

# Research and Practice of Project-based Teaching Reform of Landscape Design

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## Abstract:

The course teaching of landscape design major has always been a difficult point in the education field, and the traditional teaching mode has been difficult to meet the needs of today's society. Through the exploration and practice of project-based teaching reform, this paper discusses how to make the curriculum of landscape design major more close to the practice, and puts forward targeted suggestions. This paper analyzes the problems existing in the teaching of landscape design, and discusses the reform and practice combined with the actual situation of our school. The main measure of teaching reform is to construct a reasonable curriculum system and adopt the "project-based" teaching method. In the landscape design special curriculum, the project-based teaching can arouse students' interest in learning and enhance students' innovation ability and practical ability. This paper will describe how to apply project-based teaching method and the effectiveness of project-based teaching from the practical perspective.

## Keywords:

Landscape Design Major, Project-Based Teaching; Teaching Reform, Practical Experience, Case Analysis

## 1. Introduction

The course of Landscape Design is an important core course of landscape design of environmental design major, which has strong operability and practicality. This course training goal is to master the basic skills of landscape design, professional core ability - landscape design, design, design of construction drawing design, etc., to show the design scheme accurate vivid, make the design more convincing, for landscape professional students' employment and career development to lay a solid foundation. Landscape design is a comprehensive discipline, involving architecture, art, ecology, humanities and other aspects, and the knowledge of these aspects needs to be systematically studied and applied to become an excellent landscape designer. In the current rapid development of the social background, the traditional classroom teaching has gradually been unable to meet the needs of students, and needs to be more close to the actual teaching methods. Therefore, how to carry out the project-based teaching reform of landscape design professional curriculum has become a problem worth discussing at present.

However, at the present stage, the landscape design did not achieve the desired effect, hindering the development process of the discipline. The application of project-based teaching in landscape design can fully mobilize students' enthusiasm for learning, and provide students with practical training opportunities, which can enhance the teaching effectiveness. In this regard, it is necessary for the relevant personnel to strengthen the in-depth research of the landscape design project teaching problems.

According to the teaching principle of "serving the needs of economic and social development and paying attention to the cultivation and training of academic professional knowledge and professional skills" and the teaching principle of "practical, practical and innovative", the special course of landscape design must change from the previous focus on theoretical teaching to highlighting the cultivation of practice and innovation ability. In recent years, the special course of landscape design in our school has adopted the project teaching method based on the working process of landscape design, taking the working process as the guide and driving by the practical project tasks. It pays attention to cultivating students' comprehensive professional ability and innovative ability, and encourages students to directly participate in social practice projects. Through the combination of theory and practice and the integration of "teaching-learning-doing-evaluation", the quality of application-oriented talent training has been guaranteed, and the good teaching results have been achieved.

## **2. Problems Existing in Landscape Design Professional Education**

At present, there are many problems in the domestic landscape design professional education, mainly manifested in the following aspects:

The curriculum is not reasonable. The traditional landscape design professional education curriculum is single, lack of comprehensiveness and innovation. Many students are not clear about the connection and practical application of what they have learned, and it is difficult to fully master the knowledge and skills.

The teaching model is backward. Most of the traditional teaching mode is that teachers explain, students listen to the lecture, and finish homework after class. This mode can not well reflect students' subjectivity and creativity, nor can it well cultivate students' practical operation ability. Lack of practical project support: lack of real project case and site information as learning materials, it is difficult to provide specific practical operations and experience. Emphasis theoretical knowledge while ignoring practical skills: thematic courses may have a tendency to overemphasize theoretical knowledge while ignoring practical operation skills, and students cannot really understand the elements and difficulties of landscape design practice. Lack of interdisciplinary comprehensive teaching: the teaching of landscape design special curriculum lacks interweaving and integration with other disciplines, and cannot truly implement the integrity of design theory and practice. The teaching methods are old: the teaching methods of landscape design and the tutor leading methods are not diverse, which is difficult to innovate the teaching courses, and lack of novelty, foresight and customization. Lack of comprehensive practical evaluation: the course evaluation lacks comprehensive and practical evaluation, which cannot truly reflect the comprehensive improvement of students' professional business ability and aesthetic quality. Lack of opportunity for practice. Students majoring in landscape design need to have practical operation ability, but the traditional classroom teaching

often lacks practical opportunities, which makes it difficult to improve students' practical operation ability.

The above problems affect the quality and effect of landscape design professional education, and targeted teaching reform measures are needed.

### **3. Theoretical Basis and Practical Experience of Project-Based Teaching**

The subject of landscape design is a combination of theory and practice. When students learn theory, they can lay a solid ideological foundation for practice. Only in specific practical activities can students give full play to their imagination and design more perfect landscape works. The application of project-based teaching in landscape design can promote the in-depth development of teaching activities. In this regard, it is necessary for the relevant personnel to analyze the project-based teaching application practice of landscape design.

#### ***3.1 Theoretical basis of project-based teaching***

In the special course of landscape design, project-based teaching is an organic teaching method. It mainly focuses on students' exploration and learning in practical projects, and achieves the systematic learning of professional knowledge and the cultivation of practical ability through task-driven teaching methods. The general idea is to decompose the course into small projects, which are designed, implemented and evaluated by students under the guidance of their tutors. Project teaching pays attention to the cultivation of practical ability, based on the learning of real situation, and emphasizes the cultivation of problem-solving ability and innovative thinking. Students should experience practical activities in the project, exert their personal creativity, and experience the importance of teamwork and project management. Through project teaching, students can master the methods and skills to solve practical problems and improve their comprehensive quality.

Project teaching is according to the students' interest, demand and ability to carry out a teaching mode, it takes the project as the main line, problem oriented, take the student as the main body, by means of team cooperation, for the purpose of practice, broke the traditional classroom teaching rules, can better cultivate the students' innovative thinking and practical ability. The theoretical basis of project-based teaching mainly includes the following aspects:

(1) Constructivist theory. Constructed from the experience. Therefore, project-based teaching can create more specific experiences by involving students in practice and teamwork, thus promoting knowledge construction and skill improvement.

(2) Task-based teaching theory. Task-based teaching emphasizes that students undertake specific tasks and work in the learning process, promote students' participation and initiative, and cultivate students' practical operation ability. In the professional education of landscape design, project-based teaching takes the task as the core and guides students to actively participate in practical operation and teamwork.

(3) Social construction theory. According to the theory of social construction, individual development is realized in social interaction. Project teaching encourages the communication and cooperation between students, and increases the interaction

and cooperation between students, so that students can constantly improve their practical operation ability and comprehensive quality in team cooperation.

### ***3.2 Project-based teaching practice experience***

In view of the problems existing in landscape design professional education and the theoretical basis of project-based teaching, in recent years, our school has begun to try to carry out the project-based teaching reform, and has achieved certain results. In practice, the project-based teaching should pay attention to the following points:

(1) Project formulation. The formulation of the project should fully take into account the actual needs of students, so that the project content can be close to the reality, and realize the comprehensive application of knowledge and skills in the project.

(2) Task division. Team members should divide their tasks according to their respective strengths and interests to improve efficiency and quality, and encourage students to learn from each other to promote individual and collective development.

(3) Interaction between teachers and students. Teachers should discuss with students the project content and practical operation, as well as provide timely feedback and guidance. At the same time, students are encouraged to give positive feedback and respond to teachers' opinions and suggestions.

## **4. Practice the Steps and Methods of Project-Based Teaching Reform**

### ***4.1. Project selection***

Project topic selection is the first step of project-based teaching, and teachers need to determine the project theme and tasks according to the course content and actual needs. The project theme should be related to the course content, and should have practical significance and applied value. Project tasks should be clear, specific, challenging and feasible. In the topic selection stage, teachers should also fully communicate with students, understand students' interests and ability, and adjust the project tasks and requirements according to the actual situation of students.

### ***4.2. Project planning and implementation***

Project planning is the basis and guarantee of project implementation. In the project planning stage, students should make a detailed project plan according to the project tasks, including time arrangement, personnel division of labor, resource requirements, etc. During the project implementation stage, students should conduct project design and research according to the project plan, and report their progress to the teachers regularly. During the project implementation process, students should adjust and optimize the project plan according to the actual situation.

### ***4.3. Project achievement evaluation***

Project achievement evaluation is the key link of project-based teaching, including project achievement demonstration and project achievement evaluation. In the project results presentation stage, students should show the project results, including design drawings, models, text reports, etc. In the evaluation stage of the project results, teachers should organize students to evaluate and discuss the project results, and

summarize and reflect on the results and experience of the project by means of students' self-evaluation, mutual evaluation and teacher evaluation. At the same time, teachers should also formulate the corresponding evaluation standards and methods according to the actual situation of the project, and evaluate the students' practical ability and innovation ability.

## 5. Case Analysis

In order to better explain the application effect of project-based teaching in landscape design major, the following analysis is combined with the actual case of landscape design major in a university. The school has introduced the curriculum reform into project-based teaching. By opening practical projects such as "square landscape planning and design", it establishes a "design group". Students can independently choose the topic and set up the project group, with teachers serving as the project mentors. In the process of the project, the students formed small groups, assigned tasks reasonably, collected information, analyzed problems, conducted scheme design, and finally completed a city square design project. In the process of completion, the students gave full play to the subjectivity and creativity, improve the practical operation ability and comprehensive quality. At the same time, after the completion of the project, the teacher evaluated and gave feedback on the project of each group. Through this form, students not only participated in the actual operation, but also obtained timely and effective guidance and opinions.

### 5.1. University Case: Major in Landscape Planning and Design, Nanjing Forestry University

The major of Landscape Planning and Design in Nanjing Forestry University is one of the earliest universities to offer the undergraduate major of landscape planning and design in China. Since 2009, this major has begun to carry out the project-based teaching reform, and has gradually formed a perfect project-based teaching system and mode in many years of practice. Specifically speaking, the project-based teaching mainly includes the following characteristics:

Emphasize the practical operation. In terms of course teaching arrangement, this major makes full use of the resources inside and outside the school, providing a large number of practical opportunities and project cooperation opportunities, so that students can personally participate in the project design and implementation process, and enhance their practical operation ability.

Focus on group collaboration. In terms of project setting, the major focuses on dividing students into groups in different directions and subdivided fields, and encourages team members to divide tasks and cooperate, so as to promote the cultivation of team awareness and cooperation spirit.

Focus on problem solving. In the process of project design and implementation, the major focuses on problem orientation and enables students to improve their comprehensive quality and ability expansion by solving practical problems.

Through the project-based teaching reform, the Landscape Planning and Design major of Nanjing Forestry University has not only cultivated a large number of outstanding talents with high level and strong innovation ability, but also been widely recognized by enterprises and the society in the industry.

### 5.2. Social case: Beijing Architectural Landscape Association

Beijing Architectural Landscape Association is one of the more authoritative urban landscape industry associations in China. In recent years, the association has strengthened the education and training and vocational skills of the urban landscape industry, including promoting the project teaching reform of landscape design curriculum. Specifically speaking, the project-based teaching mainly includes the following characteristics:

Close to the market demand. By analyzing industry trends and market needs, the association makes targeted project plans and carries out project practices to ensure that the professional knowledge and skills match the market needs.

Emphasis is placed on vocational skills training. In the teaching process, the association pays attention to the introduction and explanation of relevant professional skills and practical operation skills, and improves the practical working ability of practitioners through practical case explanation and simulated operation drills.

Teamwork and communication. The association encourages practitioners to set up groups in projects and divide tasks and teamwork. At the same time, it also pays attention to organizing communication and communication between students to promote absorption, communication and mutual learning.

Through this form of project teaching reform, Beijing Architectural Landscape Association has played an active role in promoting the popularity and development level of urban landscape industry, and has been widely recognized by the society.

To sum up, both in universities and in the society, the project-based teaching reform of landscape design special curriculum has a great positive role. Through the project-based teaching mode, students and practitioners can better master practical operation skills and solve practical problems. At the same time, teamwork and communication can also promote individual development and collective development. This teaching method provides a broader space for students and practitioners, and also helps educational and training institutions and industry associations to improve the quality of service and market competitiveness.

## 6. Conclusions and Outlook

The project teaching reform is an important development direction of modern landscape design teaching. Through practice, this paper proves that project-based teaching can improve students' learning interest and initiative, enhance students' practical ability and innovation ability, and improve teachers' teaching effect and scientific research ability. Therefore, in the special curriculum of landscape design, we should actively promote the project-based teaching mode, and constantly explore and practice it according to the actual situation. At the same time, teachers should constantly improve their professional quality

Through the above case analysis and theoretical discussion, we can clearly see the advantages and application effects of project-based teaching in the teaching of landscape design professional courses, which can better promote the cultivation of students' independent learning and practical operation ability. Compared with traditional teaching, project-based teaching is more practical, more flexible and diverse, and pays more attention to practical application and teamwork. However, there are also some difficulties and challenges in practice, such as how to determine the specific content of the project, how to divide tasks, how to ensure the cooperation

between students and other problems, which need to be solved through continuous practice and improvement.

In the future, more attention should be paid to the practice and exploration of project-based teaching reform of landscape design professional courses, and actively promote the transformation of traditional teaching mode to project-based teaching. At the same time, schools should also strengthen the training and support for teachers, improve their project-based teaching ability and practical experience, and provide students with better educational resources and services. It is believed that with the joint efforts of all parties, the project-based teaching of landscape design major courses will achieve better and better results, and it will also provide useful reference and inspiration for the course teaching of other majors.

## Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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