Exploration and Practice on the Practical Teaching of Design Class with “Innovation and Entrepreneurship” in Local Colleges and Universities*

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Abstract—The practice teaching under the guidance of innovation and entrepreneurship education refers to the comprehensive practice teaching with the characteristics of practice, practical training, innovation and entrepreneurship. It also is an important practical way for colleges and universities to carry out innovation and entrepreneurship education and promote students to independently start their own business. Based on the construction of practical training platform for teaching of design major in Baoshan university as newly-built prefecture university in border minority areas, this paper carries out the research of the construction of innovation and entrepreneurship-based practical training teaching system and explores the construction approach of project-driven innovative entrepreneurship training project.

Keywords—innovation and entrepreneurship; practical teaching; project-driven; local colleges and universities

I. INTRODUCTION

"Mass entrepreneurship and innovation" is a new strategic concept of employment that comes into being with the development of the times under the new normal economic situation, and whose purpose is to promote the sound development of social economy, accelerate the realization of transformation and upgrading and tap the innovative potential of the employment market [1]. Innovative education is to cultivate students' innovative thinking and innovative ability; for entrepreneurship education, it is to guide students to put innovative consciousness and innovative ability into practice, and its goal is to change the ability into productivity through the discover of opportunities and the brave seize of them. As the main battlefield of college students' entrepreneurship and innovation, colleges and universities should conscientiously implement the national decisions and arrangements, shoulder the responsibility and obligation of assisting college students to achieve entrepreneurship and promote innovation, and constantly improve their own employment advantages [2]. The main points of work of the Ministry of Education in 2014 put forward that is "to study and formulate guidance on the transformation and development of local undergraduate colleges and universities, to initiate and implement pilot reforms at the national and provincial levels and to guide a number of undergraduate colleges and universities to transform into applied technology-type colleges and universities". Innovation and entrepreneurship education and application-oriented talent training are blending ways to together promote the education of colleges and universities in the same era. For application-oriented colleges and universities, it is urgent to adapt to the new situation of innovation and entrepreneurship in a timely manner. They should actively carry out the exploration and practice of innovative entrepreneurship talents training mode in application-oriented colleges and universities and effectively integrate the elements of innovative entrepreneurship education into the whole process of talent training based on the nature and characteristics of application-oriented to cultivate students' innovation and entrepreneurship ability in colleges and universities. Based on the design major of Baoshan University, a newly-built prefecture university in border minority areas as the starting and standing point, this paper carries out the exploration and practice of the construction of practical training teaching system and the systematic innovation of innovation and entrepreneurship training project.

II. CONSTRUCTION OF PRACTICAL TRAINING PLATFORM OF TEACHING AND THE "INNOVATION AND ENTREPRENEURSHIP" EDUCATION IN LOCAL COLLEGES AND UNIVERSITIES

A. Current Situation of Practical Training of Teaching and the Innovation and Entrepreneurship Education Platform Construction in Local Colleges and Universities

The practical teaching system is not perfect. Local colleges and universities mostly take root in local areas and serve local economic development as the orientation of talent cultivation. However, due to the short time of undergraduate school construction, on the one hand, the practical training teaching system is still in the transition state of the handover of junior college and university, and the teaching content and methods are also taking "skill-based" as the main line. Innovation, entrepreneurship and creative consciousness have not yet been
incorporated into the whole practical training system; on the other hand, the traditional studios and the education of teachers to help students fail to meet the educational purpose of "innovation and entrepreneurship" and the continuous construction of platform.

The training course system of innovation and entrepreneurship education is not perfect. As far as the current situation of "innovation and entrepreneurship" education is concerned, the innovation and entrepreneurship education in many local colleges and universities is usually only a part of students' career planning, but there is no professional course system [4]. Especially in terms of course arrangement and teaching content, most of the courses include technology management or project management and others and lack of clear professional orientation and modular course topics.

The team of "innovation and entrepreneurship" tutors is weak. "Innovation and entrepreneurship" education has the characteristics of "two-traits" with strong comprehensiveness and practicality. It usually takes course as the endogenous power guide and practice leads to more theory-based teaching instruction, which requires the tutor team to have a high level of innovative theoretical knowledge and richer experience in entrepreneurship practice. However, as far as the "innovation and entrepreneurship" faculty of local colleges and universities is concerned, some of the teachers in schools have received short-term training that is biased towards the theoretical basis, but lack practical experience; if entrepreneurs are employed to teach in schools, which is limited by the institutional system and coordinated management and others. At the same time, the overall educational effect is poor coupled with the lack of teaching experience.

The practical training teaching equipment is limited and the utilization rate is not high. The insufficiency of practical training equipment and incomplete matching often restrict the completion and development of training projects in the practical training link in prefecture colleges and universities. Due to the insufficiency of supporting equipment, some courses and practical training projects have been stagnated in all kinds of studios and strong technology-based training space with regional representative.

B. "Innovation and Entrepreneurship" Education from the Perspective of Application-oriented Talents Training

In 2015, in the ministry of education, the national development and reform commission and the ministry of finance's guidance on guiding some local general universities to transform into application-oriented ones, it clearly pointed out that colleges and universities should focus on the national major strategies of innovation-driven development, mass entrepreneurship and innovation, identify the focal points and breakthroughs of transformation and development to truly enhance the ability of local colleges and universities to serve regional economic and social development, the ability of servicing technological progress of industrial enterprises and of creating value for learners. The document points out the direction for the training ways of application-oriented talents in colleges and universities in the future, and the exploration of application-oriented talent cultivation mode should become an anchor point of the development of colleges and universities based on the educational concept and action method of "innovation and entrepreneurship". It has become the main task for local colleges and universities to improve their application-driven innovation ability by means of collaborative innovation such as school-enterprise cooperation and institution-locality cooperation.

III. CONSTRUCTION OF PRACTICAL TEACHING SYSTEM BASED ON INNOVATION AND ENTREPRENEURSHIP PLATFORM: ANALYSIS OF PRACTICAL TEACHING OF DESIGN MAJOR IN BAOSHAN UNIVERSITY

A. Construction and Operation of Practical Training Teaching System

Based on the undergraduate process of running school of design major in Baoshan university (the first undergraduate student of art and design major was enrolled in 2011), the construction of practical training and teaching has gone through three periods:

The "production-university-research" cooperation period is based on studio construction (2011-2013). In fact, the construction of practical training and teaching system mainly continues the idea of studio construction in the period of junior college. In order to explore the "production-university-research" cooperation, the studio is the practical training and teaching place in this period. Because the practical training courses are not systematic, the real meaning of practical teaching has not yet run independently.

The initial stage of industry-education integration is based on the construction of training center (2014-2017). As art became the first-level discipline, the notice issued by the Education Department in 2014 on the implementation opinion of promoting the transformation and development of some undergraduate colleges and universities has promoted the college to explore a new mode of cultivating application-oriented talents. The college has strengthened the revision of the talent training project and improved the practical course module. In 2015, with the support of the special funds of "the central financial support for the construction of local colleges and universities", the "practical training center for the education of folk crafts and design arts for the ethnic groups in Western Yunnan" was established. In addition, the College has introduced the "qualification and assessment of undergraduate teaching work in general colleges and universities". At this stage, the practical teaching system with the training center as the core has been basically constructed.

The deepening stage of industry-education integration is based on the construction of practical training platform (after 2018). At the beginning of 2018, the Ministry of Education promulgated the National Standard for Teaching Quality of Undergraduate Major in General Colleges and Universities, which clearly requires that the education commission should be used, the universities should be mobilized, and the National Standard should be closely combined with the construction of "three first-class". Based on the local reality, design majors begin to revise the talent training system in combination with the National Standard, focusing on the undergraduate teaching
reform with student as the centers and produce the construction of oriented talent training system. At the same time, in order to improve the normal monitoring and periodic evaluation of the quality assurance system, they should strengthen the construction of integration platform between industry and education, highlight the platform's principal position in the path of talent training and form a practical training teaching system with application-oriented talents training as the core (see “Fig. 1”).

B. Practical Training Teaching System Based on the Training of Application-oriented Talents

The construction of student-centered innovation and entrepreneurship training platform: building a training platform that integrates art gallery, training center and mass innovation space of west Yunnan cultural tourism. The platform integrates 17 intramural training studios, 4 extramural associations and 12 extramural practical base construction enterprises, and explores the implementation approach and guarantee mechanism of integration of production and education with the construction concept of "coherence and sharing".

The integration mechanism of industry and education based on the innovation and entrepreneurship training platform: through the platform, we can carry out exchanges and cooperation between schools, enterprises and government by divisional targets, promote innovation and entrepreneurship training by stages, and accomplish the task of training courses by different levels. On the one hand, with the training platform and training room equipment as the carrier, school should introduce enterprises to live in, the latter brings technology and products and the former integrates teaching staff and student teams. Meanwhile, schools and enterprises should combine and carry out product production and application-oriented talent training. On the other hand, enterprises arrange training tutors or technical backbone as part-time teaching staff, according to the implementation framework of production-education integration and training teaching plan, the combination of inside and outside schools to implement training teaching in production.

Special project training around the production-education integration: Special project training is the efficiency embodiment of the back-feeding training platform, which is mainly reflected in four aspects: professional talent training system construction, special platform construction, training results demonstration and third-party quality evaluation. The construction of professional talent training system mainly focuses on the special major group of design, the training scheme of technical and skilled talents, and the reform of application-oriented course system, the training of modular teaching ability and the construction of dual-competent teachers. The main special contents of the platform construction are the advent of artists' associations and calligraphers' associations at the urban level, the advent of professional associations of design industries at all levels, the cooperation between schools and enterprises and the construction of practice bases inside and outside schools. The demonstration of training results is mainly based on the construction of thematic creative series graduation design, the demonstration of second classroom teaching practical results, the annual opening day, the annual cultural and creative design competition and the demonstration of continuing education service results. Third-party quality evaluation mainly invites representatives of extramural enterprises to exchange seminars and collect feedback information during the annual opening day and the annual cultural and creative design competition. In addition, it comprehensively evaluates the quality of practical training and teaching by carrying out regular work investigations among students who have worked for the past three years.

Fig. 1. Practical training teaching system based on the training of application-oriented talents.
IV. CONSTRUCTION WAY BASED ON PROJECT-DRIVEN TRAINING PROJECT — ANALYSIS OF PRACTICAL TRAINING PROJECT FOR DESIGN MAJOR OF BAOSHAN UNIVERSITY

A. Teachers' Open Innovation and Entrepreneurship Training Project

Open innovation and entrepreneurship training project is carried out in the form of open courses. Open course resources not only include the course itself, but also pay more attention to the improvement of students' learning ability. "Flower arrangement art", "pottery art" and "national folk crafts" are more successful design-type open courses in recent years, which are characterized by resource sharing and product extension. The three courses are taught by project-driven method. After the completion of the courses, there are students who are engaged in entrepreneurship and innovation training, such as entrepreneurship florist, ceramics experiencing shop and cultural and creative design. The course resources are socialized that makes the course become a social learning platform and that students not only become users of resources, but also creators of resources in order to achieve further social learning.

B. Innovation of Students' Independent Research-oriented Training

Student-centered independent research-oriented innovative training is the second classroom practical training well advocated by the college. Interest group is one of the main ways to realize it. Students of different grades make brainstorming innovations around a certain interest point to explore and settle some practical problems together. For example, students majoring in product design develop product culture and innovation around the question that "is coffee only for drinking?" and eventually around the main line of jewelry, coffee beans are made into "coffee jewelry" and won the national silver prize of the university student innovation and entrepreneurship competition of Chinese "Internet". After graduation, several creative students begin to engage in project-based entrepreneurship work.

C. Scientific Research of Art Graduates in Vertical and Horizontal Aspects

University-level social science and art university scientific research projects are an important way for students to carry out innovative training. Students majoring in design actively integrate graduation design and project research, and actively explore the training mode of scientific research output. According to the university students' scientific research projects set up in 2018, 57% of them belong to art major subjects, among which 30% belong to design product development, and 27% belong to intangible cultural heritage development. In addition to the horizontal research projects of teacher-student cooperation, the average is 32 items in the past three years, and the average number of professional students participating in the past three years has reached 45%. Around the whole vertical and horizontal scientific research projects of college students, we can actively mobilize the promotion of innovation and entrepreneurship education.

D. Multi-level Skills Competition of Design Major

"Using competition to promote teaching" is an important part of the reform of practical teaching in design major. Multi-level professional skills competition provides an important way to strengthen the training mode of "specialty-oriented" application-oriented talents and the construction of "learning-output" course system. On the one hand, by participating in professional skills competitions, teachers and students can show the level of innovation and entrepreneurship education and students' spiritual outlook, learn from experience and improve the reform of personnel training mode. In addition, "school-enterprise cooperation", "work-study integration" and "in-post practice" are new ideas of modern innovation and entrepreneurship education. Skills competition is often used as a medium for school-enterprise cooperation and product promotion, which can actively promote the construction of off-campus practice base and promote the way of deep school-enterprise cooperation.

V. CONCLUSION

The integration of "innovation and entrepreneurship" educational concept into design training teaching is not only to set up a module or arrange several courses, but also to run through the whole teaching process with the concept of innovation and entrepreneurship. The construction of training platform is one of the important ways to realize the ability training of each teaching module under the guidance of "innovation and entrepreneurship" education. Colleges and universities should actively explore ways to promote "innovation and entrepreneurship" education through collaborative innovation such as school-enterprise cooperation and institution-locality cooperation. It is an important way that is worthy of exploring to optimize and integrate the management function resources of the training platform based on the maker pace, to build the "innovation and entrepreneurship" platform of colleges and universities and to build an integrated "innovation and entrepreneurship" service system.

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