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Reflections on Landscape Planning and Design Teaching

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Abstract: This paper discusses the teaching reform of the course of "Landscape Planning and Design", and believes that it is necessary to cultivate new landscape talents with "design thinking + digital skills + cross-border integration + social responsibility" through a variety of measures.

Keywords: Teaching Reform; Effect; Issue; Tactics

1. Introduction

The teaching reform of environmental design is a systematic project, which involves many aspects such as teaching content, methods, evaluation system, curriculum system and faculty construction. By constantly updating the teaching content, innovating teaching methods, strengthening practical teaching, optimizing the curriculum system and strengthening the construction of the teaching team, the teaching quality of environmental design can be effectively improved, and more high-quality talents with innovative ability and practical ability can be cultivated. Based on the teaching reform of the course "Landscape Planning and Design", this paper talks about my own views and understandings.

2. The Teaching Reform of Landscape Planning and Design.

The teaching reform of this course is mainly carried out from multiple perspectives such as training plan, teaching content, teaching methods, practical links, and students' ability training.

2.1 Update and Integration of Teaching Content

The teaching content of the landscape planning and design course needs to be constantly updated to reflect the latest development trends and cutting-edge developments in the relevant fields. This course has a total of 48 hours (including 24 theoretical hours and 24 practical hours). Prerequisites: Chinese and Foreign Garden History, Plant Landscape Planning and Design.

This course focuses on cultivating students' professional basic knowledge and literacy, and requires students to be proficient in the basic elements of landscape design, design points, and the methods and processes of small-scale landscape planning and design. In the teaching process, it stimulates students' professional interest, cultivates active design thinking, and lays a solid foundation for subsequent large-scale landscape planning and design courses. Through the teaching of this course, students are required to master the ability of small-scale landscape planning, train students to refine and transform common landscape forms, and cultivate students' ability to design small-scale landscapes, so that students can obtain correct landscape construction thinking and methods, and train and improve students' hands-on operation ability.

2.2 Innovation in Teaching Methods

Traditional teaching methods are too simple, lack of flexibility and interest, resulting in low interest in learning. Therefore, teaching methods need to be innovative. For example, case teaching methods, project-driven methods, and seminar-based teaching methods can be used to enhance students' sense of participation and practical ability. Through these methods, students can better understand and master the theoretical knowledge of landscape planning and design in practical operations.

Practical links are added to the teaching, such as field trips, model making, on-site surveying and mapping, etc. Through practical sessions, students can apply theoretical knowledge to practice and improve their hands-on ability and problem-solving skills.

In addition, the evaluation method has been reformed. Diversified evaluation methods are adopted, such as process evaluation, work evaluation, peer evaluation, etc. In these ways,

the learning effectiveness of students can be assessed more comprehensively and the all-round development of students can be promoted.

3. The Teaching Reform of Landscape Planning and Design

3.1 Graduation Requirements for Curriculum Objectives and Support

Course Objective 1: Through the study of the course, students are required to master the corresponding theoretical knowledge of landscape planning and design, understand the elements of landscape design, and be able to apply the knowledge they have learned to complete the landscape planning and design scheme. Master the basic knowledge of the profession and have a relatively complete knowledge system.

Indicator points: master the basic literacy of landscape planning and design, as well as the process and method of thematic design.

Course objective 2: Be able to complete the literature collection, design case research and analysis in a targeted manner, master the functional requirements and spatial organization relationship of landscape planning and design, and have the ability to analyze and solve problems.

Indicator points: find and solve problems through literature research, data collection, case analysis, etc.

Course Objective 3: Students are required to dare to break the traditional mode of thinking, carry out the creation of landscape planning and design projects, combine specific design cases, introduce teachers' studio projects or self-set themes, give design requirements, combine the latest fashion trends, social needs and cultural trends, and carry out design innovation and program performance of a certain theme. In the process of completing schematic design and drawing, integrate personal in-depth understanding of landscape planning and design.

Indicator points: have the ability to solve and apply single design problems in environmental design projects.

Course Objective 4: Students are required to master the basic skills and methods of computer drawing, be able to use computers to draw standard drawings proficiently, and the effect performance can clearly express color matching, common material texture and spatial relationships, and be able to be applied to the creation, presentation and design summary of landscape planning and design projects. Possess the ability of innovative thinking and application of landscape design and design.

Indicator points: Possess the ability of innovative thinking and application of environmental design.

3.2 The Achievement of the Course Objectives

From the overall achievement of the course objectives, the achievement degree of course objective 1 was 0.77 (Figure 1), the achievement of course objective 2 was 0.78 (Figure 2), the achievement of course objective 3 was 0.78 (Figure 3), the achievement of course objective 4 was 0.77 (Figure 4), and the average achievement of course objective was 0.78 (Figure 5), which met the basic requirements for the achievement of curriculum objectives, but it can also be seen from the achievement degree that curriculum objectives 1 and 4 are compared with objectives 2 and 3 The degree of achievement is relatively low.

Course Objective 1 requires students to master the corresponding theoretical knowledge of landscape planning and design, understand the elements of landscape design, and be able to apply the knowledge learned to complete the landscape planning and design scheme. Master the basic knowledge of the profession and have a relatively complete knowledge system. Support for this indicator point is achieved through the learning objectives of Goal 1.

Course Objective 4 requires students to master the basic skills and methods of computer drawing, to be able to proficiently use computers to create standard drawings, and to clearly express color matching, common material textures, and spatial relationships. This knowledge should be applicable to the creation, presentation, and design summary of landscape planning and design projects. Students should possess innovative thinking and application abilities in landscape design. The support for this indicator is achieved through the learning objectives of Goal 4.

3.3Analysis of Existing Problems and Causes

Course Objective 1

Problems: First, this part of the content focuses on understanding the knowledge system and is not included in the written test, so students usually memorize it less; second, in actual teaching practice, the knowledge system structure taught by teachers is relatively extensive, while the detailed knowledge points within the system are relatively few.

Reason Analysis: The reasons for the low achievement of Course Objective 1 can be divided into two main points: first, to strengthen students' memorization and learning of basic knowledge and the knowledge system; second, teachers should enhance multi-faceted training and assessment of this part of the knowledge points during teaching.

Course Objective 4

Problems: Students can basically master the basic skills and methods of computer drawing, but sometimes their drawings are not standardized, and the quality is lacking.

Reason Analysis: The main reason for the low achievement of Course Objective 4 is that this course has a total of 48 hours, and according to the training plan and syllabus, students have relatively fewer practical training opportunities for drawing compared to other teaching content. In the next phase of teaching, we will further strengthen practical teaching, deeply implement flipped classroom teaching, enhance students' practical training in computer drawing outside of class, and provide guidance on computer drawing during class.

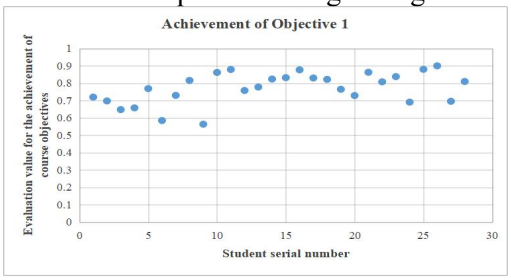

Figure 1. Achievement Status of Course Objective 1

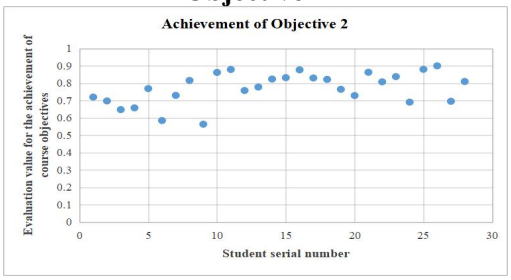

Figure 2. Achievement Status of Course Objective 2

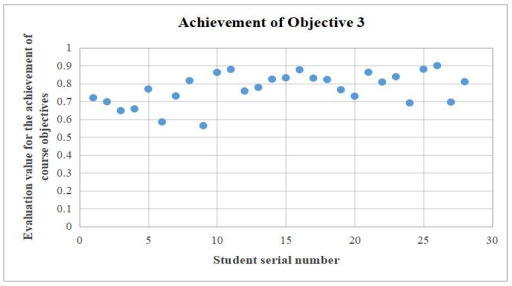

Figure 3. Achievement Status of Course Objective 3

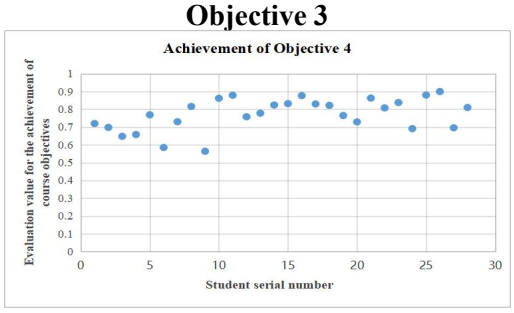

Figure 4. Achievement Status of Course Objective 4

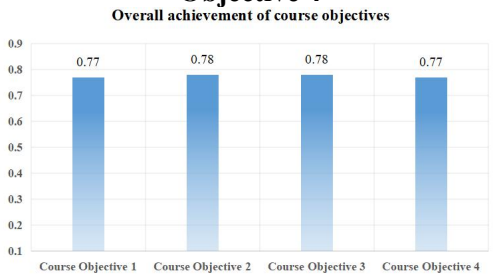

Figure 5.Overall Achievement of Course Objectives

4. Reflections on the Reform of Landscape Planning and Design

The teaching reform of landscape planning and design in colleges and universities needs to keep up with the development trend of the industry, combine ecological sustainability, intelligent technology application, interdisciplinary integration and other directions, and cultivate compound talents through innovative teaching models and contents. The specific reform measures are as follows:

4.1 Curriculum System Reconstruction

Implement modular curriculum integration: strengthen core theories such as ecology, geographic information system (GIS), and sustainable design principles. Integrate digital teaching content such as BIM technology, parametric design, UAV surveying and mapping, and AI-aided design tools. Interdisciplinary courses such as "Urban

Resilience Design" and "Ecological Restoration Engineering" are offered in conjunction with architecture, urban planning, environmental engineering and other majors.

4.2 Dynamic Update Mechanism

The dynamic update mechanism of education reform refers to the continuous adjustment and optimization of educational resource allocation, teaching content, teaching methods and evaluation system in a scientific, flexible and efficient way in the process of education reform, so as to adapt to social needs and changes in technological development. The core goal of this mechanism is to improve the quality of education, promote educational equity, and cultivate talents with innovative ability and comprehensive quality. For example, industry experts are invited to participate in the revision of the curriculum and introduce emerging topics in landscape planning and design.

4.3 Teaching Mode Innovation

First, project-driven teaching (PBL), through the integration of real questions and competitions: IFLA, ASLA and other international competition topics are incorporated into the coursework to enhance students' innovation and international vision. The second is blended teaching: the combination of virtual and real, the use of VR/AR technology to simulate the landscape space experience, combined with the GIS platform for site analysis and visual presentation. Online resource library, case library (such as 3D models of global classic projects) and industry master courses (such as Coursera special courses) for students to learn independently.

4.4 Strengthen Practical Ability

First, further deepen the school-enterprise collaborative education, through the dual tutor system: enterprise designers and teachers in the school jointly guide the graduation project, focusing on solving practical engineering problems (such as cost control, construction technology). Through the construction site classroom: organize students to participate in construction site practice and learn practical skills such as material selection and plant configuration. The second is to strengthen the knowledge system and enable students to master the basic concepts, methods and processes of landscape design through systematic and in-depth learning. The third is to improve the ability of computer drawing: the teaching focuses on cultivating students' ability to operate on professional software such as AutoCAD and Photoshop; Fourth, improve the ability of scheme design: through the analysis of classic cases and actual project practice, students can learn practical design ideas and methods. In teaching, teachers further encourage students to carry out innovative designs and adjust teaching objectives according to market demand.

4.5 Reform of the Evaluation System

First, multi-dimensional assessment. Through the process evaluation, we pay attention to the iterative logic of the plan and the ability of teamwork, and set up mid-term defense and public participation links (such as community plan reports). The second is to pass the industry standard benchmarking: the introduction of LEED certification and SITES evaluation system as a reference for the evaluation of design results. The third is to further increase the open review mechanism, and invite landscape architects, industry experts, and community representatives to form a jury to simulate real project reporting scenarios.

Through the above measures, we will cultivate new landscape talents with "design thinking + digital skills + cross-border integration + social responsibility", successfully achieve the teaching goals, and promote the transformation of the discipline from traditional aesthetics to "problem-solving" design.

References

[1] Zhang Jie. Visualization Analysis of the Hotspots and Context Evolution of Applied Undergraduate Research in China[J].Heilongjiang Higher Education Research,2020,38(01):47-53.

[2] Xing Yue,Gao Xiyin. Exploration of Digital Teaching Reform of Environmental Design in the Era of General Artificial Intelligence[J].Art Education Research,2024,(19):122-124.

[3] Zhi Furong, Yu Boya. Research on the Reform of Practical Teaching of "Three-Stage and Three-Integration" Mode of Environmental Design Under the

Background of Digitalization[J].Art Market,2024,(10):114-115.
[4] Lin Zixin. Research on the Project-Based Teaching Reform of "Modern Urban Landscape Planning and Design" Under the Background of Curriculum Ideology and Politics[J].University,2024,(03):108-111.
[5] Zhang Jie. Exploration and Practice of the Healthy Development of Landscape Design Under the New Normal[J].Forest Area Teaching,2017,(03):9-12.
[6] Wang Xinjun,Xi Juan. Reform of Project-Based Teaching Method: A Case Study of Landscape Planning and Design Course[J].Journal of Changzhou Institute of Technology,2022,35(01):89-94.