

Research on the Promotion Policy of Industry-Education Integration from the Perspective of Industry Community

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Abstract: With industrial transformation and technological advancements, industry-education integration has become a crucial pathway for cultivating high-quality technical and skilled talents. Industry communities serve as important platforms for industry-education integration, and their development is of great significance in promoting the deep integration of education and industry. This paper explores policy measures for industry-education integration from the perspective of industry communities, analyzes the current status and challenges of industry community development in China, and proposes strategies to advance the construction of industry communities, aiming to provide references for relevant policy formulation and practice.

Keywords: Industry community; Industry-education integration; Policy research; Vocational education; Collaborative development

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1. Introduction

Amidst the backdrop of global economic integration and rapid technological development, industrial transformation and upgrading have increasingly demanded technical and skilled talents. The Chinese government attaches great importance to the development of vocational education and has proposed strategic goals to deepen industry-education integration and promote collaborative development between education and industry. Industry communities serve as vital carriers for industry-education integration, and their construction and development are of great significance in enhancing the quality of vocational education and meeting industrial demands.

An industry community refers to a collaborative network composed of various entities within the industry chain (such as enterprises, universities, vocational colleges, industry associations, etc.), aiming to achieve deep integration between the education chain and the industry chain through resource sharing and complementary advantages. In recent years, the country has successively issued a series of policy documents to promote the construction and development of industry communities, which have, to some extent, facilitated the further

advancement of industry-education integration. However, the construction of industry communities still faces numerous issues in practice, such as unclear organizational forms, a lack of collaboration mechanisms, and the absence of evaluation standards.

This paper aims to analyze the current status and issues of industry-education integration from the perspective of industry communities and propose relevant policy recommendations. By discussing the construction of industry communities, this paper hopes to provide policy references for governments and educational institutions to further promote the deepening of industry-education integration in China.

2. Theoretical basis of industry communities and industry-education integration

2.1. Concept and characteristics of industry communities

An industry community refers to a cooperation platform composed of multiple entities (such as governments, enterprises, educational institutions, industry associations, etc.) within a specific industry field. Its purpose is to facilitate in-depth cooperation among all parties in technological research and development, talent cultivation, etc., through resource sharing, information exchange, and technological collaboration, thereby achieving a close connection between the industry chain and the education chain.

The core characteristics of industry communities include: collaborative innovation, where member units collaborate on technological research and development and standard formulation to enhance overall technological levels; resource sharing, where all members share resources in talent, technology, and funding, reducing redundant construction; and demand-orientation, where there is a close connection to industry demands to cultivate technical and skilled talents that meet industrial development requirements.

2.2. Connotation and significance of industry-education integration

Industry-education integration refers to the process of mutual infiltration and collaborative advancement between industrial development and educational training, aiming to achieve mutual benefits and win-win results in talent cultivation, technological research and development, knowledge conversion, etc., through the deep integration of industry and education. The core concept of industry-education integration is that education serves industrial development, while industrial development also provides practical demands and development directions for education. By closely aligning with industrial demands, industry-education integration optimizes educational content and training modes, enhancing talents' employability and adaptability. At the same time, it accelerates the transformation and application of scientific and technological achievements, driving industrial technological progress and structural optimization.

3. Current status and challenges of industry community construction in China

3.1. Current status of industry-education integration and industry community construction in China

In recent years, the Chinese government has continuously issued policies to promote the in-depth development of industry-education integration. In 2021, the Central Office of the State Council and the General Office of the State Council issued the Opinions on Promoting the High-Quality Development of Modern Vocational Education, clearly proposing to promote the in-depth development of industry-education integration and school-enterprise cooperation, further emphasizing the important role of industry communities in vocational

education and industrial development ^[1]. In 2023, the National Development and Reform Commission issued the Implementation Plan for the Vocational Education Industry-Education Integration Empowerment and Upgrade Action (2023–2025), clearly proposing the construction of industry-specific industry-education integration communities to enhance the level of collaborative development between the industrial chain and the education chain ^[2].

To date, China has established industry-education integration communities in various fields such as rail transit equipment, intelligent manufacturing, new-energy vehicles, and modern agriculture ^[3]. For example, the establishment of the national-level rail transit equipment industry-education integration community has provided a powerful platform for talent cultivation and technological development in related majors. At the local level, the number of regional industry-education integration communities has grown rapidly. According to data from the Ministry of Education, as of 2024, there are over 1,000 registered industry-education integration communities of various types nationwide ^[4]. These communities have played an active role in integrating regional resources, promoting technological innovation, and serving regional economic development.

3.2. Challenges faced in the industry community construction

Despite some progress made by industry communities in promoting industry-education integration, they still face many challenges in the actual construction process.

3.2.1. Ambiguous organizational structure and positioning

Currently, many industry communities have relatively loose organizational forms, with unclear boundaries of responsibilities among member units, leading to low operational efficiency and poor collaboration effects ^[5]. At the same time, some industry communities have vague functional positioning and lack clear development goals, making it difficult to effectively mobilize resources from all parties.

3.2.2. Imperfect collaboration mechanisms

During the construction of industry communities, the communication and collaboration mechanisms between educational institutions and enterprises urgently need improvement. Some enterprises believe that participating in industry-education integration involves high costs and unclear benefits, while educational institutions believe that enterprises lack enthusiasm for participation, resulting in superficial forms of cooperation and difficulties in achieving substantial integration ^[6].

3.2.3. Insufficient policy implementation and incentives

Despite the intensive issuance of policies, there are issues of insufficient implementation force and incomplete supporting measures in the specific implementation process ^[7]. In particular, there is a lack of effective incentive measures for enterprise participation, and enterprises lack initiative, limiting the depth and breadth of industry-education integration.

3.2.4. Evaluation system not yet established

Currently, a scientific and unified evaluation standard and assessment system for industry communities has not been established, making it difficult to effectively evaluate the construction achievements of the communities and thus affecting their long-term sustainable development ^[8].

4. The role of policy guidance in industry community construction

4.1. Necessity of policy guidance

The construction of industry communities has certain public welfare and external effects, and it is difficult to spontaneously form effective cooperation mechanisms relying solely on market mechanisms. Policy guidance and support have become important driving forces for promoting the construction of industry communities. By formulating clear policy orientations and incentive measures, the government can promote long-term cooperative relationships between educational institutions and enterprises in industry-education integration, realizing the deep integration of the education chain and the industrial chain.

First, policy guidance can clarify the goals and tasks of community construction, enabling participating entities to clearly understand their respective roles and responsibilities and promote effective resource allocation ^[9]. Second, policies can provide necessary financial support and institutional guarantees for the construction of industry communities, reducing the cooperation costs for enterprises and educational institutions and mobilizing the enthusiasm of all parties ^[10]. Finally, policies can also play a demonstrative and leading role by supporting the construction of demonstration projects for some industry communities, forming successful experiences that can be replicated and promoted, thereby driving the improvement of the overall level of industry-education integration within the entire industry.

4.2. Main policy measures for government support of the industry community construction

In recent years, the government has issued a series of policy measures to promote the construction of industry communities.

4.2.1. Financial support and incentive policies

The government encourages enterprises and educational institutions to jointly participate in industry-education integration projects through the establishment of special funds, financial subsidies, and tax incentives. For example, the Ministry of Finance and the Ministry of Education have jointly established special funds for vocational education industry-education integration, supporting a large number of pilot and demonstration projects for industry-education integration within the industry.

4.2.2. Platform construction and demonstration project promotion

The country supports the construction of a batch of industry-level industry-education integration platforms and demonstration industry communities, such as national-level industry-education integration communities in fields like rail transit equipment and new-energy vehicles, driving nationwide promotion and popularization through successful demonstration effects.

4.2.3. Institutional guarantees and policy environment optimization

The government has issued relevant guidance opinions and implementation rules, clarifying the preferential policies enjoyed by participating enterprises in terms of land use, financing, taxation, etc., creating a favorable policy and institutional environment, and promoting enterprises to participate more actively in industry-education integration activities.

4.2.4. Evaluation system and standard construction

Government departments are working on establishing scientific evaluation systems and standard specifications

for the construction of industry communities to clarify construction goals, evaluate construction effectiveness, and promote the sustainable development of industry communities.

5. Strategies for advancing industry community construction

5.1. Clarify the goals of community construction

The construction of industry communities should focus on serving industrial development and enhancing educational quality as its core objectives ^[11]. Specifically, it should aim to cultivate high-quality technical and skilled talents that meet industry demands, promote technological innovation and application, and facilitate the in-depth integration of the education chain and the industrial chain. To achieve this, it is necessary to formulate a clear development plan, clarify the roles and responsibilities of each participating entity, and ensure the orderly advancement of community construction.

5.2. Improve collaboration mechanisms

Effective collaboration mechanisms are key to the successful operation of industry communities. Firstly, a normalized communication platform should be established to facilitate information sharing and resource complementarity among enterprises, universities, and vocational colleges ^[12]. Secondly, a joint research and talent cultivation mechanism should be constructed, involving the joint development of courses and textbooks, the organization of teacher training, the conduct of scientific research cooperation, and the enhancement of overall innovation capability. Additionally, a mechanism for benefit sharing and risk-sharing should be established to ensure the active participation of all parties and jointly promote industry-education integration.

5.3. Improve the evaluation system

A scientific evaluation system helps to measure the operational effectiveness of industry communities and guide their continuous improvement. Evaluation indicators covering talent cultivation quality, technological innovation achievements, and cooperation satisfaction should be formulated to regularly assess the performance of the communities. At the same time, a feedback mechanism should be established to adjust strategies based on evaluation results and ensure the sustainable development of the communities.

6. Case study: Construction of the industry-education integration community in the rail transit equipment industry

The rail transit equipment industry is a strategically emerging industry with key development in China, having a large and demanding requirement for technical and skilled talents. To meet the development needs of the industry, the Ministry of Education supported the construction of the first national-level industry-education integration community in the rail transit equipment industry in 2023, aiming to gather industry resources, deepen industry-education integration, and cultivate high-quality talents ^[13].

The industry-education integration community in the rail transit equipment industry promotes the in-depth integration of the education chain and the industrial chain by forming a council, co-building practical training bases, developing teaching resources, conducting teacher training, and implementing joint recruitment measures ^[14]. Through the implementation of measures such as joint recruitment, teacher training, and the development of teaching resources, the industry-education integration community in the rail transit equipment

industry has significantly improved the quality of talent cultivation, technological innovation capability, and cooperation mechanisms, providing strong support for the development of the industry ^[15].

The case demonstrates that the construction of industry communities requires the active participation and collaborative cooperation of all parties. Clear goals, effective collaboration mechanisms, and scientific evaluation systems are key to the success of the communities. Government policy guidance and support have also played an important role, providing a favorable environment for community construction.

7. Conclusion

Research on industry-education integration policies from the perspective of industry communities is of great significance for deepening vocational education reform and promoting industrial development. By clarifying community construction goals, improving collaboration mechanisms, and perfecting the evaluation system, industry communities can effectively promote the in-depth integration of the education chain and the industrial chain, cultivating high-quality technical and skilled talents who meet industry demands. In the future, the government, enterprises, and educational institutions need to work together to promote the construction of industry communities and cultivate more high-quality technical and skilled talents for economic and social development.

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