The Curriculum Reform for Graduation Design of Product Design Based on the Pattern of University-Enterprise Cooperation

Minglei Zheng
College of art and design, Jingdezhen Ceramic University, Jiangxi, China

ABSTRACT: Graduation design of product design is not only the learning summary, but also the future transformation of the practical design. We implement the teaching reform of graduation design for product design, propose the pattern of university-enterprise cooperation for graduation design, research new teaching pattern and the teaching syllabus of graduation design, examination pattern, exhibition and management of graduation design to promoting practical significance of this curriculum.

1 THE PRESENT SITUATION OF THE GRADUATION DESIGN OF PRODUCT DESIGN CURRICULUM

The design subject is a combination subject of “art and technology”. The professional teaching of product design requirement not only can cultivate the students to have good aesthetic quality and creative performance, but also can cultivate students to understand the structure and materials application, to master technology. It requires the students to understand the sustainable development of environment and energy sources. And on this basis, it needs the students to complete the design tasks independently, to design some products to meet the conditions of production and the needs of social development, to improve people's life essence. Due to the processing of products design cannot work without the factory, the techniques and the consumer market, the product design is a combination subject of theory and practice. Graduation design is the main teaching procedure and method for training students to cultivate qualified talents in the universities. It’s a combination innovation of theory and practice. As a curriculum to test ultimate results of the whole teaching system, the significance and function of graduate design of product design is very prominent. In the process of graduation design, the students adopt many methods, for example: the investigation of a specific product design, the research of processing technology, the market demand, the innovative design, and the final product with the practical significance. It displays the student’s theoretical level, comprehensive quality of innovation ability, professional practice ability, it is an important practice exercise for the student transforming to a real designer.

As curriculum theory into practice, the graduation design is an important process. But in the long-term teaching pattern and teaching practice, there are many deficiencies and problems. From the analysis of teaching progress, the first step of the graduation design is the graduation topic which is generated either from teacher or from students themselves, so the selection process is not a deliberate topic. For example: the design topic is not really solve the problem of life, many problems as what is the current development situation of product, the product is or not beneficial for society, the product whether has innovation and so on, don’t have deep research. So that some design topics lack market value and practical significance. When the topics come to the second step which is comprehensive research and analysis period, students can only use the network to look up some information, roughly pass their eyes over the market or the product line. These surveys are very shallow and cannot capture the products of the latest developments and trends, to understand the design of the latest information. The survey results and conclusions, which are overall and not true, make the following topics without motivation. When the topics come to the third step which is design innovation, either because the previous research is not perfect, or because the students don't understand the process of technology, their final design will arise problems in technology and function. The design is only a "concept" and "ideal", can not be converted into actual products. When the topics come to the fourth phase of the model, the limited conditions of the universities or higher costs of model make the students’ models be very rough. So, we must search new teaching mode for graduation design which makes the curriculum be more perfect, reasonable and have more practical significance.
2 THE EFFECT OF THE PATTERN OF UNIVERSITY-ENTERPRISE COOPERATION OF GRADUATION DESIGN

The pattern of university-enterprise cooperation is introduced to the graduation design, it can solve the existing problems of graduation design, improve teaching quality and teaching significance: First, topic selection is more targeted. It has more practical significance for innovative design or improvement design project for the company's existing product. The students have higher enthusiasm on the product design, and avoid the blindness of the topics. Secondly, on the topics of the research, the pattern of university-enterprise cooperation can help students to understand and use the enterprise platforms to explore product market, the leading edge of product design, competitive situation of enterprises, the latest information about the problems of the product. It can avoid the hysteresis of product design. Thirdly, on the design of the topics, the students can understand the processing of forming, process technology and effectively solve problems between theory and practice in the graduation design. The students will design some useful and practical products. The better conditions of processing which is provided from enterprise ensure the quality and authenticity of the product model.

For the teaching effect, the combination of the pattern of university-enterprise cooperation and graduation design, because of the students participating in actual design practice, not only improves the students' design level and production level, but also strengthens the students' understanding of the design work, cultivates students' practical ability to solve problems and work style to research. From the cooperation of university-enterprise, the design works of students get adoption from enterprise and recognition from market. It has positive effect to the enterprise, university, students themselves. This new graduation design curriculum pattern is a common trend of higher education reform and development and is the inevitable requirement of higher education transformation in China from elite education to the popular education.

First of all, the cooperation is based on a win-win basis, it can make universities and enterprises play their own respective advantages, mutual support, and complementary advantages, benefit sharing and resource interoperability. Secondly, it needs to develop the mode of cooperation in the course of graduation design. The graduation design topics are proposed by enterprises and universities mutually, the graduation design guided by teacher and business adviser together. Students can choose topics according to the development direction and self-interest, and complete the graduation design under two guidance.

In the management of the whole process of the graduation design, the university teacher is responsible for the students' research work, the design innovation concept, supervision of graduation design process. The enterprise advisers in charge with school guidance is responsible for guidance the feasibility, the prospect and technical aspects and supervise the students in the enterprise survey and practice process, to ensure that students can fully complete the graduation design task, design and produce new products meeting the requirements of the market. The evaluation system of graduation design should be composed of three parts: First, the university teacher must assess and evaluate student's performance in the graduation design in the creative design, complete quality. Second, enterprise adviser must assess students' performance in exercitation stage, model making. Third, both sides from teachers and enterprise adviser must organize a graduation reply group to assess and evaluate students' performance in the graduation design. After the reply, all the products of graduation design must have a exhibition and evaluation. Finally, these products which are more outstanding, with the market competitiveness need to declare patent, and further combining with enterprises. Some products will be transformed into real products, release to the market, achieve economic value. In the process of graduation design in the pattern of university-enterprise cooperation, the students achieve the transformation from professional theoretical knowledge to the practical ability. The students have experienced feelings on the method in the process of product design, technology, molding and other aspects, which not only improves the efficiency of the graduation design, but also gives the students a great impact on future employment.

3 THE IMPLEMENTATION OF THE REFORM OF THE UNIVERSITY-ENTERPRISE COOPERATION PATTERN OF GRADUATION DESIGN

For the pattern of university-enterprise cooperation, the pattern of graduation design curriculum needs to be reformed, which includes the mode of university-enterprise cooperation, teaching methods, system of teaching evaluation and other aspects of the specific formulation and implementation.

4 CONCLUSION

Product design is a subject to train students to have the knowledge of product design, the ability of product innovation and practice. The introduction of the pattern of university-enterprise cooperation has
practical significance for the graduation design of product design. It’s good for teaching content of the graduation design, making teaching method and test the teaching contents and teaching methods, product design should implement the pattern of university-enterprise cooperation immediately to truly improve the quality of graduation design.

REFERENCES