

Exploration on the Driving Mechanism of Higher Education Talent Cultivation Model Innovation for Regional Economic Development

Fengwei Sui

Capital Normal University, Beijing 100048, China

Abstract

With the development of regional economies and the transformation of industrial structures, higher education talent cultivation models face unprecedented challenges. Currently, many local universities' talent cultivation lags behind regional economic demands, resulting in insufficient alignment between talent supply and local industrial development. From the perspective of regional economic development, this paper explores innovative pathways for higher education talent cultivation models, analyzes existing issues, and proposes optimization strategies. The study finds that improving higher education quality, strengthening university-industry collaboration, and optimizing educational resource allocation are critical for driving high-quality regional economic development. The close integration of higher education with regional economies can cultivate more high-quality talents aligned with market demands, further promoting regional economic innovation and transformation.

Keywords

Higher education, talent cultivation, regional economy.

1. Research Background and Significance

With the acceleration of economic globalization and technological innovation, regional economic development models are increasingly shifting toward intelligence, sustainability, and innovation. In this process, the innovation of higher education talent cultivation models has become a core driver of regional economic development. Higher education not only provides knowledge and skills to society but also serves as a bridge and bond in economic development. In China, the interaction between regional economies and the education system has grown increasingly close in recent years, with talent cultivation emerging as a key factor in advancing high-quality regional economic development. China's economy is transitioning from traditional growth models reliant on resources and low-cost labor to innovation-, technology-, and talent-driven high-quality development. This shift has heightened regional governments' expectations for higher education. According to the China Education Statistical Yearbook 2023, China's gross higher education enrollment rate reached 60.8% in 2022. However, regional imbalances in higher education resources persist, particularly in central and western regions where development lags, necessitating innovative talent cultivation models to bridge these gaps.

Sustained regional economic growth often depends on the cultivation and recruitment of local talent. Against the backdrop of industrial restructuring, technological innovation, and high-tech enterprise development, regional economies increasingly demand technical, interdisciplinary, and innovative talents. The "innovative city" strategy, driven by technological innovation, has been promoted nationwide. For example, Guangdong Province aims to build an "innovation-oriented province" to achieve "high-quality development," requiring local higher education to cultivate large numbers of high-quality innovative talents aligned with industrial needs. However, current talent cultivation models in regional higher education face multiple

challenges. Many local universities adhere to traditional educational models, lacking deep integration with regional economic demands. Curricula remain overly theoretical and lack practical relevance, particularly in emerging industries and technology fields, where collaboration between universities, enterprises, and research institutions remains superficial. According to the China Higher Education Development Report 2023, over 30% of local universities fail to align talent cultivation with regional economic characteristics, leading to frequent mismatches between talent supply and demand. To achieve mutual promotion between regional economies and education, many regions have begun implementing reforms. For instance, Zhejiang Province proposed advancing regional economic development through "industry-education integration," promoting policies such as university-industry collaboration and industry-academia-research synergy to deepen the integration of education and local industries. According to the Zhejiang Regional Economy and Higher Education Collaborative Innovation Report, by 2025, Zhejiang will enhance educational resource utilization and strengthen enterprise-university partnerships to cultivate more technical talents aligned with regional industrial development. The deep integration of regional economic driving mechanisms and higher education talent cultivation has become a critical topic in current educational reforms. Innovation in higher education involves not only updating curricula but also organically combining educational systems, methodologies, and economic demands. Through university-industry collaboration, regional talent cultivation programs, and technology-driven courses, regional higher education can better provide sustained momentum for regional economic development.

2. Analysis of Current Status of Regional Economic Development and Higher Education Talent Cultivation Models

2.1. Current Status of Regional Economic Development

Regional economic development is pivotal to local growth, with significant disparities in speed and quality across China. According to the National Bureau of Statistics, China's GDP growth rate in 2023 was 5.5%, with eastern regions such as Jiangsu, Zhejiang, and Guangdong achieving higher growth rates, while central and western regions face greater challenges. Underdeveloped regions, particularly in central and western China, still rely on traditional industries with slow transformation, resulting in insufficient economic momentum. Regional economic disparities lead to variations in industrial layouts, resource allocation, and policy support, especially in technological innovation and high-value-added industries. For example, Henan Province, a major hub for higher education in China, struggles with "numerous universities but low quality." Despite its 174 universities, uneven educational quality and homogeneous disciplines hinder technological innovation and industrial upgrading. Meanwhile, the growing demand for innovative talents in advanced regions contrasts sharply with underdeveloped regions, where talent shortages constrain economic growth.

2.2. Current Status of Higher Education Talent Cultivation Models

China's higher education has made remarkable progress, yet regional disparities persist, particularly in talent cultivation models at local universities. Local universities often focus on foundational disciplines, lacking integration with regional economic development, resulting in a disconnect between talent cultivation and regional needs. Many local universities continue to prioritize traditional disciplines, with curricula and teaching systems inadequately aligned with market demands and regional economic characteristics. Recent reforms, such as "demand-driven education" models, aim to adjust disciplines and talent cultivation plans based on regional economic demands. However, challenges remain, including rigid cultivation models,

superficial alignment between curricula and industry needs, and insufficient practical training, leading to low graduate-employer matching rates and exacerbating skill shortages.

2.3. Interaction between Regional Economies and Higher Education Talent Cultivation

A complex interaction exists between regional economies and higher education talent cultivation. Regional economies require application-oriented and innovative talents, while higher education serves as the primary channel for cultivating such talents. Local universities must not only supply talent but also drive regional economic transformation through technological innovation and knowledge transfer. With "industry-education integration" and "university-region collaboration" becoming trends, interactions have evolved from one-way "talent supply" to "co-development."

For example, Henan University of Technology's research achievements in grain storage and processing have supported regional and national food security, demonstrating the role of universities in regional economic growth. Despite this potential, insufficient coordination mechanisms between universities and regional economies hinder precise talent cultivation and industrial demand alignment, leaving educational resources underutilized in enhancing industrial innovation and competitiveness.

3. Issues in Higher Education Talent Cultivation Models for Regional Economic Development

3.1. Disconnect between Talent Cultivation Models and Regional Economic Demands

Most local universities adhere to traditional disciplinary teaching, failing to align with regional economic needs. Curricula and objectives remain overly theoretical, lacking industry-specific training. For example, universities in central and western China prioritize traditional fields like literature and basic sciences, neglecting modern manufacturing and emerging industries critical to local economies. Over 40% of local universities have not adjusted disciplines to match regional industrial structures, resulting in graduates with weak competitiveness in high-tech and innovation-driven sectors.

3.2. Mismatch between Higher Education Quality and Regional Economic Development

Educational quality in many regions lags behind economic demands. Despite increased investments in education, challenges persist in resource allocation and teaching quality. For instance, Henan's numerous universities lack high-level disciplines and specialized training, widening the gap between talent supply and demand. Emerging fields like artificial intelligence and big data face severe talent shortages due to outdated curricula and insufficient faculty expertise.

3.3. Uneven Distribution of Regional Higher Education Resources

Higher education resources are concentrated in eastern China, leaving central and western regions underserved. According to the Ministry of Education, provinces like Beijing and Shanghai possess abundant high-quality universities, while underdeveloped regions like Gansu and Ningxia struggle with limited resources and low-quality institutions. This imbalance exacerbates talent drain and hampers long-term economic growth.

3.4. Superficial University-Industry Collaboration and Inadequate Practical Training

Despite national encouragement for industry-academia integration, collaboration remains fragmented. Many local universities lack deep partnerships with enterprises, resulting in curricula detached from industrial needs and graduates with insufficient practical skills. Sectors like advanced manufacturing and AI face acute talent shortages due to inadequate training.

4. Innovative Strategies for Higher Education Talent Cultivation in Regional Economic Development

4.1. Strengthen Alignment between Higher Education and Regional Economic Demands

Local universities must deepen ties with regional economies, shifting from "discipline-driven" to "industry-driven" models. Collaborate with governments, industries, and enterprises to adjust disciplines based on regional industrial characteristics. For example, universities in manufacturing hubs should focus on cultivating engineers and technicians.

4.2. Enhance Educational Quality to Meet Regional Economic Needs

Improve curricula, faculty capabilities, and interdisciplinary training. Integrate emerging fields like IT and renewable energy into programs to cultivate high-end technical talents.

4.3. Optimize Resource Allocation and Sharing

Address regional disparities through policy support, funding redistribution, and digital platforms for resource sharing. Prioritize investments in underdeveloped regions to align resources with economic needs.

4.4. Deepen University-Industry Collaboration and Practical Training

Establish long-term partnerships with enterprises, integrating industry needs into curricula and practical training. Develop joint labs and research projects to enhance students' technical and innovative capabilities.

5. Conclusion

Innovation in higher education talent cultivation is vital for regional economic development. By aligning with economic demands, enhancing quality, optimizing resources, and deepening collaboration, local universities can cultivate high-quality talents to boost regional competitiveness and support economic transformation. Continuous innovation in higher education will foster a virtuous cycle between education and economy, driving comprehensive societal progress.

References

- [1] Li Wei, Liu Jiayue, Hu Xinyu. "Mechanism Construction for Coordinated Development of Higher Education and Regional Economy: A Case Study of Liaoning Province." *Industrial and Science Tribune*, vol. 23, no. 19, 2024, pp. 239–241.
- [2] Chen Qibing, Wang Shuo, Ma Tiefeng. "Dynamic Research on Coupling Coordination Between Higher Vocational Education and Regional Economic Development Based on DEA Cross-Evaluation: A Case Study of Sichuan Province." *Economic Research Guide*, no. 18, 2024, pp. 135–139.
- [3] Feng Mei. "Research on Innovation of Logistics Talent Cultivation Model in Higher Vocational Education Under the 'Three Highs and Four News' Strategy." *Logistics Science and Technology*, vol. 47, no. 13, 2024, pp. 167–169.

- [4] Li Pengshi. "Research on the Coordination Between Higher Education and Regional Economic Development in Guangdong Province." *University*, no. 19, 2024, pp. 169–172.
- [5] Yu Xuan. "Research on the Coordinated Development of Higher Vocational Education Talents and Regional Economy." *International Public Relations*, no. 9, 2024, pp. 191–193.
- [6] Cao Zijin, Xu Nanying, Zhang Xiaowen. "Research on Pathways for Higher Education to Serve High-Quality Regional Economic Development." *Market Weekly*, vol. 37, no. 10, 2024, pp. 29–32.
- [7] Liu Changan. "Innovating Higher Education Talent Cultivation Models to Implement a Powerful Education Strategy." *Beijing Education (Higher Education)*, no. 1, 2024, pp. 5–6.
- [8] Lin Chao, Xi Yunxia. "Comparative Study on the Adaptability of Higher Education Talent Cultivation to Regional Economic Development in China and the United States." *Journal of Yangzhou University (Higher Education Study Edition)*, vol. 9, no. 5, 2005, pp. 14–16.