

Innovative Research on the Development of Higher Education in Heilongjiang Province Serving the “Opening-Up to the North” Strategy

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Abstract: As a pivotal frontier in China’s “Opening-Up to the North” strategy, the supportive and leading role of higher education in Heilongjiang Province is crucial. From a geo-strategic perspective, systematically analyzing the realistic foundation, core opportunities, and challenges faced by Heilongjiang’s higher education in serving this strategy is a call of the times. Addressing current prominent issues—such as the misalignment between the structure of academic disciplines and strategic needs, insufficient depth in the integration of industry, academia, research, and application, and an underdeveloped ecosystem for international education—requires innovative approaches. These include optimizing the disciplinary cluster system, innovating talent cultivation models, building high-level new think tanks, and creating a resilient international ecosystem. Such measures aim to enhance the support capacity and contribution of higher education to the “Opening-Up to the North” strategy.

Keywords: Opening-Up to the North; Higher education; Disciplinary clusters; Geo-strategy; Heilongjiang Province

Online publication: November 11, 2025

1. Introduction

As the “bridgehead” for China’s opening-up to Russia and Northeast Asia, Heilongjiang Province shoulders the significant mission of implementing the “Opening-Up to the North” strategy and safeguarding national security in food, ecology, energy, and industry needs^[1]. The 2025 Heilongjiang Provincial Education Work Conference further emphasized “promoting the deep integration of education and industry to precisely serve the construction of the new highland for Opening-Up to the North.”

Higher education, serving as a key nexus for science and technology as the primary productive force, talent as the primary resource, and innovation as the primary driver, is the core engine supporting the implementation of the “Opening-Up to the North” strategy. However, a significant “structural mismatch” persists between the higher education system in Heilongjiang and the demands of this strategy. On one hand, there is an insufficient supply of interdisciplinary and internationalized talents urgently needed by the strategy. On the other hand,

the transformation rate of scientific research outcomes from universities remains low, offering limited direct contribution to border trade and industrial cooperation ^[2].

2. Strategic opportunities and realistic foundation for Heilongjiang's higher education serving "Opening-Up to the North"

2.1. Unprecedented strategic opportunities

2.1.1. Policy overlap advantage

Multiple national strategies and initiatives—including the "Belt and Road" Initiative, the China-Mongolia-Russia Economic Corridor, the Heilongjiang Pilot Free Trade Zone, and the initiative for the Comprehensive Revitalization of Northeast China—converge here, providing top-level design and policy guarantees for the open cooperation of higher education.

2.1.2. New geo-economic momentum

Russia's "Far East Development Plan until 2035" is accelerating, and Sino-Russian cooperation in energy, infrastructure, agriculture, digital economy, and other fields continues to deepen, generating huge demand for specialized talents.

2.1.3. Technological revolution drive

New business forms like digital trade, smart logistics, and cross-border e-commerce are flourishing, providing a broad space for disciplinary innovation and talent cultivation in new fields within higher education.

2.2. Unique realistic foundation

Heilongjiang's higher education has accumulated profound experience and formed unique advantages in cooperation with Russia ^[3].

2.2.1. Language and cultural bridge

Heilongjiang Province possesses key institutions for Russian language teaching and research, such as Heilongjiang University, which cultivates the highest proportion of Russian language talents nationwide, and has accumulated rich experience in exchanges with Russia ^[4].

2.2.2. Extensive cooperation platforms

It has established cooperative relationships with nearly a hundred Russian universities and research institutions, including multiple Sino-foreign cooperative education institutions and programs (e.g., the joint program between Harbin Institute of Technology and Saint Petersburg State University), as well as exchange mechanisms like the "Sino-Russian University Alliance" ^[5].

2.2.3. Support from characteristic disciplines

It has formed disciplinary advantages in areas such as Russian Language and Literature, Soviet-Russian History, Northeast Asian Regional Studies, Cold Region Architectural Engineering, Ice and Snow Sports, and Agricultural and Forestry Sciences, laying a solid foundation for serving cooperation with Russia ^[6].

3. Core challenges and prominent problems

Despite a solid foundation and unprecedented opportunities, Heilongjiang's higher education still faces many severe challenges in supporting the "Opening-Up to the North" strategy, mainly manifested as "four lags."

3.1. Lag in alignment between discipline structure and strategic needs

The existing disciplinary layout has not fully kept pace with the industrial upgrading and business model changes under "Opening-Up to the North." While the number of graduates from traditional Russian language programs is high, there is an extreme scarcity of interdisciplinary talents proficient in "Russian + International Trade," "Russian + International Law," or "Russian + Cross-border E-commerce."

3.2. Lag in industry-academia-research-application integration and result transformation efficiency

University research is not closely integrated with the actual needs of border ports and enterprises engaged with Russia. Many research results remain at the stage of papers and patents, failing to be effectively transformed into practical productivity supporting cooperation with Russia ^[7].

3.3. Lag in international education ecosystem and resilience building

The level of international education still falls short of the requirements for "Opening-Up to the North." Firstly, the structure of international student education is imbalanced. Secondly, the internationalization of the curriculum system is insufficient. Thirdly, cooperation resilience is inadequate.

3.4. Lag in resource allocation and coordinated development mechanisms

Universities within the province often operate in silos with homogeneous competition, failing to form a cohesive disciplinary cluster force serving "Opening-Up to the North." Resources are concentrated in Harbin's universities.

4. Development paths and strategic innovation

To solve the aforementioned problems, Heilongjiang's higher education must undergo systematic and structural reform and innovation, establishing a new paradigm to support the "Opening-Up to the North" strategy.

4.1. Constructing a new "demand-oriented, cluster development" discipline system

4.1.1. Establishing a dynamic discipline adjustment mechanism

It organizes universities, the Provincial Department of Commerce, the Foreign Affairs Office, and key Russia-focused enterprises to form a "Discipline Construction Advisory Committee," which regularly releases the "Heilongjiang Province White Paper on Talent Demand for Russia Cooperation" to guide the targeted establishment and adjustment of programs.

4.1.2. Building three major interdisciplinary clusters

Cross-border trade and law cluster: Integrate International Trade, Digital Economy, International Economic Law, Russian Language, etc., to cultivate interdisciplinary talents familiar with Eurasian Economic Union rules and proficient in digital trade.

Energy and infrastructure cluster: Focus on Arctic Passage development, cross-border energy pipelines,

cold region intelligent transportation, etc., integrating Civil Engineering, Energy Engineering, Naval Architecture and Ocean Engineering, Russian Language, etc.

Humanities exchange and regional governance cluster: Strengthen Northeast Asian Country and Area Studies, cultivating high-quality talents deeply versed in Russian national conditions and culture, capable of engaging in cultural exchange, tourism management, and border public management.

4.2. Innovating a new “industry-education integration, project-driven” talent cultivation model

4.2.1. Co-establishing modern industry colleges

In border cities like Heihe and Suifenhe, support universities in co-establishing “Cross-border E-commerce Industry Colleges” or “International Logistics Colleges” with comprehensive foreign trade service enterprises and cross-border e-commerce platforms, implementing a “Dual Mentor System” and bringing classrooms to the frontline of ports ^[8].

4.2.2. Promoting “project-based” learning

It organizes interdisciplinary student teams to engage in real Sino-Russian cooperation projects (e.g., Sino-Russian bridge operation, FTZ construction) for their capstone projects or innovation practices, thereby enhancing their ability to solve complex problems.

4.3. Building a new “high-level, policy-advisory” think tank network

4.3.1. Establishing the “Heilongjiang Province High-End Think Tank Alliance for Opening-Up to the North”

It integrates research strengths from universities, research institutes, and enterprises to focus on cutting-edge issues such as Russia’s Far East policy, barriers to Sino-Russian economic and trade cooperation, and cross-border data flow.

4.3.2. Releasing authoritative report series

It compiles the “Development [Report]” and the “Risk Early Warning Report for Opening-Up to the North” to provide high-quality intellectual support for the decision-making of governments and enterprises.

4.4. Creating a new “resilient, efficient, two-way flow” international ecosystem

4.4.1. Implementing a “northbound” international student attraction plan

It sets up special scholarships to increase the number of degree-seeking students from Russia and other Northeast Asian countries in advantageous disciplines such as STEM, agriculture, and medicine.

4.4.2. Developing “Sino-Russian bilingual, online-offline” quality course modules

Jointly develop online courses and micro-programs with Russian universities on Russian law, standards, technology, and culture, making them available to Chinese students and corporate employees ^[9].

4.4.3. Building a “multi-point support” cooperation network

While consolidating cooperation with universities in Moscow and St. Petersburg, expand deep cooperation with Far Eastern universities like Far Eastern Federal University and Irkutsk State University to enhance the resilience and stability of the cooperation network ^[10].

5. Conclusion and outlook

Serving the “Opening-Up to the North” strategy is a significant historical opportunity for Heilongjiang’s higher education to achieve connotative development and enhance its capacity to serve regional economic and social development. The existing problems regarding disciplinary alignment, industry-education integration, and international resilience must be resolved through profound systematic reform.

In the future, Heilongjiang’s higher education should unswervingly follow a path of characteristic development, cluster development, and integrated development. By constructing a demand-oriented discipline system, deepening the industry-education integrated talent cultivation model, building high-level new think tanks, and creating a resilient international ecosystem, it will ultimately establish a higher education support system that resonates and deeply integrates with the “Opening-Up to the North” strategy.

Funding

Heilongjiang Province Education Science “14th Five-Year Plan” 2025 Annual Comprehensive Education Reform Special Topic Project “Research on the Clusterization Support of Higher Education Disciplines in Heilongjiang Province for ‘Opening-Up to the North’ from a Geo-Strategic Perspective” (ZJE1425033); Heilongjiang Provincial 2025 Cultural and Tourism Scientific Research Project “Study on the Strategies and Paths of Integrated and All-Season Linked Development of County-Level Tourism Economy in Heilongjiang Province — Taking the Construction of Hulin, a Famous Tourism County, as an Example” (2025WL005); 2025 School-Level Cultivation Project for the Construction of Ideological and Political Courses in Postgraduate Curriculum of Heilongjiang University — “Logistics and Supply Chain Management”

Disclosure statement

The author declares no conflict of interest.

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