Exploration on the Teaching Model for Practice Projects of Environment Design

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Abstract: On account of the actual differences in customer requirements, project resources, time plan and some other factors, there must be various types of practice projects in term of difficulty during the practice process. Students didn’t study and analyze the practice projects deeply and even some of them were only virtual projects which made the design proposal hardly meet the actual application. Based on the classification of practice projects and respective designs according to teaching modes, we discuss how to build the teaching mode for environment design in this paper.

1. Introduction

1.1 Overview of Teaching Model Development

It was Americans Joyce and Weir who first introduced the term “model” into the field of teaching and conducted systematic research on it. They wrote in the book *Model of Teaching*: “Teaching model is a paradigm or plan that composes lessons and assignments, selects teaching materials and prompts teacher activities”\(^1\). Of course, “plan” here seems too specific and obvious to be operable, thus losing its theoretical color. As an important research object of teaching theory, teaching model is mainly a systematic strategy embodying the teaching process.

From the perspective of the development process, teaching model has undergone a transition from imparting instruction to autonomous learning, specifically, from “teaching – listening – reading – reciting – practicing” to “preparation – hint – combination – summarization – application”. The empirical pedagogy established by Herbart and John Dewey's pragmatic teaching model based on “learning by doing” have profound effects on the current teaching model. The traditional experience teaching model ignores the subjectivity of students in the learning process, which suppresses and hinders the development of students' personality. On the other hand, pragmatic teaching model also has its shortcomings, because it emphasizes the importance of direct experience while degrading the instructive role of teachers in the teaching process and also neglecting systematic learning of knowledge. Under such circumstances, the gestation and development of a new teaching model has become the need for the development of teaching theory.

1.2 Problems in the Teaching Model of Existing Practice Projects of Environment Design

Under the premise promoting application-oriented universities, project teaching, class tutoring and other practical teaching teams have realized model construction. At the same time, schools have established school-enterprise cooperation platforms with local enterprises and institutions, which bring teachers and students into the society and the market, enabling them to carry out practical teaching research effectively.

The teaching of practice projects of environment design is mainly for undergraduates who are in the second year or above who have been equipped with certain basic knowledge of Environment. Through project practice, students can combine the theoretical knowledge they have learned with practice to achieve unity of knowledge and action. The course teaching model is supposed to help students better understand the design methods and process of practice projects, so as to strengthen their effective application of profession of environment design. However, the current teaching model has the following problems:
1.2.1 Due to the Lack of Grading of Project Easiness in the Teaching Model, Students Contact Difficult Projects At the Beginning of the Project Practice, Generating Their Fear of the Major.

There must be projects with different levels of difficulty in the practice, due to differences in the actual conditions such as customer requirements, project resources and time schedule. The current teaching model lacks a hierarchical model of the difficulty of the project, and cannot achieve an effective corresponding to “novice projects from the easier to the more advanced”. If students are exposed to complex and difficult projects at the beginning of practice, they are likely to be over-anxious and have fear of their major.

1.2.2 The Current Practice Teaching is Mostly Based on Virtual Projects and Lacks Actual Combat Practice of Physical Projects.

At present, many practice projects about environment design are “surface formality”, and students fail to conduct in-depth research and implementation of project practices during the learning process. Some projects are only virtual projects, and students cannot understand the real space of actual projects. If students have poor control of the scale accuracy and ergonomic scale of actual projects, it will be difficult for them to put forward solutions that can be applied to real projects. Lack of real social project practice and opportunity to encounter problems in the project promotion process in the true sense, students cannot well solve problems in practice. The teaching purpose is to facilitate students to integrate theory with practice, aiming to cultivate innovative and also applied talents featured by “Industry-University-Research (IUR)”. But because virtual and hypothetical topics or projects are used for simulation training, the methods and processes that students understand for environment design projects are severely disconnected from the market. Students have long lacked specific design, practical operation, and practical training in real projects, which leads to a fact that students are unable to meet the market needs for environment design talents after graduation.

1.2.3 Students have insufficient experience in dealing with complex problems in the practical process due to the lack of horizontal comparison and induction between multiple projects and situations.

Whether it is a virtual project or a real project topic, students can only encounter a single case in the current practice project of environment design. The singleness of the case determines the relative singleness of the problem in the process. Maybe students can accumulate some skills of customer communication, project key points and other related experiences through a real project. In this sense, a single type of projects has a certain depth. However, students may have shortcomings in the horizontal development and breadth of different types of projects, because they cannot summarize the logical design of the project. A well-designed teaching model can effectively allow students to fully access different types of projects in limited teaching time, and enable them to connect theory with practice both at the level of the depth and breadth of the project. This is also a typical problem that the practice projects of environment design courses face. Through the teaching model with clear logical relationships, students learn a tight knowledge structure system and can apply it to various practice projects of environment design.

1.2.4 Teachers Place Emphasis on the Transfer of Theoretical Knowledge of Environment Design Projects during the Teaching Process, Which Leads to Insufficient Self-Reflection by Students.

Traditional teaching models focus on the teaching of knowledge by teachers, while environment design projects focus on integrating theory with practice. Teachers spend too much time on the explanation of knowledge points and thus students do not have enough time to carry out self-reflection, summary and refining. The process of project practice is based on students and they gain their own knowledge and experience at each stage of project promotion, which will have practical effects in their future practice. Self-reflection and induction of project cases can also help...
them better integrate theory with practice. In the process of designing the teaching model, teachers need to think about how to inspire students to conduct effective reflection and help them summarize the value process and other issues in project practice, so that they can feel the joy and pride in the process of environment design.

1.2.5 The Logical Induction and Deduction of Project Practice is Insufficient in the Teaching Process.

In the current teaching, teachers mainly focus on the explanation of knowledge points and do not pay enough attention to the induction and interpretation of the implementation process of environment design projects. They do not logically form a systematic analysis process from “special” to “general” and then from “general” to “special”. Students have a one-sided understanding of project practice in the process of learning, and at the same time, teachers do not play a prominent role in connecting points and systems. As a result, students lack a global and systematic analysis in the process of learning, and their positioning height and coordination ability in the practice process cannot meet customer requirements.

1.2.6 When Students Enter Enterprises and Institutions for Project Practice, There is Not an Effective Teaching Model to Help Teachers and Enterprises to Effectively Manage Them.

After completing theoretical courses at school, students generally have chance to carry out project practice in enterprises or institutions. The current teaching method of project practice is that students complete the assigned tasks under the guidance of a designated master, under the management of their internship institutions. On the one hand, students cannot get help from their teachers in the entire process and sometimes they don't know how to start in the place where talents are gathered. On the other hand, the relevant departments do not have a practical training mode to guide students with chaotic knowledge structures and help them achieve systematic professional learning. Many students learn and explore things entirely relying on their own cleverness and perseverance, resulting in the failure to systematically establish a logical sequence of project solutions.

2. Construction of Teaching Model for Practice Projects of Environment Design

2.1 Classification Logic of Practice Projects of Environment Design

The new teaching model requires the construction of a hierarchical model of practice projects to help students access the practice projects. The hierarchical model of practice projects is the basis to relieve students' fear of difficulties and develop their interest in learning and practice. The project practice process from easy to difficult and from shallow to deep can help students establish good logical thinking habits and thinking patterns.

2.1.1 To Classify Practice Projects of Environment Design, the First Thing to Be Considered is the Diversity of Project Customers.

At present, the clients of practice projects about environment design are mainly governments, enterprises and individuals, and they can be subdivided according to factors such as government departments, the nature of enterprises, and households or individuals. Different customers have different needs for practical projects. For example, for a corporate customer, the main consideration is whether the effects of environment design are consistent with the corporate culture, strategies and brand image of the enterprise. Considering specific needs of such kind of customers, the project research must be comprehensive and focused, which requires students to have relevant knowledge such as stakeholder analysis. If it is aimed at a home customer, the main considerations are cycle, cost, comfort and other factors, which require students to master the preferences of the owner and corresponding design styles.

2.1.2 The Second Thing to Be Considered is the Complexity of a Practice Project.

According to the needs of customers and the grasp and analysis of existing resources, students
need to effectively distinguish the complexity of project design. Determining the corresponding project plan is another important thing in the planning stage of the practice projects of environment design. Teachers need to guide students to grade projects based on the size of the project area, the complexity of the parties involved, the cost budget and the length of the cycle. Then, they are expected to guide students to analyze the management strategies, refine the project implementation plan, identify risks in the process of project advancement and formulate risk management and control plans.

Only by comprehensively evaluating and analyzing the actual situation of a practice project and scientifically classifying the project can students systematically manage the project process. The establishment of a hierarchical model can better help students understand the differences between projects and accurately grasp the elements and points that need attention in the project selection, so that they can them classify projects more properly. Through the inductive way to grasp the internal relationship between different projects, students can better understand how the knowledge system of environment design is combined with project practice.

2.2 Logical Recursive Model of Practice Projects of Environment Design in Teaching

The teaching model for practice projects of environment design requires logical deduction and deduction of the corresponding methods and processes, so as to solve the problems that teachers lack practical experience in the existing practical teaching model and improve students' cognitive understanding of practical teaching.

The teaching process of practice projects of environment design is “intensive lecture - investigation - analysis - scheme - construction - acceptance check – evaluation”. At each stage, students need to communicate with the customer service in combination with the environment and the market at any time, so as to understand the design intent, deal with various problems and conduct logical analysis, summarization and refinement. At present, Chinese colleges and universities have a large amount of theoretical research and various forms of school-enterprise cooperation, but few teachers are familiar with the research content and have rich cooperative practical experience. Some teachers lack practical experience and some of their ideas are not workable. Therefore, the schools should be committed to cultivating teachers as double-position teachers, so that they can be familiar with the theoretical methods and actual operating procedures in the process of guiding the project practice. Only in this way can they guide students to carry out logical analysis and induction based on actual situations to help them better cope with various problems in the market.

By logically deducing practice projects of environment design, students can strengthen their study and understanding of the theoretical methods and operating procedures and then apply them to the market, helping them better serve the decoration design industry.

2.3 Practical Training of the Practical Teaching in Practice Projects of Environment Design

The teaching model requires training of environment design projects under the guidance of teachers, so as to help students better realize logical thinking, control and application of related methods and processes.

At present, there are dummy activities in the practice process of environment design projects, which leads to students' insufficient understanding of the material process of design and construction. Many students operate blindly and have no way to start in the practice of the project. They don't know how theoretical methods guide the operation design and implementation process. This kind of dummy activities leads to many problems. For examples, the design and production lack standardization and authenticity and thus they cannot be applied into actual construction; design and construction are completely separated with each other. If students conduct project training under the guidance of teachers, they will be able to scientifically and systematically analyze project design and construction methods and processes, control the project progress and respond to various problems that arise during the project practice.
2.4 Participation in the Whole Teaching Process of Practice Projects of Environment Design

The teaching model for environment practice project requires teachers to guide students to follow up the whole process of project design and construction, with the purpose to help them develop logical thinking and communication ability to deal with various problems according to the project process.

Interaction allows teachers and students more time to participate in the practice project, which can make the teacher-student relationship closer. This also makes the learning process of students more intuitive, which is conducive to fostering their rational understanding, logical analysis and comprehensive summary of problems, and it can also improve their ability to handle design and construction on site. The practice of environment design projects is basically to solve the problem of human material and spiritual needs. Individuals of different ages and in different environments have different values and different levels of needs. Only with a good understanding and analysis of customers' clear and potential needs can designers better serve them.

2.5 Evaluation Mechanism of Practice Projects of Environment Design

The teaching model of environment practice project requires the introduction of a diverse and social evaluation mechanism in order to achieve a two-way and multidimensional evaluation model based on students and teachers. This can solve the one-sided evaluation of students in the project practice and promote the improvement of teachers' project practical ability.

In order to strengthen the management of students' project practice process, it is particularly important to build a suitable process evaluation model.

The project practice process is also a part of the teaching process, and thus the evaluation target is not only the students but also the teacher.

When students enter enterprises and institutions for practice, they will inevitably face multiple evaluations from customers, teachers and the internship units. Only by analyzing and summing up students' performance from all aspects can a complete process evaluation system be formed. The evaluation system for the effect of student project practice should include the following:

① The project instructor's evaluation of the practice process of students;
② Evaluation of students by business managers and designers;
③ Experience evaluation from owners;
④ Self-evaluation and mutual evaluation of students.

The evaluation of teachers in practice teaching should highlight the proportion of objective performance indicators, such as the social and economic benefits of guiding students to practice projects. In this way, teachers can be encouraged to devote themselves to practice teaching, innovate in teaching methods and promote their own practical ability.

3. The Significance of the New Teaching Model for Practice Projects of Environment Design

The construction of a new teaching model for practice projects of environment design is of great significance to both teachers and students. A new practical teaching model adapted to the specialty Environmental Design through the study of the logical inductive deduction model for practice projects of environment design can effectively improve teachers' practical teaching ability and also cultivate students' logical thinking and practical ability of project practice. This can also help students improve their ability to apply knowledge of environment design, analyze different people's psychology and control the market environment logically. In this way, they will be able to accurately solve specific problems they encounter in the actual projects and better satisfy the needs of the market and customers.

References

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