

Research on the Innovative Model and Guarantee Mechanism of Industry-Education Integration Based on Big Data: A Case Study of Wuhan Technical College of Communication

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Abstract:

With the rapid development of China's socioeconomic landscape and tourism market from 2010 to 2019, the hotel industry entered a fast track of transformation characterized by groupization, scale expansion, digitalization, and intelligence, leading to a surge in demand for highly qualified talents in digital operations and service management. With industrial upgrading and economic structural adjustments, the deep integration of vocational education and industrial development has become a key factor in enhancing national competitiveness. As an important bridge connecting education and industry, research on the innovation and guarantee mechanisms of industry-education integration models holds significant theoretical and practical value. Using the "Qingmiao" Reserve Store Manager Order-Based Class at Wuhan Technical College of Communication in collaboration with Dossen Hotel Group as a starting point, this paper aims to explore innovative paths and guarantee mechanisms for industry-education integration models based on big data, providing practical references for cultivating high-quality, market-oriented skilled talents.

Keywords: industry-education integration; model innovation; Wuhan Technical College of Communication

INTRODUCTION

The introduction of the new Vocational Education Law in 2022 further emphasized the importance of industry-education integration and school-enterprise cooperation, pointing the way for vocational education reform [1].

Moreover, Employment as a key livelihood issue, stressing the construction of a high-quality employment system. Against this backdrop, Wuhan Technical College of Communication actively responded to national policies by collaborating with Guangxi Dossen Hotel Group Co., Ltd. to launch the "Qingmiao" Reserve Store Manager Order-Based Class project. This project aims to deepen industry-education integration and innovate school-enterprise collaborative talent cultivation mechanisms to train high-quality skilled talents with both theoretical knowledge and practical expertise, addressing the challenges of the hotel industry's digital transformation, promoting high-quality graduate employment, and contributing to China's socioeconomic development.

INNOVATION IN INDUSTRY-EDUCATION INTEGRATION MODELS

Innovation in Talent Cultivation Models

To meet the urgent demand for highly qualified, multidisciplinary management talents in the industry, Wuhan Technical College of Communication partnered with Dossen Group to introduce the "Qingmiao Reserve Store Manager" Order-Based Class project. This project aims to seamlessly align talent cultivation with enterprise needs, ensuring that graduates can directly meet industry requirements and rapidly develop into versatile talents with multidimensional capabilities. The two parties collaborated closely to create two distinctive educational models: the "Dossen Reserve Store Manager Order-Based Class" and the "Qingmiao Modern Apprenticeship Class." During the recruitment phase, the school and enterprise jointly conduct precise selection, enrolling approximately 30 outstanding students annually from the Hotel Management and Digital Operations majors to form the custom "Qingmiao Students" class. A tripartite agreement is signed to define the rights and responsibilities of apprentices, the school, and the enterprise. In developing the talent cultivation plan, both parties participate to ensure that the curriculum aligns closely with industry standards and enterprise needs. The tailored curriculum for "Qingmiao Students" comprehensively covers key areas such as theoretical knowledge, practical skills, and professional ethics, aiming for their holistic development. Additionally, the partners plan to co-develop 1-2 courses or

textbooks with distinct school-enterprise cooperation characteristics to enrich teaching resources and improve teaching quality.

Innovation in Teaching Organization Models

Wuhan Technical College of Communication and Dossen Group innovated in teaching organization by jointly forming a “dual-mentor” teaching team, composed of experienced school teachers and enterprise experts. This model breaks the barriers of traditional teaching by integrating theoretical knowledge dissemination with practical skill guidance [2]. Dual mentors are responsible for imparting core knowledge in hotel management and digital operations while aligning closely with enterprise needs, guiding students to participate in real projects, and cultivating their problem-solving abilities.

To effectively promote industry-education integration, the project adopts a multi-term segmented work-study alternation teaching model. Students are arranged to engage in enterprise internships at different stages based on corporate peak seasons and their academic schedules, ensuring sufficient practical experience during their studies.

Moreover, Wuhan Technical College of Communication actively builds school-enterprise exchange platforms by inviting Dossen Group’s enterprise experts to the campus regularly to host corporate culture lectures and professional skills training. Through vivid presentations and hands-on demonstrations by these experts, students gain a deeper understanding of corporate culture, grasp industry trends and skills, and enhance their career awareness and preparation.

Innovation in Faculty Development

Wuhan Technical College of Communication and Dossen Group jointly established the “Teacher Enterprise Practice Station” and the “Enterprise Craftsman Visiting Station,” achieving deep exchange and cooperation between school and enterprise personnel. The practice station provides school teachers with a platform to engage directly in enterprise frontline operations, enabling them to experience corporate operations, understand industry trends, and translate these insights into enriched teaching cases and practical knowledge for classroom instruction. This “going-out” approach not only enhances teachers’ practical teaching abilities but also deepens their understanding and alignment with corporate culture, helping to cultivate talents that better meet enterprise needs. The “Enterprise Craftsman Visiting Station” invites skilled industry professionals with rich practical experience and expertise to participate in frontline teaching and discussion activities on campus. They not only impart valuable vocational skills and craftsmanship to students but also offer valuable advice and guidance for the professional development of school faculty through their interactions. This “bringing-in” approach not only enriches the school’s teaching resources but also fosters in-depth collaboration between schools and enterprises in talent cultivation, technology development, and other areas.

Innovation in Innovation and Entrepreneurship Education

To meet the demand for innovative and entrepreneurial talents in the new era, Wuhan Technical College of Communication and Dossen Group jointly developed a “full-chain” innovation and entrepreneurship education system centered on cultivating innovation awareness, fostering entrepreneurial spirit, and enhancing entrepreneurial skills. Under this system, the two parties co-established a comprehensive “Innovation and Entrepreneurship Base,” integrating functions such as industry-education integration, school-enterprise cooperation, innovation and entrepreneurship education and practice, internship and training expansion, career guidance, competition organization and development, and educational training. This base provides students with a comprehensive and multi-level innovation and entrepreneurship platform. While systematically receiving innovation and entrepreneurship education, students also engage in real-world projects and simulated entrepreneurial competitions, deeply integrating theory and practice to significantly improve their entrepreneurial skills [3]. The base actively expands internship opportunities, partnering with leading industry enterprises to build diverse practical platforms that align with market demands. It also emphasizes the development of teamwork and project management skills through organizing various innovation and entrepreneurship competitions, inspiring students to learn through challenges and grow through participation. Additionally, the base offers personalized career planning and employment guidance services to help students clarify their career paths and enhance their competitiveness in the job market [4-6].

GUARANTEES FOR INDUSTRY-EDUCATION INTEGRATION MODELS

Institutional Foundation and Platform Support

As a public higher education institution under the direct administration of the Hubei Provincial Department of Education, Wuhan Technical College of Communication has adhered to its educational mission since its establishment in 1953, accumulating extensive resources and experience. Its School of Transportation Services and Management, renowned for its excellence in hotel management and digital operations, serves as a solid foundation for industry-education integration models [7]. The school has built a robust curriculum and teaching resources to ensure students acquire a strong theoretical foundation, supported by a team of highly qualified faculty delivering high-quality teaching services. Crucially, the school actively expands school-enterprise collaboration channels, establishing long-term strategic partnerships with global and leading Chinese companies such as Marriott International, Hilton Hotels, and Dossen Hotel Group. These collaborations not only provide extensive external internship and employment opportunities for students but also contribute to the joint construction of several industry-education integration training bases, effectively connecting the education, talent, industry, and innovation chains [8]. Through these platforms, students gain practical skills in real professional environments while experiencing corporate culture. Enterprises, in turn, can identify and recruit exceptional talents, achieving a win-win outcome. This resource-sharing and complementary strengths model lays a solid foundation for the further development of industry-education integration models [9,10].

Faculty Development and Teaching Resources

Wuhan Technical College of Communication emphasizes faculty development and optimized teaching resources in advancing its industry-education integration model. The institution boasts a high-caliber faculty team of full-time and part-time instructors, with “dual-qualified” teachers accounting for 90%. These instructors possess not only profound theoretical knowledge but also extensive industry experience, enabling them to tightly integrate theory with practice and impart the most practical and cutting-edge knowledge and skills to students. The school also actively recruits industry experts and skilled craftsmen as part-time instructors, injecting fresh expertise into the teaching environment and enhancing its professionalism and practicality. Efforts are made to integrate and innovate teaching resources, including constructing advanced and fully functional on-campus training facilities and expanding off-campus internship bases through deep collaboration with reputable enterprises. These initiatives provide students with abundant practical opportunities and authentic professional experiences. Additionally, the school participates in various skills competitions, fostering a “learn by competition, improve through competition” approach to stimulate students’ enthusiasm for learning and enhance their professional skills and career qualities. This investment and utilization of teaching resources provide robust support for the in-depth implementation of industry-education integration models.

Collaborative Talent Cultivation Mechanism and Management System

Wuhan Technical College of Communication has established a comprehensive school-enterprise collaborative talent cultivation mechanism to ensure the depth and breadth of its partnerships. The institution and its enterprise partners regularly convene collaborative exchange meetings to discuss critical aspects such as talent cultivation, curriculum design, and practical teaching, jointly formulating talent development plans aligned with market demands [11]. Through joint teaching and research activities, the school and enterprises achieve resource sharing and complementary advantages, driving continuous improvement in teaching quality. During the talent cultivation process, the school emphasizes the all-round development of students’ professional awareness, skills, and qualities [12-14]. Students gain hands-on experience through on-campus production training that simulates real work environments and real-world positions during off-campus internships, improving their comprehensive abilities and employability. The school closely monitors industry trends, adjusting and optimizing its program offerings and curricula to align with market demands and industry advancements. Additionally, it collaborates with enterprises to explore innovative talent cultivation models, such as implementing modern apprenticeship programs where students, guided by mentors, immerse themselves in enterprise environments, achieving “recruitment upon admission, employment upon enrollment.” Through collaborative innovation, the school and enterprises jointly solve industry challenges, driving technological innovation and industrial upgrades, and achieving deep cooperation and mutual development [15].

CONCLUSION

Through innovations in talent cultivation models, adjustments to teaching organization models, faculty development, and the deepening of innovation and entrepreneurship education, the “Qingmiao” Reserve Store Manager Order-Based Class at Wuhan Technical College of Communication in collaboration with Dossen Group has significantly enhanced students’ professional skills and career qualities, laying a solid foundation for their future career development. Additionally, the institution’s guarantees in areas such as institutional foundations, teaching resources, and collaborative talent cultivation mechanisms have provided robust support for the successful implementation of the industry-education integration model.

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