

Research on the Mechanism of Industry-Education Integration Community in the Tourism and Hotel Industry under the Background of Digital Intelligence

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Abstract: With the digital intelligence wave sweeping the tourism and hotel industry, the construction of an industry-education integration community has become a key path to drive industrial development and talent cultivation. This paper deeply analyzes the problems faced in the process of industry-education integration and school-enterprise cooperation in the current tourism and hotel industry, and innovatively proposes a “three-level, two-main-body, four-management” internal governance structure of the community based on the concept of market-oriented operation, as well as an operation mechanism of “dual platforms, four integrations, five connections”, and explores a new “digital +” school-enterprise cooperation operation mode. The purpose is to solve the problems of low willingness to cooperate, insignificant cooperation efficiency and insufficient service functions among members of the industry-education integration community, so as to realize the optimization of the interests of multiple subjects, promote the in-depth integration and coordinated development of the tourism and hotel industry and the education field, and facilitate the sound operation of the community.

Keywords: Digital intelligence; Tourism and hotel industry; Industry-education integration community; Governance structure; Operation mechanism

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1. Research background

With the wide application of digital intelligence technologies such as big data, artificial intelligence and the Internet of Things in the tourism and hotel industry, profound changes have taken place in the industry’s operation mode, service content, and management methods^[1,2]. Such changes put forward higher requirements for the cultivation of talents majoring in tourism and hotel-related fields, who are required to have solid professional knowledge, master digital intelligence skills and innovative abilities, and become high-quality technical and skilled talents. Against this background, the industry-education integration community, as an effective carrier for integrating educational and industrial resources, has become an important way to cultivate

tourism and hotel-related professionals in the digital intelligence era^[3]. However, through practical exploration and analysis, the construction of the industry-education integration community in the current tourism and hotel industry still faces challenges such as weak willingness of members to cooperate, low cooperation efficiency, and insufficient service functions, and it is urgent to solve the above problems through model and mechanism innovation^[4]. Based on the development trend of digital intelligence, this paper focuses on the core issues of community governance and operation, puts forward a systematic solution, and provides theoretical and practical support for the coordinated development of the industry and education.

2. Construction of the “Three-level, Two-main-body, Four-management” internal governance structure of the community

To systematically solve the problems of “in-depth integration in form only and loose interest linkage between schools and enterprises” in industry-education integration, based on the needs of regional industrial upgrading, we innovatively build an institutionalized three-level governance structure and a four-step management and control mechanism, so as to realize a fundamental transformation from “loose cooperation” to “entity-based symbiosis”.

2.1. The “Three-level” structure: Clarifying the levels and responsibilities of the community

The government, industry associations, colleges and universities, enterprises and research institutions interact in a five-party linkage, and promote the construction of the community through the decision-making level, management level and execution level. A council is set up as the decision-making level, responsible for strategic planning and handling major issues; the secretariat and 8 professional committees including the “Vocational Education Teaching Guidance Committee” and “Innovation and Cooperation Working Committee” serve as the management level, responsible for professional guidance in scientific research, education, industry and other fields as well as the coordinated promotion of industry-education matching; physical carriers such as industrial research institutes and technology innovation centers act as the execution level to ensure the implementation of the community’s work. The group-based organizational model of “five parties, three levels, one council and eight committees” ensures the orderly and efficient operation of the community from decision-making and management to execution.

2.2. The “Two-main-body” orientation: Strengthening the leading position of schools and enterprises

Colleges and universities and enterprises are the core subjects of the industry-education integration community, which shall sign cooperation agreements to clarify their respective responsibilities and rights. Guided by market demand, colleges and universities cultivate high-quality technical and skilled talents by optimizing professional settings and curriculum systems, strengthening the construction of teaching staff, and improving the quality of talent cultivation. As cooperation partners, enterprises should actively participate in the talent cultivation process, jointly build high-quality practical training bases for industry-education integration, provide practical teaching resources and employment positions, and carry out scientific and technological research and development in school-enterprise cooperation, making use of the scientific research strength of colleges and universities to solve the technical problems of enterprises. By clarifying the “two-main-body” orientation, the in-depth integration and

coordinated development of colleges and universities and enterprises are realized.

2.3. The “Four-management” mechanism: Improving the community management system

2.3.1. Industry-education integration driving mechanism

Based on the hierarchical structure, an industry-education mutual driving mechanism with “demand perception - standard construction” as the core is established. Relying on industrial alliances, technology stations and enterprise workstations, a five-step standard development method of “demand collection - technical deconstruction - education adaptation - resource development - enterprise verification” is formed to promote the transformation of post standards into teaching resources^[5]. On this basis, a “four-field shared resource pool” and physical platforms such as industrial colleges are built, and a “five-integration coordinated” operation mechanism is implemented. Three demand lists for talents, technology and training are released regularly to form a sustainable development ecosystem with efficient resource allocation and co-creation and sharing of values.

2.3.2. Construction of entity operation mechanism

Enterprise members of the community set up special responsible departments to study and implement the relevant tasks of industry-education integration; member colleges and universities of the community establish management institutions such as school-enterprise cooperation centers, which are mainly responsible for docking with member units, as well as the development of school-enterprise cooperation and the implementation of projects. At the same time, an information resource sharing platform of the community is established to integrate, co-construct and share school-enterprise resources, thus promoting communication and interaction^[6].

2.3.3. Construction of management system

A charter for the industry-education integration community in the tourism and hotel industry is formulated to clarify the cooperation objectives, contents, methods, division of labor, responsibilities and rights and interests of members. Meanwhile, under the guidance of the charter and driven by “entity-based + substantive” operation, a “dual-drive, four-wing” management system supported by various systems such as “deliberation and decision-making”, “project management”, “fund management” and “assessment and incentive” is established to ensure the governance efficiency of the community.

2.3.4. Construction of collaborative education mechanism

Members of the community cooperate closely; colleges and universities and enterprises should jointly carry out the reform of talent training modes such as modern apprenticeship and order-based training; resources are co-constructed and shared among members, and enterprises are deeply involved in the “five-gold construction” and the development of colleges and universities; member colleges and universities deeply dock with enterprise needs, carry out technical research and development and cooperation, and help enterprises transform and upgrade.

3. Innovation of the “Dual Platforms, Four Integrations, Five Connections” operation mechanism of the industry-education integration community

3.1. Construction of “Dual Platforms” to promote resource sharing and collaboration

First, set up “technology stations” and “enterprise workstations”, build a three-level research system of “college-

school-major”, transform post standards into professional teaching standards, curriculum systems and practical training projects, thus forming a “radar station” for the dynamic development of industrial technology. Second, build a “resource sharing” platform, jointly construct a “four-field shared resource pool” including “intelligent teaching field - special practical training field - enterprise practice field - technical service field”, and realize intelligent matching and recycling of resources relying on the built industry-education integration cloud platform.

3.2. The “Four Integrations” measures to promote in-depth coordination

3.2.1. Carry out diversified talent cultivation to build top-tier majors

Colleges and universities and backbone enterprises in the community, deepen industry-university cooperation through co-construction, construct “vocational maps” and “knowledge maps” under the guidance of the industry-education pedigree of professional groups, innovate curriculum systems, give play to the supporting role of enterprises, and cultivate several high-quality technical and skilled talents in tourism and hotel management^[7]. Jointly carry out entrusted training, order-based training, early employment class projects and Chinese characteristic modern apprenticeship training projects to cultivate specific talents for industry types such as catering, housekeeping and front desk; jointly set up an elite tutor team of “college teachers + enterprise mentors + technical experts”, and solidly implement the special training plan for field engineers to cultivate several high-level skilled talents with craftsman spirit for the tourism and hotel industry. Support secondary vocational schools in the community to expand the scale of through-train cultivation in conjunction with higher vocational colleges and undergraduate universities.

3.2.2. Build provincial and above-level industry-education integration practical training bases

Colleges and universities in the community will work with leading enterprises to build several high-level industry-education integration practical training bases by field, and focus on building provincial and above-level industry-education integration practical training bases on the basis of industry-education integration platforms and practical training venues for hotel service and wine service competitions. The bases will cover comprehensive practical training functions such as restaurant service, Chinese and Western food service, and housekeeping service, and carefully build a model of industry-education integration practical training bases related to tourism and hotel management, such as front desk, housekeeping and catering, providing a high-quality practical platform for talent cultivation.

3.2.3. Establish a training system connected with academic continuing education

Vigorously carry out a variety of training programs such as hotel industry post-training, skill training, pre-examination training for industry qualification examinations, and re-employment training for the unemployed, build vocational skill level certificate appraisal and examination stations for tourism and hotel management, e-commerce engineers and other majors, and steadily carry out vocational skill appraisal work related to hotel majors.

3.2.4. Build a high-quality supply platform for employment and internship positions

The government, industry associations and colleges and universities jointly build a “provincial e-commerce demonstration base + provincial science and technology correspondent studio + AI technology application research institute”, and carry out intelligent logistics technology research and development, standard formulation and achievement transformation for leading enterprises. Enterprises in the community should provide high-

quality practical training and internship venues and suitable internship positions for students at home and abroad, promoting the in-depth integration of curriculum teaching, practical training projects, practice and internship with enterprise operation^[8]. Support teachers from undergraduate universities, higher vocational colleges and secondary vocational schools to take up practical positions in the tourism and hotel industry, carry out enterprise practice for teachers, organize teacher exchange and discussion activities, and hold various graduate recruitment activities, building a broad development platform for students and teachers and promoting the efficient docking of talents and enterprises.

3.3. The “Five Connections” path to achieve effective docking

3.3.1. Connection between education and majors

Jointly build a “co-constructed, shared and content-rich” teaching resource database. The “digital teaching resource database for hotel majors” is led by vocational colleges, with rich resources, advanced technical support, sustainable update and intelligent sharing, including several professional courses, such as vocational qualification certificate courses, basic ability training courses and core skill training courses based on vocational education, enterprise training and social services. Among them, the key is to jointly build characteristic industry-education integration teaching resources based on the practical application problems of enterprises, introduce and transform real resources based on enterprise innovation projects, and develop “vocational education going global” resources for international users. Access the national vocational education smart platform to analyze and evaluate the quality of curriculum construction, form a closed-loop system of resource construction, and continuously iterate and optimize the construction of the curriculum resource database.

3.3.2. Connection between talents and posts

Jointly build “customized and professionally improved” training resources. Vigorously build various levels and types of professional training resources to serve technical and skill training^[9]. Training resources include learning materials such as training standards, project design, learning textbooks, teaching courseware, teaching videos, demonstration animations, typical cases and assessment and evaluation, meeting the continuing education service needs such as skill improvement for on-the-job practitioners in the tourism and hotel management field, education and training for re-employed workers, and personalized learning for students in school.

3.3.3. Connection between courses and vocational standards

Jointly build top-tier courses that “dock with posts and integrate digital intelligence”^[10]. Accurately dock with the technical requirements, process flows and typical professional abilities of tourism and hotel service links, and deeply explore and draw the competency map of talents related to tourism and hotel; member colleges and universities develop modular courses related to tourism and hotel management according to the types of enterprise needs, upgrade and transform traditional courses, transform enterprise post training courses, and develop and update curriculum standards. In addition, deeply integrate digital intelligence technologies to create digital virtual courses and integrate artificial intelligence technologies into curriculum construction.

3.3.4. Connection between teaching process and production process

Jointly build practical projects that “dock with the industry and are practically implemented”^[11]. Relying on the advantages of colleges and universities in majors, teaching staff, scientific research and platforms, in conjunction with enterprise and university members of the community, construct internship and employment scenarios related

to the tourism and hotel industry, develop digital intelligence practical projects related to tourism and hotel, build a “school-enterprise integrated, industry-university-research integrated” practical training platform for tourism and hotel, and build a high-end training and further education base for hotel enterprise employees, a high-end training and research base for teachers and students, and a research travel practice base for primary and secondary school students.

3.3.5. Connection between scientific research achievements and industrial needs

Jointly build physical operation institutions with “distinct characteristics and actual operation” such as industrial research institutes, industry-education integration innovation and development research centers, and technology innovation centers. Transform R&D achievements into actual products or services that meet market demand, thus promoting industrial development and upgrading. Carry out cross-field and cross-professional collaborative research on basic, urgent and cutting-edge technical problems in the tourism and hotel industry, and spawn several influential innovative achievements.

4. Exploration of the new “Digital +” school-enterprise cooperation mode

First, construct a “digital +” talent cultivation mechanism^[12-14]. Colleges and universities and enterprises jointly formulate training objectives, focus on cultivating students’ digital intelligence thinking, introduce digital teaching resources and methods such as online courses and virtual simulation, and strengthen enterprise internship and project practice links to cultivate digital intelligence talents. Second, innovate the curriculum system construction mechanism. Build a characteristic curriculum system of “digital + tourism and hotel”, introduce advanced technologies and resources, jointly build professional courses and digital intelligence technology courses with enterprises, and integrate the latest industry cases and technologies. Third, establish a “digital + double-qualified” teaching staff construction mechanism. Strengthen the digital intelligence training of teachers, select teachers to participate in enterprise practice and resource development, introduce enterprise technical backbones as part-time teachers, and improve the overall level of the teaching staff^[15].

5. Conclusion

Guided by construction guidelines and charters, the industry-education integration community coordinates the collaborative innovation of vocational education, higher education, and continuing education, and is committed to building a demonstration industry-education integration platform. Based on the “three-level, two-main-body, four-management” organizational structure, cooperation is carried out through the overall planning of the decision-making level, the coordinated promotion of the management level, and the implementation of the execution level. Relying on the coordination of the two main subjects of education and industry, the four-dimensional linkage of management, teaching, scientific research and service is realized, and talent training plans are formulated accurately; at the same time, the “dual platforms, four integrations, five connections” mode is introduced to build an online and offline integrated teaching practice platform, promote the in-depth integration of curriculum, teaching staff, resources and culture, realize the accurate multi-dimensional connection between professional settings and market demand, and improve the market competitiveness of graduates; the “digital +” school-enterprise cooperation mode is conducive to cultivating high-quality digital intelligence talents and enhancing service functions. These innovative measures can promote the in-depth integration of the industry and

vocational education, and boost the high-quality development of the tourism and hotel industry.

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References

- [1] Huang DR, 2021, Industry-Education Integration: The Core Proposition of Vocational Education. Higher Education Press, 78–85.
- [2] Wu Y, 2024, New Forms and Paths of Industry-Education Integration in Vocational Education in the Digital Intelligence Era. *China Higher Education*, (10): 18–22.
- [3] Ministry of Education, 2024, Guidelines for the Construction of Industry-Education Integration Community in Vocational Education (Trial), March 15, 2024.
- [4] Li JQ, 2023, Governance Logic and Practical Path of Industry-Education Integration Community. *Research in Educational Development*, 43(12): 65–72.
- [5] Zhou JS, 2022, Mechanism Innovation and Practical Exploration of School-Enterprise Dual-Subject Collaborative Education. *Chinese Vocational and Technical Education*, 2022, (24): 29–34.
- [6] Wang YN, 2023, Construction and Improvement of Demand-Oriented Industry-Education Integration Driving Mechanism. *Vocational and Technical Education*, 44(18): 5–10.
- [7] Zhang ZM, 2023, Dilemmas and Breakthroughs in the Entity Operation of Industry-Education Integration Community. *Research in Higher Education of Engineering*, (04): 156–161.
- [8] Liu CS, 2022, Research on the Construction of the Management System of Industry-Education Integration Community in Vocational Education. *Chinese Vocational and Technical Education*, (18): 45–50.
- [9] Jiang DY, 2021, Collaborative Education: The Essential Requirement of Talent Cultivation in Vocational Education. *Chinese Vocational and Technical Education*, (30): 12–17.
- [10] Chen L, 2024, Construction and Application of Industry-Education Integration Platform under the Background of Digital Intelligence. *Research in Educational Technology*, (02): 89–95.
- [11] Zhao ZQ, 2022, Integration and Innovation of Modern Apprenticeship and Order-Based Training. *Vocational and Technical Education*, 43(06): 36–41.
- [12] Dong G, 2023, Standards and Paths for the Construction of Industry-Education Integration Practical Training Bases. *China Higher Education*, (08): 46–49.
- [13] Lin HQ, 2023, Construction of Vocational Education and Training System from the Perspective of Lifelong Learning. *Educational Research*, 44(05): 98–105.
- [14] Ma SC, 2022, Mechanism Innovation of the Connection between Vocational Education Talent Cultivation and Employment. *Research in Educational Development*, 42(08): 78–84.

- [15] Sha RY, Du YJ, 2025, Digital and Intelligent Translation of Cultural Memes: A Study on the Innovative Path of Wushu Intangible Cultural Heritage in Forging a Strong Sense of Community for the Chinese Nation. *Collection of Ethnological Studies*, (3): 31–37.

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