

Exploration on the Application Teaching Practice of Clothing Color in Higher Vocational Education Base on Production and Education integration

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Abstract

Under the new mode of deepening reform and innovation development in vocational education, as compulsory basic course of fashion design, Clothing Color from developing new ideas of the application of clothing color teaching to promote the construction of clothing and apparel design to exploring new teaching methods through school-enterprise cooperation, integration of industry and education, infuses new blood for clothing industry to cultivate applied professional talents with high quality skills, integrating design, production, scientific service and management.

Keywords

Production and Education integration; Clothing Color; Project; silk painting.

1. Introduction

In the current development of global economy, China has become one of the biggest countries of clothing production and export in the world. The integration of industry and education has been promoted to social level. Vocational education has been irreplaceable and is no longer a compressed biscuit for undergraduates. As the basic course of clothing design in the freshman year, Clothing Color shall be closely related with current industries as well as economic development. Sun Rao, deputy minister of education, proposed 20 articles about vocational education, "increase the vitality of industry company's participation in vocational education and promote school-enterprise collaborative education." The talent quality of vocational education should be continuously improved. Clothing design is an application specialty. Thus, the teaching reform of project-based applied curriculum integrating local industry and teaching is proposed for Clothing Color to promote the teaching of higher vocational education to keep pace with the times, form the integration mode of school and companies, and cultivate high-level application-oriented compound talents in line with current needs, which is of great significance. Hence, it is vital to strengthen students' practical ability coping with the enterprise R&D projects during the teaching.

2. Teaching Model Reform Based on the Integration of Industry and Education

(1) Course teaching status

After investigation, from the perspective of some higher vocational colleges in China, Clothing Color reflects the traditional and inflexible teaching methods in terms of curriculum standards, teaching plans, lesson plans, and teaching materials. The homework is based on text exercises and curricula is theory-oriented with a few training sessions. Even the practice projects in the class are set depending on teacher's personal expertise, lacking of integration with enterprises and markets, so that students are easy to get caught in working behind closed doors and wisdom without experience. Students will have no a deep impression on color knowledge and can't apply it flexibly.

(2) Combination of teaching content with market reality

Color is one of three components of clothing. American Marketers put forward the world famous "7-second color law". Whether a product can evoke your desire to buy is can be determined rapidly and correctly in a short 7 seconds by consumers. During the 7 seconds, color factor accounts for 67%. Therefore, the clothing color course teaching shall be closely related with industry and market economy. From the industrial development needs, the R&D project connected with the company by teachers shall be imported in course teaching so as to mobilize students' enthusiasm for learning with teachers real R&D project. Clothing color is not only reflected in the mastery of clothing basics, but it is more important to integrate consumers' emotional and psychological factors in the clothing color design. In addition, fashion color extraction and application practice ability shall be cultivated, the solid foundation should be laid for the color recognition of clothing packaging design brand, the design and application of clothing pattern, clothing display design, and the practical reference should be made for the design and development of cultural and creative derivative products.

(3) Integration of teaching mode as well as industry and education

Old clothing color teaching content should be changed. Reasonable education system of integration of industry and education as well as school-enterprise cooperation should be made. Based on industry, market and brother institutions, project teaching mode should be fully applied throughout teaching to give full play to the students' ability of independent innovation. Attention should be paid on the connection of curriculum system construction and actual production of enterprises. Cooperation between school and enterprises should be strengthened, and teachers go deep into the enterprise to carry out special site-based R&D services, so as to introduce horizontal topics and let students participate in teacher practice. This is the most effective way of practice for students in clothing color course, and at the same time, the teaching conforms to the cultivation of the demand for clothing talents. How to achieve deep integration of industry and education is an urgent problem to be solved. This paper combines the author's R&D content, in the new teaching mode of "integration of industry and teaching" and "school-enterprise cooperation", to realize that the teacher is the planner of the industry and education integration project and students are subject of the model. In the school-enterprise cooperation, the teacher shall set team project implementation steps according to teaching progress and corresponding R&D task and provide students with feasible planning and ideals. In addition, students are organized to have on-site color teaching in the enterprise workshop and color theory teaching and school-enterprise cooperation project practice teaching are organically compatible and throughout the curriculum so as to cultivate their innovative ability and enhance professional quality.

3. Practical Setting of Clothing Color Teaching with Industry and Education Integration

The teaching contents aimed at adapting to the needs of industrial talents. In the teaching design, practical training section should be constructed timely according to the school-enterprise cooperation project. Clothing color need student have a strong manual technology. It is the most important part for teaching to pay attention to students' actual color matching application ability. Only by combining theory with practice can we improve students' practical ability and master the essence of clothing color project training. The following sub-projects of teachers' horizontal subjects are introduced into the teaching of clothing color units, making students can actively participate in the practice of teachers' scientific research projects on their own, guiding students to fully develop their own creative abilities and stimulate learning enthusiasm and innovation, which is an effective way to train students to master clothing color knowledge and improve their social practice ability and fully cooperates with scientific

research projects, school-enterprise cooperation, and production and education integration to jointly promote the coordinated, orderly and purposeful development of teaching.

(1) Design practice of cultural creative calendar

Taking Wenzhou Haoxihao Accessory Co., Ltd. and teacher research and development project as an example, the design of cultural and creative products in 2019 calendar color scheme was integrated into curriculum teaching. The project takes the sample of the calendar provided by the enterprise as an example. The project team drew the content, subject matter, composition, color, technique and form in strict accordance with the requirements stipulated by Party A, and designed and produced according to the standard size of the calendar, among which, the color configuration sub-items involved are in line with the teaching content of the basic unit for clothing color. The clothing students in 2016 were divided into five groups to jointly design and develop the 2019 fine art calendar and the corresponding color is based on the established art materials. The food in January and March (as shown in Figure 1 and Figure 2) used a similar color with yellow tone, and the overall color was matched by the gradient color principle. The figure was decorated with rose red watercolor flowers as a bright color. The calendar design of August is a corner of life (as shown in Figure 3). The colors were matched with the three primary colors of red, yellow and blue, which is beautiful. In calendar design of December (as shown in Figure 3), students made bold attempts to use red and green complementary colors to lay the foundation for a strong visual impact. The whole series of colors deeply excavated Wenzhou's local characteristics to meet spiritual needs of people, strive to highlight the artistic atmosphere of the calendar painting, so as to further reflect the characteristics of the enterprise cultural and creative products. The content of the course was guided by the basic theory of color and the form of color expression, took the clothing color psychology as the design connotation, adhered to the combination of practical training and theory, and took the design of cultural and creative products as the market orientation to cultivate high-skilled and innovative application talents for small and medium-sized enterprises in production, design, management and service. In the course of teaching, taking the real project design (by the application of a number of practical projects in the enterprise to connect the color development of the clothing products) as an example, students can master the color matching workflow. Finally, the enterprise instructor chose excellent student works for production, and the final product was tested by the market.



Fig 1.



Fig 2.



Fig 3.



Fig 4.

(2) Design and color matching of hand-painted scarves

Taking the hand-painted scarves provided by Wenzhou Haoxihao Accessory Co., Ltd. as an example, the clothing students in 2017 participated in the teacher's scientific research project team, and used the scarves painting color sub-item as a real project of clothing color and psychological unit to carry out the design of hand-painted scarves and derivative design and production of cultural and creative clothing accessories. The hand-painted scarves were designed based on the style of the designer and the design team. The color matching reflected the trend of the enterprise brand, highlighted fashion, high-end temperament and style. The

following are the final results of three series of hand-painted scarves developed and designed by the design team for the company.



Fig 5. Hand-painted pure silk scarves Flower Sea 1



Fig 6. Hand-painted pure silk scarves Golden Pheasant Meets Spring



Fig 7. Hand-painted pure silk scarves Flower Sea 2

Fig.5 Flower Sea is directly painted on silk with insulating adhesive and special pen for silk painting by combining weak acid fuel. The insulating adhesive has a good anti-dyeing effect on silk. With red, yellow and blue as the main tone, under the effect of silk anti-dyeing additives, brilliant color sparks are produced by the collision of three primary colors, the color matching of silk scarves is full of visual impact, and color tone is lively. Hand-painted silk scarves Golden Pheasant Meets Spring in Fig. 6 and silk hand-painted pillow Flower Sea 2 in Fig. 7 are a pair of cultural and creative derivatives. They are used for greeting the new year by an enterprise who entrusted our project team to custom cultural and creative pillow design. In terms of subject matter, we adopt the Buzi pattern of ancient second-class civil servant as the source of inspiration. Analyzing from the connotation, the character “锦” means colorful and good. Thus, in the color matching, the dark blue background with low brightness and the high saturation orange red for the theme form a vivid color complement relationship and achieve exaggerated color visual effects. The beautiful connotation is explained as glorious year of the Rooster and injects new auspicious semantics for the customization of enterprise cultural and creative pillow. In the pattern, the traditional golden rooster drawing is mainly applied with fashionable, innovative and vital color matching, showing off the new ideas with nostalgic patterns. In technique, hand-painted on silk, insulating adhesive anti-dyeing method are applied to paint and warm New Year blessing is sent to customers with soft material of pillows. Fig. 7 is simple and elegant in design. Clustered daisy is used as main theme. Hand-painted push halo shows

the layering of the petals. The cool flower reflects the back feeling of the picture, while the floral color visual sense of progression is reflected with warm colors. The use of clothing color psychology expresses the fullness of the overall shape. The project-oriented teaching of the integration of industry and education makes the clothing color experience from the theoretical teaching to the design and color matching based on the angle of the company's research and development. It also can guide students to practice in the enterprise and achieve the connection between the teaching process and the production process, also between the teaching standards and industry standards. This kind of teaching method realizes the cooperation between major and enterprise for cultivating the talents, and between the long-term research and development projects of enterprises and the clothing major. All of them aim to achieve a win-win situation which realizes the integration of clothing industry and teaching, and effectively transforms the theory course into the practice of clothing color. Finally, the new teaching model will deepen the cultivation of students' practical ability and make them master the essence of the course.

4. School-Enterprise Cooperation Model of Integration of Industry and Education

(1) To make clear Clothing color course objectives

In order to establish the target of the Clothing color Production and Education integration course, we need to pay attention to the following aspects. First, the curriculum standards to meet the curriculum development planning, but also in line with the needs of the industry market talent. Curriculum standards should be set according to the enterprise talent demand standards and skills requirements, and curriculum standards should be adjusted in line with changes in the industrial structure. Clothing color popular color application training must be based on the current trend of Popular Information research to capture the overall trend of 2019 clothing and inspiration to the group as a unit to collect different brands Clothing color series, and find inspiration from the reverse thinking training, from which to extract color, and to report to the enterprise experts. Zhejiang fester Co., Ltd. design consultants were invited to participate in the extraction and application of the effect of the popular color assessment, with industry standards to test the effect of the course. Secondly, the development of Production and Education integration courses, based on the Clothing color form and expression, Clothing color psychology, series of color matching project curriculum.

Courses regularly with students to participate in enterprise research, color curriculum Content Settings and enterprise R & D projects and business tasks, career standards relative connection, invited business experts to participate in the curriculum training development, analysis of professional courses in the field of development and market talent demand, school-enterprise cooperation professional course discussion, with the main project and sub-project teaching mode Change the theory-centered curriculum content system, the status quo of teachers sing a one-man show. Imitate the corporate color practice process, with students as the main body, in the simulation of the work situation in practice, the students in the teacher's guidance targeted, exploratory project training application, in order to summarize the color collocation experience in order to master the series Clothing color collocation skills.

(2) establishing the mechanism of Clothing color Production and Education integration course development

The establishment of close cooperation between the government, schools, enterprises, to establish a good mechanism is the only way to ensure the development of Production and education integration Clothing color, promote curriculum reform efforts from the following aspects. The government, first of all, to regulate the policy document, clear vocational colleges and enterprises in the school-enterprise cooperation should perform the rights and obligations. Enterprise cooperation participation to Clothing color course development of

enthusiasm, more and enterprise for horizontal topic cooperation, will special funds for teaching course development, perfect school enterprise cooperation running reward policy and tax policy, deepening Production and Education integration, for Production and Education integration course development provides corresponding system guarantee, elimination impact school enterprise cooperation of negative factors.

In vocational colleges, improve students ' initiative for the enterprise service consciousness, participate in enterprise technology research and development, through the school-enterprise cooperation exchange platform, for the development of series of clothing and apparel design color to provide new ideas. In the course development of Clothing color, find the combination of silk painting color collocation and corporate scarves and other cultural and creative design, set up a special project funds into Clothing color curriculum development, the establishment of "resource sharing, complementary advantages, mutual benefit and win-win " long-term school-enterprise cooperation mechanism. Through school-enterprise cooperation, production and Education integration talent training mode, the formation of school-enterprise curriculum development and effective mechanism of win-win, the formation of teaching resources and industry technology complementary new pattern.

(3) integration of production and Education integration course resources

At the level of teaching resources, should establish the teaching of the United States, the public number of mobile terminals and other information network courses, through digital teaching platform and information technology education environment, development of professional colleges and universities with the characteristics of clothing boutique courses, school-based teaching materials, making Clothing color supporting teaching courseware, color device training room. In addition, the teachers themselves should strengthen teaching ability, improve scientific research ability and practical ability, to be proficient in theoretical knowledge teaching, at the same time to find the fit point of enterprise subject and course teaching, refining Production and Education integration project training module, improve students to participate in enterprise research and development work, good "double teacher" teachers, improve Clothing color Enhance production and Education integration with color curriculum resources to develop human qualities, in collaboration with Zhejiang forest Garments Co., Ltd. design director jointly led the development and design of curriculum content. Enterprise technical personnel to understand the production line of the latest industry trends, there is a strong level of expertise and insight into the sensitivity of the international fashion trends, so the teacher I want to actively encourage industry leaders, business experts and technical personnel to participate in the development of wenjia Clothing color. I use digital media resources to create a complete American teaching, complete the curriculum effective case-model teaching and Project Training key difficulty analysis teaching, to ensure that students get rich and adequate information resources to complete the project development learning.

In the enterprise resource level, should give full play to the main role of the enterprise, allowing students to school-enterprise cooperation base practice, allowing students to master color collocation technology in the work environment. Clothing color courses according to the needs of Wenzhou economic and social development, strengthen cooperation with enterprises, science and technology parks, industrial parks, industrial parks, multi-level, multi-domain, multi-dimensional, multi-school training base, take orders of Project Personnel Training, the use of enterprises to improve the professional teaching ability of clothing. For Clothing color discipline to write School-enterprise cooperation characteristics of teaching materials, and strive to declare the online boutique courses, the effective use of multimedia network teaching resources to break the limitations of teaching in time and space. Promote Production and Education integration to develop appropriate policies and regulations, the state should be reduced or reduced this type of tax policy, improve the enthusiasm of enterprises to cooperate with higher vocational colleges and universities, the relevant departments should also play a

role of supervision and coordination, establish a good pattern of industry and teaching integration, provide long-term mechanism for the

(4) production and Education integration

In the Clothing color course, the Production and Education integration course system has been established, and the project of painting on silk and the training course are carried out on a regular basis, so as to carry out targeted and effective stand-up R & D for enterprises. According to the level of economic development in Wenzhou region, industry demand and regional cultural and creative industry characteristics, to carry out the corresponding curriculum development training, construction of application capacity as the center of the Curriculum Assessment content. The final evaluation of the students can not be a single set up in the course rate, usually homework, final examination nuclear three aspects, but also to study the students in the training for the strength of enterprise R & D ability into the examination evaluation index. Clothing color course has been in the process of implementation of the invited enterprise design department responsible for the selection of outstanding works for students, comments on the merits and shortcomings of the results of practical training, with the vision of the market, industry standards to test students ' works. The enthusiasm of students and the degree of knowledge to enhance the degree of desire, but also completely outline the color of the paper to fill the job to research and development projects into the main training, the use of Student Works campaign into the enterprise production line, the results show, get the enterprise draft sponsorship way to replace a single written test.

The integration of industry and education enables enterprises and clothing color teaching to infiltrate and support each other. Through higher vocational course teaching, enterprises obtain technological breakthroughs in research and development projects, and provide greater production efficiency for new clothing design. The college truly achieves a win-win situation for enterprises and higher vocational education through clothing color teaching, pointed research and development for servicing the enterprises, integration of enterprise management mode, and high inspection standards for production line.

In order to deepen the reform of clothing color teaching, I, as an engineer, went to Zhejiang Feist Garment Co., Ltd. for a 12-month visit from August 2017 to August 2018. I participated in the integration process includes design draft, pattern making, flow line production, quality inspection, sales, and also engaged in the design of sample clothing and color matching. Through further visit in the factory, I master the latest development of clothing, apparel and fabrics both at home and abroad, especially the popular trend of clothing color industry and its latest developments. I focus on improving my professional quality, and carry out the comprehensive research of feedback teaching in Clothing Color—the cooperation project between the college and the enterprise. I invent a utility model patent "a processing device for silk painting", which is convenient to be used in the color matching of silk painting, and more effectively solves the problem of glue leakage and glue infiltration caused by drawing the outline before the use of this processing device. The visiting engineer program can bring more industrial elements in teaching, which can create a platform to communicate color matching between students and professionals in enterprises, accumulate experience, share project results, and finally serve teaching, so as to integrate and supplement professional teaching and industrial development. In recent years, two companies, Hao Xi Hao Co., Ltd. and Zhejiang Feist Garment Co., Ltd., have invested in the teaching of fashion design in Wenzhou Vocational and Technical College, and have established the internship base for production, study and research, the innovation and entrepreneurial team, the design team for cultural and creative industries, and the design team for creative products with silk painting, which will help to jointly promote the color teaching of clothing. The enterprise's assistance makes the practical training more diversified and timelier, and at the same time, it infuses the enterprise's production standards and management mode, the professional and technical personnel, color matching process and

quality assurance mode to provide industrial support for improving the quality of clothing color teaching.

Continuously improve teachers' knowledge, and social practice ability, through access to the Engineer Project, for clothing and apparel design talent to cultivate the quality of more effective social resources. Based on Clothing color curriculum construction, classroom teaching, production and Education integration, school-enterprise cooperation and other connotation construction, improve the quality of Personnel Training. In the production and Education integration curriculum reform, at the same time, enhance the student employment rate, promote the development of highly skilled and practical new talents.

In short, on the basis of the integration of industry and education, the college also focuses on the school-enterprise cooperation when developing the clothing color teaching. We not only construct the complete theory of clothing and apparel, but also research and develop project-based teaching. We aim to cultivate the talents with innovative, practical and high-skilled abilities, and we will also improve the basic course system for the major of clothing and apparel design. The construction of studios for the international and domestic masters, which can broaden the design vision, increase the practice of the study, production and research of clothing colors, study and research of the clothing color, and finally transform the students' theoretical knowledge into practical ability and application ability. Through cooperation between college and enterprise, resource sharing, strengthening the project construction of professional groups, the school concentrates on accumulating rich experiences for the teaching of clothing color application, realizing the professional quality and cultural quality of students and achieving the win-win situation of school, majors, enterprises and industries.

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