

# ***Research on the Construction and Development of "Government-Industry-Enterprise-University" Four in One Modern Apprenticeship Talent Training System based on Famous Teachers' Studio***

—Taking the Major of Architecture as an Example

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**Abstract**—In order to realize the scientific and long-term development of modern apprenticeship personnel training mode in China, it is necessary to analyze the teaching mode and current situation of modern apprenticeship. Because one of the core spirit of modern apprenticeship is to realize the mutual benefit and win-win between universities and enterprises. Therefore, this paper puts forward the "famous teacher studio" model, and based on the "famous teacher studio" to build a "government-industry-enterprise-University" four in one modern apprenticeship talent training system. As a platform and media, the "famous teacher studio" model can coordinate and protect the interests of universities, enterprises and students. It not only inspires enterprises to participate in the modern apprenticeship system, but also improves the talent training level of higher vocational colleges.

**Keywords**—modern apprenticeship; architecture; master studio

## I. INTRODUCTION

The promotion of modern apprenticeship system has greatly promoted the development of Vocational Education in China [1]. However, in the process of promotion and implementation of modern apprenticeship, there are also some problems. Among them, the most prominent aspect is the low enthusiasm of enterprises to participate. The phenomenon of "cold enterprises, hot schools" is an embarrassment that many vocational colleges have encountered in implementing the modern apprenticeship model [2]. In addition, the individualized training of modern apprenticeship talents is also a difficult problem to be faced and solved in the implementation of modern apprenticeship teaching mode [3]. As far as the current situation is concerned, the modern apprenticeship cooperation between enterprises and schools

often stays on the surface, with insufficient depth and breadth [4]. The effect and quality of modern apprenticeship need to be improved. Based on this, there is an urgent need for a medium that can coordinate and protect the interests of colleges, enterprises and students improve the learning effect of students, stimulate the enthusiasm of enterprises to participate in the modern apprenticeship system, and at the same time improve the talent training level of higher vocational colleges.

## II. THE CONSTRUCTION OF MODERN APPRENTICESHIP TALENT TRAINING SYSTEM

### A. Putting forward the core idea

This paper puts forward the core idea of the construction of modern apprenticeship personnel training mode, which is "building a platform, radiating and driving, forming a team of schools and enterprises, and integrating training". With "famous teacher studio" as the platform and media, coordinate the interests of enterprises, universities and students, and promote the development of modern apprenticeship. Higher vocational colleges develop the implementation plan for the construction of famous teachers' studio, sign the joint education contract with the cooperative enterprises, so that the enterprises can benefit, the students can benefit, and the schools can develop. Taking the Architectural majors of our university as an example, we have established a famous teacher studio, and take the studio as the hub to establish a cooperative relationship with local architectural enterprises.

### B. The establishment of teaching system

In the process of the implementation of modern apprenticeship system, the architecture specialty of our university took the lead in building a teaching system based on

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Famous teacher studio project of Shandong Province in 2019 hosted by Xiuyan Zhang

"famous teacher studio". The establishment of the teaching system fully investigates the overall needs of the quality and skills of the employees in the current transformation and upgrading of the construction industry. The new teaching system includes four parts: platform course, module course, practice teaching system and innovation and entrepreneurship system. On the basis of considering both systematization and flexibility, the system realizes the simultaneous development of knowledge system construction and skill level, and lays the foundation for the future career development of students. The specific contents of the system are as follows:

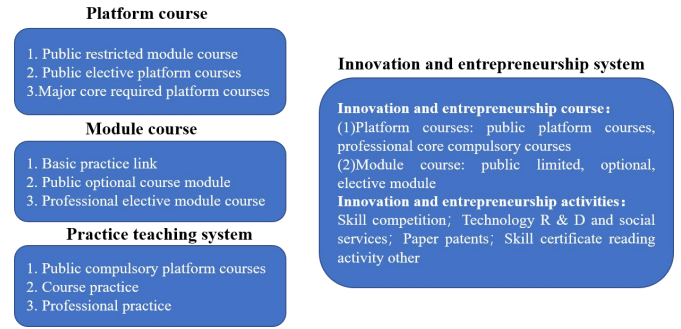


Fig.1. Modern apprenticeship teaching system based on "the famous teacher studio"

TABLE I. PRACTICE TEACHING SYSTEM

Category of professional practice links		Name	Credit	Semester
Post-Practice	Special ability training	The practical training of "construction engineering drawing and structure"	5.5	1
		Construction engineering survey training	2	2
	Comprehensive ability training	Application of engineering cost software application of engineering cost software	6.5	4
		Manual calculation of civil engineering measurement and valuation of Construction Engineering	8.5	3
Post-Practice	Cognition practice	In the first semester, I got to know the architectural engineering map and structure	5.5	1
	Post-Practice	Professional rotation training module I: Civil Engineering Measurement and pricing	5	5
		Professional rotation training module II: Decoration Engineering Measurement and pricing	5	5
		Professional rotation training module 3: Measurement and pricing of installation engineering	5	5
		Professional rotation training module 4: Municipal Engineering Measurement and pricing	4	5
	Post-Practice	Internship: the position of budget clerk	18	6

### C. Improvement of the evaluation system

Under the modern apprenticeship training mode, whether vocational colleges can establish and improve the scientific and effective evaluation system is of great significance for the smooth implementation of teaching and talent evaluation, for improving the quality of education and promoting the long-term development of modern apprenticeship. The construction specialty of our university has built a student evaluation standard system based on "famous teacher studio" and improved the process evaluation of students under the "double tutors" system.

benefit among enterprises, universities and students is constructed. The members of the "famous teacher studio" include two parts: school personnel and enterprise personnel. Every studio member must make a reasonable and effective personal growth plan. For college teachers, in addition to completing the prescribed teaching workload, they must also complete the studio's enterprise training plan, and improve their dual teacher level in enterprise production and project research and development. Through the studio, enterprise teachers can participate in teaching, organize scientific research and select talents, which not only improve the theoretical level but also broaden the thinking.

### III. CONCLUSION

In view of the problems existing in the implementation of the modern apprenticeship education mode, this paper puts forward the concept of "building a platform, radiating and driving, school enterprises forming teams, and integrating and cultivating". With "famous teachers' Studio" as the medium, the school and the enterprise cooperate, on the basis of updating the existing talent training program, jointly develop the talent education standard system, implement the "double tutors" process assessment and evaluation of students, and provide a platform for the ability improvement of enterprise experts and full-time teachers [5]. Through the exploration and practice of the modern apprenticeship personnel training system based on the "famous teacher studio" in the architecture major of our school, the skills competition of the students in the architecture major of our school has achieved fruitful results. The innovation and entrepreneurship ability of the students has been continuously improved. The recognition of the employers to the students has been increasing year by year [6]. The professional skills level of the teachers has been

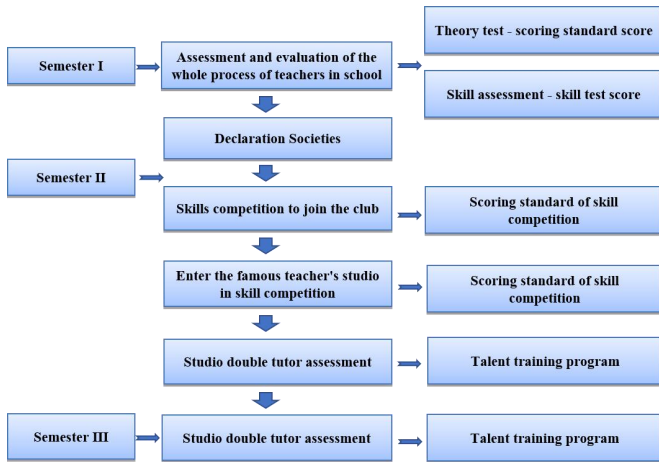


Fig.2. Process assessment and evaluation system

### D. Construction of implementation plan

Based on the "famous teacher studio" mode, the implementation scheme of the talent training system of mutual

increasingly improved. Taking architecture as an example, in the exploration and practice of modern apprenticeship talent training mode, this paper holds that the platform of "famous teacher studio" is a positive, healthy and effective exploration for the improvement of talent training quality. Other majors can also explore and build the most effective platform according to their own professional characteristics.

#### ACKNOWLEDGMENT

Xiuyan Zhang, famous teacher studio project of Shandong Province in 2019

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