

Research on the Tripartite Collaborative Education Model of “School-Enterprise-Research Base”

—Taking the Environmental Design Profession as an Example

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Abstract—The study is aimed to solve the problem that the talents trained by the environmental design specialty do not match the needs of the industry. Due to the demand deviation of both sides, the effect of traditional school-enterprise cooperation in training talents is not good. The college research base is rooted in schools and has close ties with enterprises. It is a good medium for school-enterprise cooperation. Therefore, it is necessary to build a three-party collaborative talent training model of “School-Enterprise-Research Base”. Establish a tripartite synergy mechanism, and work together to develop training objectives, curriculum systems, and teaching content. The three parties set up ‘Innovation Studio’, students participate in research base projects and enterprise projects, and designers participate in teaching. In the course, Manchu and regional culture research results are introduced to train students to get design inspiration from traditional culture. The practice shows that the design ability and innovation ability of students have been improved obviously.

Keywords—*Environmental design; Collaborative education; Talent training mode; regional cultural*

I. INTRODUCTION

The development of the social economy has driven the rapid development of cultural and creative industries, and society has put forward higher requirements for the quality of design talents. At present, there are problems in the cultivation of talents, such as paying attention to skills, neglecting creativity, paying attention to virtual design, ignoring actual project training, and there is a certain gap with the demand for enterprise jobs[1-2]. Colleges and universities need to strengthen cooperation with industry and enterprises. The traditional school-enterprise cooperation has the problem that the form is greater than the content. It is difficult for students to obtain the professional ability to meet the needs of the enterprise, and the graduates are difficult to adapt to the work requirements[3]. As a local applied university and a model university for transformation and development, Changchun Institute of Technology(CIT)needs to serve the local social and economic development. It is urgent to adapt to the needs of the society for high-level design talents and carry out the reform of the environmental design professional talent training mode.

II. ENVIRONMENTAL DESIGN PROFESSIONALS TRAINING NEEDS

In 2014, the ‘*Several Opinions of the State Council on Promoting the Integration of Cultural Creativity and Design Services and Related Industries*’ put forward the basic principles of ‘cultural inheritance’ and ‘*encourage ordinary undergraduate colleges to strengthen the integration of professional and regional culture and national culture*’[4]. In 2017, the State Council issued the ‘*Several Opinions on Deepening the Integration of Production and Education*’, proposed to promote the reform of the integration of production and education, and strengthen the construction of a platform for integration of production and education[5]. These opinions point the direction for the reform of the design talents training mode of colleges and universities, that is, strengthen multi-party cooperation and highlight the integration of regional culture and professional teaching.

‘Northeast Regional Decorative Culture Research Center’(Hereinafter referred to as ‘Research Base’) is the key research base of humanities and social sciences in the provincial colleges and universities of Changchun Institute of Engineering, including three research directions: ‘Decorative Culture’, ‘Costume Art’ and ‘Human Settlement Environment’. It undertakes the National Art Fund, the provincial key research projects, and the provincial social sciences. Research on more than ten projects of the project. The research base is rooted in colleges and universities and has deep cooperation with many well-known industry enterprises on the project. It is an excellent medium for building school-enterprise cooperation and can make up for the asymmetry between universities and enterprises. Relying on the “Northeast Regional Decorative Culture Research Center” and “cooperative enterprises”, the environmental design major of CIT has determined the research direction of the reform of talent training mode.

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The key issues to be addressed in the reform of talent training teaching include the following aspects:

- It is necessary to establish a “School-Enterprise-Research Base” collaborative education mechanism to build a three-party collaborative talent training system, and the three parties participate in the completion of the talent training target;
- In the introduction of theoretical teaching and practical training, the construction of the three-party collaborative curriculum system and the reform of teaching content.
- It is necessary to break through the classroom-centered training model, rely on the base and enterprises to establish innovative studios, establish the ways and mechanisms for the cooperation of the three parties in the innovation studio.
- It is necessary to solve the introduction of ‘National culture’ and ‘Regional culture’ in curriculum teaching and practical training, give play to the unique role of regional cultural design elements in practical teaching, rebuild the application methods of regional culture in environmental design, and enhance the aesthetic, the design expressiveness and comprehensive ability of student.

III. THE “SCHOOL-ENTERPRISE-RESEARCH BASE” TRIPARTITE COLLABORATIVE EDUCATION MODE CONSTRUCTION

A. The Goal and Path of the three-way Collaborative Education Mode

The goal of applying talents in local colleges and universities to meet the needs of local industry talents is to achieve multi-party interaction and integration of production and education. Therefore, we have determined the principle of the reform of the talent training model under the collaborative innovation and education mode of “School-Enterprise-Research Base”: constructing a three-party deep cooperation mechanism, and the three parties are deeply involved in the goal formulation of the personnel training, the curriculum system and the practice teaching platform, highlighting the regional cultural characteristics. Strengthen the cultivation of practical ability and innovative ability.

- Build a mechanism for collaborative education among universities, enterprises and research bases, formulate goals and specifications for talent cultivation, build a curriculum system based on industry demand, and set up a progressive curriculum system with projects as the main line.
- Establish an ‘Innovation Studio + Enterprise Practice Base’ practical teaching platform.
- Integrate regional culture with the content of the course to ensure that students are familiar with ‘National culture’, ‘Regional culture’ and design

elements, and enhance students' aesthetic judgment and design expression.

The implementation path is shown in Fig. 1. First, the combination of talent cultivation and cultural and creative industry upgrading will be carried out to determine the training objectives of environmental design professionals. Then establish a cooperation mechanism to build a progressive curriculum system of ‘2+1+1’ training cycle. The third is to feature regional culture and to form a combination of theory and practice with the project process as the main line. Finally, through the ‘Innovation Studio + Enterprise Practice Base’ practical teaching to enhance students' design ability.

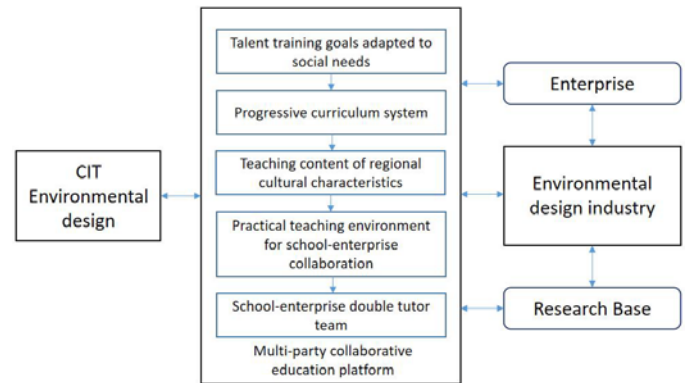


Fig. 1. The realization path of multi-party collaborative education

B. Constructing a “School-Enterprise-Research Base” tripartite collaborative innovation education mechanism

Based on the concept of ‘cultivating people based on research bases, school enterprises, and strengthening practical training’, we will establish a cooperative education mechanism. Cooperate in such a way as ‘cooperation to determine training objectives, establish a regional curriculum system, corporate tutors to participate in teaching, and innovation studios’. Use the advantageous resources of schools, research bases, and enterprises to strengthen the cultivation of practical ability.

According to the demand of environmental design professionals in the cultural industry of Jilin Province, the training objectives are: graduates have a sense of social responsibility, high humanistic quality and aesthetic ability, open vision and innovative spirit; possess professional culture and basic theory of environmental design, Professional design thinking and skills; comprehensive ability to analyze and solve the research, design, organization and implementation of projects in the field of environmental design; strong practice, teamwork and self-employment High-quality applied art design talents with the ability.

C. Construction of Professional Curriculum system

According to the requirements of the training objectives, determine the quality standards of design talents

(comprehensive quality indicators, professional-quality indicators), and establish a basic framework for progressive professional courses. The talent training cycle adopts the “2+1+1” mode, and 2 indicates the cultivation of professional foundation and core competence in the previous two years. The third year is the cultivation of professional comprehensive ability, with the enterprise project as the main line, so that students can use the basic knowledge of the profession to study the subject in depth. In the fourth year, we will conduct comprehensive practical training and conduct practical teaching through enterprise projects and competitions. And strengthen students' innovation and entrepreneurship training.

The curriculum is oriented by the two vertical lines of the progressive professional curriculum system and the practical teaching system. Through the measures of “experts enter the classroom, the competition enters the classroom, and the project enters the classroom”, a hierarchical and phased cooperation mode is formed. The curriculum of the curriculum system is shown in Fig. 2.

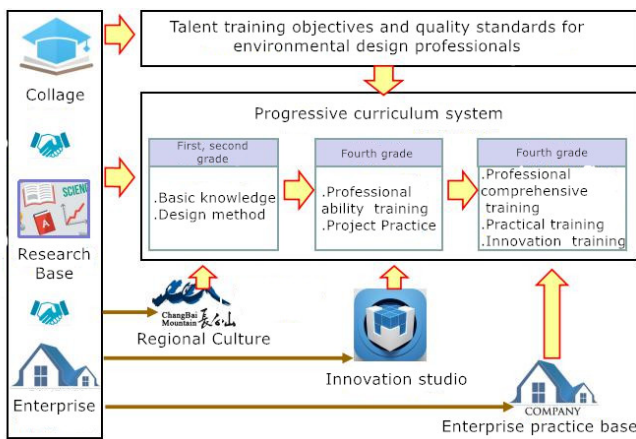


Fig. 2. “School-Enterprise-Research Base” collaborative training curriculum system

D. Multi-party Cooperation to Build a Team of Teachers

In teaching, Changchun Institute of Technology promotes the dual-teacher system of teachers, encourages young teachers to participate in enterprise projects, and realizes the identity of teachers, designers and engineers. The company has hired industry and enterprise experts to participate in the teaching team. Through the dual tutor mode, the theoretical knowledge system and enterprise project practice are closely combined, and the enterprise cognitive practice and enterprise expert lectures are combined to ensure that the professional learning of students follows the needs of industrial development.

E. Constructing a three-party collaborative practice system centered on "innovation studio"

The single-teaching model centered on the classroom does not conform to the essence of design teaching[6]. In the implementation of this project, relying on the research base, the “Innovation Studio” was established, and the

enterprise practice base was established based on the cooperative enterprise. Establish a tripartite openness, collaboration and resource sharing mechanism. Make full use of the research base's exhibition halls, design studios, galleries, research information resources and corporate design rooms to achieve the docking of talent training practice links.

The Innovation Studio is a permanent group for undergraduate teaching under the three research rooms of Humanities and Social Sciences Base Decoration Culture, Costume Art and Human Settlement Environment. It is generally 8 people and has 2 instructors. Students complete relevant assignments and program design in the innovative workroom according to the content of the course. The design tasks of the studio can be diversified, such as research projects, corporate commissioned design, competition proposition design, etc., and the corporate tutor tutors students to participate in the actual project. Excellent student design can be connected to the outside through the studio to achieve the transformation of results. The whole process makes the students' initiative, creativity, communication ability, presentation ability and so on deeply explored and continuously improve the students' comprehensive professional ability.

Taking the cooperation between the school and enterprise of the Jilin Province Guyi Decoration Co., Ltd. as an example, the enterprise will introduce the actual engineering project into the studio, send engineers and professional teachers to form a dual tutor system, combining the “Course design” and “Graduation design” links. Students complete the design and sketching of corporate projects in the studio, and the dual tutors provide procedural guidance and guide students to familiarize themselves with and apply industry norms and standards.

IV. TEACHING CONTENT REFORM HIGHLIGHTING REGIONAL CULTURAL CHARACTERISTICS

‘National culture’ and ‘Regional culture’ is an important source of innovation in art design. The “Northeast Regional Decorative Culture Research Center” has been devoted to the study of decorative culture in Northeast China for many years, and has accumulated rich research results in Manchu culture and regional culture, which can provide rich teaching content for environmental design professional education.

In the design basis and professional course teaching, we take the actual project undertaken by the research base as the main line, integrate the teaching content, and form a serialized teaching system combining theory and practice. The research results of Manchu cultural and regional culture are carried out at various stages of the teaching system. The folklore culture and expression techniques of the Northeast region are interpreted in the design theory course. The Manchu cultural and regional cultural forms and artistic elements are introduced in the design basic course. The application of regional cultural elements is explained with

examples. Features. In the design practice course, we pay attention to the refinement and application of Manchu cultural and regional cultural elements in the actual design.

For example, in the 'Composition' series of courses, the research base will introduce the series of research results such as 'Manchu decorative patterns, Changbai Mountain straw, urban regional colors', so that students can learn how to image regional cultural elements while learning regional culture. And the abstract expression, to guide students to pay attention to the application of regional cultural elements in the design, to enhance students' aesthetic judgment and design expression.

In the design of cultural and entertainment space design, the results of the 'Manchu nationality Culture', 'Goguryeo Culture' and 'Pseudo-Manchu Building Decoration' are designed and taught, so that students can observe, examine, solve design problems and expand horizons from the perspective of regional culture. From the perspective, learn to inspire from traditional culture and improve its ability to design and innovate.

V. CONCLUSION

In recent years, the environmental design major of Changchun Institute of Technology has taken advantage of the opportunity of local university transformation and development model schools to continuously carry out the optimization and adjustment of professional talent training programs, and continuously strengthen professional connotation and characteristic construction.

- Through in-depth cooperation with the provincial humanities and social science base 'Northeast Regional Decorative Culture Research Center' and industry enterprises, the talent cultivation is closely integrated with scientific research and social needs, and the production and education integration training mechanism, curriculum system and teaching content are constantly innovation.
- The new 2018 version of the talent training program, related curriculum construction and other series of teaching reform series of results in the 2018 level environmental design, public design and other professional development of teaching practices, achieved remarkable results.

- In the training mode, curriculum system, practical teaching, etc., the organic combination of 'integration of production and education', 'innovation' and 'application' is reflected, and the teaching methods of teaching methods, teaching contents and teaching methods are further enriched and improved.

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