

Research on the Implementation Path of Project-Based Curriculum of Industry University Cooperation in Applied Undergraduate---Take Fashion Design as an Example

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Abstract: The construction of school enterprise cooperation curriculum is an important part of the application-oriented undergraduate teaching reform. This project from the production, teaching and research project curriculum objectives, concepts, curriculum ideas, teaching methods, teaching content, evaluation feedback and other aspects, taking fashion design major as an example, this paper studies the implementation path of school enterprise cooperation project-based curriculum.

1. The Trend of Applied Curriculum Reform

The 13th five year plan for the development of national education in 2018 will promote the transformation of qualified ordinary undergraduate universities into application-oriented ones. As an important measure to adjust the structure of higher education, it is proposed to guide colleges and universities to carry out all-round and systematic reform from the aspects of governance structure, professional system, curriculum content, teaching methods and teacher structure. The construction of application-oriented undergraduate course should pay attention to the connection of production and education, the cooperation of production and education, and the guidance of production and education. The traditional theoretical and practical courses in Colleges and universities, according to the knowledge characteristics of the courses and the needs of the industry and enterprises, carry out the construction of application-oriented curriculum modules, enhance the students' practical ability and problem-solving ability, and cultivate new applied, technical and skilled talents.

2. Teaching of Cooperative Courses in the Fields of Clothing Design.

2.1. Professional Features of Clothing Design.

Fashion design major (creative direction) is mainly for enterprises and institutions related to fashion creativity and design development. It mainly produces and serves the first-line clothing needs, and cultivates high-quality application-oriented innovative talents who can engage in brand planning, fashion modeling design, fashion sample design and production, fabric development and management.

2.2. CDIO Project Teaching Method.

Fashion design major requires higher practical ability of students. Learning by doing is the main teaching method of CDIO project. The project-based teaching mode takes practice teaching as the main form, integrates the knowledge and skills required by professional posts, and integrates students' learning into the process of project completion. Let the students independently carry out learning thinking and practical exploration, establish the teaching implementation and teaching evaluation mode of "teaching, learning, doing and evaluation", and cultivate and improve students' comprehensive ability of professional knowledge.

3. Industry University Cooperation Project Course of Fashion Design Specialty

3.1. The Characteristics of the Course Son of the Production-School Cooperation Project.

The industry university cooperation course of fashion design specialty usually aims at the needs of enterprises, based on the teaching rules of clothing specialty, combined with the course content, organizes students to complete cooperative projects through course learning and practice. The industry university cooperation projects of fashion design major are divided into two types: research projects and design projects.

Mainly according to the needs of enterprises, based on the industry market, competitive brands and consumer status, around the fashion trend, carry out targeted research and research, and draw the conclusion of regularity and methodology. Help enterprises to understand the trend of clothing products. Through the practical investigation of research projects, students obtain relevant data, and through scientific analysis and collation, they can draw valuable conclusions of clothing design research course, and finally display the results in the form of Research Report and research paper..

Also known as product design and development projects, according to the needs of different enterprises or brands, complete the design and development of enterprise clothing products. This kind of project is mainly divided into new quarter product design and development projects of clothing enterprises, or clothing demand design projects of cross industry enterprises or organizations. This kind of project has strong practicality, and requires to complete a series of clothing design to meet the needs of cooperative enterprises in limited course time. This involves research, design, printing, production and other aspects.

The successful cooperation project course of clothing industry and university can obtain the win-win result of school and enterprise. Through the project-based curriculum, enterprises can get inspiration from students' new ideas and concepts, help brand design innovation and explore new design talents. Through cooperation, the school can obtain more resources, which is conducive to the development and construction of the specialty. In the process of cooperation, teachers can get the opportunity of practice and teaching test, which is conducive to the improvement of teaching ability. In the practical study, the students can make comprehensive use of the knowledge they have learned, which is helpful to the cultivation of their professional ability and comprehensive quality.

3.2. Status of Courses for Productive Cooperation Projects.

In the actual process of industry university cooperation, research cooperation is relatively easy to achieve. In the course of industry university cooperation, the project of design practice often becomes a mere formality. The reason is that the project cooperation of research nature and the participation of enterprises are not high, which is relatively easy for the organization and management of curriculum and students. And with the clothing enterprise class cooperation, the new product design development project. Enterprises and colleges are required to have good cooperation, communication and support. In the process of practical operation, various problems often appear, which makes the cooperation project become a mere formality and cannot be implemented.

4. Implementation Path of Industry University Cooperation Project Based Curriculum in Fashion Design Specialty

4.1. Implementation Path Map Of Project Based Curriculum In Industry University Cooperation.

The implementation of Project-based Curriculum of industry university cooperation (Figure 1) needs to carry out curriculum planning on the basis of clear curriculum objectives, core concepts and curriculum standards. It is an important part of the smooth development and success of the course to select the appropriate production and learning projects, to carry out the scientific curriculum content design in line with the design market law, and the corresponding guarantee system of curriculum.

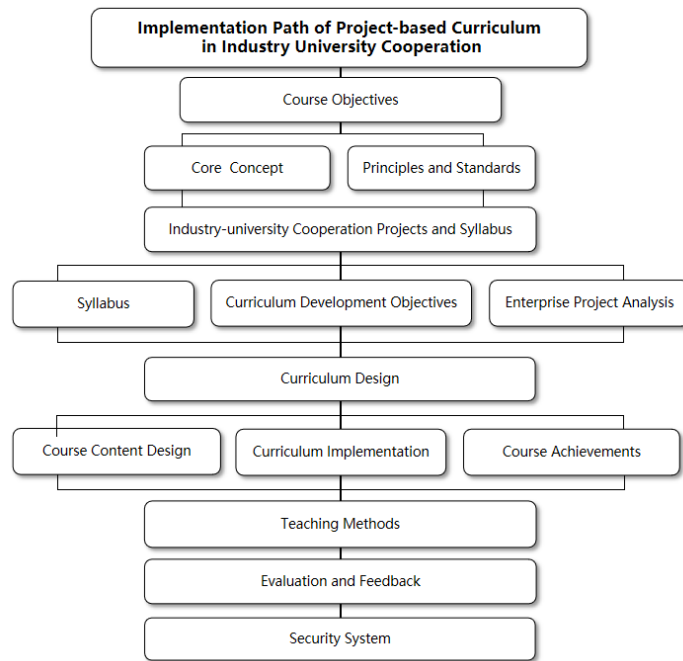


Figure 1 The route map for the implementation of the projectized course, production, and research.

The project-based curriculum of industry university cooperation aims at cultivating students' professional ability and comprehensive quality, and carries out modular design of curriculum knowledge based on post skills. Combining theoretical knowledge learning with project task practice closely, through project practice, we can learn and understand the internal relations among professional knowledge, project tasks, knowledge and tasks, comprehensively and thoroughly study the course content from multiple perspectives, and complete the product results with practical value.

The course of cooperation project of production and learning is student-centered, the project is the main body, the knowledge is the framework, the practice is the means, the evaluation of the school and the enterprise is the standard, the goal of win-win, and the project landing is the goal. The project-oriented course needs to have the teaching purpose of combining theoretical knowledge and practical skills, and the course content is directly related to the actual production activities of the enterprise, the progress of the curriculum structure matches the project workflow, and the curriculum results are linked to the actual production and sales of the enterprise.

The cooperative course of the production and learning of the specialty of clothing has a direct relationship with the characteristics of the curriculum module and the goal of curriculum training. The undergraduate course knowledge module of clothing design is divided into four stages: professional general knowledge module, professional basic module, professional core module and comprehensive creation module. The cooperative courses of production and learning are mainly concentrated in the second, third and fourth stages of expertise modules. According to the course content and students' professional knowledge ability level, select the corresponding enterprise projects to cooperate. Such as chart (2) professional basic modules, such as decorative pattern design and other painting courses, can be combined with the pattern design category projects, such as the completion of T-shirt design projects. Professional core module courses such as clothing brand design courses, can be used with clothing brands to cooperate with the brand clothing design and planning.

Corresponding Table of Fashion Design Courses and Projects

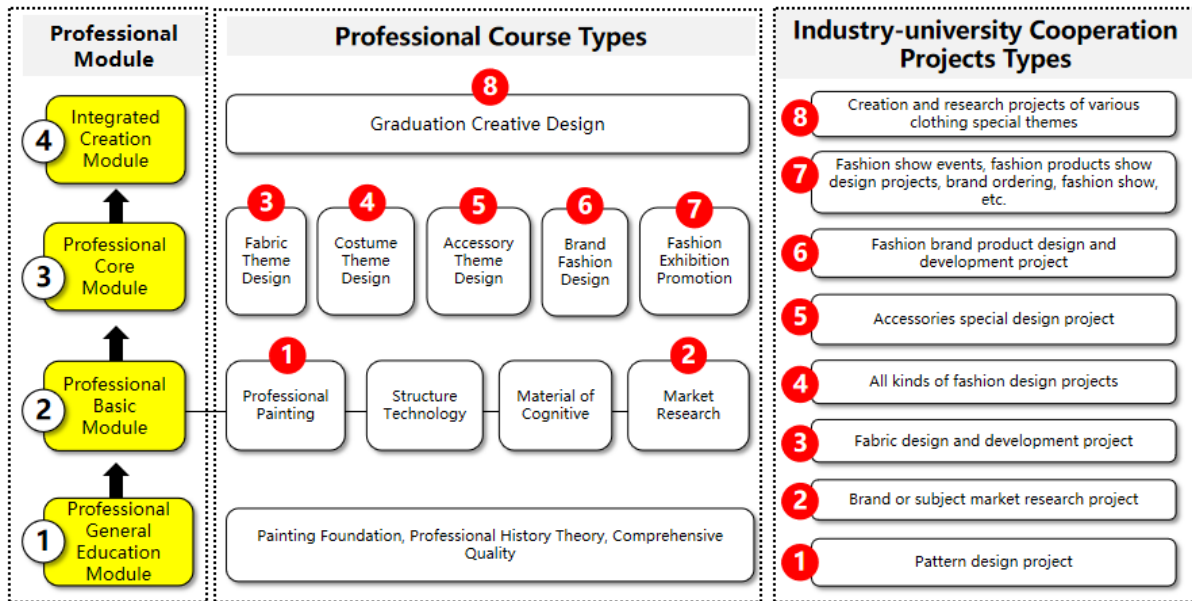


Figure 2 The application of undergraduate clothing design courses and production and research projects corresponding table.

The curriculum content and progress are arranged according to the requirements of the enterprise and the market law by combining the training goal of knowledge ability with the requirements of the enterprise project. At the same time, the course design and implementation process, must maintain good communication with the cooperation enterprises. The project-oriented course of production-school cooperation is shown in Figure3, which is divided into three parts: curriculum design, implementation and summary. In the preparatory stage of curriculum design, the curriculum plan is formulated by the curriculum teacher according to the actual situation of curriculum teaching and the opinion of the enterprise representative. The course implementation stage, from the early investigation and research, design mid-report, final report and evaluation feedback several important stages, the need for enterprise representatives to participate in, to help grasp and confirm the design direction, and the final design of the proposal to give advice and suggestions. The summary stage summarizes and reflects the results of the project and lays the foundation for the next cooperation.

Flowchart of the Industry-university Project Curriculum

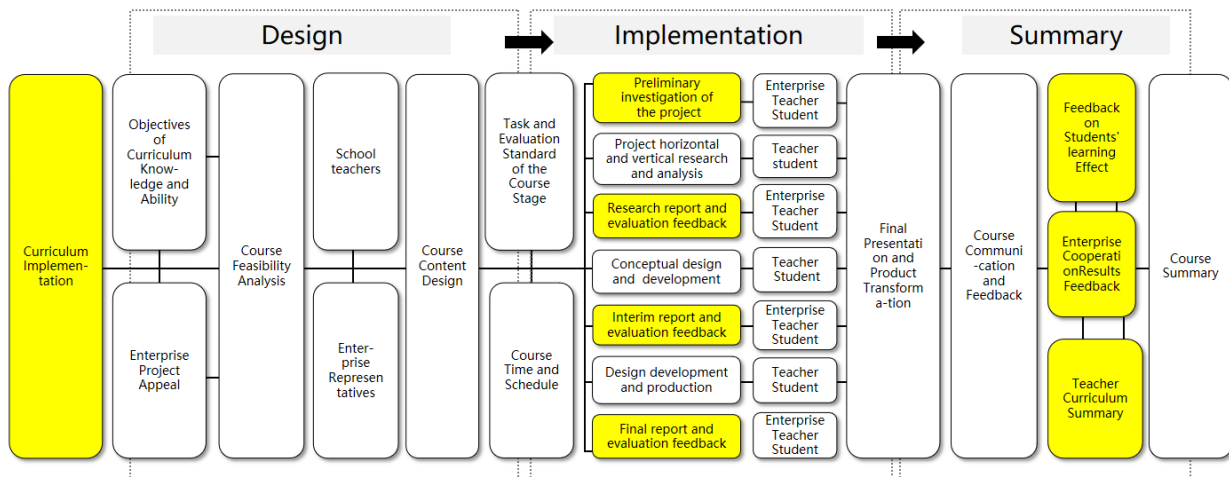
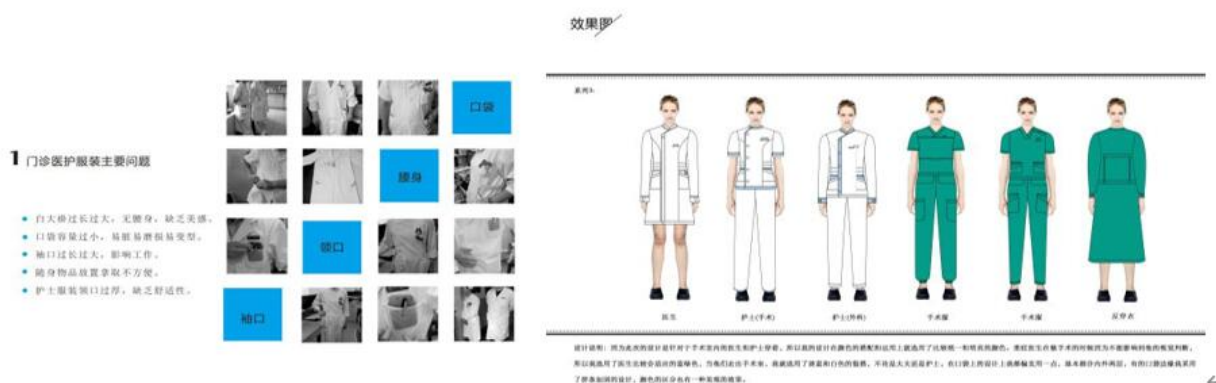


Figure 3 The process for the development of the course for the production, learning and research project system.

Clothing design professional third-year "children's wear theme design" course and baby clothing brand Li baby room company cooperation. The curriculum takes the theme design and teaching practice of children's clothing as the goal, aims at the design and development of baby clothes for the autumn and winter of the li-baby house, and carries out the practical teaching of curriculum design and excellent design program through the form of joint teaching by both sides of the school and enterprise. By the enterprise proofing, into production and sales. The project course first studies the theory of children's clothing knowledge, basic design methods, etc., and then conducts market research, visits the enterprise factory, completes the design research report and reports. In the middle of the project on the design of the design, with the company representatives to conduct two communication and reporting. Final design works selection, after many joint discussions between the two sides, and in the form of a contest to evaluate outstanding works. In the end, more than 20 sets of outstanding works selected by the enterprise proofing, in the enterprise new product order, will be independent container display, and access to more than 12,700 orders.



The ready-to-wear theme design course is combined with the Shanghai Guanghua Hospital's medical and clothing design program. The project design tasks include professional clothing design for doctors and nurses in different positions. At the beginning of the project, teachers and students conducted in-depth field visits to the working environment, work content, clothing status quo and employee opinions of the medical staff of Guanghua Hospital. Research and analysis of the current situation, understand domestic and foreign trends, and made a detailed research and analysis report. According to the needs of the hospital side, combined with the results of the research, emphasizing the practicality, comfort, functionality in line with the fashion trend of the design direction, and finally completed a series of different positions of medical staff clothing design program, access to enterprises have been well received. The hospital eventually confirmed two of the series as a hospital production program.



5. Teaching Characteristics of the Project Course of Industry University Cooperation.

5.1. Change of teachers' role

The teacher of the course needs to change from the "teacher" of the past knowledge to the "organizer" and the "manager" of the project, and the "guide" of practice. The cooperative course of garment production and learning needs teachers to communicate with enterprises on the basis of design and carry out the curriculum. Through the actual project, stimulate students' interest in learning, as a project designer, independently carry out relevant design research. When encountering problems, the teacher guides the students in solving the problem.

5.2. Teaching on Projects as the Main Line.

The clothing school-enterprise project itself needs scientific theoretical support. Before the project can be carried out, the teacher needs to let the students understand the project tasks, in addition to introducing the project process, but also need to explain the relationship between project practice and curriculum knowledge and professional ability. Let students have purposeful through the project practice to learn knowledge, exercise their ability in all aspects, and finally communicate the project results to accept.

5.3. Theoretical Teaching is Interspersed With Practical Teaching.

Although the traditional teaching method is not the main teaching method in the course of productive cooperation, it is the proper theoretical teaching and plays an important role in practical teaching. The theory teaching before the project allows students to practice with purpose, in the course of practice, timely theoretical summary can make students deepen their impression, in the practice of problems, through theoretical teaching can expand knowledge, at the end of the project theoretical knowledge review and summary, to help students comb the course knowledge, self-evaluation and feedback, further deepen the solid knowledge and ability.

6. Evaluation and Feedback.

6.1. Project Evaluation System

The evaluation standard of school enterprise cooperation results shall refer to the industry standard. Such as the design integrity of clothing products, whether they fit the brand style, whether they have market potential. The professional evaluation standard is helpful to clarify the purpose of practice, improve students' practical ability and standardize their behavior in the process of practice.

The stage evaluation is very important in the process of the project. For example, in the early stage of the project, the evaluation of the design practice direction is conducive to the smooth implementation of the design practice in the later stage; the evaluation in the practice process is conducive to the modification and improvement of the design project. Stage evaluation is conducive to the integrity and objectivity of the final results evaluation, and helps to improve the efficiency of project design and grasp the project effect.

In addition to the evaluation of teachers as course teachers, enterprise evaluation opinions are an important part of project cooperation evaluation opinions, which can directly reflect the project results. In addition, as the main members of the project, students' mutual evaluation and self-evaluation are also important evaluation components of cooperative courses. On the one hand, students' comments reflect the knowledge and practical experience of the course, on the other hand, they reflect the actual situation in the project design and implementation, which is helpful to modify and adjust the curriculum plan and project cooperation details, and lay the foundation for better school enterprise cooperation projects in the future.

6.2. Information Feedback From Both Sides of Industry University Cooperation

The information feedback of cooperative project curriculum mainly comes from the school teaching team represented by teachers, the industry market team represented by enterprises and the project implementation team represented by students. Only by synthesizing the feedback from various parties can we make objective and reasonable evaluation for the project-based curriculum

from multiple perspectives. The feedback information from various parties is helpful to improve the content of curriculum teaching design, standardize the process of project implementation, and more effectively control the results of school enterprise cooperation projects and the quality of cooperative courses.

The smooth progress of the course of production-school cooperation needs the corresponding guarantee system. First of all, the school professional curriculum teaching system needs to be complete. The organizational relationship between the course modules is reasonable and the basic knowledge of the students is complete. in order to have the opportunity to work with enterprises to complete the corresponding course plan. Secondly, the comprehensive ability of teachers in school-enterprise cooperation projects is higher, strengthening the construction of teachers' ranks, improving the level of teaching teams, and teaching staff with the theme of "double-teacher" teachers and enterprise designers. Moreover, the hardware facilities of teaching practice are perfect. The construction of the studio of off-campus projects is an important link to ensure the effect of practical teaching.

Conclusions

The project-based curriculum of industry university cooperation is one of the important links in the construction of applied undergraduate course. The research on the implementation path of industry university cooperation project provides the foundation for the construction of Application-oriented Undergraduate Specialty and lays the foundation for the cultivation of application-oriented talents. Successful industry university cooperation project curriculum requires the selection of appropriate curriculum modules and enterprise projects, reasonable allocation of teachers inside and outside the school, scientific and effective curriculum content design, and smooth school enterprise communication and cooperation. Only by actively participating in practice and timely evaluation and feedback in each stage can the whole process of project-based curriculum be effectively organized and managed.

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