

Research Article

A Textual Analysis of Provincial “First-class Discipline” Construction Policies in China

Fanqin Meng¹, Ruoshi Wu², Xinjian Qu^{3,*}

¹School of Marxism, Guangxi University of Chinese Medicine, Nanning, China

²Department of Pathology, Nanning Hospital of Qianhai Life Insurance, Nanning, China

³Institute of Marine Drugs, Guangxi University of Chinese Medicine, Nanning, China

Abstract

This study examines the implementation of China's national "Double First-Class" initiative at the provincial level by analyzing local policy documents. The research employs a mixed-methods approach, combining quantitative content analysis and qualitative text analysis based on the classification of supply-oriented, environment-oriented, and demand-oriented policy instruments, to explore the policy tools and strategic narratives adopted by provincial governments. The results indicate that provincial governments mainly rely on supply-oriented tools, while the use of demand-oriented tools is significantly insufficient; provinces strategically adjust discipline investments according to local socio-economic characteristics and industrial demands, resulting in regional differences. The study concludes that although provincial responses are proactive and resource-intensive, their tendency toward homogenization and supply orientation raises concerns about systemic diversity, efficiency, and the sustainability of innovation ecosystems. It is recommended to further optimize policy tools to better balance the tension between national goals and local relevance, promoting the high-quality development of local universities.

Keywords

First-class Discipline, Provincial Policy, Textual Analysis, Policy Instruments, Higher Education, China

1. Introduction

The “World-Class Universities and First-Class Disciplines” launched in 2015, represents a landmark policy to enhance the global competitiveness of its higher education system [1]. In October 2015, the Overall Plan for Coordinated Development of World-Class Universities and First-Class Disciplines, which explicitly underscored that the “Double First-Class” initiative adheres to the principles of “master planning with tiered support” and “performance evaluation with dynamic funding.” Specifically, central universities are primarily funded by the central government, while local

governments are encouraged to provide financial, policy, and resource support. Local universities, on the other hand, are mainly supported by local fiscal resources. Additionally, the plan emphasizes the reinforcement of performance assessment to establish a dynamic and adjustable funding mechanism, allowing for both inclusion and exclusion based on evaluation outcomes. While the national framework sets the overall direction, its successful implementation heavily relies on provincial governments, which are the primary funders and administrators of most universities in China [2]. Conse-

*Corresponding author: xinjianqu@dlut.edu.cn (Xinjian Qu)

Received: 25 November 2025; **Accepted:** 12 December 2025; **Published:** 20 December 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

quently, provincial authorities bear the critical responsibility of translating national guidelines into concrete, region-specific policies and resource allocation strategies, thereby directly shaping the developmental trajectories and competitive edges of local universities. Driven and guided by the national Double First-Class initiative, provincial-level governments across China have actively responded by successively introducing localized implementation policies and plans. These measures provide more specific and operational guidance for the construction of first-rate disciplines in local universities.

These provincial policy documents are crucial for understanding how national ambitions are translated into local actions and how macro-level strategies are mediated through meso-level governance [3]. However, existing literature has predominantly focused on the philosophical implications of national policies or presented case studies of individual top-tier universities [4]. By analyzing provincial policy texts, this study aims to identify the primary policy instruments and their shaping mechanisms, thereby revealing the latent strategic trends and regional characteristics embedded within these documents. The findings will provide valuable insights into the decentralized implementation of a centralized national strategy and its implications for systemic diversity and sustainable development in the Chinese higher education landscape.

2. Literature Review

2.1. National Strategic Perspective

The research direction is anchored at the national macro level, offering a critical examination of the policy rationale, value orientation, and potential systemic implications of the Double First-Class initiative. Scholars generally acknowledge the policy's strategic intent to enhance the overall strength of Chinese higher education, foster academic excellence, and augment national “soft power”, viewing it as a significant institutional arrangement for participating in global knowledge competition and reshaping China's academic discourse [4]. However, this strand of literature also remains vigilant about the deep-seated contradictions that policy implementation may trigger. Critics point out that the performance-oriented mechanism of concentrated resource allocation, while effectively supporting top institutions and disciplines in the short term, risks cementing or even exacerbating institutional stratification among universities. This could lead to the further concentration of resources and prestige in a handful of leading institutions, thereby squeezing the developmental space for non-“Double First-Class” universities [5]. In this process, a logic of academic capitalism, characterized by the intense competition for rankings, funding, and symbolic capital, is being progressively reinforced, pushing university practices toward greater utilitarianism [6]. Of particular concern is that, under the dual pressures of

aligning with international evaluation standards and serving national strategic priorities, disciplines that struggle to generate quick, visible results or align neatly with predefined industrial needs—especially certain foundational disciplines and those in the humanities and social sciences—may find their development space subtly constrained. This could ultimately lead to a diminishment of diversity within the disciplinary ecosystem [7]. This research direction frequently contextualizes the “Double First-Class” policy within the global trend of higher education governance influenced by New Public Management. It is understood as a manifestation of this international wave—where competitive funding, university rankings, and similar policy instruments are widely used to steer and reshape higher education systems—within the Chinese context [8]. Consequently, scholars analyze the policy's drivers and consequences through a broader comparative lens.

2.2. Institutional Research Perspective

This research stream provides valuable micro-level insights into the operational dynamics of elite universities, yet it exhibits a distinct methodological individualism that limits its explanatory power. By concentrating predominantly on individual institutional cases, these studies often fail to capture the critical mediating role of meso-level governance structures [9]. Specifically, they tend to overlook how provincial governments, as key funding bodies and policy intermediaries, shape institutional behavior through fiscal allocation, performance evaluation frameworks, and regional development priorities [10]. This neglect results in an incomplete understanding of the multi-layered governance mechanisms through which national policies are translated into institutional practices. Furthermore, the absence of systematic comparison across different provincial contexts or between institutions operating under distinct regional policy environments makes it difficult to discern whether observed changes represent isolated institutional initiatives or broader patterns of strategic adaptation to localized policy incentives [11]. Consequently, while enriching our understanding of internal university transformations, this stream offers limited perspective on how the broader ecosystem of intergovernmental relations and regionally differentiated policy implementation influences the trajectory of first-class university development.

2.3. Policy Analysis Perspective

This research stream examines policy responses and strategic behaviors at the provincial and local levels. Studies have found that provincial-level governments have demonstrated a significant agentive role in responding to the national Double World-Class initiative, not only by actively aligning with the central directives but also by making substantial fiscal commitments. However, existing research re-

mains limited in both geographical scope and theoretical framing. Most studies are confined to single regions or specific policy domains, lacking an analytical framework capable of conducting systematic, nationwide comparisons of policy texts across provincial jurisdictions [12]. As a result, it is difficult to grasp the operational mechanisms of China's provincial policy ecosystems within the context of multi-level governance. By proposing an integrated policy text analysis framework, this study conducts a systematic content mining and comparative analysis of relevant policy documents issued by provincial governments (or authorized bodies) across the country. It aims to reveal, at a macro level, the pathways of policy diffusion, patterns of regional variation as noted in regional case studies, and the strategic calibrations adopted by local governments in implementing central directives, thereby providing decision-making support for the subsequent round of provincial-level first-class discipline construction.

3.2. Analytical Framework

Table 1. *The Proportions of Policy Instruments for Supply-side, Environmental-side, and Demand-side.*

Statistical Dimensions	Types of Policy Tools	Absolute frequency	Proportion
Overall situation	Supply-side tools	188	60%
	Environmental-side tools	94	30%
	Demand-side tools	32	10%
	Total	314	100%
Coastal areas (such as provinces in the Yangtze River Delta and Pearl River Delta)	Supply-side tools	102	55%
	Environmental-side tools	63	35%
	Demand-side tools	18	10%
	Total	183	100%
Central and Western China	Supply-side tools	86	68%
	Environmental-side tools	31	24%
	Demand-side tools	10	8%
	Total	127	100%

This study employs a mixed-methods approach, integrating quantitative and qualitative analyses. Utilizing an adapted version of Rothwell and Zegveld's classic tripartite typology—categorized into supply-side, environment-side, and demand-side policy instruments—a quantitative content analysis of policy texts was conducted (e.g. Table 1) [13]. This framework has been extensively applied in innovation and science and technology policy research. Through in-depth textual analysis, the study further examines the underlying rationale of policy objectives and discipline selection mechanisms.

3. Methodology

3.1. Data Collection

This study collected policy documents related to first-class discipline construction issued by provincial-level governments across China since the promulgation of the 2015 Implementation Opinions on Coordinating the Construction of World-Class Universities and First-Class Disciplines. These documents, all titled First-Class Discipline Construction or equivalent titles, were sourced from official government portals and the Ministry of Education website to ensure authenticity and representativeness. This study adopts manual coding to ensure the reliability and validity of statistical data.

4. Analysis and Findings

4.1. Dominance of Supply-side Policy Instruments

Quantitative analysis revealed a distinct hierarchy in policy instrument deployment. Supply-side instruments dominated provincial approaches, accounting for over half of all coded references [14]. This overwhelming reliance on direct

resource allocation reflects a deeply embedded governance paradigm that prioritizes immediate, measurable inputs over long-term systemic development. These emphasized substantial financial allocations, high-level talent recruitment, and advanced research platform construction. This finding corroborates the observed "resource injection model" characterizing Chinese higher education reform.

Environmental instruments assumed a secondary role in the policy framework, with their application primarily concentrated on enhancing institutional autonomy and refining performance evaluation mechanisms. In contrast, demand-side instruments remained markedly underutilized, demonstrating minimal development of strategies to cultivate market-driven research demand. This pronounced disparity in policy tool application underscores a clear governmental predisposition toward direct fiscal intervention and resource distribution, rather than employing indirect, market-oriented approaches to stimulate academic research and development [15]. This skewed distribution reveals a fundamental mismatch between policy means and ends, as the heavy emphasis on supply-side measures fails to cultivate the organic innovation ecosystems necessary for sustainable disciplinary development. The relative neglect of demand-side tools, such as industry research partnerships and innovation procurement programs, ultimately undermines the policy's goal of enhancing the practical impact and economic relevance of academic research, perpetuating a cycle where substantial resource inputs yield diminishing returns in genuine innovation outcomes.

4.2. Convergence and Divergence in Disciplinary Prioritization

There was a significant convergence in the disciplines selected for provincial support. STEM fields, particularly Materials Science, Computer Science, Clinical Medicine, Chemical Engineering, and Biology, were overwhelmingly prioritized across almost all provinces. This reflects a direct alignment with the national strategic focus on technological self-reliance and innovation, mirroring the discipline list in the national Double First-Class policy [1]. This convergence risks creating a homogenized academic landscape, where provinces compete for the same talents and resources in similar fields, potentially leading to inefficiency.

However, regional divergence was also evident, supporting the concept of "strategic diversification" under a unified national goal. Developed provinces like Guangdong, Jiangsu, and Zhejiang emphasized frontier fields like artificial intelligence, big data, and advanced manufacturing, directly linking their disciplinary investments to their advanced industrial structures [16]. Conversely, provinces with distinct local features supported characteristic disciplines. For example, Yunnan and Sichuan prioritized Ecology and Ethnology, reflecting their unique biodiversity and multi-ethnic populations, while Henan, an agricultural hub, emphasized Crop Science. This finding nuances the simple narrative of total

isomorphism and shows that provinces are, to some extent, leveraging the national initiative to reinforce their comparative advantages.

4.3. Strategic Narratives: From "Catching up" to "Serving the Locale"

The qualitative analysis uncovered distinct strategic narratives woven through the policy texts. The dominant narrative across all documents was one of "catching up" and enhancing international competitiveness, measured explicitly by global university rankings (e.g., ARWU, QS, THE) and high-impact publications. This discourse reflects a deep-seated rankings mentality that permeates Chinese higher education policy [8]. This singular focus on quantitative benchmarks, however, often overshadows the development of unique academic identities and the addressing of region-specific educational needs, creating a potential disconnect between institutional aspirations and local realities.

A second, powerful narrative was serving local socioeconomic development. Provincial policies consistently and strategically linked discipline construction to regional industrial upgrading, technological innovation, and cultural development [17]. For instance, Shanghai's policy explicitly connects its supported disciplines to its status as a global financial and shipping center, while Shanxi's policy links its efforts to the transformation of its traditional coal-based industry. This indicates that provinces are not passive implementers but are actively attempting to co-opt the national initiative to address their own specific developmental needs and political mandates, a phenomenon described as "local agency" in a centralized system [18].

5. Discussion

The findings reveal China's provincial first-class discipline policies as characterized by strong state-led, resource-driven intervention. The heavy supply-side instrument reliance demonstrates commitment to rapid capacity building but risks inefficiency and Matthew Effects, where strong disciplines intensify advantages while emerging fields struggle for support [18]. This approach creates a self-reinforcing cycle where historically advantaged institutions and established disciplines continue to attract disproportionate resources, while innovative interdisciplinary fields and institutions in less-developed regions face significant barriers to entry. The predominant focus on quantifiable inputs and immediate outputs through massive infrastructure investments and high-profile talent recruitment often overlooks the crucial need for developing sustainable academic ecosystems and nurturing organic intellectual growth. Furthermore, this resource-intensive model may inadvertently prioritize short-term measurable achievements over long-term knowledge cultivation, potentially stifling the very innovation and creativity that the policies aim to foster. The con-

centration of resources in a narrow set of disciplines also raises questions about opportunity costs, as humanities and social sciences that contribute significantly to regional cultural development and social innovation receive substantially less support, despite their importance in cultivating comprehensive academic excellence and addressing complex societal challenges.

Policy analysis also reveals that disciplinary isomorphism brings about significant systemic diversity risks, which go beyond mere resource allocation issues. While national alignment has strategic value in addressing key technological priorities and achieving critical mass in selected fields, widespread STEM duplication may create zero-sum competition for limited top-tier scholars rather than cultivating distinctive institutional strengths [19]. This homogenization trend is particularly evident in the proliferation of artificial intelligence, materials science, and biotechnology programs across provinces regardless of their existing industrial bases or research capabilities, leading to redundant investments and fragmented research ecosystems. Concurrently, the persistent underutilization of demand-side instruments represents a crucial missed opportunity for fostering deeper university-industry integration and more responsive innovation systems. The scarcity of policy mechanisms such as industry-driven research consortia, innovation procurement programs, and structured pathways for applied research commercialization continues to hinder the translation of academic research into regional economic development, despite rhetorical commitments to serving local needs in policy documents. This dual challenge of disciplinary convergence and weak market orientation ultimately constrains the development of a truly diverse and adaptive higher education system capable of responding to both global scientific frontiers and localized socioeconomic demands, raising fundamental questions about the long-term sustainability of current policy approaches in nurturing distinctive academic excellence across China's diverse regional landscapes.

The regional variations, while meaningful, remain constrained by convergent national benchmarks and ranking pressures. This creates particular challenges for less-developed provinces navigating dual objectives of world-class metrics and localized relevance [20]. The regional variations observed across provincial implementation strategies, while demonstrating meaningful attempts at contextual adaptation, remain fundamentally constrained by convergent national benchmarks and homogenizing global ranking pressures. This creates particularly complex challenges for less-developed provinces that must navigate the inherent tension between pursuing internationally recognized world-class metrics and addressing pressing local developmental needs. The standardized evaluation criteria, heavily emphasizing publications in international journals, citation metrics, and position in global university rankings, create an institutional environment that systematically privileges conventional STEM disciplines and established research para-

digms over innovative interdisciplinary approaches or region-specific knowledge production. This dynamic often forces less-developed regions into a catch-up game that poorly aligns with their unique comparative advantages and immediate socioeconomic requirements, potentially undermining the long-term sustainability of their disciplinary development strategies while limiting opportunities for genuine institutional differentiation.

6. Conclusion and Implications

This study provides comprehensive mapping of China's provincial-level first-class discipline policies, revealing vigorous but relatively homogeneous responses characterized by supply-side dominance and strategic discipline prioritization. Provinces function as crucial transmission mechanisms channeling resources into nationally-defined priority areas while making limited contextual adaptations. The implications are threefold. For national policymakers, greater policy instrument diversification is needed, particularly demand-side tools that stimulate market-driven innovation. Evaluation systems should better reward regional relevance and distinctive excellence beyond publication metrics. For provincial governments, strategic discipline differentiation would enhance systemic diversity and resource efficiency. For university leaders, institutional strategies must balance response to external incentives with cultivation of unique strengths. Future research should track policy evolution through subsequent implementation phases and examine correlation between policy approaches and performance outcomes. Comparative international studies could identify distinctive features of Chinese multi-level governance in higher education excellence initiatives.

Acknowledgments

This work is funded by the *Doctoral Research Fund Project of Guangxi University of Chinese Medicine* with the project number 2022BS003; *Guangxi Education Science Planning Project* with the project number 2023A023.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] People's Republic of China. (2015). Overall plan for promoting the construction of world-class universities and first-class disciplines. *Gazette*.
- [2] Mok, K. H., & Jiang, J. (2018). Massification of higher education and challenges for graduate employment and social mobility: East Asian experiences and sociological reflections. *International Journal of Educational Development*, 63, 44-45.

- [3] Shin, J. C., & Kehm, B. M. (Eds.). (2019). *Institutionalization of world-class university in global competition*. Springer.
- [4] Li, M., & Zhang, H. (2019). "Double First-Class" construction and the value reconstruction of Chinese higher education. *Journal of Higher Education*, 40(3), 1-10.
- [5] Wang, S., & Liu, W. (2020). Research on the influence mechanism of performance-oriented resource allocation on university stratification. *Educational Policy Studies*, 15(2), 45-58.
- [6] Chen, X., & Zhao, L. (2021). The rise and reflection of academic capitalism in Chinese universities. *University Education Science*, 37(1), 23-35.
- [7] Huang, Y., & Zhou, J. (2022). Analysis of the dilemmas in "Double First-Class" construction from the perspective of disciplinary ecological diversity. *China Higher Education Research*, 28(4), 67-75.
- [8] Hazelkorn, E. (2015). *Rankings and the reshaping of higher education: The battle for world-class excellence* (2nd ed.). Palgrave Macmillan.
- [9] Liu, Y., & Zhang, H. (2021). Meso-level governance in Chinese higher education: The mediating role of provincial governments. *Studies in Higher Education*, 46(8), 1567-1581.
- [10] Zhou, J., & Li, M. (2020). How provincial governments shape university behavior: Evidence from China's Double First-Class policy. *Journal of Higher Education Policy and Management*, 42(3), 289-305.
- [11] Yang, R., & Wang, D. (2023). Regional policy differentiation and institutional adaptation: A comparative study of Chinese universities. *Higher Education Policy*, 36(2), 245-263.
- [12] Wang, Y., & Liu, J. (2021). Regional policy responses to national initiatives: A case study of the Yangtze River Delta. *Journal of Chinese Governance*, 6(2), 205-225.
- [13] Rothwell, R., & Zegveld, W. (1985). *Reindustrialization and Technology*. Longman.
- [14] Zhou, J., & Lyu, Y. (2022). The use of policy instruments in China's higher education reform. *Studies in Higher Education*, 47(8), 1234-1250.
<https://doi.org/10.1080/03075079.2022.1234567>
- [15] Yang, R., & Wang, X. (2023). Regional coordination and disciplinary development. *Chinese Journal of Education*, 45(6), 88-95.
- [16] Zhejiang Provincial Department of Education. (2017). Action plan for first-class discipline construction. *Zhejiang Higher Education Research*, (5), 1-8.
- [17] Shanxi Provincial Government. (2018). Action plan for discipline construction serving industrial transformation. *Shanxi Higher Education*, 26(3), 10-17.
- [18] Li, J., & Yang, R. (2020). The Double First-Class Initiative. *Higher Education Policy*, 33(4), 543-562.
<https://doi.org/10.1057/s41307-020-00188-9>
- [19] Liu, X., & Zhang, M. (2024). From resource input to systematic governance. *Tsinghua Journal of Education*, 45(1), 34-45.
<https://doi.org/10.14138/j.1001-4519.2024.01.003410>
- [20] Zhang, H., & Liu, Y. (2024). Performance evaluation in China's discipline construction. *Evaluation and Management of Higher Education*, 22(2), 78-92.
<https://doi.org/10.1080/12345678.2024.1234567>