Streamlined Construction of the Practice-based Curriculum System for Environmental Art Design in Vocational Undergraduate Education

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Abstract: Vocational undergraduate education aims to cultivate high-caliber technical talent. Environment art design program serves as an interdisciplinary field that integrates artistry and practicality, and the perfection of its practice-based curriculum system directly determines the quality of talent cultivation. Current practice-based curriculum system for vocational bachelor's Environmental Art Design program still has many urgent problems, such as disconnection between curriculum design and industry demands, ossified practice teaching models, insufficient practical competencies of faculty teams, and fragmented evaluation systems, impeding the realization of the talent cultivation objectives. Based on the typological DNA of vocational undergraduate education and aligned with the development trends of the Environmental Art Design industry, this paper deeply analyzes the existing problems in the practice-based curriculum system, and proposes targeted streamlined construction strategies across four dimensions: course module reengineering, teaching model innovation, faculty team building, and evaluation system improvement, aiming to promote the precision alignment of the practice-based curriculum system with the job requirements, enhance students' holistic practical competencies and professional competitiveness, and provide theoretical reference and practical support for the high-quality development of vocational bachelor's Environmental Art Design program.

Keywords: Vocational Undergraduate Education; Environmental Art Design; Practice-based Curriculum System; Streamlined Construction; Technical Skills

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1.Introduction

With the high-quality development of urban and rural construction and the upgrading of the cultural and creative industries in China, the demand has become increasingly urgent for high-quality technical and skilled talents in the Environmental Art Design industry. It not only requires practitioners to have a solid theoretical foundation in their fields, but also emphasizes strong practical competencies, project execution capabilities and innovation capabilities. Vocational undergraduate education serves as an important vehicle for bridging higher vocational education and regular undergraduate education, focusing on the cultivation of applied talent. The core task of its Environmental Art Design program is to cultivate agile industry-responsive transdisciplinary designers. Practice courses, as the key vehicle for achieving this cultivation objective, serve as a bridge connecting theoretical knowledge with professional practice. However, their current development trajectories remain misaligned with both vocational undergraduate education mandates and industrial job requirements, exhibiting prevalent issues of curricular superficiality and homogenization. Therefore, it is of significant practical significance to conduct an in-depth analysis of the existing problems in the practice-based curriculum system, explore a scientific and reasonable pathway for streamlined construction, break through the limitations of traditional practice teaching, and achieve the deep integration of practice courses with professional positions and industry development for improving the quality of talent cultivation in vocational bachelor's Environmental Art Design program and promoting the resonance between professional education and industry development.

2.Current Challenges in the Practice-based Curriculum System for Environmental Art Design in Vocational Undergraduate Education

2.1 *Unsound Curriculum Design, Disconnecting from Industry Demands*

Currently, in some vocational undergraduate institutions, the practice-based course design for Environmental

Art Design still continue to use the traditional undergraduate or higher vocational education curriculum models, and fail to accurately grasp the dual positioning of vocational undergraduate education, which is "technical skills + application innovation", resulting in a disconnection between the curriculum design and job requirements. On the one hand, the boundaries of course modules are ambiguous, and the ratio of theoretical courses to practice courses is unbalanced. Some programs overly focus on imparting theoretical knowledge, with insufficient proportion of practice courses. Moreover, the practice content mainly consists of fundamental skills training, lacking systematic training on the entire process of projects, failing to cultivate students' holistic project execution capabilities [1]. On the other hand, the course content is outdated, failing to incorporate the latest industry technologies and concepts in a timely manner, and neglects the transmission of regional culture, green ecological design, digital design, and other hotspots in the industry development. As a result, the knowledge of students is disconnected from the real-world application in the industry, struggling to be agile industry-responsive practitioners. Furthermore, the curriculum design lacks specificity, failing to establish differentiated practice course modules based on the requirements of industry-segmented job roles in the Environmental Art Design industry, resulting in curricular homogenization, failing to meet the personalized needs of different job roles for talent.

2.2 *Ossified Teaching Models, Resulting in Insufficient Efficacy of Practice Teaching*

The practice teaching models for vocational bachelor's Environmental Art Design are relatively ossified, still mainly relying on the traditional approach of "classroom lectures + simulation exercises", lacking innovation and practicality, which has greatly reduced the efficacy of practice teaching. In classroom teaching, teachers mainly focus on theoretical explanations and case presentations, and students passively receive knowledge and lack the opportunity to proactively participate in practical activities, and conduct exploration and innovation. As a result, it is difficult for students to flexibly apply theoretical knowledge to practical operation. In the simulation exercises, teachers mainly use virtual cases as the vehicle, which lack scenario experience and stress testing from authentic projects. During the practice process, students do not need to account for real-world issues such as customer needs, cost control, and construction norms. This leads to a disconnection between practical operation and industry reality, and the students thus cultivated lack the capabilities to solve real-world problems [2]. Meanwhile, the practice teaching lacks interactivity and collaboration, mainly focusing on individual practice, neglecting the cultivation of core professionalism such as teamwork skills, communication and expression skills, which does not align with the work pattern of project team collaboration in the industry. Moreover, the application of digital teaching methods is insufficient. The digital design tools and online practice platforms have not been adequately utilized, which restricts the improvement of students' digital practical competencies and makes students struggle to suffice the digital development trend of the industry.

2.3 *Chronic Shortage of Qualified Faculty and Insufficient Practice Teaching Competencies*

Faculty teams are the core safeguards for the effective implementation of the practice-based curriculum system. Currently, the faculty teams for vocational bachelor's Environmental Art Design program suffer from problems, such as an unreasonable faculty structure and insufficient practical teaching competencies, which seriously affects the teaching quality of practice courses. On the one hand, the faculty structure is unbalanced. Most of the teachers come from regular undergraduate institutions and lack industrial immersion. After graduation, they directly enter higher education institutions to engage in teaching, failing to have a deep understanding of the job requirements, project processes, and technical standards in the Environmental Art Design industry, which makes them struggle to provide targeted practice teaching guidance. On the other hand, the faculty training systems are not well-developed. Higher education institutions lack systematic training for practice teachers, especially in areas related to the cutting-edge technologies and practical skills in the industry. This results in teachers struggling to continuously improve their practical competencies and failing to keep pace with the industrial evolution [3]. Furthermore, lack of an effective bidirectional communication mechanism between schools and enterprises results in higher education institutions

struggling to recruit outstanding designers and project managers from the industry to serve as part-time teachers. Moreover, university teachers also lack the opportunity to engage in project practice at the industry front, resulting in a disconnection between the practice teaching content and the industry reality, struggling to meet the practice learning needs of students.

2.4 *Fragmented Evaluation Systems, Lacking Multidimensional Evidence Capture and Context-Responsive Calibration*

Current evaluation systems for the practical courses are rather fragmented, mostly focusing on the results and lacking comprehensive evaluations of the practice process and students' holistic competencies, failing to exert the guiding and motivating role of the evaluations in practice teaching. In terms of evaluation content, it mainly focuses on the completion of students' practice works, while neglecting the evaluation of students' practice performance, innovative thinking, teamwork skills, problem-solving capabilities and other capabilities. This results in students overly focusing on the final presentation effect of the works, while neglecting the improvement of their capabilities during the practice process. In terms of the evaluation methods, they are mainly centered on teacher evaluation, lacking student self-evaluation and peer evaluation, as well as evaluation by industry experts and enterprise mentors. The evaluation entities are relatively monolithic, failing to ensure the objectivity and fairness of the evaluation results. Furthermore, the evaluation criteria are rather ambiguous and lack specificity. Vocational undergraduate institutions fail to make differentiated evaluation criteria based on different practice courses and job requirements, resulting in a "one-size-fits-all" phenomenon. The evaluation criteria fail to comprehensively reflect students' practical competencies and professionalism, and struggle to accurately measure the actual effectiveness of practice course teaching [4].

3.Strategies for the Streamlined Construction of the Practice-based Curriculum System for Environmental Art Design in Vocational Undergraduate Education

3.1 *Reengineering the Course Modules to Achieve Precision Alignment with Industry Demands*

Vocational undergraduate institutions should ground themselves in the talent cultivation objectives of vocational undergraduate education and the development needs of the Environmental Art Design industry to reengineering the practice course modules, optimize the curriculum design, and achieve precision alignment between the course content and job requirements. Firstly, they should plot positively the course modules, establish a "fundamental practice-core practice-on-the-job practice-innovation practice" four-in-one practice course module system, and reasonably adjust the ratio of theoretical courses to practice courses to ensure that the proportion of practice courses meets the talent cultivation requirements in vocational undergraduate education. The fundamental practice module focuses on training fundamental specialized skills, covering hand-drawing, software operation, material knowledge, etc. to lay a solid foundation for students' practical competencies. The core practice module focuses on the entire process of projects, covering scheme design, construction drawing production, budget preparation, and construction supervision, to cultivate students' holistic project execution capabilities. The on-the-job practice module aligns with the requirements of industry-segmented job roles to establish differentiated modules, such as interior design, landscape design, and public space design, to cultivate students' position-specific skills. The innovation practice module focuses on cutting-edge technologies in the industry and the cultivation of innovation capabilities, incorporating elements such as green ecological design, digital design, and regional cultural design, to enhance students' innovative thinking and industry-alignment capabilities [5]. Secondly, they should update the course content promptly, keep track of industry development trends, integrate cutting-edge technologies, design concepts and post standards into practice courses, and eliminate outdated and useless teaching content to ensure the industry-immediate applicability and future-skill adaptability of the course content. Concurrently, they should enhance the articulation and integration among courses, avoid repetitive teaching content, and establish a systematic and integrated practice-based curriculum system, so as to promote the comprehensive improvement of students' knowledge and

skills.

3.2 *Innovating Teaching Methods to Enhance the Efficacy of Practice Teaching*

Vocational undergraduate institutions should break through the limitations of the traditional practice teaching model, innovate the teaching models, and construct a student-centered, practice-oriented, and project-based practice teaching model to enhance the efficacy of practice teaching. Firstly, they should implement the project-driven teaching model, using authentic industry projects as the vehicle, integrate the practice teaching content with the entire process of projects, guide students to participate in all components such as project research, scheme design, construction drawing, and project report, enabling students to accumulate experience and enhance their capabilities in authentic project practice, and cultivate their capabilities to solve real-world problems. Concurrently, they should implement case-based teaching, select excellent cases and typical failure cases in the industry, guide students to conduct analysis, discussion, and summarize experience and lesson, thereby enhancing students' design mindset and project management capabilities. Secondly, they should enhance interactive and collaborative teaching, and adopt group cooperation and teamwork to conduct practice teaching, enabling students to complete practice tasks through teamwork, and cultivating their core professionalism such as communication and expression skills, as well as teamwork skills, which align with the work pattern of project team collaboration in the industry. Furthermore, they should deepen the implementation of digital teaching, fully utilize digital design tools and online practice platforms to carry out online-offline blended practice teaching, guide students to complete design practice tasks using digital tools, and enhance students' digital practical competencies to suffice the digital development trend in the industry. At the same time, they should establish on-campus practical training bases and off-campus practice platforms to provide students with authentic practice scenarios and practice opportunities, achieving the deep integration of classroom practice and industry practice.

3.3 *Strengthening the Construction of Faculty Teams to Enhance the Practice Teaching Competencies*

Vocational undergraduate institutions should focus on enhancing the practical competencies of faculty teams, establish an "on-campus cultivation + off-campus recruitment + bidirectional exchange" faculty construction system, and forge high-quality faculty teams with both theoretical knowledge and practical competencies. Firstly, they should enhance the training of university faculty and establish a sound faculty training system, and regularly organize university faculty to participate in industry training, academic exchanges, and skill competition, focusing on the training on cutting-edge industry technologies, practical skills, and teaching methods, to enhance their practice teaching competencies and professional competence. Concurrently, they should encourage university faculty to go deep into the frontlines in the industry, engage in enterprise project practice, accumulate industry experience, and convert the practice results into teaching content, thereby enhancing the targeted relevance and efficacy of practice teaching. Secondly, they should increase the efforts in recruiting external teachers, actively invite outstanding designers, project managers and technical experts from the industry to serve as part-time teachers in order to enhance the faculty teams and provide professional practical guidance for students, thereby remedying the deficiency that university teachers have insufficient practical experience. In addition, they should establish a bidirectional exchange mechanism for between university faculty and enterprise mentors to promote the bidirectional communication and cooperation between university faculty and part-time teachers from enterprises. University faculty provide theoretical support and technical services for enterprises, while enterprise part-time teachers engage in on-campus practice teaching, curriculum development, and other related work, achieving complementary advantages to jointly improve the quality of practice teaching.

3.4 *Refining the Evaluation Systems to Leverage the Guiding and Motivating Role of Evaluations*

Vocational undergraduate institutions should transcend the one-sided outcome-oriented evaluation models, and establish a diversified practice course evaluation system that integrates "process-oriented evaluation", "outcome-oriented evaluation" and "comprehensive evaluation" to leverage the guiding and motivating effects of

evaluations in practice teaching. Firstly, they should optimize the evaluation content by including the practice process and results in the evaluation scope. Not only should the completion of students' practice works be evaluated, but also their practice performance, innovative thinking, teamwork skills, problem-solving capabilities, communication and expression skills, etc. should be evaluated to comprehensively reflect students' practical competencies and professionalism. Secondly, they should diversify the evaluation entities and establish a diversified evaluation entity system that integrates teacher evaluation, student self-evaluation, peer evaluation, evaluation by industry experts, and evaluation by enterprise mentors to ensure the objectivity and fairness of the evaluation results. Teachers are mainly responsible for guiding and conducting comprehensive evaluations of students' practice process. Student self-evaluation and peer evaluation facilitate to cultivate their self-reflection and solution-oriented critique capacity. Industry experts and enterprise mentors evaluate students' practice outcomes from the perspective of professional positions. All of these aim to enhance the targeted relevance and practical efficacy of the evaluations. In addition, they should make differentiated evaluation criteria, and formulate specific and detailed evaluation criteria based on different practice courses and job requirements to avoid the "one-size-fits-all" evaluation phenomenon, and ensure the targeted applicability and practical operability of the evaluation criteria.

4.Conclusion

The streamlined construction of the practice-based curriculum system for Environmental Art Design in vocational undergraduate education is a crucial initiative to meet the demands of the industry development, realize the talent cultivation objectives of vocational undergraduate education, and enhance the quality of talent cultivation. Current practice-based curriculum system for vocational bachelor's Environmental Art Design suffers from problems, such as unsound curriculum design, ossified teaching models, chronic shortage of qualified faculty, and fragmented evaluation systems, which hinders the realization of the cultivation objectives. By reengineering the course modules to achieve precision alignment with industry demands, innovating teaching methods to enhance the efficacy of practice teaching, strengthening faculty team construction to enhance practice teaching competencies, and refining the evaluation systems to exert the guiding and motivating role of evaluations, vocational undergraduate institutions can effectively solve the existing problems in the practice-based curriculum system and construct a scientific and reasonable practice-based curriculum system that aligns with the talent cultivation objectives of vocational undergraduate education and industry demands.

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