

## Research and Practice of Innovative Research Practice Teaching Mode Based on Master Studio

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### Abstract

Based on the guidance of the industry association, higher vocational education shall cooperate with master to establish the master studio in the school, innovate and construct the practical teaching mode of "Promote Study with Research", which integrates teaching, training, R & D and technical services, which can expand the social and enterprise service scope of garment and garment design major to a great extent, improve the professional service, and drive the development of professional construction, and then train a large number of innovative talents of garment design with international vision for the regional garment industry.

### Keywords

Master; Research Practice Teaching; Innovative Education.

### 1. The Experience of Participating in the Construction of Garment and Garment Design Specialty in Higher Vocational Education

As a matter of fact, garment design in higher vocational education shall not only keep up with changes in market demand, but also serve the local garment industry and enterprises. Based on the industry association, famous enterprises, famous teachers, give full play to its advantages and strengths, it shall develop cooperation in running schools. Practical teaching, in particular, needs to be integrated with industry and enterprise projects for implementation, which can not only ensure the development of garment design in higher vocational education in line with the development direction of the industry, but also make the professional talent training mode timely. There is no doubt that the cooperation between higher vocational colleges and local garment industry associations and famous enterprises has achieved some results. Garment design of Wenzhou Vocational & Technical College has accumulated some experience in exploring the innovation and practice of famous enterprises "Integration of Production and Education" relying on industry associations, and has completed the content of school-enterprise cooperation:

#### (1) Cooperate with Industry Association to Establish Professional Secondary College

Local industry association serves for local enterprises. It not only undertakes a considerable part of government functions, but also has certain professional functions of industry management. The industry association understands the pattern and development trend of the regional garment industry, especially the scale, development history, management strategy, talent demand and so on. Since 2000, garment design of Wenzhou Vocational & Technical College began to explore the mode of running schools jointly with industry associations and famous enterprises, and set up Wenzhou Garment College jointly with Wenzhou Garment Chamber of Commerce, the president of the industry association also served as the vice president of the college, and the industry association belongs to the excellent enterprise, the famous enterprise becomes the college off-campus practical training base. In 2016, led by

Wenzhou Municipal Government, Wenzhou Design Institute, a secondary college, was established in Ou Hai characteristic town. In 2109, Wenzhou Vocational & Technical College worked with Dongmeng Group to set up excellent order classes, industry associations and famous enterprises to put forward the demand for talents according to the needs of the industry and the development of enterprises, and worked out the talent training plan with the specialty to determine the talent training mode and talent training program. In the process of joint running, the train of thought of, Art Design Department of Wenzhou Vocational & Technical College is consistent with that of the industry and the development direction of the enterprise, and the talents trained have been recognized by the enterprise and the society.

(2) Led by industry association, a multi-level and multi-forms scientific and technological innovation and service platform has been built.

Art Design Department and industry association have jointly established a multi-level and multi-forms scientific and technological innovation and service platform (figure 1) and formed a strong R & D foundation. Art Design Department gives full play to the advantages of the platform hosting units, vigorously provides technical services for the regional garment industry, and also combines teachers' scientific research projects and technical service projects into professional teaching, so as to assist students realize the combination of theory and practice and form a "Production, Learning, Research" interactive talent training mechanism, which improves the quality of talent training and ensures the effectiveness and advanced nature of talent training.

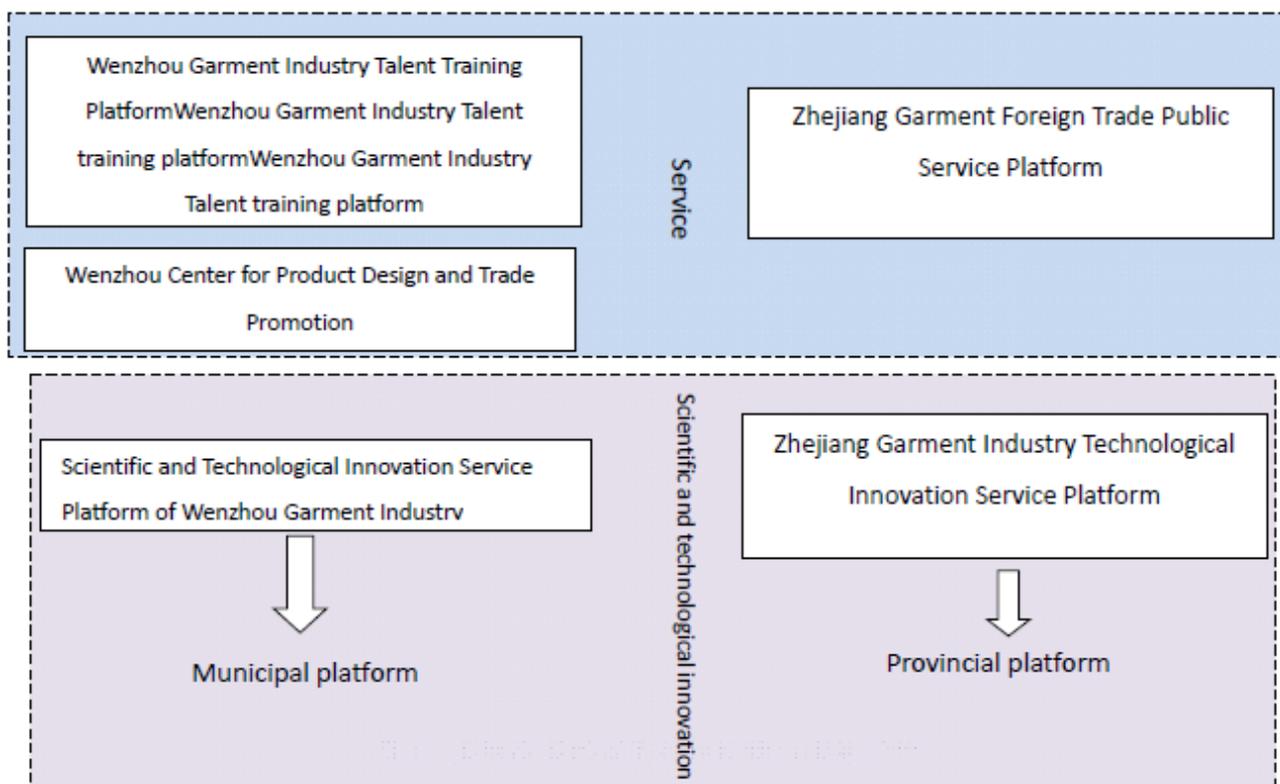


Fig 1.

(3) Relying on industry association and Enterprises to Complete the "three in one" School Training Base

Based on industry association, famous enterprises, garment design has completed the construction of "three in one" school garment training base, and the information garment training has realized "the unity of classroom and training room". The cooperative enterprises

in the school have achieved the "unity of training and production", and the industry scientific and technological innovation service platform has realized the "unity of graduation design and development service". The "three in one" training base in school has effectively improved the effect of practical training teaching, the ability of professional service enterprises, industry association and the depth of enterprises participating in professional teaching with gradual operation.

## 2. Difficulties in School-enterprise Cooperation

China's garment industry has gradually entered a mature stage of development, "mutually beneficial win-win" will become the premise of school-enterprise cooperation. However, there are some practical problems to be solved on the establishment of "mutually beneficial win-win" garment design education mechanism. Although the teaching of garment design in China defines the teaching ideas of higher vocational education, many higher vocational colleges are also actively exploring the teaching mode of "Integration of Production and Education" for garment and garment design majors, and some move the production workshop of the enterprise to the school and put forward the mode of productive practical training to train "practical talents", and establish all kinds of off-campus enterprise practice base, practice teaching project enterprise and so on. At present, there are the following difficulties in school-enterprise cooperation.

1. Existing on-campus or off-campus practice sites do not transform the student's role into that of a professional worker.
2. The actual project of the enterprise is long-term and continuous, but the teaching project of the university is piece-wise and phased, and the connection will not be smooth in the process of practice, and the cooperation between the school and the enterprise can not be carried out continuously and deeply.
3. The mechanism of school-enterprise cooperation is not perfect and lacks the long-term effect of cooperation. Although some enterprise mentors have rich practical experience in the industry, they lack the foresight of the industry.

## 3. Innovation of Research Practice Teaching Mode Based on Master Studio

Over the past few years, garment design of Wenzhou Vocational & Technical College has uninterrupted cooperation with industry association, enterprises and has made some achievements. A series of curriculum comprehensive practice projects based on real cases of enterprises have been completed and teaching based on the comprehensive projects of enterprise background. Moreover, garment design integrates the knowledge and skills of professional courses and improves students' practical ability by introducing practical projects into the curriculum, so as to further advance the teaching quality of professional courses. On the basis of the original training base, garment design set up master studio in the school and implemented the research practice teaching reform to deepen the teaching reform of "Integration of Production and Education", and improve students' training specifications and students' innovative ability and professional social and technical service ability. Compared with other forms of school-enterprise cooperation, master studio has the following innovations:

- (1) The achievement of master affects students and stimulates students' learning motivation with the research and development of new products. The influence of master in the industry will bring the industry major and the latest information, and the studio will be the bridge between teaching and market that will transform the content of market and business into teaching content in the process of practice replacing classroom teaching with market-oriented work. On the one hand, it is conducive to more accurately grasp the needs of the industry,

enterprises for garment design personnel and the professional ability requirements of garment design posts. On the other hand, it can further perfect the curriculum system, so as to promote professional reform, improve curriculum construction and teaching quality.

(2) Master studio carries out practical teaching in the form of open and "quasi-employment", and replaces classroom with post teaching.

The positions provided by master studio are consistent with the actual positions in the enterprise. Students entering master studio positions mean practicing and touching the design and production of the enterprise in a real panoramic workplace atmosphere. As masters is in the front end of the industry, most of them are engaged in garment brand planning, design and management for a long time, so they have mastered the latest international popular trends and market development trends, and embrace rich industry practical experience and industry resources. They form a teaching team with the teachers in the school, which can not only give students the teaching of design methods, but also provide students a demonstration of practical operation.

(4) Replace piece-wise teaching projects with continuous R & D projects. Based on the original teaching mode, students' continuous practice in R & D posts through the introduction of continuous R & D projects in master work gradually improves their R & D ability and innovation ability from participating in project practice to independent R & D practice, so as to cultivate innovative talents suitable for the industry, enterprise design and research and development department. The teaching reform project, master studio, which focuses on construction and long-term practice, can gradually form a research practice teaching model and a good innovative education atmosphere.

#### **4. Practice of Master Studio Practical Teaching Mode**

Practical teaching mode is a way to deepen Integration of Production and Education. Deepening Integration of Production and Education is the depth of integrating the advanced technological elements of industry, excellent culture and development needs into professional teaching, the optimization of education and teaching objectives and talent specifications, and the degree of integration and benign interaction between education and industry as a whole. The key is that the students trained by the school face the competence of industrial development and the improvement of the service ability of the school. [1] According to the core post requirements related to the industry enterprises, garment design emphasizes the talent training of the professional technical level while paying attention to the personnel training of the professional skill level, and gives full play to the advantages of training carriers such as professional training base, public scientific and technological innovation platform and public service platform, and fully integrates "Production, Learning, Research" resources to improve the quality of innovative personnel training. Through the practice of master studio, the cultivation of the spirit of cooperative innovation of professional technology, the ability of professional innovation and the consciousness of entrepreneurship are emphasized. Furthermore, garment design can make use of all kinds of scientific and technological innovation service platforms, introduce some masters to join Art Design Department and utilize market-oriented designer studio operation mode to create advanced customization, brand product design and planning, new products and new technology research and development services, so as to realize the combination of theory and practice, and establish the research and development training base and implement research and development practice between professionals and students. Based on teaching, training, R & D and technical service, this model is mainly realized through project teaching, master studio practice and graduation comprehensive practice, and it can expand the social and enterprise service scope of the professional base, improve the service of the

professional base, promote the development of professional construction, and train innovative talents of garment design with international vision for the regional garment industry.

(1) The master teaching project is integrated into the "two-level and multi-directions" talent training mode through docking the needs of the core posts related to the major.

According to the training goal of garment and garment design specialty, the core posts of garment enterprises are garment design and development, garment layout development and other development technical posts, master studio shall analyze the requirements of post ability corresponding to the core position and sum up the core competence of the post (development ability, innovation ability, according to the needs of post ability of garment enterprises and the personal characteristics of students, and divide students majoring in garment design into garment design and garment plate making in the fourth semester. Moreover, it shall be divided into two levels: specialty type and general type. According to the talents training goal of garment and dress design major, it shall be the master studio practice content into the teaching system, and constantly perfect the practice teaching system of cultivating the ability of incremental, its main points and basic skills training, vocational skills training, comprehensive ability, creative ability training, specific content with classroom teaching practice, project teaching training and professional qualification appraisal practice, the school master graduate studio practice and comprehensive practice forms, such as the master studio is given priority to with the school master graduate studio practice and comprehensive practice. The practical teaching mode can realize the transformation from the professional talent training mode to the open, active and innovative mode, and the professional teaching can be closely related to the society, enterprises and the market, which can grasp the development direction of garment industry, and inject fresh ideas, entrepreneurship and the essence of corporate culture, the most cutting-edge design trend and R & D technology to promote teaching reform and innovation.

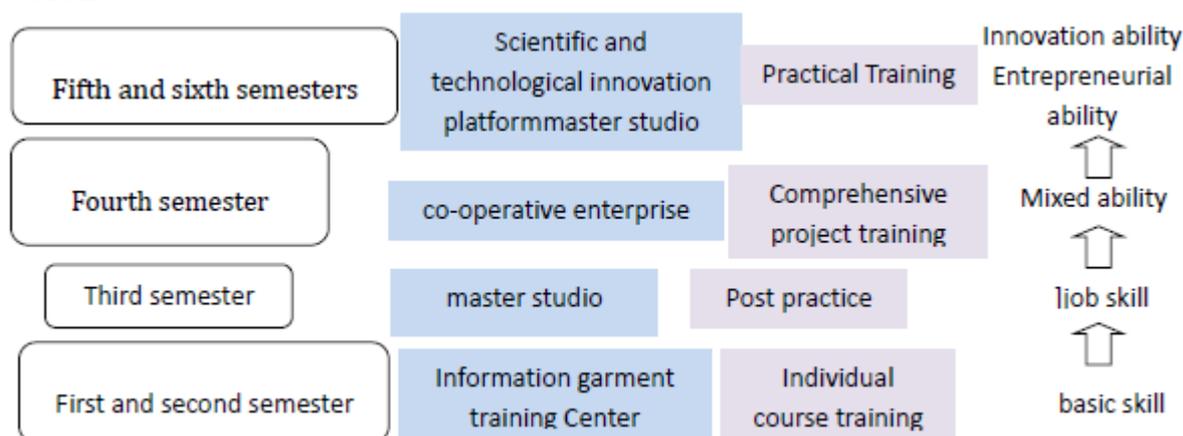


Fig 2. Practical Teaching System for Gradual Ability Training

(2) Layered practice to gradually form a practical teaching model.

During the 13th five-year Plan period, garment design kept up with the development of the industry and added advanced software and hardware equipment, further improved the teaching and training environment, and maintained the leading advantage of professional teaching conditions. Based on the original training base, through the absorption of innovative ideas, institutional innovation, teachers upgrade, garment design builds a "training, research, creation" as one of the training system, focusing on the construction of master studio in the school and the implementation of research practice.

Master studio internships are divided into the following two levels: the first level is to cultivate vocational skills. In the second and third semesters, it is necessary to focus on the training of

students' vocational skills. Each student shall go to the master studio, in his spare time to carry out the internship, and the studio arranges the internship position and undertakes the guiding task. The second level is to cultivate R & D and innovation ability. In the fourth to sixth semester, it shall cultivate students 'R & D and innovation ability. Through students' independent registration and studio recruitment, each studio absorbs 8-10 students to enter the practical training of r&d positions and complete the graduation design. Research and development post refinement, according to category groups to carry out in-depth practice, the process by Art Design Department and studio joint monitoring, and develop a special assessment system and standards, evaluate related results. At ordinary times, the assessment system for commuting in studio will be implemented, and the project design and development will be arranged by studio according to the needs of the post and the professional expertise of the students, and special persons will be appointed to coach them. In the sixth semester, students integrate entrepreneurial content while completing the graduation project at studio.

(3) Replace the original closed classroom with open work and workplace, and realize the combination of hands-on, brain-using and emotional innovative education..

The original intention of creating master studio is to influence students with the charm of master personal achievement, to stimulate students' motivation to learn with the research and development of new products, and to use the post situation of master studio to replace the original closed classroom with open work and workplace to realize innovative education with the combination of theory and practice. The practice pays attention to creating the atmosphere of innovative education, creates the post situation of master studio in the way of immersing the post, enables the students to fully experience the post environment, find the sense of achievement, and stimulate the students' learning motivation in the process of the practice of the post.

Moreover, the members of master studio shall undertake the teaching workload and special lectures of certain core courses. Students mainly enter the studio post practice through the on-the-job practice link, and each student distributes the "in-school post practice manual" every semester to complete the corresponding post work. According to their own professional research direction, professional teachers carry out the specific jobs of studio, combine their teaching tasks with professional specialties and studio projects and improve teaching ability.

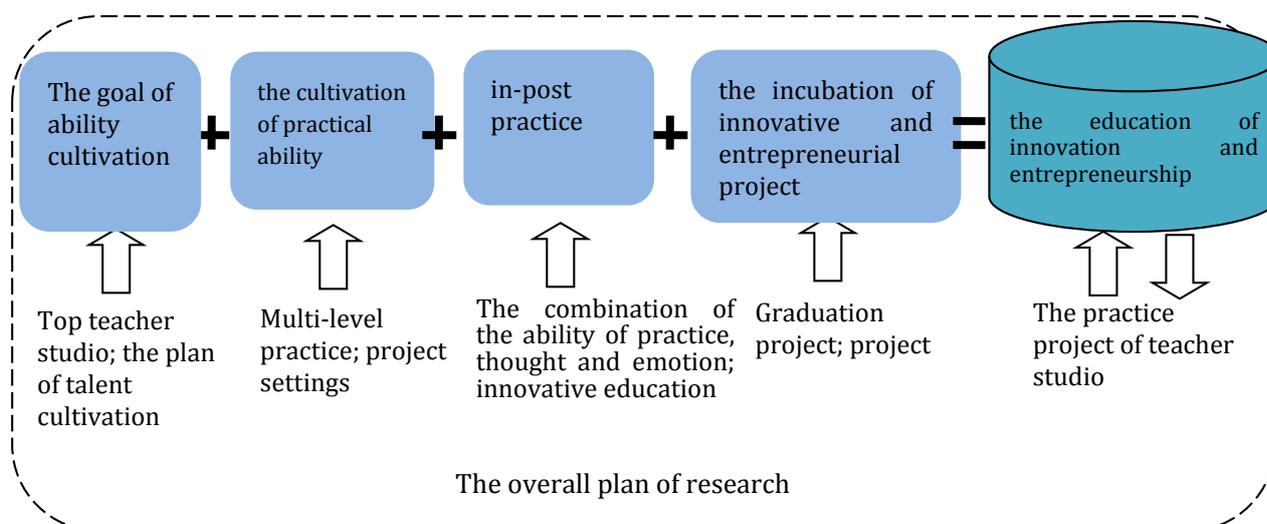


Figure 3. Master Studio Practice Project Settings

(4) Strengthen the construction of "double teachers and three abilities" teachers with comprehensive abilities such as "teaching", "R & D" and "technical service".

At present, there is a certain lag in the construction of higher vocational teaching staff relative to the industry, especially the lack of practical training instructors with both practical experience and teaching experience. The 13th five-year plan clearly proposes to accelerate the talent development system and policy innovation, and a certain amount of capital shall be invested to introduce talents, broaden the channels for the introduction of high-level talents of "double-qualified teachers" and further refine the level of talent introduction.[2] The major adopts the principle of "inter-working between schools and enterprises, combining with each other, dynamic combination" and "paying equal attention to both theoretical level and practical ability" to construct teaching staff .[3] One of the more appropriate ways to train teachers is school-enterprise cooperation. .On the one hand, colleges can introduces master to join the team of teachers, on the other hand, professional teachers can complete the enterprise practice in the school, so that they can contact the enterprise and combine teaching with post work. Moreover, it shall give full play to the expert advantages of master in the industry, provide teachers in the school with a variety of forms of training, technical guidance, R & D guidance, etc., so that every teacher can participate in the master studio project, and the regional industry, and focus on the issues in the development of enterprises, so as to guide teachers to change their ideas, carry out horizontal research with famous enterprises in the industry, improve the ability to track the development of the industry and professional teaching.

In addition, the college shall employ internationally renowned designers, institutions as partners, set up an international garment design resource sharing platform, establish an international garment master design studio to further promote research and development posts, and achieve international exchange, and then absorb the internationalization of teachers and students.

(5)The college shall establish a perfect practical teaching management mechanism of master studio, and formulate effective management system and long-term mechanism.

(1) The college shall incorporate the post practice into the talent training program to ensure its long-term operation, and each studio must accept more than 10 junior students to carry out R & D post training and graduation design, arrange R & D posts reasonably, and designate special personnel for guidance. At the same time, it is imperative to accept the post practice of freshmen and sophomores in their spare time, be responsible for arranging the post practice station, practice content and undertake the guiding task, and carry on the special examination to the studio post practice work by the department.

(2) Establish the advance and retreat mechanism for the introduction of enterprises into studio, pass the annual assessment, conduct comprehensive evaluation in terms of personnel cultivation and operation status, provide support in terms of equipment, site and graduate employment for those in good operation status, and establish exit mechanism for those in poor operation status.

(3)According to the specific R & D project of each studio, at least 5 technical personnel are hired to undertake the training instructor and undertake the task of practical teaching of the core course of the specialty, not less than 50 class hours per semester.

## 5. Conclusion

As an essential link in the implementation of garment design in higher vocational colleges, there will still be some problems and conflicts in the implementation of school-enterprise cooperation and integration of production and education. How to find the balance point between enterprise pay and harvest in school-enterprise cooperation is the key. As for colleges and universities, the purpose of it is to guide students to transform theoretical knowledge into practical ability, so that they can become high-quality skilled talents, but for master studio, who hopes to transform the resources of colleges and universities into productive forces in actual

operation and reserve cadres in R & D departments. If practical teaching can solve the needs of schools and enterprises, it will bring remarkable results to the reform. According to the development of the current industry, garment design in higher vocational education should change the teaching concept in time, create a talent training mode to meet the needs of market talents, and implement practical teaching. Garment design of Wenzhou Vocational & Technical College uses industry association to work with enterprises to build "classroom and training room", "practice and production". The in-school training base of "Integration of graduation Design and Development Service" and master studio to cultivate students' R & D ability and innovation ability. At the same time, it reserves talents for master studio, and gradually forms the research practice teaching mode of "Promote Study with Research" and a good atmosphere of R & D and innovation, which is beneficial to the cultivation of innovative talents who adapt to the society, industry and enterprises. At the same time, it has also solved some problems of enterprise development.

Combining the above mentioned, garment design in higher vocational education used industry association grasps the direction of professional construction from the overall situation of regional industry development and combines with master to implement the implementation of teaching ideas from the specific practical links, which gradually improves the talent training model named "Drive Study with Production & Promote Study with Research ". Therefore, we hold that adhering to the Integration of Production and Education will certainly achieve fruitful results.

## Acknowledgements

Zhejiang Educational Science Planning Project Research and practice of "R & D Training" in Master Studio No.:SCG291.

## References

- [1] Ma Shuchao, Guo Wenfu. Experience, Problems and Countermeasures of Deepening Integration of Production and Education in Higher Vocational Education [J].China Higher Education Research, 2018(4).
- [2] Zou Yurong. Construction of "Double-qualified" Teachers and Integration of Production and Education [J].Journal of Zhangzhou Teachers College:Philosophy and Social Sciences. 2017 (2).
- [3] Xiang Gan. Reform and Practice of the Combination of Work and Study in Garment Design Course in Higher Vocational Education [J].Education and Vocation, 2008 (36).
- [4] Xiao Jinrong. Research on the Teaching of Garment Design Course Based on Studio Mode[J] Shandong Textile Economy, 2012(7).