

# Practical Research on Project Based Teaching in Packaging Design Course

Li GuangAn

Shanghai University of Engineering Science;  
Tongji University Shanghai Institute of Design and Innovation, Shanghai  
hnasmy@126.com

## Abstract

Packaging design is an applied design course. project based teaching is a teaching method that combines theoretical teaching with practical operation. It is applied to packaging teaching. Taking the whole project as the carrier, changing the deficiencies of traditional teaching methods and effectively improving teaching efficiency and effect. This paper discusses the practical arrangement, method and content of project based teaching in the packaging design course, and makes systematic research and induction to form the curriculum-teaching paradigm, and provides reference for curriculum reform.

**Key words:** Project based teaching ; packaging design; paradigm research

## Introduction

Packaging design is a core professional course generally offered by art studies in Chinese colleges and universities. The main content is the packaging design, structural design and decoration design. It is an applied course that is closely integrated with the market. Under the background of the increasingly close relationship between industry, university and research institute, the traditional teaching methods of packaging design courses need to be reformed and innovated. Since the 1980s, project Based teaching has been widely used in higher education courses, showing obvious advantages in cultivating applied talents, and it is an effective teaching method that has been tested by practice. Applying the project based teaching method to the packaging design course can solve some of the problems that existing in traditional packaging design courses. At present, some colleges and universities at home and abroad have carried out some related teaching practices, and gradually accumulated some experience in the practice arrangement, methods and contents of project based teaching in the packaging design course, but have not yet formed a universal and highly reliable teaching Paradigm. In this context, give full play to the advantages of colleges and universities in talent reserve, experience accumulation, cooperation resources and practical research space, researching and summarizing the application of project based teaching in packaging design course, will be beneficial to the teaching

reform and effect improvement of the packaging design course.

## 1. Analysis of existing problems in packaging design courses

At present, the packaging design course of colleges and universities takes classroom theory teaching as the main teaching method. The lecture content focuses on the explanation of basic concepts, the introduction of design methods, and the analysis of typical cases, which can basically achieve the teaching goal of "knowledge popularization". Some colleges and universities use the resources of the school platform to incorporate the graphic design, printing process and manufacturing materials of the package into the curriculum, which reflects certain theoretical teaching characteristics. In addition, many colleges and universities also keep in touch with enterprises, strengthening the "production, study and research" cooperation, reflects a certain practical teaching characteristics. However, the current packaging design courses also have obvious problems in design, personnel, and platforms.

### 1.1 the lack of theoretical and practical linkage design

Most of the domestic colleges and universities' packaging design courses are based on "teaching materials", which are prone to two problems. On the one hand, knowledge is outdated. After research, most of the textbooks used by domestic universities are published before 2011. With the awakening of Chinese design consciousness and the increase of foreign exchanges, the concept and technology of packaging design have changed a lot in recent years, far beyond the scope of textbooks. A considerable part of the knowledge that students have learned from the textbooks no longer applies to the current design environment. On the other hand, "there is a glimpse of the end of the paper, and I know that this matter must be carried out." Students who only have the conceptual knowledge and software skills in the textbooks and lack practical experience, their "art" and "technology" cannot be well combined, and there is a gap between the design works and the market demand.

The lack of practical theory teaching is "paper talk"; the lack of theoretical practice teaching is "catch the ducks on the shelves"; the lack of theoretical and practical links seems deliberate and blunt. The lack of theoretical and practical linkage curriculum design is the primary problem in the

packaging design curriculum. Colleges and universities need to have a certain forward-looking and overall view in the curriculum design, taking into accounts both theoretical teaching and practical teaching, and linkages formsynergy.

### **1.2 Insufficient ability and quality of first-line participants**

The first-line participants in college courses are students and teachers. Now there are problems in the packaging design course that the quality of students cannot meet the basic requirements of the profession, and the ability of teachers still needs to be improved.

The students' problem is mainly due to the following two points. First, in recent years, colleges and universities have continuously expanded the scale of enrollment. However, in the context of family planning, the growth rate of student base is not proportional to the speed of enrollment, which has led to a decline in the quality of college students. The second point is that in high school education, which is mainly based on exam-oriented education, science is the most important in China, followed by liberal arts, and art is less important. Many students turn to learn art when their academic achievements are not ideal. This has caused some art majors to have a lack of learning ability or insufficient interest in learning after entering college.

Some professional teachers are limited by their knowledge structure and practical experience. On the one hand, the packaging design course is an interdisciplinary course, but the professional background of many teachers is relatively simple, and the limitations of the knowledge structure affect the course effect. On the other hand, many teachers go directly to the podium after graduating from the PhD., lacking practical experience. In the course of such an applied course such as packaging design, they often fail to do so.

In addition, there is a phenomenon among Chinese university teachers that they focus more on scientific research but less on teaching. Many teachers' teaching attitudes are also affected because the title evaluation criteria are not emphasized. Now the curriculum reform has been strengthening, this situation has improved.

### **1.3 The lack of standardization of the course practice platform**

Many universities and enterprises have established a practical platform for "production, study and research". From the perspective of curriculum design, they have made up for the shortcomings in the practice of packaging design classroom learning. However, there have been many problems in the standardization of practical operations.

First, schools and businesses are difficult to connect. In the cultivation of applied talents, schools and enterprises have the willingness to cooperate, but it is often difficult to be matched. If high-level universities are in the market, it is difficult for non-prestigious schools to find suitable cooperative enterprises.

The second point is that the "production, study and research" platform lacks effective protection. Through the platform, the school wants to get the assistance of the company in the

practice space and funds, and the enterprise needs the professional counterparts of the school. However, the cultivation of talents requires a short period of time, during which both parties lack effective guarantees and constraints. Once a party has shortsighted behavior, it can easily lead to cooperation suspension or rupture. This requires the development and improvement of a series of standardized safeguard systems.

Third, deep cooperation is still in the trial and exploration stage. Some colleges and universities do superficial articles under policy pressure and lack specialized coordination personnel or departments to promote the deep docking of schools and enterprises. The "Industry-University-Research" platform sometimes fails to cultivate application-oriented talents with professional ability, which will influence the enthusiasm and follow-up cooperation of enterprises.

All in all, the current packaging design course has obvious problems in terms of "class", "person" and "platform", and it is urgent to rethink and reform from the concept. In this context, "project based teaching" has shown obvious advantages in cultivating students' basic skills and practical ability.

## **2. Practice of project based teaching in packaging design course**

project based teaching is a teaching method centered on "projects" rather than "textbooks". Teachers are more of a role to guide rather than teach. Through cooperation, students complete relatively independent projects, give full play to subjective initiative, and learn in practice. These characteristics of project based teaching are in line with the needs of the packaging design curriculum for practice. The Art & design department of Shanghai University of Engineering Science (SUES) has accumulated some experience in this area in recent years. These practical effects of project based teaching in the packaging design course will be discussed with the design of "Product Packaging Concept Design".

"Product Packaging Concept Design" is one of the core courses of product design. It mainly addresses the effective communication of packaging to corporate culture and brand concept, and the relationship between packaging and products. Conceptual design is a design method that utilizes the design concept to be the main line throughout the design process. The concept of product packaging design is to raise the cumbersome and instantaneous thinking of the packaging design to a unified rational thinking level, so that the packaging of the product can undertake the task of conveying things like corporate culture, brand concept and product characteristics that beyond the traditional decoration category.

### **2.1 Optimize course content**

Product packaging concept design is a new course based on the adjustment of the undergraduate professional catalogue (2012) of the general colleges and universities and the development trend of the current packaging industry, based on the original packaging design curriculum to enhance, optimize and integrate. Compared with the original packaging design course, the product packaging concept design strengthens the important position of the theme concept in product packaging,

Transforming packaging functional evaluation criteria into creative evaluation standards. In the teaching process, through the project platform to introduce the professional design classroom in the school, in the extracurricular homework and graduation design, the old closed teaching mode and the old teaching mode of the paper are completely innovated. In recent years, the in the graduation design of SUES, project Based design subject have accounted for more than 80% of the total. At the same time, the college organized students to participate in a series of large-scale events, including: "World Star" college students packaging design competition, "Oriental Star" college students packaging design competition, "Light Industry Cup" college watch design competition. The school also successfully hosted "China (Kunshan) Packaging & Printing Industry Expo" twice along with "China International Creative Design Competition" and other exhibition activities, which became an important driving force for the packaging industry, in the meantime gained a good social reputation.

## **2.2 Establish a practice platform inside and outside the school**

Relying on the project-oriented product packaging concept design course, the school and the enterprise jointly build a teaching practice platform inside and outside the school, forming a characteristic teaching chain from classroom, factory, company to market. On the one hand, based on the principle of "complementary advantages" and "mutual benefit", an off-campus practice base is established in enterprises with professional counterparts, development prospects and cooperation intentions. The company provides students with internship venues and internship positions with professional guidance. On the other hand, various "R&D centers", "creative studios", "institutes", etc., which are named after the companies. The school provides the internship site, and the company invests in equipment and professional technicians to set up a professional design studio or design factory. It runs in full accordance with the management mode of the enterprise, develops and designs products with actual projects, so that students can experience it at school to lay a good foundation for future career.

Through the classroom learning and practice platform of the product packaging concept design course, students can master the procedures and methods of market research, theme concept creative planning, and specification design sample production while learning and mastering the basic techniques, materials and techniques of product packaging. The student's product packaging design meets the basic functions of the packaging, and has a clear conceptual theme, artistically reflecting the corporate culture, brand concept and product characteristics.

## **2.3 Course teacher training and supply ensure**

The product packaging concept design course has a strong crosscutting nature. This crosscutting can be shared and complemented by a certain range of resources between professions, departments, regions even between home and abroad. The Art & Design department of SUES when developing the characteristics of design education, combined with the characteristics and advantages of the course,

implemented the resource sharing and complementary features of teachers and equipment in education and scientific research, and formed its own characteristic design education. Encourage enterprises to participate in education and participate in the construction of part-time teachers. On the one hand, strengthen school-enterprise cooperation and train "double-type" teachers. On the other hand, establish a long-term stable "partner" library: sign an agreement with counterpart enterprises, hire experienced first-line engineers as part-time teachers, and improve the part-time teacher management system.

In addition, SUES has established a solid communication and mutual visit mechanism with Japan's Kyushu University of Technology and Lawrence University of Technology to train teachers with international vision.

According to the summary above, the Art & Design of SUES in the practice of packaging design courses; in view of the practical problems of the current packaging design courses in the "class", "people" and "platform", using the project based teaching method, targeted and solved one by one.

## **3. Inductive paradigm model of project based teaching practice in packaging design course**

Based on the analysis of the course problems of packaging design and the project based teaching practice of "Product Packaging Concept Design" of SUES, starting from the three aspects of "class", "person" and "platform", this paper will propose The "5P" paradigm model in order.

### **3.1 Project Platform (Platform)**

Platform construction is the foundation of project based teaching practice in the packaging design curriculum. Schools and enterprises jointly build studios or design factories on and off campus, which not only provide teachers and students with a place for project practice, but also allow students to get in touch with front-line project operations.

This part is mainly to provide the necessary guarantee conditions for the teaching of the course from the school level.

### **3.2 Participation / Division of Work (Participation)**

Actual projects are generally not done by a single person. The successful completion of the project is in most cases dependent on teamwork than personal ability. Based on this, a class teacher divides a class into several project groups according to certain criteria or students' own choice. Each project team has a certain task and responsibility according to different division of labor. In this participation/partitioning practice, students' learning energy and cooperation consciousness are maximized.

This part mainly trains students' teamwork and other abilities.

### **3.3 Project Topic (Project)**

Under the guidance of the teacher, the students decide the project content according to their own interests, numbers of group members, how the project is, and the length of the practice cycle. A variety of different types of project topics are

generally provided by the instructor for students to choose.

This part mainly exercises students' data collection ability, design sensitivity and self-awareness.

### **3.4 Project Practice (Practice)**

Whether in a mock project or an actual project, students will experience the full phase of project practice in the packaging design course. The topic represents the beginning of the project and the closing represents the end of the project. In each of these sessions, the instructors will conduct periodic evaluations and summaries in the classroom. In each stage of the practice, students constantly self-satisfy, improve methods, improve their skills, and “learn” from “doing”.

This part mainly exercises students' ability in organizational planning and practical operation.

### **3.5 Producing Products (Production)**

Students present the practical results of the course with an actual product. At the request of the instructor, in the last lesson of the course, through the classroom presentation, report summary, the results display and project summary, then accept the assessment of teachers and other students. Among them, excellent products participate in competitions or exhibitions under the recommendation of teachers.

The practice of project-based teaching in the packaging design course breaks the limitations of traditional teaching, and its form is more interesting and easy to attract students' interest. In the process of completing the project, exercise the student's data collection, practical operation, teamwork and other capabilities required in the project practice. Let students go to the front desk, not only provide them with an opportunity to apply what they have learned, but also supplement and practice the teaching of curriculum theory, so that the students' knowledge system is more complete. “Youth is strong then the country is strong”, the growth of art youth will promote the development of China's entire packaging design industry in the future.

## **References**

- [1] Niu Yuhui, Teaching Reform and Innovation of Packaging Design Course for Art Design Majors in Colleges and Universities, Science and Education Wenhui (mid-season), 2018, pp. 49-50.
- [2] Wang Shanshan, Li Liang, Su Lina, etc, project based teaching Courses Comprehension, Fujian Quality Management, 2016, pp. 219. [3] Song Yanfang, Wang Jianhua, Sun Zhiwei, etc, Products and Packaging, Hunan Packaging, . 2018, pp. 127.
- [4] Fung K Y, Ng K M, Teaching chemical product design using design projects, Education for Chemical Engineers, 2018, pp.13-26. [5] Sato Y, Hazeyama A, Miyadera Y, Development of a project/problem based learning body of knowledge (PBLBOK)[C]// IEEE International Conference on Engineering Education. IEEE, 2017, pp.181-186.
- [6] Sirotiak T L, The effect of Problem/Project-Based Learning on a desired skill set for construction professionals, Dissertations & Theses - Gradworks, 2008, pp.431.