

Research on the Operation Mechanism of Industry-Education Integration in Tourism Vocational Education

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Abstract: Driven by the in-depth integration of culture and tourism, rapid iteration of digital cultural tourism, and successive policy requirements for high-quality development of vocational education, industry-education integration in tourism vocational education has become a hub linking the education chain, talent chain, industrial chain and innovation chain. It is an indispensable approach to resolve the mismatch between the supply and demand of tourism talents, improve the quality of vocational talent cultivation, and fuel the transformation and upgrading of cultural tourism industries. Nevertheless, the current practices of industry-education integration in China's tourism vocational education are plagued by prominent problems including inadequate collaborative governance, disjointed talent cultivation mechanisms and incomplete support systems. Most cooperation remains at a superficial school-enterprise interaction level, without forming a normalized, institutionalized and long-term operation system. On the basis of systematically sorting out the actual status and deep-seated dilemmas of industry-education integration in tourism vocational education, this paper constructs a four-dimensional operation mechanism covering governance, talent cultivation, support and evaluation, and puts forward targeted improvement suggestions. It is expected to provide theoretical references and practical enlightenment for the high-quality development of tourism vocational education and the construction of talent teams for cultural tourism industries in the new era.

Keywords: Tourism vocational education; Industry-education integration; Operation mechanism; Talent cultivation

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1. Introduction

The transformation and upgrading of China's cultural tourism industry keep advancing, and the integration of digital technologies and tourism formats accelerates. Emerging forms such as smart tourism, immersive cultural tourism, rural tourism and wellness tourism have emerged one after another, driving the industry's growing demand for high-quality interdisciplinary, skilled and innovative talents. The revised Vocational

Education Law of the People's Republic of China (2022) clearly stipulates that industry-education integration and school-enterprise cooperation shall be deepened to realize the synchronized development of vocational education and industries. The 14th Five-Year Plan formulated by the Ministry of Culture and Tourism also highlights the need to perfect the tourism vocational education system and strengthen the capacity to support industrial talent supply ^[1]. As the main platform for cultivating cultural tourism talents, tourism vocational education features professionalism, practicality and industrial adaptability, and industry-education integration serves as the core tool to realize this school-running orientation.

The core characteristics of industry-education integration consist of school-enterprise joint operation, joint talent cultivation, shared responsibilities and shared achievements ^[2]. Against this backdrop, in-depth research on the operation mechanism of industry-education integration in tourism vocational education, clarification of the power, responsibility and collaborative logic of multiple stakeholders including governments, vocational colleges, enterprises and industry associations, construction of a scientific, sound and efficiently implementable operation system, and resolution of bottlenecks and difficulties in industry-education integration practice bear great theoretical value and practical significance for elevating the talent cultivation quality of tourism vocational education, optimizing the supply structure of cultural tourism talents, and advancing the high-quality development of cultural tourism industries.

2. Current operation status and dilemmas of industry-education integration in tourism vocational education

2.1. Current operation status of industry-education integration

The essence of industry-education integration extends far beyond the binary interaction between schools and enterprises; instead, it builds an ecological community integrating education and industries through the free flow of all elements of vocational education ^[3]. From an industrial perspective, the ecological construction of industry-education integration is continuously improving. The Ministry of Culture and Tourism and the Ministry of Education jointly issued the Guiding Opinions on Promoting the High-Quality Development of Cultural and Art Vocational Education in the New Era (Document No. Wen Jiao Ke Fa (2022) 48), which explicitly requires the establishment of a collaborative mechanism involving governments, industries, schools and enterprises. It promotes the integration of cultural tourism post standards into talent training programs, and encourages cultural tourism institutions to participate in specialty construction and practical talent cultivation throughout the whole process of vocational education ^[4]. Leading cultural tourism enterprises such as Ctrip and Overseas Chinese Town have taken the initiative to engage in industry-education integration. They cooperate with colleges to build industrial colleges, live-streaming training bases and smart cultural tourism training platforms, and facilitate two-way mobility of teachers between colleges and enterprises. Overall, industry-education integration has achieved full coverage in tourism vocational education, with increasingly diverse cooperation forms and continuously improved integration carriers.

2.2. Deep-seated dilemmas in the operation of industry-education integration

2.2.1. Imperfect governance system and absence of multi-party collaborative mechanisms

A prominent problem facing the industry-education integration of tourism vocational education lies in the unclear division of power and responsibility among stakeholders and fragmented governance, failing to form a unified and efficient collaborative governance pattern. Colleges unilaterally dominate most cooperation

models, while governments play a weakened role in overall planning and guidance, lacking comprehensive plans and operable, detailed implementation rules for regional cultural tourism industry-education integration^[5]. Industry associations are insufficiently involved, and most enterprises only participate passively. Without regular communication and consultation mechanisms, cooperation is arbitrary and unstable. Each party operates independently without effective coordination, making it impossible to form joint governance capacity, which constitutes the root cause of the phenomenon of “superficial cooperation without substantive coordination”.

2.2.2. Superficial integration of talent cultivation and insufficient matching between talent supply and demand

Talent cultivation is the core goal of industry-education integration, yet a wide gap exists between the talent cultivation links of tourism vocational education and the actual demands of industrial posts. On one hand, specialty setup lags far behind industrial iteration, and many colleges fail to timely adjust their specialty layout to cater to emerging formats including smart cultural tourism, rural cultural tourism and cultural tourism new media. On the other hand, cutting-edge content such as big data analysis, cultural tourism live-streaming operation and immersive cultural tourism planning is largely absent from teaching. Teaching modes remain rigid, dominated by classroom theoretical lectures, with real enterprise projects and post scenarios hardly incorporated into teaching, which fails to improve students’ practical operation and innovative capabilities significantly. In addition, talent cultivation standards are poorly connected with industrial post standards, resulting in low post adaptability of graduates who cannot meet the practical demands brought by industrial transformation and upgrading.

2.2.3. Imbalanced benefit guarantee mechanism and lack of incentives for enterprise participation

Unbalanced benefit distribution is the fundamental cause of the “enthusiastic colleges, indifferent enterprises” paradox in school-enterprise cooperation. In terms of respective benefit demands, colleges can directly improve talent cultivation quality and complete various school-running assessment indicators through industry-education integration, hence holding extremely high enthusiasm for participation. In contrast, enterprises prioritize profit-making. Participating in vocational education operation requires massive investment in human, material and financial resources, accompanied by long talent cultivation cycles and slow returns. Moreover, trained students may leave the enterprise, bringing barely any short-term economic benefits. Meanwhile, incentive measures such as tax preferences, financial subsidies and policy support remain incomplete, failing to effectively offset enterprises’ costs of participation and fully safeguard their legitimate rights and interests^[6].

2.2.4. Lack of evaluation and assessment system and uninformed closed-loop operation

A scientific evaluation and assessment mechanism is critical to guarantee tangible outcomes of industry-education integration, yet tourism vocational education currently lacks a standardized and regular evaluation system for industry-education integration. Evaluation participants are overly single, relying mainly on college self-assessment with little involvement from enterprises, industries and third-party institutions, leading to highly subjective evaluation results. Evaluation content is also one-sided, focusing excessively on superficial indicators such as cooperation forms and quantity, while insufficient attention is paid to core indicators

including talent cultivation quality, graduate post adaptability, industrial empowerment effects and resource utilization efficiency ^[7]. The whole operation process of industry-education integration cannot form a closed loop of “operation – evaluation – optimization – improvement”, resulting in persistently low integration quality.

3. Construction of a long-term operation mechanism for industry-education integration in tourism vocational education

Combining the industrial characteristics of tourism vocational education and existing dilemmas, and drawing on core theories including collaborative governance and stakeholder theory, this paper constructs a closed-loop four-in-one operation system of industry-education integration covering governance, talent cultivation, support and evaluation mechanisms, so as to realize multi-party coordination, in-depth integration, long-term operation and quality improvement.

3.1. Multi-stakeholder collaborative governance mechanism

A five-party collaborative governance system of “government overall planning, industrial guidance, college leadership, enterprise main participation and social engagement” shall be established. The key lies in clarifying the core power and responsibility of each party and building regularly operated collaborative platforms to address fragmented governance. Governments shall fulfill their role of overall planning and guidance, formulate special supportive policies for industry-education integration based on the overall development plan of regional cultural tourism industries, complete institutional norms, and advance supervision, assessment, service and guarantee work. Industry associations shall act as bridges and links, take the lead in formulating industrial post standards and talent evaluation standards, analyze emerging formats, new posts and new demands of cultural tourism industries, guide colleges to optimize specialty setup and curriculum systems, and build industrial resource sharing platforms. Vocational colleges shall firmly uphold the core responsibility of talent cultivation, take the initiative to connect with industrial demands, take the lead in promoting specialty reform, curriculum development, teaching innovation and faculty development, and build carriers required for industry-education integration school-running. Enterprises shall give full play to their role as main school-running entities, deeply engage in all links including the formulation of talent training programs, classroom teaching, practical training guidance and assessment evaluation, open up their own projects, venues and technical resources, and provide practical platforms for on-the-job practice.

3.2. Supply-demand matching talent cultivation mechanism

Guided by the actual post demands of cultural tourism industries, establishing a complete talent cultivation chain of “industrial demand – standard alignment – teaching implementation – post adaptation” serves as an effective way to resolve the mismatch between talent supply and demand ^[7]. First, a dynamic specialty adjustment mechanism shall be established. Relying on industry associations and leading enterprises, regular research shall be conducted on changes in cultural tourism business formats, post demands and talent shortages, and outdated specialty orientations shall be phased out in a timely manner. Second, a school-enterprise collaborative curriculum development system shall be constructed. Teachers from both schools and enterprises shall jointly sort out the standard requirements of core post skills, restructure curriculum systems and update teaching content. Real enterprise projects, cutting-edge industrial technologies and post

service norms shall be integrated into textbooks and classroom teaching, and loose-leaf and project-based characteristic textbooks shall be developed to realize precise alignment between curriculum content and post standards. Third, work-study teaching modes shall be innovated. Modern apprenticeship, order-based training and project-based teaching shall be fully promoted, transforming real enterprise working scenarios into teaching environments to enable students to consolidate practical skills through on-the-job practice and truly achieve “learning as employment, training as real operation”. In addition, a hierarchical talent cultivation system shall be built to balance basic skill training, innovative capacity improvement and entrepreneurship literacy cultivation, matching the demands of different post levels including grassroots service, middle-level operation and high-end planning in the industry.

3.3. Multi-dimensional rights and interests support mechanism

Based on the diverse demands of all stakeholders, establishing a three-dimensional support mechanism integrating policy, benefit and risk dimensions helps address insufficient enterprise participation incentives and provides support for the long-term operation of industry-education integration. In terms of policy support, governments shall refine and implement incentive policies for enterprises participating in industry-education integration, including tax reductions and exemptions, special subsidies and priority in evaluation and recognition. In terms of benefit sharing, revenue allocation rules between schools and enterprises shall be clarified regarding talent cultivation, research achievement transformation and social services. In terms of risk sharing, the boundary of responsibilities between schools and enterprises shall be defined for potential risks such as student internship safety, talent turnover and failed project cooperation. Uncertainties in cooperation can be reduced through purchasing internship insurance, signing formal cooperation agreements and improving management systems.

3.4. Closed-loop evaluation and feedback mechanism

Building a closed-loop evaluation mechanism with multi-stakeholder participation, full-process coverage and dynamic feedback is the key to ensuring effective implementation and continuous optimization of industry-education integration. On one hand, diversified evaluation subjects shall be established. Colleges, enterprises, industry associations, third-party institutions and students shall all be incorporated into the comprehensive evaluation system to avoid excessive subjectivity brought by single-subject evaluation. On the other hand, a dynamic feedback and rectification mechanism shall be launched. Quarterly assessments and annual comprehensive evaluations shall be carried out to timely sort out deficiencies exposed in the operation of industry-education integration, generate evaluation reports and feed them back to all parties, so as to conduct targeted optimization of cooperation models, talent training programs and management systems. Meanwhile, evaluation results shall be linked with policy support, fund allocation and merit evaluation to strengthen the guiding and restrictive functions of evaluation, ultimately forming a complete closed loop of “implementation – multi-dimensional evaluation – problem rectification – optimization and upgrading”.

4. Optimization paths for the operation mechanism of industry-education integration in tourism vocational education

4.1. Strengthen government overall planning and improve top-level institutional design

Education and cultural tourism authorities at all levels shall formulate medium- and long-term development

plans for industry-education integration based on regional cultural tourism industrial layouts and local tourism vocational education realities, refine special implementation plans, and clarify development objectives, key tasks, and supporting measures to avoid blind and fragmented development of industry-education integration. Policy and institutional regulation shall be adopted to accelerate dynamic specialty adjustment and resolve the problem of mismatch between the response speed of specialty setup and industrial development speed^[8]. Meanwhile, supporting laws, regulations and policies shall be improved, and detailed rules concerning school-enterprise power and responsibility, benefit distribution, risk sharing and incentive support shall be refined to remove barriers to policy implementation. A cross-departmental coordination mechanism shall be built to coordinate educational, industrial and financial resources, break departmental barriers, promote precise implementation of industry-education integration policies, funds and projects, and provide institutional guarantees for long-term operation.

4.2. Consolidate industry-education integration communities and deepen multi-party in-depth collaboration

Leveraging the advantages of regional cultural tourism industries, scale up cultural tourism industry-education integration communities and municipal vocational education consortia, integrate resources of regional tourism colleges, leading cultural tourism enterprises, industry associations and industrial parks, and build an industrial ecosystem featuring joint development and collaborative talent cultivation. The five-party collaborative model of “government, school, enterprise, local authority and industry association” shall be popularized, with industrial colleges, training bases, skill master studios and research and innovation centers as core carriers to carry out all-round, in-depth and regular cooperation. Traditional superficial cooperation modes shall be broken away from, focusing on six core fields: joint talent cultivation, co-construction of curricula, joint faculty training, joint scientific research, shared achievements and joint social services. Cooperation shall shift from short-term project collaboration to long-term strategic integration, and from single talent cultivation cooperation to all-round integration of education, industry, research and innovation.

4.3. Improve the incentive and restraint system and activate the internal driving force of all stakeholders

Incentive policies for enterprises shall be further refined with increased tax and fee concessions, financial subsidies and talent support. Cultural tourism enterprises with outstanding performance in industry-education integration and talent cultivation shall be granted multiple rewards including tax reductions, priority access to industrial projects and brand promotion, effectively reducing enterprises’ cooperation costs and raising their cooperation returns. Incentive mechanisms for colleges and teachers shall also be improved. The effectiveness of industry-education integration, outcomes of school-enterprise cooperation and graduate post matching quality shall be incorporated into core indicators for teacher performance appraisal, professional title evaluation and merit recognition to mobilize teachers’ enthusiasm for participating in industry-education integrated teaching, research and practical training. Restraint mechanisms are equally indispensable. Stakeholders with perfunctory and ineffective cooperation shall be urged to rectify problems, forming a benign operation atmosphere with effective incentives, powerful restraints and clear rewards and penalties.

4.4. Perfect the long-term supervision system to guarantee effective implementation of mechanisms

A regular supervision and inspection mechanism shall be established, led by governments with participation from industry associations. Routine inspections shall be conducted on the operation of industry-

education integration in local tourism vocational colleges and the performance of cooperating enterprises to identify and resolve bottlenecks and difficulties emerging in operation timely. An information-based supervision platform shall be built to dynamically monitor data including industry-education integration projects, practical training progress, faculty mobility, talent cultivation and achievement transformation, realizing precise supervision and efficient management. In addition, a mechanism for cultivating and promoting typical cases shall be established. Excellent industry-education integration practices such as the Ctrip Industrial College shall be summarized and popularized to exert demonstration and leading effects, driving the overall upgrading of industry-education integration quality in regional tourism vocational education.

5. Conclusion

Industry-education integration is a core path for the high-quality development of tourism vocational education in the new era, as well as an important support for the transformation and upgrading of cultural tourism industries and the construction of talent teams. This paper constructs a long-term four-dimensional operation mechanism of industry-education integration covering governance, talent cultivation, support and evaluation, clarifying the collaborative logic, power and responsibility of multiple stakeholders, paths for in-depth integration and closed-loop operation logic. The proposed optimization paths — strengthening top-level government planning, consolidating industry-education integration communities, improving the incentive and restraint system and perfecting the long-term supervision mechanism — can effectively resolve pain points such as the mismatch between talent supply and demand in industry-education integration, and drive governments, colleges, enterprises and industries to shift from superficial cooperation to in-depth integration, and from short-term collaboration to long-term symbiosis. In the future, tourism vocational education shall keep pace with the iterative upgrading of cultural tourism business formats and technologies, dynamically adjust and optimize the operation mechanism of industry-education integration, continuously advance precise alignment between the education chain and industrial chain, and steadily improve talent cultivation quality, so as to provide solid talent support and intellectual guarantee for the high-quality development of cultural tourism industries.

Disclosure statement

The author declares no conflict of interest.

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