

Research on the Construction of Excellent Teaching Teams in Design Studios of Universities under the Background of Industry-Academia Integration

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Abstract: The integration of industry and education is the core guiding principle of the reform of higher design education in the new era. Design studios, as the core carrier for the practical education of design-related majors in local universities, require an excellent teaching team to support their efficient operation and the realization of the educational goals. Based on the policy requirements of industry and education integration and the actual development of design education in local universities, this paper conducts a systematic study on the significance, practical obstacles, and practical paths of the construction of teaching teams in design studios in the era. It clarifies the core role of team construction in school-enterprise collaboration, practical education, and disciplinary development, sorts out the prominent problems in terms of teachers, models, management, and resources, and proposes targeted construction strategies. This provides practical references for the improvement and upgrading of design studios in local universities and the cultivation of applied design talents.

Keywords: Industry and education integration; Design studio; Teaching team; Design education; Applied talent

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1. Introduction

With the continuous advancement of national policies on industry-academia integration and school-enterprise cooperation, design-related majors in local universities have gradually broken free from the limitations of traditional theoretical teaching and have reconstructed the practical education system with design studios as the carrier. Design studios integrate teaching, practice, competitions, research, and social services, serving as an important platform connecting university education with the demands of the design industry. The professional quality, collaboration ability, and practical level of the teaching team directly determine the quality and development efficiency of the studio's education. Currently, the construction of excellent teaching teams in local university design studios still faces many compatibility problems, making it difficult to meet the new requirements for talent cultivation in the background of industry-academia integration. Based on this, this article focuses on the construction of outstanding teaching teams and explores the construction path suitable for the development of design studios.

2. The significance of building outstanding teaching teams in local university design studios under the background of industry-academia integration

2.1. Anchor the core of industry-academia integration and build the foundation for collaborative education between schools and enterprises

The essence of industry-academia integration is to promote the synchronous resonance of university education and industrial development. The outstanding teaching team of design studios is the core force for building a bridge of collaborative education between schools and enterprises. Local universities' design majors cover multiple directions, such as architecture, landscape architecture, environmental design, and visual communication. There have long been problems of disconnection between teaching content and industry demands, as well as a lack of practical resources. The outstanding teaching team can precisely align with the job standards, project processes, and technical requirements of the design industry, introducing industry-cutting-edge concepts and real design projects into the studio teaching process. The team can lead the establishment of stable cooperative relationships with local design enterprises and cultural and creative institutions, promoting the participation of enterprise mentors in campus teaching guidance and the participation of university teachers in project practice. This enables the exchange and circulation of resources such as teachers, projects, equipment, and technology in both directions^[1]. At the same time, the team can rely on the school-enterprise cooperation platform to break down real enterprise projects into modular teaching tasks, allowing students to master industry practical skills in real combat, and the connection channel between campus learning and career employment, making industry-academia integration transform from policy concepts to implementable educational practices, and laying a solid foundation for the long-term development of design studios.

2.2. Activate the momentum of practical teaching and lay a solid foundation for cultivating application-oriented design talents

Design-related majors are highly practical and application-oriented. Practical teaching is a core part of talent cultivation. An excellent teaching team can activate the practical teaching momentum of the studio and fill the gaps in practical teaching in local universities. Traditional design teaching mainly focuses on large-class theoretical lectures, leaving students lacking practical training and project experience. Their practical abilities are difficult to meet the demands of the industry. An excellent teaching team can restructure the layered practical teaching system based on the studio, and set differentiated practical goals for students of different grades. In the first year, the focus is on professional basic skills training, such as hand drawing and software operation; in the second year, professional design ability training is strengthened, and small-scale design practices are carried out in line with professional courses; in the third and fourth years, comprehensive and expansion ability training is emphasized, and students participate in complete design projects, academic competitions, and research and innovation. The team teachers can integrate on-campus practical equipment and off-campus practical venues, lead students to conduct on-site research, scheme design, and outcome implementation throughout the process of practical activities, and at the same time, accumulate practical experience through social service projects, enabling students to enhance their design application ability, problem-solving ability, and teamwork ability in immersive practice, providing solid support for the cultivation of application-oriented design talents.

2.3. Promote professional cross-border integration and empower new paths for the innovative development of the design discipline

The iterative upgrading of the design industry requires talent to possess the ability for cross-border integration. Excellent teaching teams can break down professional barriers and promote cross-border integration and innovative development of the design discipline. The design-related majors in local universities have long operated independently, with scattered teaching resources and fragmented curriculum systems, making it difficult to cultivate comprehensive design talents. Excellent teaching teams with cross-professional collaboration capabilities can take the lead in establishing cross-

studio and cross-professional communication platforms. The team can organize teachers from different majors, such as architecture, environmental design, and visual communication, to jointly conduct teaching, integrate the teaching advantages of each major, and develop cross-professional comprehensive design courses; guide students from different majors to form teams and jointly participate in comprehensive design projects, academic competitions, and research projects, leveraging the expertise of each major to complete cross-border design tasks. At the same time, the team can keep up with the industry's innovative trends and integrate cutting-edge concepts such as green design, intelligent design, and digital cultural creation into teaching, promoting the design discipline to shift from a single professional development to cross-border integration, driving teaching innovation, talent innovation, and injecting lasting momentum for the high-quality development of the design discipline through team innovation.

3. Obstacles in the construction of teaching teams for design studios in higher education institutions in the background of industry-academia integration

3.1. Monotonous and fixed teacher structure, insufficient supply of dual-teacher teams

The teaching teams of design studios in local universities generally have the problem of a monotonous and fixed structure. The supply of dual-teacher resources is insufficient to meet the teaching needs of industry-academia integration. From the perspective of teacher sources, most team members are directly hired after graduating from universities and lack practical experience in design enterprises. They have insufficient understanding of industry project processes, technical standards, and market demands, and their teaching content leans towards theoretical explanations, while their practical guidance ability is weak. In terms of faculty composition, the team has an imbalanced echelon structure in age, academic specialties and professional capabilities. Young teachers account for a relatively large proportion but lack experience in teaching and practical guidance. Senior teachers have limited energy and cannot manage multiple tasks simultaneously. Most part-time instructors from enterprises are employed on a temporary basis, and the absence of a long-term cooperation mechanism prevents them from participating in team development throughout the process. From the perspective of professional layout, the teaching resources of each professional studio are independently configured, and the sharing mechanism of cross-professional teaching resources is missing. The scattered teaching resources cannot form a collaborative synergy.^[2] At the same time, the enterprise practice training system for design professional teachers in universities is not perfect, and the channels for improving teachers' practical abilities are limited. The progress of cultivating dual-teacher resources is slow, which restricts the overall practical teaching level of the teams.

3.2. The traditional and conservative education model, and the insufficient depth of implementation of industry-academia integration

Some design studio teaching teams still adhere to the traditional education model. The implementation of industry-academia integration lacks depth and effectiveness, making it difficult to meet the requirements of the studio's development. The team teaching still focuses on classroom theoretical instruction and course assignment grading, simply positioning the studio as a place for after-class tutoring, without establishing an integrated education model of "teaching + practice + project + competition". It neglects the core values of school-enterprise cooperation, project practice, and social service. The teaching content is outdated, and the team of teachers lacks systematic research on industry-cutting-edge technologies and design trends. They continue to use old cases and teaching methods, resulting in a disconnection between teaching content and industrial demands. There are deviations in the education goals, with some teams prioritizing academic competitions and research projects as their core tasks, excessively pursuing visible results while neglecting the cultivation of students' comprehensive practical abilities and professional qualities. Moreover, the team has not established a hierarchical and classified education mechanism. Students with different backgrounds and directions receive the same teaching, which cannot meet the individualized development needs of students and significantly reduces the effectiveness of industry-academia integration education.

3.3. The loose operation management system and the insufficient guarantee mechanism for team collaboration

The loose operation management system is an important factor restricting the efficient operation of the design studio teaching team. Team collaboration lacks institutional guarantees. There is no clear division of responsibilities within the team. The division of work, such as teaching guidance, project management, competition organization, school-enterprise cooperation, and research promotion, is vague, and the boundaries of teachers' responsibilities are unclear, leading to issues such as work procrastination and resource waste. The cross-studio collaboration mechanism is missing, and teams from architecture, environmental design, and visual communication operate independently, lacking regular academic exchanges and project cooperation among different disciplines. Professional integration is difficult to advance. The team and school-enterprise cooperation units lack standardized cooperation charters, and most of the cooperation is in the form of short-term project-based cooperation. Long-term stable teacher sharing and project co-construction mechanisms have not yet been formed. At the same time, the studio lacks regular academic exchanges and teaching research systems. Internal teaching discussions and experience-sharing activities of the team are insufficient, making it difficult for teachers' teaching abilities and practical levels to be jointly improved, and the overall operational efficiency of the team is low.

3.4. Weakness in resource integration capability, and insufficient efficiency in converting collaborative resources between schools and enterprises

The teaching team of design studios in local universities has a weak ability to integrate resources, and the collaborative resources between schools and enterprises are difficult to be effectively transformed into educational resources. In terms of internal resources, the team failed to fully integrate elements such as teaching equipment, course resources, and research platforms. The sharing rate of practical equipment is low, and there is a disconnection between courses and studio projects, resulting in low resource utilization efficiency. In terms of external resources, the team did not fully explore resources from local design enterprises, industry associations, and community platforms. The school-enterprise cooperation merely remained at the superficial level of visits, short-term lectures, etc., and the core resources such as real enterprise projects, industry mentors, and practical bases were difficult to be regularly integrated into teaching^[3]. The resource conversion mechanism is lacking, and the team failed to convert school-enterprise cooperation projects, social service practices, and subject competition topics into standardized teaching cases and practical tasks. High-quality resources cannot be implemented in the talent cultivation process. In addition, the team lacks awareness of resource operation and maintenance, and the externally connected resources are difficult to sustain for a long time. The supply of resources is unstable, and it is unable to provide continuous support for the integration of industry and education for talent cultivation.

4. Practical paths for the construction of outstanding teaching teams in design studios under the background of industry-academia integration

4.1. Reconstruct the faculty team structure and strengthen the cultivation of dual-qualified teaching teams

To solve the problem of a single faculty structure, it is necessary to restructure the faculty team structure based on industry-academia integration and systematically cultivate dual-qualified teaching teams. Expand the channels for faculty recruitment, break the single standard of academic qualifications for recruitment, and focus on recruiting key designers with more than five years of enterprise design experience and complete industry qualifications. This will enrich the practical teaching strength of the team. Establish a long-term mechanism for faculty practice in cooperation with design enterprises, requiring team teachers to enter the cooperative design enterprises for on-the-job training regularly, participate in the design and operation management of actual projects, and systematically master industry practical skills and cutting-edge technologies. Standardize the management of enterprise mentors, sign long-term cooperation agreements with high-quality local design enterprises, and hire key enterprise designers as fixed part-time mentors, who will participate in the teaching, project guidance, and team building of the studio

throughout the process. Build a team structure of “senior teachers leading, young teachers as key figures, and supplementary enterprise mentors”, promoting cross-disciplinary faculty sharing, integrating the teaching strength of architecture, environmental design, and visual communication, and creating a well-structured, complementary in ability, and combination of full-time and part-time dual-qualified teaching teams.

4.2. Innovate the implementation model of education and training, and deepen the implementation of industry-academia integration teaching scenarios

To break the constraints of the traditional education model, it is necessary to innovate the education model based on the characteristics of the studio, and promote the deep implementation of industry-academia integration. Build a “teaching + practice + project + competition + service” five-in-one education model, integrate school-enterprise cooperation projects, social service tasks, and discipline competition topics into daily teaching, and achieve seamless connection between theoretical teaching and practical teaching ^[4]. Update the teaching content system, organize team teachers to conduct regular industry research, participate in the design of exhibitions and academic forums, and transform industry-leading technologies, market demands, and real cases into teaching content, maintaining the synchronization of teaching and industry. Optimize the stratified education mechanism, combine students’ grades and professional foundation, and carry out basic skills, professional ability, and comprehensive ability training in stages to meet students’ individualized development needs. Balance the orientation of education goals, abandon the one-sided concepts of only competitions and only research, and focus on the cultivation of students’ practical ability, professional quality, and innovative thinking, making the studio truly become the core scenario for industry-academia integration education.

4.3. Improve the operation management system, and build an efficient collaborative team operation mechanism

In response to the problem of loose team operation, it is necessary to improve the systematic operation management system to provide institutional guarantees for the efficient collaboration of the team. Establish a clear division of labor responsibility mechanism, based on the professional expertise and ability advantages of teachers, divide the job responsibilities of teaching guidance, project management, school-enterprise connection, competition organization, and research promotion, and clarify the work standards and assessment requirements. Build a cross-disciplinary collaboration platform, establish a weekly teaching research system and a biweekly cross-studio communication system, promote the joint conduct of teaching research and project design by different professional teams, and break the professional barriers. Improve the management charter for school-enterprise collaboration, clarify the rights and obligations of the university, enterprises, and the team, establish a regular project connection, teacher sharing, and a practical training mechanism, and maintain long-term stable cooperation. Improve the academic exchange and teaching system, regularly organize the team to conduct sharing activities of teaching insights, project experience, and competition skills, strengthen academic exchanges with sister universities and industry institutions, and continuously improve the overall teaching and practical level of the team.

4.4. Integrate internal and external high-quality resources to enhance the efficiency of resource transformation in school-enterprise collaboration

To improve the team’s ability to integrate resources, it is necessary to comprehensively integrate resources both within and outside the school, and promote the efficient conversion of high-quality resources into educational resources. At the internal resource level, integrate and coordinate teaching equipment, course resources, research platforms, and venue facilities, establish mechanisms for equipment sharing and course interconnection, and enable internal resources to serve the practical teaching of the studio. At the external resource level, deeply explore resources from local design enterprises, industry associations, community streets, etc., expand practice bases, project sources, and cooperation channels, and promote the regular input of real enterprise projects, industry mentors, and technical resources ^[5]. Establish a resource transformation mechanism, break down school-enterprise cooperation projects, social service practices, and subject competition topics into modular teaching tasks, compile standardized practical teaching cases, and directly implement

high-quality resources into the talent cultivation process. Establish a resource maintenance mechanism, assign dedicated personnel to be responsible for the connection and maintenance of school-enterprise resources, ensure the stable and continuous supply of resources, and provide sufficient resource support for the integration of education and industry. At the same time, leveraging the advantages of resource integration, break through the barriers between classroom theory and industry practical operation, enrich the forms of practical teaching based on diverse cooperation resources, keep up with industry development trends, promptly introduce cutting-edge design concepts and practical technologies, continuously optimize the resource utilization model, and effectively strengthen the effectiveness of school-enterprise collaborative education, helping students' comprehensive practical abilities to improve steadily.

5. Conclusion

In the context of industry-academia integration, the construction of an outstanding teaching team in design studios in universities is a crucial measure for improving the quality of design education and cultivating applied design talents. An outstanding teaching team can lay a solid foundation for the collaboration between the university and enterprises, activate the momentum of practical teaching, and promote the integration of disciplines. In response to the current obstacles in terms of teachers, model, management and resources, it is necessary to restructure the teaching staff team, innovate the educational model, improve the management system, and integrate high-quality resources to create a teaching team that meets the requirements of industry-academia integration. In the future, local universities should continue to focus on the construction of teaching teams in design studios, using team building to drive the improvement and upgrading of the studios, and make design studios truly become the core platform connecting university education and the design industry, providing more high-quality applied talents for the design industry.

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