

# Exploring the Pedagogical Paradigm of “Practice of Transformation and Renovation Design” Course through Collaborative Academic Endeavors

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**Abstract:** Collaborative academic endeavors between local governments and universities can leverage their respective strengths, facilitate talent development and resource sharing, and reflect win-win situations for both the institutions and the local communities. Practical courses in the field of environmental design occupy crucial positions in academic training, requiring close ties between regional authorities and enterprises to align with social demands and industry development. This approach can enable the cultivation of innovative and versatile professionals and promote the growth of the field. This paper takes the *Practice of Transformation and Renovation Design* course as an example to explore the pedagogical paradigm of student skill development through collaborative academic endeavors. The research will provide valuable insights for the construction of practical courses in environmental design.

**Keywords:** Environmental Design; Practical Course; Collaborative Academic Endeavors; Pedagogical Paradigm

## 1. Introduction

Collaborative academic endeavors, also known as university-government cooperation, refer to a form of collaboration between universities and the local government departments and relevant entities within their geographical or associated regions. [1] Such collaboration enables local universities to cultivate discipline specialties and competitive fields based on the characteristics of local economic and social development, and to foster innovative and entrepreneurial talents, ultimately achieving a win-win situation for regional economic and social development as

well as institutional growth. [2] Embracing the concept of open education, university-government cooperation continually facilitates the effective alignment between academic discipline construction, talent development, and local social progress, [3] thereby exemplifying the social service function of universities. Consequently, societal attention towards and recognition of university-government collaboration has grown significantly, with it becoming a crucial means of nurturing talents and driving industrial transformation and upgrading in various regions. [4]

The Chongming District of Shanghai boasts abundant natural resources and a rich cultural heritage. As a vital ecological region in Shanghai, the environmental construction and development of Chongming District hold significant importance. XianDa College of Economics and Humanities, Shanghai International Studies University is the only institution of higher education in the eastern part of Chongming, carrying the responsibility of cultivating talents for regional development. The Environmental Design Department of XianDa College has been dedicated to nurturing innovative and versatile professionals who can contribute to regional development since its establishment. The nature of the environmental design discipline, which is oriented towards vocational demands, dictates a greater emphasis on social service, practicality, and applicability in curriculum design. Given the context of social development and regional construction, how to collaborate with the local government and businesses, engage in social services, and promote regional development through practical courses has become a crucial issue in the ongoing reform of practical curriculum.

This study takes the course *Practice of*

*Transformation and Renovation Design* as an example to explore the practical teaching model of “university-local collaborative education” in applied undergraduate institutions. By adopting this model, the aim is to expand the role of discipline construction in serving social development, enhance students’ subjective initiative, cultivate their innovative abilities and teamwork qualities, and better reflect the goals of talent development.

## **2. The Main Issues in the Teaching of the Practice of Transformation and Renovation Design Course**

### **2.1 Disconnect between the Course Design and Societal Needs**

According to preliminary investigations, the course has been designed based on the standards of discipline construction, with a teaching syllabus and plan in place, providing an overall framework for the course. However, the current planning primarily focuses on the classroom teaching system and lacks alignment with social development and regional construction. As a result, students are unable to accurately grasp the social and market demands, which in turn affects the quality of professional talent development. Therefore, it is necessary to consider integrating practical courses with local issues in teaching, enhancing students’ awareness of the needs of the people and societal realities, fostering close ties and interactions between the university and local development, and creating an educational characteristic rooted in local culture.

### **2.2 Weak Integration of Course Content in Teaching**

Environmental design is an interdisciplinary and comprehensive field that involves multiple disciplines and sectors such as planning, technology, art, and ecology [5]. As such, the course content for the *Practice of Transformation and Renovation Design* should be comprehensive and practical. However, the current course mainly focuses on the theoretical content of architectural transformation-related textbooks and project assignments given by teachers, completed by students using design software in the classroom. The practical course contents lack alignment with regional construction, attention

to social issues and sufficient emphasis on planning and analysis of on-site investigations for design projects. This may result in course content lagging behind societal development needs and low practical value.

### **2.3 Limited Diversity in Teaching Methods**

During the course implementation, practical tasks involve a wide range of content and methods, such as on-site investigations, field trips, user interviews, observation methods, questionnaire surveys, and more. However, the current teaching methods in the course are relatively limited, primarily focusing on a combination of theory and project design in the classroom. This form of practice makes it difficult for students to exercise their independent abilities and lacks opportunities for utilizing professional knowledge to solve problems. Consequently, the course fails to engage students’ interests, and the teaching effectiveness cannot be adequately demonstrated.

### **2.4 Insufficient Course Evaluation Process**

In the past, course evaluations have primarily relied on the judgment of the teachers, placing too much emphasis on their authority and failing to truly reflect students’ learning attitudes, teamwork abilities, and overall personal qualities [6]. The teacher-centered evaluation process often focuses solely on the completeness and aesthetic expression of design works, neglecting the development of students’ comprehensive abilities during the design process. The subjective nature of the evaluation method results in students paying less attention to the practical significance and societal value of their design works, leading to a lack of practicality and innovation. As a result, the classroom teaching evaluation has not effectively promoted teaching improvement.

## **3. Exploring the Curriculum Instruction of Practice of Transformation and Renovation Design**

The compulsory practical course *Practice of Transformation and Renovation Design* in the Environmental Design undergraduate program consists of 36 class hours and carries 2 credits. This course typically adopts a project-based approach, employing a well-designed and scientifically planned teaching curriculum that

places the students at the center of the learning process. The ultimate goal is to cultivate students' innovative thinking and enhance their professional competence, practical skills, and collaborative abilities.

### **3.1 Curriculum Planning**

The planning of the practical course curriculum is based on regional development and construction, and places emphasis on the environmental development of the Chongming area in the context of social development. The course is dedicated to collaborating with natural villages in Chongming, such as Yuxi Village and Fuxu Village, to develop projects such as rural vacant space design, housing design, and homestay design. The instruction process includes on-site research, architectural measurement, conceptual design, project production, and work presentation. After completing the course, a design exhibition will be held in the village, inviting relevant professionals and village representatives to participate in course guidance and outcome evaluation. Through the development of the practical course, students will continuously enhance their awareness of local development, closely connect and interact with local grassroots organizations, and create unique educational characteristics that reflect the local identity.

### **3.2 Ensuring Project Alignment**

Prior to the course commencement, the instructor visits the project site to establish project alignment. Firstly, the instructor engages with village representatives, village committees, and villagers to understand the design needs. Secondly, the course team conducts on-site investigations to assess the architectural structures and collect basic project information. Thirdly, the course team collaboratively prepares the course materials, including a task book, based on the syllabus and teaching plans. This document clarifies the teaching objectives, design requirements, expected outcomes, and other relevant details, ensuring proper preparation for the course implementation. Lastly, considering the characteristics and specific circumstances of the rural area, the *Practice of Transformation and Renovation Design* course has formulated four project directions: renovation design of rural idle public spaces, renovation design of

homestay spaces, design of ecological farm experience spaces, and micro-updates in rural landscapes and public facilities. Students can choose their research and practical projects based on group interests and practical situations, offering professional and innovative solutions to optimize rural environmental design.

## **4. Implementation of Teaching**

### **4.1 Guiding Student Understanding of the Project and Fostering Team Collaboration**

During the first week of the course, the instructor provides a comprehensive introduction to the curriculum. Firstly, students are guided to understand the research scope, course implementation plan, project information, and assessment criteria. Secondly, they engage in relevant literature reading, which initiates preliminary thinking on effective approaches to rural space transformation and renovation within the context of Chongming's ecological construction. Furthermore, extensive discussions are conducted with students on the significance of ecological design, human-centric design, and sustainable design in rural project development. Lastly, the course advocates for team collaboration. Students are encouraged to form design teams based on their interests, strengths, and abilities, aligned with the project's requirements. The design teams begin their practical work by selecting topics and conducting data research, ensuring thorough preparation for the course projects.

### **4.2 Conducting On-site Surveys to Comprehend Spatial Characteristics and User Demands**

Investigation and analysis are essential procedures before embarking on the design phase. Throughout the practical course, we leverage the convenient transportation advantage between the school and the project site, employing a combination of collective and group surveys. Firstly, the instructor and students collaboratively conduct preliminary research on-site. Given that rural transformation projects often lack architectural and landscape drawings, it becomes necessary for the teacher-student team to perform on-site surveying. To address any challenges encountered during the survey, the instructor

can impart scientific methods and techniques of site measurement on the spot, assisting students in completing the site survey. Secondly, the instructor guides the students in understanding the architectural structures and facilitates the design teams in comprehending the current spatial conditions. Thirdly, upon the completion of the collective research, students will conduct investigations in groups, focusing on the project environment and natural landscape elements. This phase aims to gather insights into the design requirements of various groups, including villagers and tourists. Students are encouraged to utilize their own time outside of classes and on weekends for these group investigations. By combining collective research with group inquiries, students can acquire objective data from the preliminary investigations, thereby laying a realistic foundation for the subsequent phases of the project.

#### **4.3 Emphasizing Objective Analysis and Cultivating Students' Inductive Reasoning**

Upon completing the research, students organize the preliminary findings and compile them into an analysis report for the project. The instructor guides students to delve deeper into the group research reports, encouraging them to explore the relevance of various pieces of information and identify the issues and potentials of the site [7]. Throughout the course, the instructor fosters students' subjective initiative and creativity, urging them to conduct comprehensive and integrated research on the design project site. Building upon the research, students can analyze and refine the preliminary design content. Finally, through scientific and rational research analysis, students will develop a thinking approach that involves problem discovery, comprehension, and summarization, thus enhancing their overall ability to integrate knowledge.

#### **4.4 Leveraging Scientific Guidance to Improve Project Design Process**

Based on the previous research and analysis, the course moves into the concept design teaching phase, with students' design groups taking the lead and the instructor assuming an assisting role. Through group discussions, division of labor, project reporting, and other means, students carry out design work. The

instructor provides advisory opinions or suggestions for different design proposals, genuinely making students the mainstay of the practical classroom [8]. Classroom teachers respect students' creative ideas, give play to their subjective initiative, and guide them to solve problems independently. Through communication, discussion, and continuous refinement of the design proposal, students accumulate experience in exploring issues. During the concept design phase, the instructor should always prioritize scientific guidance, inciting students to embody an independent and active spirit of exploration, leading to better development of their self-directed learning capabilities.

#### **5. Exploring Diversified Curriculum Evaluation**

Evaluation plays a guiding role in school education [9]. When it comes to practical courses, evaluation emphasizes diversity and real-world significance more than other courses. Therefore, the evaluation of the *Practice of Transformation and Renovation Design* course focuses on a combination of process assessment and outcome assessment. The evaluation consists of three components: regular performance, project presentations, and exhibition of design proposals. Regular performance accounts for 50% of the final grade and includes factors such as attendance, project research, and communication reports. Project presentations contribute 20% to the final grade. After the completion of the project, team members give group presentations to showcase the design process and the final completed design proposal. The evaluation of the final proposal accounts for 30% of the grade. Following the completion of the design proposal, an online or offline practical design exhibition is organized, where experts from relevant departments, representatives from the community, and the teaching team jointly evaluate the proposals. During the exhibition, students are responsible for answering questions, collecting feedback, and making final improvements to the proposals. Through diverse evaluation methods, particularly the involvement of joint evaluations between the school and the local community, students become aware of their shortcomings in alertness and realize the importance of practical skills in the field of environmental art.

Furthermore, the active participation of project parties in the teaching evaluation allows them to understand the diversity of design proposals and can also enhance the quality of rural construction [10].

## 6. Conclusion

In this course development, a practical teaching system combining local design and professional teaching has been established. The ultimate goal is to enable students to apply theoretical knowledge to design practice and cultivate their abilities to identify and solve problems. Curriculum development should focus on “student-centered” teaching. In the teaching process, teachers should fully exert the subjective initiative of students, focus on cultivating design awareness, innovation capability, cultural heritage and application ability, and better reflect the practical, open, and professional characteristics of environmental design.

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