

Research on the Multiple Integration and Collaborative Education Mode of Enterprise Management under the Perspective of Industrial Cluster

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Abstract: The collaborative innovation and education of enterprise management disciplines and industrial clusters play a vital role in promoting regional economic development. How to effectively promote the development of enterprise management discipline requires the collaborative cooperation of multiple subjects such as government, enterprises and industries, etc., to effectively implement the effective integration of discipline and industrial cluster around the extension of core enterprises in the industrial cluster. Based on the analysis of the role of multiple subjects in collaborative education, this paper explores the dilemma faced by enterprise management discipline and industrial cluster in collaborative education, furthermore, analyzes the entry point and integration aspect of the multiple integration and collaborative education of enterprise management disciplines, finally puts forward the corresponding implementation approaches under the background of industrial clusters construction.

1. Introduction

At present, the scientific and technological innovation is placed at the core of China's overall development, therefore, it has become an irresistible trend for enterprises to make use of their core technological advantages, integrate innovative development, and plan for a win-win collaborative development mode. The healthy development of disciplines in colleges and universities must meet the needs of the industry, adhere to the development concept of clusters, sharing, coordination and characteristic integration, and build the development idea of close integration with industrial clusters and interdisciplinary integration, furthermore, with the help of cutting-edge science and technology, the enterprise management discipline is radiated and grafted, making integration and innovation around the enterprise characteristics. Driven by new technologies and new demands, the linkage and integration of disciplines and industrial clusters will be improved systematically to enhance the innovation potential and accelerate the conjunctive development of disciplines.

2. The Role and Function of Multiple Integration and Collaborative Education of Enterprise Management Disciplines

Multiple integration and collaborative education involve many subjects such as governments, enterprises, industries and universities. Only by effectively giving play to the functions and roles of multiple participants and clarifying their respective roles, can a new pattern of collaborative education development be established. The government plays a leading role in meta-governance and it is responsible for the top-level design, overall planning and effectively performs the duties of guiding, coordinating supervision, resource integration and financial support. As the important participants and beneficiaries of collaborative education, enterprises and industry associations play a leading role by building a sharing platform and providing a collaborative environment. As the subject of discipline construction, schools play a vital role in problem research, technology docking, cultural inheritance and other aspects. If the multiple subjects want to achieve win-win cooperation, they must make continuous exploration on the basis of mutual respect and transpositional consideration, under the promotion of the government and fully relying on the collaborative education platform jointly built by schools and enterprises¹.

3. Implementation Basis and Realistic Logic of the Multiple Integration and Collaborative Education of Enterprise Management Disciplines under the Perspective of Industrial Cluster

In today's implementation of industrial technology innovation strategy, neither the government departments leading industrial development nor the enterprises participating in market competition appear in the form of many related clusters rather than as individual or simple joint ones. Colleges and universities also appear not in the form of simple aggregation of several majors, but in the form of disciplines centering on the strategic demand for technological innovation of the core enterprise chain in the industrial cluster³, forming the integration of industries and disciplines, especially characteristic disciplines. Disciplines are directly related to industrial clusters, depending on the nature and needs of the industrial clusters to be served. For example, Heilongjiang Institute of Technology, following the strategic concept of 'closely combining with the industry chain to develop disciplines', plans to build a cluster of green food marketing disciplines and develops enterprise management disciplines, one important factor of which is considering that Heilongjiang Institute of Technology is located in Jixi area and the discipline construction of colleges and universities should provide intellectual support for local governments. Meanwhile, the business management major of Heilongjiang Institute of Technology is a provincial-level major for improving local service ability, which has a good discipline foundation. Marketing major is a long-time important major, which always focuses on local economic development. In the current economic development, Jixi region focuses on supporting five advantageous industrial clusters, such as green food deep-processing industrial clusters, which gathers the upstream and downstream enterprises of the industrial chain, including the research and development, production, deep processing, sales, after-sales service and other related industries of green food and forms a complete industrial chain from food, mechanical processing, logistics transportation, sales and other aspects. The continuous innovation and in-depth development of the industrial chain require the enterprise management discipline to focus on the connection of core green food deep processing of industrial clusters with the industrial chain within the region to establish a shared platform for scientific information and technology, create a collaborative mechanism, and promote industrial development. The discipline construction must take the discipline characteristic direction as the key to promote the integration under the guidance of direction, gradually form mutual-promotion and development-coordinated discipline construction situation. Industry cluster gives birth to discipline or discipline cluster and discipline construction must adapt to and serve industry cluster, besides, discipline construction provides practical service and support for the development of industrial cluster, which is the inevitable trend for industry development and discipline construction in the era of innovation.

4. The Dilemma of Multiple Integration and Collaborative Education of Enterprise Management Disciplines from the Perspective of Industrial Cluster

4.1 The Dilemma of the Cooperation Pattern for Participants

At present, the implementation subject of discipline construction collaborative education is still dominated by schools, which are the main promoters and planners. The degree of enterprise integration is insufficient, and the involvement of other kinds of social organizations is relatively limited. In the form of cooperation, the cooperation of all participants is mostly based on the contracts, namely, establishing cooperation, and mostly are the cooperation on a single project, without the establishment of a substantial and deep integration.

4.2 The Dilemma of Subject Characteristics Integration

The dilemma of subject characteristics integration for the multiple integration and collaborative education of enterprise management disciplines is mainly reflected in the interest demands and cultural ideas of the collaboration between subject enterprises and schools in the development process. With the pursuit of value as its culture and the profit as its goal, the enterprises pay attention to how to realize the maximization of profit. The school takes talent training and serving

the society as its core objectives, and pays attention to the improvement of social reputation and the embodiment of social service¹. That how to make timely adjustment to such deviation and make it come back to the same track needs the continuous exploring and trying in the process of collaborative education¹.

4.3 Dilemma of Discipline Integration

With the adjustment of industrial structure, the diversification and individuation of science and technology and social demand, the demand of industrial clusters for technology is also constantly adjusted, so enterprises hope that discipline construction in the enterprise chain research and development, production and processing, sales promotion, technical training and other core issues can provide strong support and guarantee, which therefore, requires the subject construction adjusts according to the industrial cluster demand¹, besides, after defining the characteristic research direction, continuous adjustment and integration are carried out to extend and expand the subject connotation and form new subject points or clusters.

4.4 Support Dilemma of Policies and Regulations Etc.

Government guidance and support play a crucial role in the process of collaborative education. Governments at all levels issue a series of policy documents around industrial clusters, discipline construction and collaborative education¹. However, at present, the implementation, binding force, driving force, safeguard measures of the policy is not enough, and there is still room for improvement and improvement. At the same time, the government agencies and organizations' participation in the collaborative education of multiple subjects also needs further improvement¹.

4.5 Dilemma Faced by Scientific Research Bases and Platforms Construction

As the study of enterprise management requires a long-term process of practice in enterprises, the importance and openness of enterprises to the study of enterprise management subject directly affects the study and practice of the discipline, so a stable and open research platform is needed for the enterprise construction. However, the realistic interests that enterprises pursue determine directly the neglect on the platform construction, at the same time, the platform construction belongs to the soft science so some institutes list it into the edge of exclusion, even if the construction of the scientific research base is finished, it is unable to get sustainable development as the slow equipment update speed and insufficient technology promotion. Even the situation exists that the discipline construction personnel in colleges and universities do not have due ability to undertake the high-level construction of scientific research bases and platforms².

5. The Implementation Standard, Entry Point and Integration Aspects of Multiple Integration and Collaborative Education

From the perspective of industrial cluster, the multiple integration and cooperative education of enterprise management disciplines provide the talent support for regional economic development, which implementation is mainly oriented towards the major strategic needs of regional industrial development and the frontier of scientific and technological development to deepen the integration of industry and education, promote economic and social development and industrial restructuring by focusing on interdisciplinary research and cooperation among enterprises, furthermore, do a good job in school-enterprise cooperation platform and cooperation projects to promote scientific and technological progress and innovation and accumulate strength for the industry development. Therefore, we can know that, the implementation standard is reflected in the aspects of industry integration, discipline quality benefit, social contribution and influence. The entry point is needed by the industry and the core content of industrial development involves the formation of enterprise competitiveness and the play of competitive advantages. In the discipline construction, the core competitiveness of core enterprises should be taken as the main construction direction and construction point of the discipline. The integration aspect lies in the integration with industrial clusters, further promoting the development of industrial clusters through discipline construction,

realizing the aggregation and optimization of various factors resources in a certain region, promoting the integration and optimization of productive forces and scientific and technological forces in spatial distribution and improving the technological innovation environment²⁻³, so as to solve various complex problems and realize the comprehensive and efficient matching of academic points and discipline directions with industrial core and industrial elements.

6. Mode Construction of the Multiple Integration and Collaborative Education of Enterprise Management Disciplines under the Perspective of Industrial Cluster

6.1 Building and Perfection of Guidance Mechanism for Multiple Integration and Collaborative Education

Perfect laws and regulations and preferential policies are the source power to effectively stimulate the collaborative education of various social subjects. In discipline construction, enterprises, industrial organizations, scientific research institutions, universities and governments should pay full attention to their respective roles in collaborative education and actively provide various incentive policies to promote the subject of collaborative education, improve the guidance mechanism, and expand and deepen the implementation of diversified cooperation and collaborative education from the breadth and depth.

6.2 Intersection, Fusion and Optimization of Enterprise Management Discipline Connotation with Industrial Enterprises as the Core

The construction of enterprise management discipline should focus on the industrial cluster value chain and construct the discipline ecological chain. Relying on resource advantages, according to the development advantages of core enterprises in industrial clusters and the practical problems that need to be solved or faced, the connotation of the discipline should be optimized, the characteristics of the discipline should be condensed, the direction of the discipline should be clarified, and the relevance between the enterprise management discipline and core enterprises in industrial clusters should be increased, so that to form a mutual-supporting, mutual-integrating and resources-sharing disciplinary ecological chain that is compatible with the operation of industrial clusters, consistent with the application of technologies and disciplines, besides, promote the characteristic discipline orientation to drive the discipline development, pay attention to the cross integration of enterprise management discipline and industrial cluster core enterprises, build the emerging cross-discipline orientation of enterprise management, and seek for new growth points of enterprise management discipline⁴.

6.3 Innovate and Improve the Discipline Construction Mechanism to Promote the Coordinated Development of Related Majors

The intersection and integration among majors and the coordinated development of industrial clusters are the strategic choices for improving the quality and application ability of enterprise management disciplines. By perfecting the discipline management system, establishing the inter-departmental coordination mechanism, standardizing the discipline development, strengthening the inter-disciplinary coordination and exploring the reform law, the knowledge and technology bottleneck, and the characteristics of the demand for talents' knowledge and accomplishment of the core enterprise management mode in the industrial cluster so as to promote the development of enterprise management discipline.

6.4 Give Play to the Dominant Position of Enterprises and Integrate the Knowledge and Technology

Discipline construction should solve the technical problems of core enterprises in industrial clusters, break the bottleneck of science and technology, and lead the development direction of enterprises' science and technology, therefore, enterprises should become the realistic subject of discipline construction and collaborative education and it is imperative to strengthen the cooperation between enterprises and schools. According to the specific requirements of core

enterprises' scientific and technological knowledge and technology in industrial clusters, the direction and content of disciplinary research should be determined, and enterprises should be actively guided to participate in the design and system reform of school curriculum knowledge, besides, by integrating the technical needs of enterprises with the knowledge fields and projects, infiltrate the professional knowledge required by enterprises into the curriculum knowledge system of discipline construction.

6.5 Build a Scientific Research Platform to Achieve the Collaborative Sharing of Resources

Collaborative education requires resource sharing and collaborative development. Disciplines in colleges and universities have scientific research precipitation, technical capability and technological frontier, while enterprises have practical basis, technical application and technical demand. Under the guidance of the government, the construction of enterprise management discipline in colleges and universities should carry out in-depth cooperation with enterprises, establish collaborative innovation platform, pay attention to collaborative innovation and collaborative education, and develop basic research and application research centering on the frontier of discipline development and key technical problems and sustainable development problems faced by the industry². Enterprises provide resources, scientific research platform and implementation environment, while disciplines provide scientific research teams and scientific research achievements. The integration of the two provides intellectual support for industrial structure adjustment and industrial development, and provides development opportunities for optimizing the connotation of disciplines.

6.6 Break Discipline Barrier, Promote the Intersection and Integration of Disciplines and Form Characteristic Enterprises Management Discipline

The construction of enterprise management discipline under industrial cluster needs to focus on the core enterprises of industrial cluster and build the characteristic discipline of enterprise management with the high-quality characteristics, so that to promote the further intersection and integration of disciplines and cultivate the characteristic direction of disciplines. Therefore, the institutes should pay attention to the construction of mechanism and system in protecting and promoting the intersection and integration of disciplines, encourage the establishment of characteristic disciplines, and give sufficient attention to resources. Apart from that, the discipline should focus on exploring the core enterprises in the industrial cluster and excavating the integration point, integration aspect and deep integration to form the characteristic research direction, and construct the characteristic enterprise management discipline.

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