

# Study on the Teaching Mode of Architecture Professional Studio System Course in Application-oriented Undergraduate Universities

Yu Gu, Chenglong Qi, Tongge Ban

School of Architecture and Design, Hebei Polytechnic Institute, Shijiazhuang, Hebei 050091

---

**Abstract:** This paper aims to explore the teaching mode of architectural professional studio courses in application-oriented undergraduate universities. By analyzing the current situation and challenges of architecture professional education, combined with the characteristics of the studio system teaching mode, this paper proposes a series of reform measures to improve students' practical ability and innovation ability. This paper first introduces the concept, background and application status of studio teaching mode, and then expounds the specific implementation plan of studio course teaching mode, including teaching content, teaching methods, teaching resources and other aspects. Finally, the effectiveness and feasibility of this teaching model are verified through practical case analysis.

**Keywords:** Application-oriented undergraduate university; Architecture major; Studio system; Curriculum teaching mode; Practical ability; Innovation ability

---

## Fund Project:

Research on the teaching mode of architecture professional studio system course in application-oriented undergraduate universities, subject number: SZ2022113

## Foreword

Architecture is a strong practical subject, which not only requires students to master theoretical knowledge, but also needs to have rich practical experience and good innovation ability. In the application-oriented undergraduate universities, how to cultivate high-quality architectural professionals in line with the social needs is an important problem facing the current higher education circle. As a new education mode, the studio course teaching mode can provide new ideas and methods for the teaching of architecture major. This paper will explore and analyze this teaching mode.

## 1. The meaning and characteristics of the teaching mode

Studio system course teaching mode is an innovative teaching method that attracts much attention in the field of education today. Its core concept is to take practice as the core, teachers as the guidance, students as the main body and the studio as the platform. In this teaching mode, students become the leading role of learning. By participating in practical projects, applying the knowledge they have learned and cooperating with their peers to complete tasks, so as to improve their practical ability and teamwork spirit.

Studio system course teaching mode focuses on practical teaching. In the past, students tended to passively accept knowledge in the classroom and lacked the opportunity to apply knowledge to practical projects. In the studio-based course teaching mode, students can participate in real projects and give full play to their creativity and practical ability, so as to transform what they have learned into specific skills. Teachers play an important role as guides in this teaching mode. Teachers are not only to impart knowledge, but more importantly, to guide students on how to analyze and solve problems and think independently, so as to promote the comprehensive development of students' comprehensive quality. As the main body of learning, students can better play their initiative under the

studio course teaching mode. They are no longer passively accepting knowledge, but actively participate in discussion, show personal views, ask questions, give play to professional ability and critical thinking, and finally realize the promotion of self-worth. In addition, as a learning platform, the studio itself not only provides a carrier for resource sharing, but also is an important place for students to learn and communicate. In the studio, students can discuss problems together, share experience, learn from each other, and obtain a comprehensive cognition through multi-perspective communication. Finally, the studio-based course teaching mode emphasizes teamwork and project completion. Students work with each other in the team to complete the project together, and develop teamwork and communication skills, which is of great significance to the students who enter the society or enter the workplace in the future.

In short, the teaching mode of the studio course is characterized by the practice, teacher guidance, students as the center, the studio as the platform, and teamwork to complete the project. This teaching mode is becoming a new direction of modern education, prompting students to better cope with the challenges of the future society, and cultivate new applied talents with more innovative ability and teamwork spirit.

## **2. The application of studio system course teaching mode in architecture major**

The teaching mode of studio system course is a relatively new teaching mode in architecture major. It can be applied to various core courses, such as architectural design, architectural structure, and architectural planning. This teaching model allows students to participate in practical projects, enabling them to better understand and master professional knowledge and improve their practical ability. At the same time, using the studio system teaching mode can also cultivate students' teamwork ability and communication skills through teamwork. In the architecture major, such a teaching mode has a broad and far-reaching influence. Studio-based courses can provide students with a platform for learning closer to the actual working environment. Through field trips, project research, and design planning, students can learn how to apply theoretical knowledge to practical projects, so as to improve their practical design ability. In addition, they can also accumulate experience through participation and practical projects, better understand and grasp the relevant knowledge system of architectural design, structure and planning, and deepen their understanding of professional knowledge.

Studio courses provide students with an opportunity to work together and promote the cultivation of team spirit. In a studio, students often need to work together to complete the project, giving full play to their strengths and helping each other to improve their teamwork skills. This cooperation mode teaches them how to communicate and negotiate effectively, and cultivates team spirit and leadership, which are the necessary qualities for the construction industry in the future. In addition, studio courses can help students expand their network and social circles. During the course, the students will have the opportunity to contact and communicate with clients, architects, contractors and other architectural related professionals. This will not only pave the way for their future internship and employment, but also stimulate students' interest in the development of the industry and encourage them to invest more actively in their study and practice. Therefore, the teaching mode of the studio system course plays a very important role in the architecture major. It not only extends the students' professional knowledge, but also serves to cultivate their practical ability and comprehensive quality. This teaching model provides students with a richer learning experience and helps them to better adapt to their future work in the construction industry.

## **3. The implementation methods and steps of the studio system course teaching mode**

### **3.1 Build a studio**

In order to enable students to better understand the knowledge of architecture major courses, we have set up multiple studios through different teachers based on their professional classes. Each studio can be matched with advanced equipment and resources to meet the needs of students in practice.

### **3.2 Determine the project**

In order to enable students to better apply the knowledge they have learned, we chose some projects suitable for students' level and interest. These projects can be actual engineering projects or simulation projects designed to help students understand the problems and challenges in actual engineering.

### **3.3 Group building and team building**

In order to enable students to better cooperate and communicate, we grouped students according to their interests and specialties. Each team consists of students from different professional backgrounds to better leverage their respective strengths. At the same time, we also identified the team leader to coordinate and organize the work of the team.

### **3.4 Task assignment**

After determining the project, the teacher assigned the project tasks to each team. Tasks are assigned within the team to ensure

that each member can participate in the practice of the project. Teachers will also give some guidance and help to ensure the smooth progress of the project.

### **3.5 Implement the project**

Students complete their own tasks through practical design. Within the team, members will share and communicate with each other to solve problems and challenges together. At the same time, teachers will also give regular guidance and help to ensure the quality and progress of the project.

### **3.6 Results evaluation**

After the project is completed, the teachers will evaluate the project results. The evaluation includes architectural scheme design, planning design, construction drawing design, structural design, etc., to evaluate the students' practical ability and innovation ability. At the same time, teachers will also give certain feedback and suggestions to help students to further improve their practical ability.

### **3.7 Feedback and summary**

Students should reflect and summarize according to the evaluation results, understand their own shortcomings in practice, and improve them. At the same time, teachers will also organize students to summarize and exchange, and share each other's experience and harvest, so as to improve students' practical ability and innovation ability.

## **4. The advantage and effect of the studio system course teaching mode**

4.1 Improve students' practical ability and innovation ability: Through practical project operation, students can deeply understand and master professional knowledge, and improve their practical ability and innovation ability.

4.2 Cultivate students' teamwork ability and communication skills: Team work way can cultivate students' teamwork ability and communication skills.

4.3 Improve the teaching quality and effect: The teaching mode of the studio system course can stimulate students' interest and initiative in learning, and improve the teaching quality and effect.

4.4 Promote teachers' professional development and the improvement of teaching level: teachers need to guide students in practice, which requires teachers to have rich practical experience and a high teaching level. Through the implementation of the studio-based curriculum teaching mode, teachers can constantly improve their professional quality and teaching level.

## **Conclusion:**

The teaching mode of the studio system course is a new way of education, which can provide new ideas and methods for the strong professional teaching of architecture and related practice. Through practical project operation and teamwork, students' practical ability and innovation ability can be improved, students' teamwork ability and communication ability can be cultivated, and teaching quality and effect can be improved. At the same time, this teaching mode can also promote the professional development of teachers and the improvement of their teaching level. Therefore, it is hoped that we can promote and apply the teaching mode of application-oriented undergraduate architecture courses through this study.

## **References:**

- [1] Huang Shaogang. Rhino3D Industrial-grade modeling and design [M]. Beijing: Tsinghua University Press, 2013.
- [2] Yuan Feng, Menges. Rich Building Robot Construction [M]. Shanghai Tongji University Press. 2015
- [3] Yuan Feng. From digital programming to digital construction [J]. Times Building 2012 (5): 10- -20
- [4] Yuan Feng. Study on the performance of digital structures [J]. Western Journal of Human Habitat Environment 2014 (6): 6- -12.