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Teaching Reform of Environmental Design Specialty based on Practice and Innovation Ability

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Abstract: With the development of environmental design industry, the comprehensive talents who have both practical ability and innovation ability are the training goals of the students of environmental design specialty. This paper analyzes the practical problems existing in the teaching of environmental design, such as the lack of training conditions, the "overfilling" traditional teaching mode, the simplification and standardization of the teaching evaluation system, and puts forward the normalization of school-enterprise cooperation and professional course practice, to construct creative teaching content system and establish and perfect teaching reform measures of teaching evaluation system.

Keywords: Practical ability; Innovation ability; Environmental design;

1. Introduction

The environmental design specialty is defined as an interdisciplinary comprehensive specialty and is the application discipline based on the humanity and natural science. Training a comprehensive application talents with practical and innovative ability has become the goal of talents training in environmental design. At present, the course design of environmental design in colleges and universities should be actively adapted to the direction of talents training, to establish a reasonable way of training talents and build scientific talents training mode, so as to further adapt to the needs of the domestic market economic development, training high-quality applied talents that services for the regional economy.

2. The Problems in the Teaching Process

2.1. School teaching and training conditions are insufficient, students practice ability is not enough

Environmental design is a comprehensive technical discipline, involving urban planning, design aesthetics, architecture, ergonomics, landscape ecology and other disciplines. Environmental design professionals should pay attention to the training of professional application ability, the development history of China's environmental design specialty is short, the hardware and software facilities in colleges and universities fail to follow the pace of practical teaching, there are a few school teaching and training bases, and the school-enterprise cooperation is not close enough. Such as the course of "outdoor landscape construction design", it is an important specialized course, teachers need to take the students in person to the building materials market, construction site or company, to observe the construction process and experience the specific application of materials, but the school conditions are limited, it is hard for them to find companies for on-the-spot learning, and they lack the perfect material technology laboratory. In the whole teaching practice activities, the teachers focus on the indoctrination of experience, some new technology, new materials and new technologies cannot be timely integrated into the practice of teaching. Not involving modern professional equipment, materials and technology lead the students cannot adapt the society or the adaptation period is extended, which effect the quality of talents training.

2.2. Traditional teaching mode is difficult to inspire students' study spirit and innovation enthusiasm

At present, the teaching mode of the environmental design specialty in some colleges and universities is still the type of "overfilling", the teaching is carried out in accordance with the three-stage: basic course - professional theory course - design course, the basic course of environmental design specialty in colleges an universities is to train students' art painting techniques and skills, short-term course arrangement can meet the students' learning requirements to complete the basic course, but the their understanding for the design is still in the ignorant stage; teachers are the initiators and the core of professional theory teaching process, there are few links for students' participation in discussion and independent thinking and analysis, so their understanding of problems lie in the surface. The design course adopts the "theory - practice – comment" mode. Teachers' theory explanation in the classroom more rely on personal experience, focusing on

follow, inheritance, copying and reference too much, so the classroom design contents lack of innovation and the sense of the times.

2.3. Simplification and standardized evaluation system weakened the students' expectation of innovation

In the teaching process, the evaluation language of the teachers for the students' works usually is "excellent", "general" or "poor", and there is no one can directly judge the reference. For the weak students, they do not know what kind of design ideas are "good" and how to improve, resulting in students do it just for finishing the homework, lack of design creativity. The course assignments are evaluated in a simple way, the teachers only pay attention to the results and neglect the process. To a certain extent, the study enthusiasm of the students is struck, which leads to the dilution of the students' innovation expectation and is not good for the cultivation of the innovative talents.

3. Discussion on Teaching Reform of Environmental Design Specialty

3.1. School-enterprise cooperation to enhance students' ability of linking theory with practice

The construction of the training base is an important guarantee for the practice of teaching, and the construction of the training base is the core content of the school-enterprise cooperation. Both universities and enterprises hold the principle of "mutual cooperation and mutual support" , to build a variety of modern apprenticeship system new model – "projects come into the campus, masters come into the campus" (see below Figure 1).

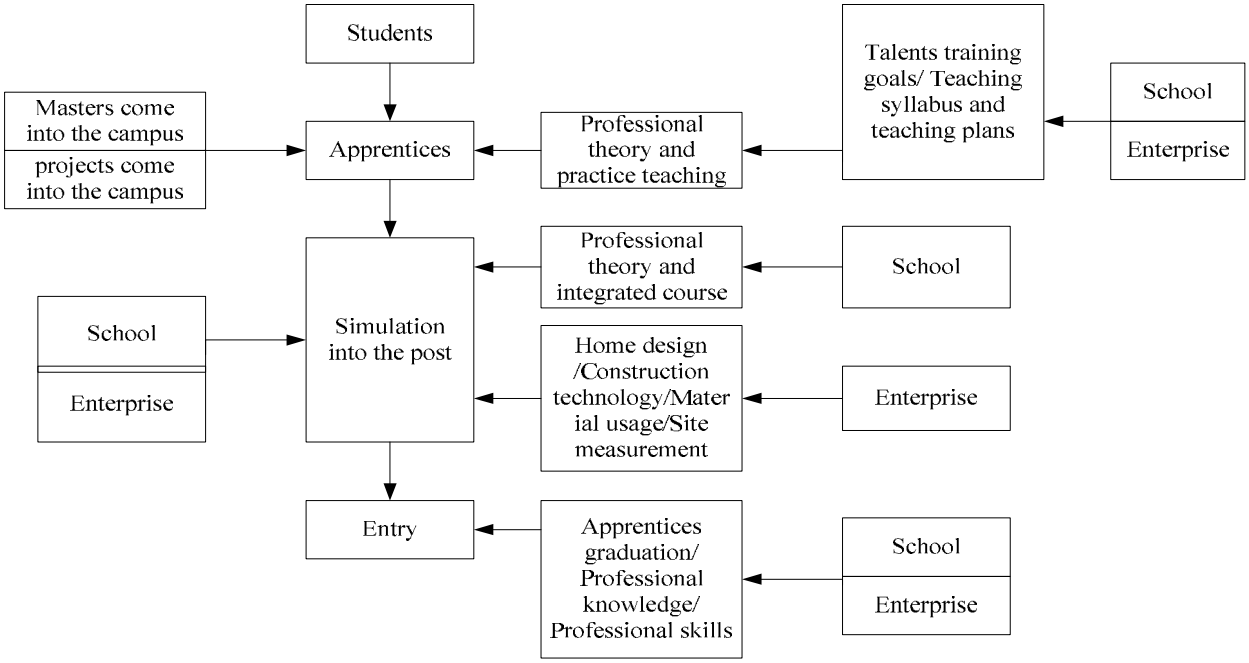

Figure 1. Diagram of Talents Cultivation in Environmental Design Specialty by School-enterprise Cooperat

Based on practice teaching, schools negotiate with the relevant enterprises to develop talents training goals, teaching syllabus and teaching plans, and jointly organize professional theory teaching and practice teaching. It breaks the original closed teaching form, and the learning form changes from the classroom theory plane teaching to practice three-dimensional teaching. Enterprises select professional and technical personnel as masters stationed in the school, and combine with part of the school's professional teachers to implement modern apprenticeship training program. School teachers and enterprise masters establish the training group jointly to complete the guidance of students' internship and graduation design, the homework of students usually come from the completed projects of enterprises, simulated into the post is: according to the design process, the enterprises separate several types of jobs, students can choose to participate in practice voluntary according to the various positions. Combining with the class theoretical knowledge, simulated into the post allows students to deepen practice feeling, understand design and construction process in order to understand the latest technology and design methods, design flow and material application of the current environmental design specialty.

3.2. Professional course practice normalization, construct creative teaching content system

Teachers of environmental design specialty should keep abreast of the latest development trend of the specialty, and connect with the actual situation of students closely to develop a scientific, hierarchical and creative teaching content system for different stages' students. The teachers should reorganize, select, supply and update the basic course teaching content of the specialty to promote that while it reflects basic knowledge of environmental design specialty, it can show the latest developments and profession, and effectively cultivate students' innovative ability in each teaching link. The teaching design of the professional courses, such as "urban landscape design", "public space design", "indoor and outdoor construction design" and other professional courses should be based on practical teaching, supplemented by theoretical teaching, it should make the students go to the professional teaching training base or construction site to feel the real project, which can improve the students' design skills and greatly enhance their ability of thinking innovation, practical application and social adaptability. Constructing a creative teaching system can expand the teaching scope of environmental design specialty, cultivate the comprehensive talents of design, production and construction, who have design innovation consciousness in environmental design industry, and narrow the distance between environmental design graduates and social needs.

3.3. Establish and improve the teaching evaluation system

In the classroom, in addition to guide students to learn excellent cases, the teachers need to develop a series of quantifiable and effective teaching evaluation criteria. Whenever the students complete the design works, the teachers should randomly select out the excellent, general and poor three different levels works to organize all the students to correct and score collectively. Then according to the students' score results, the teachers should re-judge the works and explain the score criteria and basis. Through the study of this link, students can not only visually compare the merits of the works, but also understand teachers' evaluation criteria, which is more conducive to clear the future learning goals and direction to further quickly improve design standards.

In short, the training and improvement of environmental design professional talents' practical ability and innovation awareness is a complex and systematic engineering, which should clear the goal of talents training, and vigorously promote the reform of teaching methods to explore a variety of teaching modes, scientifically and rationally construct creative teaching content system, establish and improve the teaching evaluation system, improve the quality of teaching, so as to meet the need of the economic development for the environmental design talents furthest.

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