

Innovative Research on Teaching in College Architecture Major by Integrating Sustainable Development Concepts

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Abstract: Teacher cooperation community; Continuous improvement

Construction industry plays an important role in the development of national economy and people's livelihood. The training of construction personnel in colleges and universities plays a basic role in ensuring the sustainable development of the construction industry. However, with the development of The Times, the training of personnel in colleges and universities in our country is also facing some new situations and problems, such as the decrease of students' enthusiasm in choosing architecture major for college entrance examination. Some colleges and universities are dissatisfied with enrollment or cannot solve the problem of insufficient enrollment of students by means of major transfer of students, and some colleges and universities have the problem that the talents trained can not meet the needs of society. This paper intends to explore how to effectively solve the problem of training talents for architecture majors in colleges and universities from the aspect of teaching innovation.

Keywords: Sustainable development; Major in architecture; Teaching innovation

1. College architecture courses must reflect more information, intelligent and industrial

1.1 With the development of The Times, the original large-scale outdoor construction has greatly reduced its appeal to the current young people, and the wind and sun of outdoor construction has become one of the obstacles for young students to voluntarily choose this major. Moreover, the original construction mode also affects the efficiency of building construction, which is contrary to the development requirements of The Times. Therefore, in order to improve the attractiveness of college architecture majors to young students, college architecture majors must set up BIM, prefabricated construction and other related courses, so that young students will work more in the office and factory in the future, minimize outdoor work time and process, and improve work efficiency and promote wages.

1.2 The concept of sustainable development must run through the whole teaching process of architecture major in colleges and universities

At present, the society has put forward better requirements for sustainable development. College architecture teachers must integrate the new development concept into the whole teaching process, and "innovation, coordination, green, openness and sharing" must be reflected in the whole process of architectural design, construction and maintenance. Overall planning of architectural design, material and energy selection and maintenance and other links with a systematic concept to ensure that the building is green and better adapt to future social development.

1.3 The teaching of architecture in colleges and universities must be closely combined with enterprises

The architecture major in colleges and universities is highly applied and practical. It must work closely with social enterprises to do a good job in personnel training according to social needs, let architectural design institutes, construction enterprises and supervision cost enterprises deeply participate in the whole process of personnel training, promote the sharing of teacher resources, information resources and facilities and equipment resources between schools and enterprises, and allow students to learn in real situations. Improve students' application and practice ability.

1.4 The teaching of architecture in colleges and universities must be built into a collaborative community

of teachers

The sustainable development of a major cannot rely solely on individual teachers. Colleges and universities must mobilize the enthusiasm of all professional teachers and form a cooperative community for professional development. Teachers must make concerted efforts in course offering, integrated teaching and research and organized scientific research, and form a good mechanism of division of labor and close cooperation.

1.5 College architecture teaching must carry out the concept of continuous improvement

If architecture majors in colleges and universities want to have lasting and vigorous vitality, they must make continuous improvement in professional teaching. No matter the curriculum, teaching methods or teaching resources are invariable, they must be constantly adjusted according to social development and students' characteristics, and the teaching content should timely absorb new knowledge and theories of architecture. Ensure that the architectural expertise taught to students is relevant to The Times; Teaching methods and teaching resources must be constantly updated and adjusted according to the characteristics of students and technological advances to ensure that students learn professional knowledge enthusiastically and efficiently. Of course, the realization of continuous improvement of teaching knowledge must first complete the teachers' consciousness and ability of continuous improvement of teaching knowledge, and to achieve this, universities must establish the corresponding reward and punishment mechanism for teachers.

1.6 Innovative teaching paths and methods for architecture majors integrating the concept of sustainable development

According to the professional certification standards of engineering education, actively build a curriculum system that ADAPTS to the training of application-oriented talents, mainly through general education courses to improve students' humanistic quality and ability, through professional education courses to help students obtain the basic training of modern engineers, and through various experiments and practical links to improve students' hands-on practical ability. In order to adapt to the development of the industry, a number of characteristic specialty directions have been established, and corresponding characteristic courses have been set up respectively. At the same time, the second class of BIM, structural design, innovation and entrepreneurship training will be established to cultivate students' professional practical skills and innovative practical ability.

(1) Pay attention to regional characteristics and industry development needs, and combine diversification and personalization of personnel training -- in view of the existing training mode of civil engineering major, that is, mainly oriented to design units, biased towards academic and other problems, according to the school's student source and employment characteristics, take the initiative to adapt to social needs, combined with the requirements of characteristic professional construction, in terms of training objectives, Highlight the concept of civil engineering and highlight the application characteristics; In terms of operation mechanism, the establishment of professional construction advisory committee, the construction of employers, industry management departments, schools three parties to jointly develop talent training programs and curriculum system; Set up modular courses such as intelligent construction, project management, and Taishan Cultural tourism architecture to meet the diversified needs of the industry and society and the personalized development needs of students.

(2) Construct an integrated curriculum system of theory and practice, pay attention to the cultivation of comprehensive practical ability of engineering technology - attach importance to practical links, and highlight application-oriented characteristics. Practice teaching is an important part of cultivating application-oriented talents and the key to embody the characteristics of application-oriented talents education. The key to achieving the goal of training applied talents is whether the practice teaching is perfect and has its own characteristics. Integrate the new achievements of industry and discipline development, develop information resources with new loose-leaf and workbook-type textbooks, and cultivate students' professional practice skills and innovative practice ability. For example: on the basis of theoretical courses, the simulation training room is used to conduct BIM technology, project management sand table and other characteristic practical training.

(3) Improve students' innovation ability through discipline competitions and research project training -- innovate applied talent training models, strengthen school-enterprise and school-local cooperation, and cultivate high-level professional training bases integrating production and education; Establish a curriculum system suitable for the training of applied talents, conduct in-depth research on innovation and entrepreneurship education, organize and guide students to participate in scientific research practice, independent innovation activities and various discipline competitions; According to the characteristics of civil engineering curriculum, actively carry out the second classroom, encourage students to actively participate in the second classroom, take the competition of various disciplines as the starting point, promote learning and teaching through competition, establish the second classroom in the directions of BIM, structural design, Zhou Peiyuan Mechanics competition, Internet +, intelligent construction, innovation and entrepreneurship

training, carry out training, and actively integrate into the ideological and political curriculum. To realize the deep integration and docking of ideology and politics, stimulate students' interest in participating in various college student competitions and innovation and entrepreneurship training programs, and actively participate in provincial and ministerial level and national level competitions.

(4) Sustainable development of the teaching staff - clarify the specific division of labor of team teachers, and formulate specific systems for carrying out collective teaching research activities and teaching reform. In the teaching content, strengthen the mechanics foundation, broaden the professional area, increase the proportion of course design, reduce the difficulty of the teaching content of professional courses; In teaching methods and assessment, students' research-oriented and autonomous learning should be emphasized, and skills courses should be certified. In practical teaching, we should pay attention to the combination of students' learning and thinking, the unity of knowledge and action, enhance students' innovative spirit and creative consciousness for exploration, practical ability and entrepreneurial ability to solve problems, improve their ability to find and solve problems in exploration and practice, and comprehensively improve students' comprehensive quality.

(5) Continue to strengthen discipline construction -- reform the teaching content, teaching form and assessment methods for specific courses, use modern information technology to improve teaching methods, deeply analyze the integration mechanism of curriculum ideology and politics with professional courses, and promote the construction of first-class majors and courses; Explore the new model of labor education, integrate labor education with specialized courses, innovation and entrepreneurship; Actively organize the application of teaching reform projects and teaching achievement awards at all levels, and improve the construction of first-class majors and courses.

2. Conclusion

In summary, based on regional characteristics and industry development needs, we will formulate specific plans to improve the quality of talents training for application-oriented undergraduate colleges and universities, clarify the specific division of labor among team teachers, strengthen school-enterprise and school-locality cooperation, and innovate the training mode of application-oriented talents, the curriculum system integrating theory and practice, the research and construction of textbooks, and the reform of teaching methods. Promote the construction of first-class majors and courses, and comprehensively improve the overall quality of the team.

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