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AI-Enabled Cadre Education and Training: Policy Evolution Pathways and Latest Practices in China

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Abstract: Under the background of merging new technologies into government governance, artificial intelligence is gradually embedded in the governance system and has a positive impact on government training in the public sector. Meanwhile, the relevant policies show obvious characteristics of phased evolution. This paper focuses on China's policies for AI-enabled cadre education and training, and systematically traces their evolution over the past decade. First, the policy evolution is divided into two stages, including an initial stage of strategic positioning and a subsequent stage of systematic advancement. Then, the characteristics of these policy changes are analyzed in three aspects, i.e., from technology advocacy to governance needs, from macro policy to system promotion and construction, and from general education training to specific capability improvement. Finally, three regions, including Zhejiang Province, Shenzhen City and Yangzhou City, are selected to explain how AI can enable cadre education and training in the latest practices.

1. Introduction

The rapid development of artificial intelligence technologies has significantly changed human production and lifestyles, and also injected strong momentum into social governance. The Chinese government places great emphasis to the deep integration of AI and various industries, and regards AI as the core support to promote social governance. In 2025, the Guiding Opinions of the State Council on Fully Implementing the "AI+" Action explicitly stated that AI applications in the field of government affairs should be promoted in a safe, stable and orderly manner [1], which pointed out the direction for AI-enabled governance and services.

As government services gradually evolve toward informatization, digitalization and intelligence, the gradual application of artificial intelligence in government services also puts forward higher requirements for the capability of governance and the quality of public servants. The traditional training of administrative knowledge has become increasingly inadequate to meet the demands of digital government development. The education and training of cadres (public servants) need to be reformed in both training content and training methods. According to National Cadre Education and Training Plan (2023-2027), it emphasizes the application of modern information technologies in cadre education and training, including virtual reality, augmented reality, hybrid reality and artificial intelligence, and promotes the digitalization and intelligence of cadre learning [2].

Promoting cadre education and training, through artificial intelligence has become a requirement for advancing the modernization of governance capability. From the perspective of China's policy practice over the past decade, AI-enabled cadre education and training was not promoted in isolation, but has been embedded within the national AI development strategy, the construction of digital government, and cadre training system, exhibiting a clear logic of gradual evolution. Through the systematic analysis of the relevant policies in the past decade, this study seeks to deepen the understanding of the internal mechanisms underpinning AI-enabled public sector training, refine the transformation pathways for cadre capacity-building policies, and offer practical reference for the digital transformation of public sectors training in other countries.

2. Policy evolution pathways

Over the past decade, China has shown an embedded and gradual evolution process in AI-enabled government training policy. Rather than emerging abruptly, these polices has been systematically guided by the national strategy from top to bottom, in which macro-level strategy objectives has been progressively incorporated into cadre education and training framework to form a unified action system. The first stage of policy evolution is the strategic planning and layout from 2015 to 2019. By promoting the intelligent transformation of social governance, national policies established an institutional foundation for the organic combination of artificial intelligence and government services, while simultaneously provides momentum for the digital transformation of cadre training. During the period 2020-2025, based on that strategic foundation, the policy has gradually shifted from broad strategic orientation toward more implementation pathways, and further clarified the application scenarios of AI-enabled government services and the competency requirements for public servants. These changes laid a policy foundation for subsequent action plans by administrative departments and localized practices by local governments.

2.1. Strategic planning and layout stage (2015-2019)

In the first stage, the strategic layout laid the foundation for intelligent government training. Table 1 shows the relevant policies at this stage. In 2015, the Guiding Opinions of the State Council on Actively Promoting the "Internet +" Action proposed to accelerate the deep integration of the Internet and the government public service system [3]. This laid the foundation for the integration of artificial intelligence and government services. In 2016, the Outline of the National Informatization Development Strategy clearly proposed to make full use of information technology to improve the scientific level of management and service of cadres and talent [4]. This outline puts forward rigid requirements for the informatization ability of public servants from the national level. In 2017, China released the Notice of the State Council on Issuing the Development Plan for a New Generation of Artificial Intelligence, raising the development of artificial intelligence to the national strategic level, requiring system layout and active planning. The plan clearly proposes to promote the intellectualization of social governance and develop an artificial intelligence platform suitable for government services and decision-making [5]. In 2018, the central authorities released the National Cadre Education and Training Plan (2018-2022), which explicitly mentioned to carry out the learning and training of new knowledge and skills such as Internet, big data, cloud computing and artificial intelligence, and help cadres improve the basic knowledge system necessary for performing their duties [6]. From 2019, provinces and cities in China began to issue implementation opinions on relevant training. For example, Shandong Province has put forward the requirement that cadres should carry out the learning and training of new knowledge such as Internet, big data, cloud computing and artificial intelligence [7]. It can be seen that these trainings at this stage focus on improving the popularity and the understanding of cadres' knowledge related to AI.

Table 1: Core policies on promoting cadre informatization training

No.	Release Date	Title
1	July,2015	Guiding Opinions of the State Council on Actively Promoting the "Internet +" Action
2	July,2016	Outline of the National Informatization Development Strategy
3	July,2017	Notice of the State Council on Issuing the Development Plan for a New Generation of Artificial Intelligence
4	November, 2018	National Cadre Education and Training Plan (2018-2022)

2.2. System promotion stage (2020-2025)

The second stage is the system promotion, in which the policy mainly transits from the macro strategy to the specific implementation path. Table 2 shows the relevant policies at this stage. In 2021, the Office of the Central Cyberspace Affairs Commission issued the Action Plan for Enhancing Digital Literacy and Skills for All, which proposed to improve the digital governance ability of leading cadres and civil servants [8]. To boost the digital governance capacity, the policy aims to strengthen the informatization training of leading cadres and civil servants, expand the pool of online training resources in the fields of digital economy, society and government, integrate the development of digital governance competencies for leading cadres into the core teaching agenda of administrative colleges at all levels. In 2022, the Guiding Opinions of the State Council on Strengthening the Construction of Digital Government clearly stated that strengthening the construction of digital government is an important measure to innovate the concept and methods of government governance, form a new pattern of digital governance, and promote the modernization of national governance system and governance capacity [9]. In 2023, the "Robot+" Application Action Implementation Plan was issued by Ministry of Industry and Information Technology and 16 other departments, which defined Education as the key application field of robot technology [10]. This policy provides a feasible path for robots to introduce various training scenarios. In August 2023, the Guiding Opinions of the General Office of the State Council on Establishing a Regular Working Mechanism for Improving the Efficiency of Government Services Based on the National Integrated Government Service Platform was issued, which clearly stated that improve the mechanism for improving the ability of digital literacy, and required continuously improve the digital thinking, digital skills and digital literacy of cadres [11]. In September 2023, the central authorities revised and issued the Regulations on Cadre Education and Training, which made it clear that improve the digital level of cadre education and training teaching and management, and made good use of big data, artificial intelligence and other technical means [12].

From 2024, the pace of intelligent cadres' education and training in China is gradually clear. The Guiding Opinions of the State Council on Further Improving Government Services, Enhancing Administrative Efficiency, and Promoting the "Efficient Handling of a Single Matter" put forward that government services should be transformed from human service type to human-computer interaction type, and from experience judgment type to data analysis type [13]. In 2025, the Guiding Opinions of the State Council on Fully Implementing the "AI+" Action was issued, which proposed to promote the application of artificial intelligence in the field of government affairs in a safe, stable and orderly manner, and create a new model of government services that accurately identify needs, actively plan services, and intelligently handle the whole process [1]. In October 2025, the Guide for the Deployment and Application of Large-Scale AI Models in Government Affairs stated that the government intelligence training had entered the stage of deepening the deployment. This policy advocates the necessary to develop a training curriculum system covering the theory, technology,

application, safety, ethics, industry and other contents of AI large models, carry out AI literacy and skills training, improve the cognitive level of leading cadres on AI, and enhance the application ability and level of cadres [14]. Local governments have also accelerated their response to cadre training. For example, Bao'an District, Shenzhen City, Guangdong Province, issued a Work Plan for Conducting Tiered and Categorized Full-Coverage Education and Training on Artificial Intelligence under the "1363" Framework. Through system design, including one main line, three aspects, six topics, and three abilities, it aims to make digital intelligence literacy become the standard competence of cadres in the region, and realize full coverage and systematic training from recognition to application to governance [15].

Table 2: Core policies on promoting cadre intelligent training

No.	Release Date	Title
1	November, 2021	Action Plan for Enhancing Digital Literacy and Skills for All
2	June, 2022	Guiding Opinions of the State Council on Strengthening the Construction of Digital Government
3	January, 2023	Notice of the Ministry of Industry and Information Technology and 16 Other Departments on Issuing the "Robot+" Application Action Implementation Plan
4	August, 2023	Guiding Opinions of the General Office of the State Council on Establishing a Regular Working Mechanism for Improving the Efficiency of Government Services Based on the National Integrated Government Service Platform
5	September, 2023	Regulations on Cadre Education and Training
6	October, 2023	National Cadre Education and Training Plan (2023-2027)
7	January, 2024	Guiding Opinions of the State Council on Further Improving Government Services, Enhancing Administrative Efficiency, and Promoting the "Efficient Handling of a Single Matter"
8	July, 2025	Notice of the General Office of the Ministry of Human Resources and Social Security on the Extensive Development of AI General Continuing Education for Professional and Technical Talents
9	August, 2025	Guiding Opinions of the State Council on Fully Implementing the "AI+" Action
10	October, 2025	Guide for the Deployment and Application of Large-Scale AI Models in Government Affairs

2.3. Main characteristics of policy evolution

At the beginning, China's AI-enabled governance affairs training started from the informatization infrastructure. Then, the Chinese government strengthened the top-level design and deeply bound the cadre training with the goal of intelligent social governance, in order to improve the governance literacy of public servants and boost the scientization of government services and decision-making. From 2020 to 2025, the digital government strategy was further refined and implemented. The training object was expanded from leading cadres to all public servants. Relevant strategies were incorporated into the continuing education system for professional and technical personnel to build an integral lifelong learning ecosystem. The focus of the training has also shifted from the early popularization of general education to the new requirements for the implementation of AI government

scenarios, and emphasized the comprehensive improvement of the cognition of leading cadres, the human-computer collaboration and digital intelligence application ability of cadres.

2.3.1. From technology advocacy to governance needs

The early Chinese government mainly introduced information technology and related infrastructure to promote AI-enabled government training. Based on this, the Chinese government gradually realized that social governance needs informatization and intelligence, and began to increase the top-level and strategic layout. As the executors of policy implementation, cadres' education and training goals must be deeply bound with the national strategy. Through these trainings of relevant knowledge for public servants, the management capabilities of cadres were improved, which is essentially a strategic investment in the accuracy of social governance, the intelligence of government services, and the scientific management decision-making.

2.3.2. From macro policy to system promotion and construction

The policy system of AI-enabled cadre training has been initially constructed in China, forming a closed-loop policy of top-level design, departmental implementation, local implementation, personnel training and ability improvement. Especially from 2023 to 2025, the top-level strategy of digital government was further extended to the regional cadres' education and training. The scope of training objects has expanded from leader to all cadres. For example, the Notice of the General Office of the Ministry of Human Resources and Social Security on the Extensive Development of AI General Continuing Education for Professional and Technical Talents emphasized that artificial intelligence training will be included to create an intelligent, personalized and whole domain lifelong funded learning system [16].

2.3.3. From general education training to specific capability improvement

The early cadre training mainly focused on the cultivation of relevant general knowledge and the popularization of information technology knowledge. The accelerated landing of artificial intelligence and robots in specific governance scenarios further leads to new requirements for the ability of public servants. It not only requires leaders to improve their cognitive ability, but also requires cadres to improve their application level, especially the ability of human-computer cooperation and digital intelligence management.

3. Latest regional practices

The cadres training of AI-enabled in China is not only a technological innovation forcing institutional change, but also a gradual integration of training tools and governance methods within the existing framework of the cadre's system. Since 2025, a variety of differentiated practices have appeared in the education and training of AI-enabled cadres, and served different stages and objectives of cadre's capacity development. The practices in three regions are introduced below. Zhejiang province held the large-scale general training to accelerate the empowerment of AI knowledge for cadres through online and offline integrated training. Shenzhen city emphasized immersive teaching and training scenarios, and improved the capability of using AI in working scenarios through open training. Yangzhou city focused on the application of intelligent agents, took the local data platform as the technical base, and guided cadres to carry out the collaborative development and deployment of intelligent agents around the real pain point of government affairs.

3.1. Zhejiang Province: Provincial large-scale training

From March to June 2025, the Organization Department of the Zhejiang provincial launched a series of trainings every week, where 296,000 cadres from the provincial, municipal, county, township and village levels participated these trainings [17]. Different types of cadres learned together through online and offline channels. These trainings have three features: First, voluntary participation and no mandatory requirements for cadres. Second, these teachers are elites from academia and industry, such as Jian Wang, academician of the Chinese Academy of engineering, founder of Alibaba cloud, and Xingxing Wang, founder of Yushu technology. Third, the training theme based on AI general knowledge and application network specialized training. After centralized training, cadres were encouraged to use AI thinking and mode to help work. For example, the trainee Yucong Pei, a cadre in a top-100 town, conceived a new AI regulatory environment mode after the training [17].

3.2. Shenzhen city: Full scenario system training

From April to July 2025, the Municipal Organization Department and relevant departments closely followed the main topic of technology enabled and scenario application, and successively held 10 special seminars on artificial intelligence scenario application [18]. These trainings have two features. On one hand, it covered a wide range of government services, city governance, medical services, education and teaching, and cultural tourism. On the other hand, these trainings adopted open training approach, pay attention to selecting trainees from the perspective of industrial chain and business chain, and invite representatives form enterprise, business associations and cadres of government organs to participate in the training together for joint research and discussion.

3.3. Yangzhou city: Intelligent agent co-creation training

In December 2025, Yangzhou, one of the prefecture-level cities in Jiangsu Province, launched the first intelligent co-creation training course for public servants. This training was jointly organized by the Municipal Organization Department and the Municipal Data Bureau successfully, where nearly 100 cadres from all regions and departments in the city participated in the training [19]. These trainings integrated theoretical learning and practical application, highlighted the characteristics of human-computer collaboration, and relied on the Intelligent Agent Co-Creation Platform of Yangzhou City, which was created by the municipal data system to achieve training objectives. This platform has several features. First, it has opened up the boundaries between departments and industries, integrated professional knowledge in many fields. Second, it focused on core field such as government services, social governance, industrial development, and people's livelihood security. Third, a series of intelligent agent applications are developed to reflect local characteristics of Yangzhou and solve the problem of blocking points in work.

4. Conclusion

The rapid development of AI is profoundly influencing cadre training. This study focuses on China's policies for AI-empowered cadre education and training over the past decade. The evolution of these policies exhibits three characteristics: from technology advocacy to governance-driven demand, from macro policy to system promotion and construction, and from general education training to specific capability improvement. Additionally, this study introduces the latest regional practices in China. This study provides a policy research foundation for AI-enabled cadre education and training.

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