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THE DEVELOPMENT HISTORY, CHARACTERISTICS AND TRENDS OF EDUCATIONAL TECHNOLOGY IN CHINA

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Abstract: After a century of exploration, China's educational technology has forged a unique development path, transforming from electronic education to digital and intelligent education. This article systematically reviews its development history, stage characteristics, and future trends. Historically, the period from the 1920s to 1985 was the exploratory phase of electronic education; the period from 1986 to 2017 was the formation of the educational technology discipline system and the development of educational informatization; since 2018, marked by the "Education Informatization 2.0 Action Plan," it has entered a new 2.0 era. The National Education Digitalization Strategy Action was launched in 2022, and the "Outline of the Plan for Building a Strong Education Nation (2024-2035)" further places educational digitalization in a key position for opening up new development tracks. In terms of development characteristics, China's educational technology exhibits a distinct policy-driven nature, currently undergoing four major transformations: from localized scarcity of resources to nationwide sharing; from standardized teaching to personalized learning; from tool-assisted learning to scenario integration; and from experience-based governance to data-driven approaches.

Keywords: China, Development Stage, Digital Transformation, Educational Informatization.**Disciplines:** Vocational Learning Theory.**Subjects:** Other.**DOI:** <https://doi.org/10.70393/6a6574.343235>**ARK:** <https://n2t.net/ark:/40704/JET.v3n2a01>

1 INTRODUCTION

Educational technology is an important engine for the modernization of education. From the emergence of electronic education in the 1920s to the deep integration of artificial intelligence and smart education today, China's educational technology has gone through a century-long journey. This development process is closely intertwined with the grand narrative of China's educational modernization, reflecting both the global wave of technological change and the profound changes in national strategic needs in different historical periods. The strategic value of educational technology has been continuously upgraded at the policy level. In 2018, the Ministry of Education issued the "Action Plan for Educational Informatization 2.0" [1], marking the leap from the 1.0 era to the 2.0 era of educational informatization in China. In 2019, "China's Education Modernization 2035" listed "accelerating the transformation of education in the information age" as one of the strategic tasks [7]. In 2022, the National Education Digitalization Strategy Action [2] was officially launched, and the National Smart Education Public Service Platform was launched on March 28 of the same year. The 20th National Congress of the Communist Party of China included "promoting the digitalization of education" in the Party Congress report for the first time. In early 2025, the "Outline of the Plan for Building a Strong Education Nation (2024-2035)" [3] was officially issued, clearly requiring the "implementation of the national education digitalization strategy" and the "promotion of artificial intelligence to assist education reform" [3], placing education digitalization in a key position for opening up new development tracks and shaping new development advantages [3]. This series of policy deployments indicates that educational technology has risen from a peripheral tool to an auxiliary teaching tool to a core force driving systemic changes in education. At the same time, China's international influence in education technology has significantly increased. According to the "Global Digital Education Development Index Report" [4], China's overall level of digital education jumped from 24th in 2023 and 9th in 2024 to 6th in 2025, firmly establishing itself in the first echelon of global digital education development [4]. Yang Zongkai, director of the Education Digitalization Expert Advisory





Committee of the Ministry of Education, pointed out that during the "14th Five-Year Plan" period, China's education digitalization development has moved from single-point exploration and partial application to the "smart education" stage of system integration and comprehensive deepening [8]. This leap in international ranking is both an affirmation of past development achievements and a higher requirement for future in-depth research. The academic community has paid close attention to the development of educational technology in China. In terms of historical review, Wang Yunwu et al. divided the development path of educational technology in China over the past century into three stages: the exploration stage of the development path of Chinese-style electrified education (1920s-1985), the formation stage of the development path of Chinese-style educational technology (1986-2017), and the mature stage of the development path of Chinese-style educational technology in the new era (2018-2035) [6]. From the perspective of educational informatization, some scholars have divided it into the pre-educational informatization stage (1978-2000), the educational informatization 1.0 stage (2001-2017), the educational informatization 2.0 stage (2018-2021), and the digital transformation stage of education (after 2022) [5]. In terms of policy evolution and comparative research, some studies have taken 189 educational informatization policy documents issued by the state between 1993 and 2024 as the object, and systematically revealed the phased shift of policy focus from infrastructure construction to the integration of smart education, digital governance and artificial intelligence [5]; some scholars have also conducted a two-dimensional analysis of the preferences and tool selection of global educational digitalization policies [9]. In terms of discipline construction, the academic community has also conducted rich discussions on the development history of Chinese educational technology discipline. However, existing research mostly focuses on a specific stage or a single dimension, lacking a multi-dimensional examination that spans a century, integrates policy evolution, discipline development and technology application; there is still a lack of sufficient theoretical response to the systematic characteristics and internal logic of the current leap from "educational informatization" to "educational digitalization" and "smart education". Based on the above background, this paper aims to systematically sort out the development history, stage characteristics and future trends of Chinese educational technology. The study first outlines the development path from the dual perspectives of a century-long vision and educational informatization, then extracts the core characteristics and development laws of each stage, and finally looks forward to the development trend towards 2035 based on the era context of artificial intelligence and digital transformation. This study aims to construct an analytical framework that combines historical depth with a forward-looking perspective, based on the integration of policy text analysis, disciplinary development review, and technological evolution examination, to provide a reference for deepening research on educational technology in China and serving the construction of a strong education nation.

I. Development History

The development history of educational technology in China can be examined from both a century-long perspective and the perspective of educational informatization. The following first outlines a panoramic view of three stages over a century, and then supplements the stage division from the perspective of educational informatization to present a more comprehensive historical picture.

2 DEVELOPMENT HISTORY

The development of educational technology in China can be examined from both a century-long perspective and the perspective of educational informatization. The following first outlines the panoramic trajectory of three stages over a century, and then supplements this stage division from the perspective of educational informatization to present a more comprehensive historical picture.

2.1 THREE-STAGE DIVISION FROM A CENTURY-LONG PERSPECTIVE

2.1.1 The Exploration Stage of the Development Path of Educational Technology with Chinese Characteristics (1920s-1985)

The origins of educational technology (audio-visual education) in China can be traced back to the 1920s. In 1927, the Shanghai Commercial Press established the Guoguang Film Company, which produced my country's earliest silent educational films, such as "Education for Blind Children," "Silkworm Raising," and "Famous Scenic Spots of the Yangtze River," which were shown at school assemblies. This marked the beginning of educational films in my country. [10] The term "audio-visual education" also emerged in the 1920s and 1930s, reflecting the use of electricity as a teaching tool in education. [11] In 1935, the Department of Social Education at Shanghai Daxia University offered an "Educational Film Course." In 1936, educators in Shanghai founded my country's earliest audio-visual education publication, the weekly "Audio-visual Education." In 1937, the Shanghai Commercial Press published my country's first monograph on audio-visual education—Chen Yousong's "Sound Film Education." [12] The development of audiovisual education during this period roughly went through the nascent stage of the introduction of silent films (1899-1921), the initial stage of using audiovisual media in teaching (1922-1931), and the development stage of establishing specialized audiovisual education institutions (1932-1949) [10]. my country's educational





technology (audiovisual education) began to develop under the influence of foreign audiovisual education theories and practices [6]. Some scholars summarize this stage as the initial stage of China's audiovisual education development (from the 1920s to the late 1940s) [11].

After 1949, audiovisual education progressed through twists and turns. In November 1949, the Science and Technology Popularization Bureau of the Ministry of Culture established the Audiovisual Education Department, responsible for leading the national audiovisual education work [12]. Around 1958, China launched an educational reform movement, promoting the development of audiovisual education activities in universities and primary and secondary schools [13]. Starting in 1960, television universities were successively established in Shanghai, Beijing, Shenyang, Harbin, Guangzhou, and other places.[12] During the Cultural Revolution, the work of audiovisual education was once at a standstill.[11] 1978 was a crucial turning point in the development of audiovisual education in China. In the spring of 1978, Deng Xiaoping pointed out at the National Education Work Conference: "We must formulate measures to accelerate the development of modern educational means such as television and radio. This is an important way to develop education in a faster, better, and more economical way, and it must be given full attention." [12] This speech laid the policy foundation for the comprehensive recovery of audiovisual education. In the same year, the Ministry of Education established the Central Audiovisual Education Center.[13] On February 6, 1979, the Central Radio and Television University officially opened.[12] Subsequently, audiovisual education centers were established in all provinces, autonomous regions, and municipalities. Starting in 1979, the Ministry of Education established the Audiovisual Education Bureau and the Central Audiovisual Education Center to be responsible for the management and business of audiovisual education nationwide.[13] By the end of 1985, 2,253 counties (districts) across the country had established educational technology institutions, accounting for about 95% of all counties and districts nationwide. More than 800 universities and many primary and secondary schools across the country had successively established educational technology centers and classrooms.[12]

Regarding discipline development, in June 1983, the Ministry of Education approved South China Normal University to establish my country's first undergraduate program in educational technology.[6] In 1983, the Central Educational Technology Center organized the establishment of a national educational technology textbook compilation and review group, and began to organize the compilation of the public course textbook "Educational Technology".[14] In 1986, the educational technology program at South China Normal University was rated as one of the first batch of provincial key disciplines, and in the same year, it obtained the first batch of master's degree granting rights nationwide.[15] On October 1, 1986, China Education Television officially began broadcasting, marking an important step forward in the development and use of modern educational technology in my country's education system.[12]

2.1.2 The Formation Stage of the Development Path of Educational Technology with Chinese Characteristics (1986-2017)

1993 was a significant milestone in the development of educational technology as a discipline in China. The "Directory of Undergraduate Majors in Regular Institutions of Higher Learning" issued by the former State Education Commission officially renamed the "Electrical Education" major as "Educational Technology" [6]. This renaming not only facilitated the exchange and integration of Chinese electronic education with educational technologies in developed countries such as Europe and the United States, but more importantly, accelerated the transformation of Chinese electronic education towards a system supported by modern educational theory [6]. In September 1993, the Institute of Modern Educational Technology at Beijing Normal University was approved to establish China's first doctoral program in Educational Technology, and officially began enrolling students in 1994 [15]. In 2002, the annual meeting of the China Association for Educational Technology officially changed the association's name to "China Educational Technology Association" [6], and "Educational Technology" gradually replaced the name and definition of "Electrical Education," which had been used in China for more than half a century [6]. In terms of policy promotion, in February 1993, the CPC Central Committee and the State Council officially issued the "Outline for the Reform and Development of Education in China", which clearly proposed to "actively develop radio and television education and school audio-visual teaching, and promote the use of modern teaching methods" [18]. In the 21st century, educational informatization has risen from technical practice to national strategy. In 2010, the "National Medium and Long-Term Education Reform and Development Plan (2010-2020)" first proposed that "information technology has a revolutionary impact on education development". In March 2012, the Ministry of Education issued the "Ten-Year Development Plan for Educational Informatization (2011-2020)", which proposed that "driving the modernization of education with educational informatization is a strategic choice for the development of my country's education" [16]. In the same year, the National Educational Informatization Work Video Conference clearly stated that the construction of educational informatization should be promoted with "three connections and two platforms" as the starting point [14], namely, "broadband network access to every school, high-quality resources access to every class, and network learning space access to everyone", and the construction of public service platforms for educational resources and public service platforms for educational management. During this period, educational informatization gradually moved from "following" to "running alongside" [5].





2.1.3 The Mature Stage of the Development Path of Educational Technology with Chinese Characteristics in the New Era (2018-2035)

In April 2018, the Ministry of Education issued the "Educational Informatization 2.0 Action Plan" [1], proposing the development goals of "three comprehensives, two highs, and one large" [1]. This plan is an inevitable choice to adapt to the development of education in the intelligent environment and a specific implementation plan to promote "Internet + Education" [1]. Educational informatization thus moved from the 1.0 era to the 2.0 era, and shifted from "integrated application" to "innovative development" [1].

In 2019, "China's Education Modernization 2035" listed "accelerating the transformation of education in the information age" as one of its strategic tasks [5]. In 2022, the National Education Digitalization Strategy Action [2] was officially launched. On March 28, 2022, the National Smart Education Public Service Platform was officially launched [2]. The 20th National Congress of the Communist Party of China included "promoting the digitalization of education" in its report for the first time [5]. In early 2025, the "Outline of the Plan for Building a Strong Education Nation (2024-2035)" [3] was officially issued, which clearly required "implementing the national digitalization strategy of education" and "promoting artificial intelligence to assist educational reform" [3]. China's digitalization of education has moved from single-point exploration and partial application to the stage of "smart education" with system integration and comprehensive deepening [14].

2.2 CFour-stage Division from the Perspective of Educational Informatization

After China's reform and opening up, computer technology entered the country, and computer-aided instruction (CAI) began to receive attention. In 1984, Deng Xiaoping said, "Computer literacy should start from childhood," which led to the gradual rollout of computer education in primary and secondary schools. Subsequently, various CAI courseware were created, and some universities began to establish educational technology majors. By the 1990s, multimedia computers entered schools, and the focus of educational technology shifted from hardware to software and teaching models. During this period, the country also launched the "Modern Distance Education Project," paving the way for later online education.

From the perspective of educational informatization and digital transformation, the above process can be further subdivided into four stages [5]:

2.2.1 Pre-Educational Informatization Stage (1978-2000)

This stage was characterized by the restoration and reconstruction of audiovisual education and the initial exploration of computer-assisted teaching [5]. From Deng Xiaoping's speech in 1978 and the establishment of the Central Audiovisual Education Center, to the launch of China Education Television in 1986, and then to the renaming of "audiovisual education" to "educational technology" in 1993, educational informatization went from nothing to something, completing the conceptual transformation and infrastructure construction [5]. Some scholars divide the 25 years since 1978 into two stages: the audiovisual education stage (late 1970s to early 1990s) and the informatization education stage (mid-1990s onwards) [15]. Mr. Nan Guonong also proposed that China's audiovisual education can be divided into the audiovisual education stage and the informatization education stage [17].

2.2.2 Education Informatization Stage 1.0 (2001-2017)

This stage focused on infrastructure construction, addressing the fundamental issue of whether or not hardware such as networks, terminals, and resources were available [5]. After 2000, education informatization entered a period of rapid development [5], marked by the "Three Connections and Two Platforms" project [14], gradually moving from "following" to "running alongside" [5]. The promulgation of the "Ten-Year Development Plan for Education Informatization" [16] in 2011 further clarified the development blueprint for education informatization [5].

2.2.3 Education Informatization Stage 2.0 (2018-2021)

Marked by the "Action Plan for Education Informatization 2.0" [1], education informatization entered a new era characterized by integrated innovation and intelligent leadership [1]. This stage promoted the transformation from dedicated educational resources to large-scale educational resources, from improving application capabilities to improving information literacy, and from integrated applications to innovative development [1].

The launch of the National Digital Education Strategy Action in 2022 [2] marked the beginning of the fast track for digital education [5]. It has moved from single-point exploration and localized applications to the "smart education" stage of system integration and comprehensive deepening [14]. Digital education is shifting from "technology empowerment" to "system reshaping" [3].





3 DEVELOPMENT CHARACTERISTICS

The development of educational technology in China exhibits distinct stage-specific characteristics and structural patterns. These can be summarized from four dimensions: policy-driven, phased progression, current transformation, and international standing.

3.1 POLICY-DRIVEN CHARACTERISTICS

The development of educational technology in China has always been closely intertwined with national policies, exhibiting a distinct policy-driven characteristic [5]. One study, using 189 educational informatization policy documents issued by the state between 1993 and 2024 as its subject, systematically analyzed the stage characteristics and overall evolution of policies [5]. The study found that policy formulation at each stage of educational informatization was a response to major national strategic goals, with continuous strengthening of policy supply. The policy system exhibited a process of "focusing to diffusion and then back to focusing," with increasingly rich policy themes and a shift in policy focus from extensive expansion driven by scale to intensive development focused on fairness and quality improvement [5].

From the perspective of the phased shifts in policy focus, in the initial and nascent stage, there was insufficient coordination among various fields, and related policies and measures were still in the process of integration and improvement [5]. In the foundational and popularization stage, policy content became more detailed, and the state played a leading role in the field of educational informatization [5]. In the application and improvement stage, policies became more focused, promoting the transformation of educational informatization from hardware priority to application innovation [5]. In the in-depth development stage, policies were adjusted to adapt to technological development, shifting from technology application to ecosystem construction [5]. Another study divides the evolution of China's educational informatization policy since the reform and opening up into four stages: initial stage, construction and popularization, integrated development, and transformation and upgrading [5]. It points out that my country's educational informatization is entering a critical period of transformation and upgrading, which is an important period for seizing the high ground in international informatization competition [5]. The continuous supply of policies has provided institutional guarantees and directional guidance for the development of educational technology [5]. From "actively developing radio and television education and school audio-visual teaching" [18] to "information technology has a revolutionary impact on education development" [16], and then to "promoting the digitalization of education" [3], the evolution of policy discourse reflects the systematic upgrading of the status of educational technology in the national strategic system [19].

3.2 STAGE CHARACTERISTICS

From the perspective of development stages, China's educational informatization presents clear stage characteristics, successively experiencing three progressive stages: infrastructure foundation laying, capacity system improvement, and ecological efficiency reconstruction [5].

3.2.1 Infrastructure Foundation Laying Stage (Around 2010)

This stage focused on solving the core issue of "whether or not" [5]. The "National Medium- and Long-Term Education Reform and Development Plan (2010-2020)" asserted that "information technology has a revolutionary impact on education development," propelling educational informatization from technological practice to a national strategy [16]. It focused on solving hardware issues such as network coverage, terminal configuration, and resource construction, completing the infrastructure construction for digital education [5]. Educational informatization 1.0, as the starting and foundational stage of my country's educational informatization, has achieved comprehensive development in infrastructure, resource development, system and application construction, focusing on the construction of hardware, software, and potential components [15].

3.2.2 Capacity System Enhancement Stage (Around 2019)

Marked by the "China Education Modernization 2035," educational informatization entered the capacity system enhancement stage [5]. This stage focuses on the question of whether the capacity dimensions of platform construction, training model innovation, and governance transformation are "sufficient," reconstructing digitalization from an auxiliary tool into an endogenous variable of educational modernization [19]. Educational digital transformation is positioned as an important strategic choice for building a high-quality development education system in the new era [5].

3.2.3 Ecological Efficiency Reconstruction Stage (After 2025)

Guided by the "Outline of the Plan for Building a Strong Education Nation (2024-2035)," educational digitalization entered the ecological efficiency reconstruction stage with the three-dimensional architecture of "digital foundation + intelligent hub + institutional innovation" as its core [3], striving to resolve the deep-seated contradiction of "whether the efficiency is strong





enough" [3]. The Outline for Building a Strong Education Nation clearly proposes major initiatives such as "implementing the national digital education strategy" and "promoting artificial intelligence to assist educational reform" [3]. This not only outlines the implementation path for intelligent technology to empower education, but also indicates that the modernization of education has entered a new stage characterized by deep intelligence [23]. Digital education is moving from a superficial and fragmented "technology empowerment" stage to a new paradigm of a "system center" that is comprehensive, collaborative, and intelligent [24].

3.3 THE CORE CHARACTERISTICS OF CURRENT DEVELOPMENT

Currently, China's digital education development has moved from single-point exploration and localized application to the "smart education" stage of system integration and comprehensive deepening [14]. This stage is mainly reflected in four structural transformations [21]: First, the supply of high-quality resources has shifted from local scarcity to nationwide sharing [21]. The construction of the National Smart Education Public Service Platform has promoted the cross-regional flow and universal coverage of high-quality educational resources [2]. Digital educational resources are no longer limited to a few high-quality schools or developed regions, but are extended to weak areas and rural schools through platform mechanisms, and the public good attributes of educational resources are becoming increasingly prominent [22]. Second, the teaching and learning organization model has shifted from standardization and uniformity to personalization and diversification [21]. The deep application of information technology has broken the spatial and temporal boundaries and uniform rhythm of traditional classrooms, and new models such as data-driven personalized learning and adaptive learning are gradually becoming popular [20]. The learning mode has shifted from "teaching-oriented" to "learning-oriented," and the teaching organization has shifted from a single form of class-based instruction to a multimodal form that integrates online and offline learning and connects in-class and out-of-class learning [21]. Third, the application of intelligent technology has shifted from tool-assisted to scenario-integrated [21]. Technology is no longer merely an auxiliary means of teaching, but is deeply embedded in the entire process and all scenarios of instructional design, learning analysis, evaluation feedback, and educational management [20]. Smart education, as a new form of education in the digital age, has become an important goal of the digital transformation of education [20]. After years of exploration by Chinese scholars and educational practitioners, my country's smart education research has developed over ten years and has formed a smart education theory and practice model with Chinese characteristics [20]. Some studies have proposed 16 specific characteristics of smart education from four dimensions: environment, teaching, governance, and talent [21].

Fourth, educational governance decisions have shifted from experience-based judgment to data-driven [22]. The construction and application of educational management information systems and big data analysis platforms have enabled educational decisions to shift from relying mainly on personal experience to precise judgment based on data [22]. In terms of resource allocation, artificial intelligence can dynamically optimize the allocation of educational resources based on data such as regional population changes, school carrying capacity, and teacher distribution [3]. The data-driven educational governance model is reshaping the decision-making logic and operating mechanism of educational management [21].

3.4 INTERNATIONAL STATUS RISES

China's international influence in digital education has significantly increased, making it an important force in the global digital education development landscape [4]. According to the Global Digital Education Development Index Report [4], China's overall digital education ranking jumped from 24th in 2023 and 9th in 2024 to 6th in 2025, firmly establishing itself in the first tier of global digital education development [4]. The 2024 index assessment covered 62 participating countries, selecting leading countries in digital education from over 200 countries and regions worldwide, covering major regions and different economic and population sizes [4]; the number of participating countries expanded to 72 in 2025 [4].

Over the past three years, China has made significant progress in three areas—digital resource construction and application, digital literacy cultivation, and digital education system construction—through the implementation of the National Digital Education Strategy Action. Its index ranking jumped from 24th to 9th, advancing 15 places [25]. Yang Zongkai, director of the Expert Advisory Committee on Digital Education of the Ministry of Education, pointed out that the key to this achievement lies in China's systematic construction and accelerated formation of its own unique advantages in the three core dimensions of literacy improvement, model reconstruction and governance upgrading [8]. China is in a relatively leading position in data-driven education governance, the construction and application of public digital education resources, and the construction of a student digital literacy cultivation system [26]. This leap in international ranking is not only an objective confirmation of past development achievements, but also puts forward higher requirements for deepening the digital transformation of education in the future [4].





4 CONCLUSION

This article systematically reviews the century-long development of educational technology in China, from its inception in the 1920s with the emergence of audio-visual education to the present day, revealing its stage characteristics and evolutionary logic. Looking at this history, the following basic conclusions can be drawn:

First, Chinese educational technology has followed a unique development path from "technology-assisted" to "systemic restructuring." The century-long history can be divided into three major historical stages: the exploration period of educational technology from the 1920s to 1985, during which Chinese educational technology (educational technology) gradually developed under the influence of foreign audiovisual education theories and practices [6]; the period of formation of the educational technology discipline system and development of educational informatization from 1986 to 2017, during which "educational technology" was officially renamed "educational technology", and educational informatization jumped from technological practice to national strategy [6]; and the mature period from 2018 to the present, marked by the "Education Informatization 2.0 Action Plan" [1], where educational informatization has entered a new era characterized by integration and innovation and intelligent leadership [1]. The national education digitalization strategy action was launched in 2022 [2], and the "Outline of the Plan for Building a Strong Education Nation (2024-2035)" in 2025 further placed education digitalization in a key position for opening up new development tracks [3].

Secondly, policy-driven development is the core driving force of China's educational technology development, and the policy focus has undergone a systematic leap from infrastructure construction to ecological reconstruction. From the 1993 Outline for China's Education Reform and Development proposing "actively developing radio and television education and school audio-visual teaching"[18], to the 2010 National Medium- and Long-Term Education Reform and Development Plan Outline proposing for the first time that "information technology has a revolutionary impact on education development," and then to the 2022 report of the 20th National Congress of the Communist Party of China including "promoting the digitalization of education," and the 2025 Outline for the Construction of a Strong Education Nation requiring "implementing the national digitalization strategy of education" and "promoting artificial intelligence to assist educational reform"[3], the evolution of policy discourse profoundly reflects the systematic upgrading of the status of educational technology in the national strategic system[19]. The evolution of China's education informatization policy presents clear stage characteristics, having gone through three progressive stages: infrastructure foundation laying, capacity system improvement, and ecological efficiency reconstruction [5]. Currently, education digitalization is moving from "technology empowerment" to "system reshaping"[3], and from "quantitative expansion" to "qualitative leap."

Third, China's digital education has achieved a historic leap from "following" to "leading," and its international influence has significantly increased. According to the Global Digital Education Development Index Report, China's overall digital education level jumped from 24th in 2023 and 9th in 2024 to 6th in 2025, firmly establishing itself as a leader in global digital education development [4]. Over the past three years, China has made significant progress in three areas through the implementation of the National Digital Education Strategy: digital resource construction and application, digital literacy cultivation, and the construction of a digital education system [25]. China holds a relatively leading position in data-driven education governance, the construction and application of public digital education resources, and the construction of a student digital literacy cultivation system [26]. This leap in international ranking is both an objective confirmation of past achievements and a higher requirement for deepening the digital transformation of education in the future [4].

Fourth, the basic experience of China's educational technology development can be summarized as a combination of top-level design guidance and grassroots practical innovation, and a synergy between technological application and institutional reform. The continuous supply of national strategies provides institutional guarantees and directional guidance for the development of educational technology [5]. Meanwhile, the evolution of educational technology has always been deeply integrated with educational reform. From early audiovisual media-assisted teaching to the deep integration of information technology, and then to the systemic transformation empowered by artificial intelligence, technology has never deviated from its essential function of educating people. The rich experience accumulated in China's century-long history of educational technology has provided solid support for building a strong education nation and has also contributed Chinese wisdom and solutions to global digital education governance.

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