

# Unpacking China's Pisa Success: Governance, curriculum, and challenges in pursuit of educational excellence

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## Abstract

This review synthesizes literature from 2009 to 2024 to analyze key features of China's education system influencing PISA (Programme for International Student Assessment) outcomes, focusing on governance, curriculum, learner and teacher development, and support systems. China's high PISA rankings reflect strengths in centralized governance, rigorous curricula, and teacher professionalism, especially in affluent urban regions. However, these successes mask persistent rural-urban disparities and an exam-driven culture criticized for stifling creativity and increasing student stress. Ongoing reforms seek to address these issues, yet sustained efforts are essential to ensure educational excellence that is both broad-based and balanced across the country.

**Keywords:** PISA; China; Education System; Systematic Review; Performance

## 1. Introduction

China has participated in the Programme for International Student Assessment (PISA) four times, initially represented by Shanghai in 2009 and 2012, regions known for their outstanding performance that placed them well above OECD averages. However, these results primarily reflected urban centers rather than the entire country, revealing significant rural-urban educational divides and inequality. In 2015, the sample expanded to include Beijing, Jiangsu, and Guangdong, which led to a drop in ranking due to greater diversity. By 2018, Guangdong was replaced by Zhejiang, a province with a strong educational reputation, likely improving China's overall standing. PISA participation serves multiple purposes for China: enhancing system assessment, modernizing education quality and management, and professionalizing policy-making. This review synthesizes literature from 2009 to 2024 to analyze key features of China's education system influencing PISA outcomes, focusing on governance, curriculum, learner and teacher development, and support systems (OECD, 2020; Schulte, 2019; Wikipedia, 2025)

## 2. Methods

This systematic review draws on peer-reviewed articles, policy analyses, and official reports related to China's PISA participation and education reforms from 2009 to 2024. The analysis is structured following the IMRAD format, with thematic areas identified from the most relevant and recent research. Data synthesis emphasizes governance and management, curriculum development, learner and teacher development, and support systems in relation to PISA performance and subsequent policy responses.

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### 3. Results

#### 3.1. Governance and Management

China's education system is highly centralized, with the Ministry of Education (MOE) setting national policies, standards, and curricula, while provincial and local authorities implement these directives. Teacher certification follows national standards requiring formal qualifications, certification exams, and continuous professional development. Salaries and benefits are regulated to maintain competitiveness, especially in urban areas. Despite robust governance, significant disparities persist between urban and rural schools, with urban centers receiving more resources and attracting more qualified teachers, contributing to their superior PISA performance (Ministry of Education of the People's Republic of China, 2025; Lin, 2025; CHEA, 2025).

#### 3.2. Curriculum Development

China employs a nationwide standardized curriculum emphasizing core subjects aligned with PISA domains: mathematics, science, and Chinese language. Recent reforms aim to move beyond rote memorization to foster critical thinking, creativity, and holistic development, though implementation varies widely across regions. Shanghai's curriculum reforms, influenced by PISA insights, have shaped national policy by integrating balanced assessment systems that include student well-being and broader competencies alongside academic achievement (Asia Society, 2006; Wang, Bian, Xin, Kher, Houang, & Schmidt, 2009; OECD, 2019).

#### 3.3. Learner Development

Chinese students are recognized for their strong work ethic, discipline, and academic achievement, particularly in urban areas. However, the system's heavy focus on examinations results in high workloads, significant stress, and widespread reliance on extracurricular tutoring. Motivation is often extrinsic, driven by exams and parental expectations, with less emphasis on creativity and independent inquiry. Some Chinese educators defend this approach, emphasizing knowledge accumulation as foundational for innovation. Conversely, others argue for more child-centered, creative education. The Shanghainese model has attracted international attention for its relative educational equality and effective management of low-performing schools, suggesting potential lessons for other contexts (OECD, 2020; BBC, 2015; Chen, 2020; Zhao, 2016).

#### 3.4. Teacher Development

Teacher professionalization is prioritized through clear career pathways, regular evaluations, and mandatory ongoing training. Urban teachers benefit from better training, resources, and incentives, whereas rural teachers face heavier workloads and fewer advancement opportunities. Government reforms target improving teacher quality and reducing disparities, but challenges remain in attracting and retaining qualified teachers in less developed regions (Ministry of Education of the People's Republic of China [MOE], 2024; Li, Yang, & Wang, 2025; UNESCO, 2025).

#### 3.5. Support Systems

China has developed comprehensive support systems, including nationwide assessments, targeted funding for disadvantaged areas, and initiatives to modernize school infrastructure. Inspired by PISA, national quality monitoring systems assess academic achievement alongside student well-being, teaching quality, and school management. Nonetheless, resource allocation remains uneven, with urban areas enjoying more robust support, perpetuating performance gaps (Chen, 2020; Darcy & Roy Press, 2023; Sitian Chen, 2020).

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### 4. Discussion

China's high PISA rankings reflect strengths in centralized governance, rigorous curricula, and teacher professionalism, especially in affluent urban regions. However, these successes mask persistent rural-urban disparities and an exam-driven culture criticized for stifling creativity and increasing student stress. While reforms aim to promote holistic development, diversify assessments, and address inequalities, progress is uneven. Chinese policymakers increasingly acknowledge that high PISA scores do not fully capture educational quality, particularly regarding student well-being, innovation, and equity. The enduring influence of Confucian educational traditions and societal expectations shapes both achievements and challenges within the system (Grujters, 2020; Kobakhidze, 2023; OECD, 2023; TES, 2023).

## 5. Conclusion

China's education system, as reflected in its PISA performance, is characterized by strong governance, standardized curricula, and a focus on teacher quality. These factors contribute to high test scores, particularly in urban centers, but also reveal challenges including exam pressure, urban-rural disparities, and limited emphasis on creativity and holistic development. Ongoing reforms seek to address these issues, yet sustained efforts are essential to ensure educational excellence that is both broad-based and balanced across the country.

## Compliance with ethical standards

I comply with ethical standards by conducting my research responsibly, ensuring transparency, obtaining necessary ethical approvals, and securing informed consent when applicable. The researchers' also assured that there would be conflicts of interests and that the top priority is to maintain a high level of objectivity in data collection, analysis, and discussion. Moreover, this research would be of compliance to the Republic Act No. 10173 or known as the Data Privacy Act of 2012.

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