natural Science Funds (including 1 key projects, 2 joint funds), and about 30 provincial and ministerial projects; 18 provincial science and technology awards and 2 teaching achievements awards; In recent three years, 10 patents for invention have been authorized and 14 monographs have been published. College is the Ministry of Education civil engineering education refers to the subcommittee member unit, provincial civil engineering education refers to the director of the committee unit, provincial college students structural design competition secretariat unit.

3. Benefits of building civil engineering specialty group

At present, there is a great demand for talents in civil engineering specialty group in China, and the employment of talents studying this specialty is also very broad. However, the requirements for the relevant professional ability and professional quality of the personnel working in this field are also very high. Therefore, the construction of civil engineering specialty group in undergraduate colleges and universities can cultivate technical talents and management talents related to real estate development budget, construction, architectural design, facility installation, etc., required by the market.

4. Specific ways of building civil engineering specialty group

4.1 Setting scientific construction goals and key points

The construction goal of civil engineering specialty group is to take service as the purpose, market employment as the guidance, and combine production, study and research. In the curriculum system, we should combine the actual process of construction, cooperate with the relevant enterprises in the market, and discuss the curriculum content setting, according to the relevant job requirements of the construction industry post group, in order to integrate modern advanced science and technology, and cultivate students' professional quality in an all-round way. The focus of the construction of civil engineering specialty group is the reform of teaching content. After setting up the teaching content according to the market demand, the undergraduate colleges should combine the actual work process, set up the scene teaching appropriately in the teaching process, and design the relevant examination content and standards according to the industry demand.

4.2 Further reform of teaching methods and strategies

The traditional teaching mode is based on teachers' one-way imparting knowledge, which can't meet the relevant requirements of modern teaching and cultivate high-quality talents in line with social needs. Therefore, undergraduate colleges and universities should speed up the reform of teaching methods, and make use of modern information technology and modern teaching concept, in order to let students combine theory with practice. In the process of teaching, through situational teaching, the use of multimedia, the abstruse and abstract text with pictures, animation, video and other intuitive image, not only help to activate the classroom atmosphere, but also effectively focus the attention of students and greatly improve the efficiency of classroom teaching. In addition, in the past, there was only one textbook for a professional course, which also needs to be changed.

Undergraduate colleges and universities should strengthen students' practical ability, ensure that students' knowledge learned in the school can be consistent with their work content in the future, and guarantee students' employability. Therefore, colleges and universities need to keep close cooperation with the construction industry, provide students with practice platform, and configure corresponding teachers to link the internship results with the final students' assessment results, so as to fully ensure the harvest of students in the internship. In addition, the school should vigorously promote the students to obtain "double qualification", so that the students can meet the needs of the job market.

4.3 Strengthening the construction of teaching staff

Although there are some excellent teachers in the construction of civil engineering specialty group, the overall structure of teachers is not balanced, and there are still a large number of teachers who are not competent for teaching

tasks. Therefore, colleges and universities should strive to cultivate and build a number of teachers with excellent theoretical knowledge and rich practical ability, and strive to build a “double qualification” teaching team. In order to make the knowledge taught by the school timely adjust with the needs of the market, the school should provide teachers with opportunities and platforms for further study, so that teachers can participate in technology research and development, technology application, architectural design and other construction processes in construction enterprises, and fully improve the comprehensive quality and professional quality of teachers.

4.4 Strengthening the construction of professional groups

Undergraduate colleges should not only increase the investment in the construction of laboratory, but also start to build professional groups. The so-called construction of professional group is to provide water supply, electricity, gas and other related facilities on the basis of building construction; In the process of urban construction, we should reasonably plan the traffic, green space, various bridges and tunnels in the city. In fact, the construction of civil engineering specialty group is a complete set of systematic engineering, which should integrate many aspects of technology and professional knowledge. Therefore, in the construction of specialty group, colleges and universities should focus on the teaching content of a certain specialty, and also take into account the professional knowledge of related fields, constantly broaden students’ knowledge, cultivate more professional skills, and realize the cultivation of all-round talents with high comprehensive quality in line with the trend of social and economic development and the demand of market employment talents.

4.5 Using network resources to develop comprehensive curriculum textbooks

After setting up the teaching objectives of civil engineering specialty group construction according to the market demand and employment orientation, we should scientifically build a curriculum system which is suitable for it. The undergraduate colleges should innovate the curriculum materials that conform to the curriculum system, combine the advanced technology in the market and relevant cases, and enrich the contents of the teaching materials constantly, so as to integrate the theory of the course into the practical operation, and train the students’ practical operation ability. At the same time, universities can also use Internet technology to share relevant teaching content on the Internet, such as “Chinese MOOC”. Teachers record the whole process of class into video, and then upload them to the relevant platform created. Students can learn various professional knowledge anytime and anywhere, which not only greatly saves practical costs and trains students’ ability to study independently, but also effectively broadens the knowledge of students, in order to make the students trained by colleges and universities more in line with the development needs of society.

5. Conclusion

In the new era, China’s education reform continues to deepen. As the pillar industry of the national economy, the construction of civil engineering specialty group is to cultivate application-oriented talents in line with social development. Yunnan universities have a good foundation and advantages in the construction of civil engineering specialty group. Therefore, we should strongly recommend the construction of first-class civil engineering specialty group in universities. It is necessary to make clear the objectives and key points of the construction, and change the mode and way of teaching, in order to strengthen the construction of teaching staff, strengthen the investment in the construction of civil engineering specialty group, and use Internet resources to carry out comprehensive professional teaching. Only in this way, the first-class civil engineering professional group of undergraduate colleges can be more stable and faster construction, and the talents cultivated by undergraduate colleges can play an important role in the social and economic market in time.

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