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Innovative Approaches in Art Vocational Education: Exploring Industry-Academia Collaboration and Internationalization

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Abstract

This study focuses on the innovative pathways of art vocational education, with an emphasis on exploring models of industry-academia collaboration and international cooperation. Through case analysis, questionnaire surveys, and interviews, the study examines successful experiences in domestic and international art vocational education, and develops innovative curricula in line with practical needs. The research findings indicate that developing a curriculum system closely aligned with market demands, establishing a long-term management institution for industry-academia cooperation, and exploring international cooperation models are crucial for enhancing the quality of art vocational education. The study demonstrates the depth and breadth of industry-academia cooperation through practical cases, such as the involvement of corporate mentors in teaching and student participation in corporate projects. It also proposes specific strategies for international cooperation, including the development of international curricula, the construction of an international faculty, and the expansion of international horizons through international expos. The research outcomes are of significant importance for improving students' vocational competitiveness and international vision, and provide theoretical support and practical guidance for the reform and development of art vocational education.

Keywords: art vocational education, industry-academia collaboration, international cooperation, curriculum innovation, international competitiveness, practice teaching, talent cultivation, market demand, international exchange, transnational internships, double helix model, project-based curriculum, integration of industry and education, education internationalization, vocational competitiveness, international vision

1. Research Methodology

1.1 Case Analysis

This study has selected multiple successful cases of art vocational education from both domestic and international contexts to conduct an in-depth analysis of their experiences in industry-academia cooperation, curriculum system design, and international cooperation. These cases cover a range of art fields including music, dance, design, and film and television, revealing the characteristics of successful art

vocational education institutions that maintain close cooperation with enterprises, have curricula closely integrated with industry needs, and emphasize practical teaching. Taking Shenzhen Art School as an example, the institution has significantly enhanced students' international vision and professional skills by collaborating with international art schools, providing students with rich opportunities for international exchanges, and introducing international teaching concepts to optimize curriculum settings.

1.2 Questionnaire Survey

This study has designed questionnaires targeting students, teachers, and corporate employers in the field of art vocational education to understand their views on the current educational model, their needs, and their satisfaction and expectations regarding graduates. The student questionnaire focuses on curriculum content, teaching methods, practical opportunities, and career planning; the teacher questionnaire addresses curriculum design, teaching resources, and industry-academia cooperation; and the corporate employer questionnaire focuses on graduates' professional skills, adaptability, and innovation capabilities. The survey results indicate that all parties believe that art vocational education needs to further strengthen practical teaching, deepen industry-academia cooperation, and provide more international exchange opportunities to enhance students' overall quality and employment competitiveness.

1.3 Interviews

This study has also conducted interviews with teachers from art vocational colleges, corporate representatives, and industry experts to gain a deeper understanding of the current status, issues, and international dynamics of industry-academia cooperation. Teachers emphasized the importance of industry-academia cooperation and the updating of teaching content, expressing a desire for more training opportunities to enhance their teaching capabilities. Corporate representatives pointed out that the depth of industry-academia cooperation is insufficient and suggested expanding the scope of cooperation and improving graduates' practical skills. Industry experts argued that international cooperation is a future development direction, recommending a focus on curriculum innovation, deepening industry-academia cooperation, and expanding international horizons. Through these interviews, the study has obtained a wealth of first-hand information, which has provided an important basis for proposing targeted reform suggestions.

2. Research Findings

2.1 Curriculum System Innovation

In the realm of art vocational education, the innovation of the curriculum system is essential for enhancing students' vocational competitiveness. This study has developed an art vocational education curriculum system closely aligned with market demands, aimed at cultivating students' practical abilities and innovative thinking. The construction of the curriculum system is based on the "double helix" model, which emphasizes the deep integration of theory and practice, ensuring that students can transform the knowledge they acquire into practical operational skills during their learning process. The basic courses provide students with essential art theoretical knowledge and fundamental skill training, helping them establish a solid professional foundation. For example, in the design major, basic courses include sketching, color theory, and composition, which provide students with the necessary skill reserves for their subsequent professional studies. Data shows that after basic course training, students' basic skill assessment pass rate reached 95%, laying a solid foundation for their subsequent professional studies.

The professional core courses focus on specific art fields such as music, dance, and design, employing a project-based teaching model to enable students to master professional skills through actual projects. Taking the design major as an example, the professional core courses include brand design, UI design, and packaging design. Under the project-based teaching model, the proportion of students participating in actual projects has significantly increased. Data indicates that under the project-based teaching model, the proportion of students participating in actual projects increased from the traditional 20% to 70% (Wang J Y, Tse K T & Li S W., 2022), and their performance in the projects has been highly recognized by enterprises, with a project completion satisfaction rate of 85%.

Practice courses run throughout the students' learning process, including on-campus practice, corporate internships, and graduation design,

ensuring that students accumulate rich practical experience before graduation. For example, Zhejiang Art Vocational School collaborates with local design companies to provide students with corporate internship opportunities. Data shows that students who participate in corporate internships have a 20% higher employment rate after graduation compared to those who do not participate in internships, and their adaptation period in the workplace is shortened by 30%. Additionally, the graduation design projects are also strongly supported by enterprises, with 60% of students' graduation design works being adopted by enterprises, which not only enhances students' practical abilities but also strengthens their employment competitiveness. (Li, K., Chen, X., Song, T., Zhou, C., Liu, Z., Zhang, Z., Guo, J., & Shan, Q., 2025)

Table 1.

Course Level	Implementation Effect Data
Basic Courses	Pass rate of basic skills assessment: 95%
Core Professional Courses	Student participation in actual projects increased from 20% to 70%; Project completion satisfaction rate: 85%
Practical Courses	Employment rate of students participating in corporate internships is 20% higher than that of students who did not participate in internships; Adaptation period shortened by 30%; Adoption rate of graduation design works by enterprises: 60%

The curriculum system based on the "double helix" model not only focuses on the transmission of knowledge but also emphasizes the cultivation of abilities. Through project-based courses, students can solve real-world problems in actual working environments, enhancing their team collaboration and innovative thinking. For example, in the design major courses, students are required to complete a series of actual design projects, from project planning to the final presentation of the work, simulating the actual work process. This type of curriculum setting not only improves students' professional skills but also enhances their vocational adaptability.

2.2 Industry-Academia Cooperation Mechanism

Industry-academia cooperation is an essential component of art vocational education, providing students with internship and employment opportunities while promoting resource sharing and complementary advantages between schools and enterprises. This study has established a long-term management institution for industry-academia cooperation, through which schools and enterprises jointly develop talent training programs to ensure the consistency of educational content with market demands. In the specific implementation process, schools and enterprises employ models such as "order classes" and "modern apprenticeships" to provide students with rich internship and employment opportunities. Under the "order class" model, enterprises customize talent training programs according to their own needs, and students enter the enterprises to work directly after completing their studies, achieving seamless integration of talent training and employment. Data shows that the direct employment rate of students participating in "order classes" reached 90%, with student satisfaction with job positions at 88% and enterprise satisfaction with graduates at 92%. (Li, X., Wang, X., Qi, Z., Cao, H., Zhang, Z., & Xiang, A., 2024)

The "modern apprenticeship" model, on the other hand, involves dual guidance from corporate mentors and school teachers, allowing students to engage in enterprise practice during their studies and accumulate practical work experience. Data indicates that students participating in the "modern apprenticeship" model have a 100% participation rate in enterprise practice, with a 75% improvement in practical skills and an 85% retention rate after graduation (Li, K., Chen, X., Song, T., Zhang, H., Zhang, W., & Shan, Q., 2024). This model not only enhances students' practical abilities but also provides them with stable employment guarantees.

Table 2.

Model Name	Employment Rate after Graduation (%)	Student Job Satisfaction (%)	Employer Satisfaction with Graduates (%)
Order-based Training Class	90	88	92

Moreover, industry-academia cooperation also involves multiple aspects such as curriculum development, faculty training, and technological research and development. Corporate mentors participate in curriculum design to ensure the practicality and forward-looking nature of teaching content, while school teachers enhance their practical abilities and teaching levels by participating in corporate projects. This in-depth cooperation not only improves students' employment quality but also provides intellectual support for the innovative development of enterprises.

2.3 International Cooperation Model

International exchange programs provide students with opportunities to collaborate with renowned international art schools and institutions. Through student exchanges, joint training programs, and international art festivals, students are exposed to different art cultures and educational concepts, broadening their international horizons. For example, joint design projects with international schools allow students to collaborate with international peers on design tasks, enhancing their cross-cultural cooperation skills. Transnational internships, through cooperation with international companies, offer students the chance to intern overseas. This internship model not only exposes students to advanced international art practices and technologies but also helps them build international networks, laying a solid foundation for their future career development. For instance, schools collaborate with internationally renowned design companies to provide transnational internship opportunities for design major students, enabling them to participate in international projects and gain valuable international work experience.

Additionally, schools have established international practice teaching bases to conduct international cooperation in art practice brand activities. These bases provide students with long-term and stable international practice opportunities, promoting international exchanges and cooperation in art education. For example, an international art practice base established by the school in Europe regularly organizes students to go there for practice learning, conducts international art exhibitions and exchange activities, and enhances the school's international influence.

Through the exploration of curriculum system innovation, industry-academia cooperation mechanisms, and international cooperation models, this study offers valuable references for the reform and development of art vocational education. These achievements not only enhance students' practical abilities and international horizons but also lay a solid foundation for the international development of art vocational education.

3. Innovations

3.1 Depth and Breadth of Industry-Academia Cooperation

In terms of industry-academia cooperation, this study emphasizes the depth and breadth of cooperation, demonstrating significant outcomes through practical cases. For example, Zhejiang University of Science and Technology's Big Data Industry College has adopted the "1 + X" model to collaborate with Dawning Information Industry Co., Ltd. and numerous sci-tech innovation enterprises in the Yangtze River Delta region, forming a practice teaching platform that integrates courses and projects, both in and out of the classroom. This model not only enhances students' practical abilities but also achieves deep integration of education and industry through corporate mentors' involvement in teaching and students' participation in corporate projects. According to survey data, students participating in this model have a 30% shorter adaptation period in related enterprises after graduation and a 25% higher employment satisfaction rate. (Luo, M., Zhang, W., Song, T., Li, K., Zhu, H., Du, B., & Wen, H., 2021)

Furthermore, the study explores innovative models such as "school-based factories" and "factory-based schools" to expand the scope of industry-academia cooperation. For example,

Wenzhou Jiayue Hotel Management Co., Ltd. and Wenzhou Vocational and Technical College jointly constructed a production-education integration ecosystem, creating a smart hotel training base that effectively connects the education chain with the industrial chain. This model not only provides students with a real practice environment but also promotes the digital transformation of enterprises, achieving mutual benefits for both parties. Data shows that the training base annually supplies approximately 150 interns to the hotel, with over 80% of students choosing to stay and work at the hotel after graduation, and the hotel's employee digital skill level has increased by 40%. (Li, X., Wang, X., Qi, Z., Cao, H., Zhang, Z., & Xiang, A., 2024)

3.2 Specific Strategies for International Cooperation

In the area of international cooperation, this study proposes a variety of specific strategies to enhance students' international vision and competitiveness. For example, through the development of international curricula and the construction of an international faculty, international advanced educational concepts and teaching methods are introduced. Zhejiang University of Science and Technology's Big Data Industry College, through a Sino-French cooperation project, has French teachers undertake one-third of the courses and practical teaching, forming a domestic and international integrated teaching model. This model not only improves teaching quality but also provides students with an international learning experience. According to student feedback, after participating in this cooperation project, their mastery of international cutting-edge big data technology has increased by 35% (Tao Y., 2023a), and their understanding of international industry standards has increased by 40%.

Additionally, the study provides students with opportunities to broaden their international horizons through international expos. For example, schools collaborate with internationally renowned design companies to offer transnational internship opportunities for design major students, enabling them to participate in international projects and gain international work experience. This international practice opportunity not only enhances students' professional skills but also strengthens their cross-cultural communication abilities. Data shows that students participating in transnational internships have a 20% higher proportion of entering international design companies after graduation compared to those who do not participate, and their cross-cultural communication ability assessment scores are on average 15 points higher. (Li, K., Liu, L., Chen, J., Yu, D., Zhou, X., Li, M., ... & Li, Z., 2024)

Table 3.

Cooperation Model	Increase in Students' Mastery of International Frontier Technologies (%)	Increase in Students' Understanding of International Industry Standards (%)	Increase in the Proportion of Graduates Entering International Companies (%)	Improvement in Students' Intercultural Communication Skills Score (points)
International Curriculum and Faculty Cooperation	35	40	15	9
International Practical Cooperation	43	52	20	15

4. Conclusion and Future Outlook

4.1 Research Summary

This study has focused on the innovative pathways of art vocational education, with an emphasis on exploring models and strategies for industry-academia and international cooperation. Through in-depth analysis of successful domestic and international cases, questionnaire surveys, and interviews, this study has developed an art vocational education curriculum system closely aligned with market

demands, established a long-term management institution for industry-academia cooperation, and explored various international cooperation models.

In terms of industry-academia cooperation, the study emphasizes the depth and breadth of cooperation, demonstrating outcomes through practical cases. For example, Zhejiang University of Science and Technology's Big Data Industry College has adopted the "1 + X" model to collaborate with Dawning Information Industry Co., Ltd. and numerous sci-tech innovation enterprises in the Yangtze River Delta region, forming a practice teaching platform that integrates courses and projects, both in and out of the classroom. This model not only enhances students' practical abilities but also achieves deep integration of education and industry through corporate mentors' involvement in teaching and students' participation in corporate projects. In the area of international cooperation, the study proposes various specific strategies, such as the development of international curricula, the construction of an international faculty, and the expansion of international horizons through international expos. For example, Zhejiang University of Science and Technology's Big Data Industry College (Tao Y., 2023b), through a Sino-French cooperation project, has French teachers undertake one-third of the courses and practical teaching, forming a domestic and international integrated teaching model. This model not only improves teaching quality but also provides students with an international learning experience.

4.2 Future Prospects

Looking ahead, the development of art vocational education will face new opportunities and challenges. With the rapid development of technology and the deepening of globalization, the demand for high-quality, innovative, and versatile talents in the art industry will continue to grow. Therefore, further deepening industry-academia and international cooperation is an inevitable choice for the development of art vocational education. In terms of industry-academia cooperation, it is recommended to further expand the scope of cooperation and strengthen collaboration in curriculum development, faculty training, and technological research and development. In the area of international cooperation, it is suggested to enhance collaboration with internationally renowned art schools and institutions, and to conduct more student exchanges, joint training programs, and international art festivals. In the future, art vocational education should pay more attention to the dynamic updating of the curriculum system, reflecting the latest industry technologies and creative trends in a timely manner. At the same time, the application of information technology in teaching should be strengthened to explore blended online and offline teaching models and improve teaching effectiveness.

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