

Overview of the Development Effectiveness of Digital Education with Chinese Characteristics - Analysis of China's Education Digitalization Strategy Action at the 2024 World Digital Education Conference

Wen Yue^{1,a}, Ning Ba^{2,b}

sqxs9@buaa.edu.cn^a, 232510337@qq.com^b

Department of Physical Education, Beihang University, Beijing 100191, China¹
Department of Physical Education, Tsinghua University, Beijing 100084, China²

Abstract. The study adopts methods such as literature review and logical analysis, based on the 2024 World Digital Education Conference to analyze China's digital education strategy actions, and elucidates the Chinese wisdom in promoting education digitization, which is of great significance for narrowing the global education digital divide. Research suggests that the effective development of digital education with Chinese characteristics includes digital platforms serving education and teaching. Digitalization empowers lifelong learning for all, such as the construction of smart education platforms for primary and secondary schools, the creation of international brands through "MOOCs going global", and digital empowerment of lifelong learning. China provides digital education solutions to the world.

Keywords: World Digital Education; Digitalization of Education in China; Development Effectiveness; Summarize

1 Introduction

In the report of the 20th National Congress of the Communist Party of China, it was proposed to promote the digitization of education and build a learning society and a learning country with lifelong learning for all. President Xi stressed that "Education digitization is an important breakthrough for China to open up a new track for education development and shape new advantages in education development. We will further promote digital education to provide effective support for personalized learning, lifelong learning, expanding the coverage of quality education resources and modernizing education." The digital transformation of education has become a global trend. A set of data has witnessed the vigorous trend of China's education digitalization: China has built the world's largest education and teaching resource database, released a series of standards and norms for education digitalization, and ranked first in the world in the construction and application scale of MOOCs..... By the end of 2023, the

First Author: Wen Yue(1987-), Doctor of Philosophy, Research Direction in Higher Education, E-mail: sqxs9@buaa.edu.cn

Co First Author: Ning Ba(1987-), Doctor of Philosophy, Research Direction in Higher Education, E-mail: 232510337@qq.com

cumulative registered users of the national smart education platform have exceeded 100 million, with more than 36.7 billion page views and 2.5 billion visitors, and the superposition, multiplication and spillover effects of digital technology have fully emerged[1].

The 2024 World Digital Education Conference aims to showcase the latest achievements in China's digital education field and build an international exchange and cooperation platform for digital education, promoting the common development of global education. This study is based on the analysis of China's education digitalization strategy actions (Table 1), elucidating the Chinese wisdom in promoting education digitalization, which is of great significance for narrowing the global education digital divide.

Table 1 The China's Action Measures for Deepening the National Education Digitalization Strategy

Promoting the National Education Digitalization Strategy Action	Content
Action 1	Breakthrough progress has been made in the overall deployment of digital education. In June 2023, the first nationwide on-site promotion meeting for educational digitization was held; In October 2023, a special conference was held to promote the high-quality development of education through digital education in the central and western regions.
Action 2	The construction level of the national smart education platform continues to improve. The platform resources continue to expand, gathering 88000 primary and secondary school resources, over 10000 online high-quality vocational education courses, and 27000 high-quality MOOCs for higher education.
Action 3	The application scope of the national smart education platform has significantly expanded. As of the end of 2023, the platform has accumulated over 100 million registered users, with over 36.7 billion views and 2.5 billion visitors.
Action 4	The construction of the National Education Digital Big Data Center has begun. Expand the scope of monitoring the operation of the national smart education platform, expand the depth of monitoring, and collect more than 50 billion pieces of data. Build a data governance platform and carry out two batches of pilot work for a total of 61 universities.
Action 5	The digital guarantee capability of education is constantly improving. We will release 7 series of standards around four aspects: platform, data, resources, and literacy, and improve the digital education standard specification system.
Action 6	The international influence of China's digital education is fully demonstrated. In February 2023, the first World Digital Education Conference was successfully held, with representatives from more than 130 countries and regions participating. The conference released the China Smart Education Blue Book and Smart Education Development Index, and other achievement documents, providing China's wisdom and solutions for global education reform.

2 Application: Digital Platform Services for Education and Teaching

Digital education is an unstoppable trend. In most of the European countries, the implementation of digital technologies has been driven through government education policies [2]. Similarly, China regards the construction of a national smart education platform as a starting point and important lever for its digital education strategy. The platform connects 519000 schools, radiates 18.8 million teachers, 293 million students, and a wide range of learners in society. Upgrade and iterate the platform 5 times, launch the National Smart Education Reading Platform, and develop and launch the "Smart Education" app. The platform resources continue to expand, gathering 88000 primary and secondary school resources, over 10000 online high-quality courses in vocational education, and 27000 high-quality MOOCs in higher education. We have updated the special resources of "Learning the Twenty Cloud Classrooms", launched special resources such as "2023 Summer Teacher Training" and "Network Security Promotion and Education", and expanded the service hall's overseas study services. Upgrade the "Smart Education China Passport" and launch a unified search engine, providing functions such as liking, bookmarking, and forwarding, to achieve aging friendly and accessible transformation. The national smart education platform further enhances its ability to support personalized learning, lifelong learning, and expand the coverage of high-quality education.

3 Sharing: Digitalization Empowers Lifelong Learning for All

Today's education in China is accelerating to become a reality - high-quality classrooms overlap in time and space everywhere, and high-quality courses span mountains and seas and are always accessible. The core of digital transformation in education is to promote digital transformation across all elements, businesses, fields, and processes [3]. Everyone can learn, can learn everywhere, and can learn at all times, which is booming in different levels of education such as basic education, higher education, and vocational education.

3.1 Initial Scale of Smart Education Platform Construction in Primary and Secondary Schools

In terms of the supply of high-quality resources, China continues to build high-quality digital resources covering aspects such as morality, intelligence, physical fitness, aesthetics, and labor, covering 65 versions of 565 textbooks; Strengthen the construction of science popularization resources in primary and secondary schools, jointly create "open science courses" with the Chinese Academy of Sciences, and launch high-quality resources such as "excellent experimental teaching courses", "experimental teaching lectures" and "master lectures for children". The Chinese Ministry of Education has launched the National Youth Student Reading Action, established and opened a national smart education reading platform, which gathers rich reading resources such as "Youth Reading Space", "Elderly Reading Community", "Chinese Language and Writing Digital Museum", and "China Digital Science and Technology Museum". Based on the platform, reading sharing activities are carried out to promote more attention to youth reading in various regions and promote the widespread and in-depth development of the National Youth Student Reading Action. The lack of digital skills is one of the main factors that constraint the development of online education platform[4]. In

order to improve the digital literacy of teachers, we will carry out national level online training for platform applications, conduct winter and summer teacher training and other activities, strengthen guidance, tracking, and summary of pilot work, leverage the power of expert guidance teams, teaching and research personnel, and excellent teachers to guide frontline teachers to make good use of the high-quality resources provided by the platform, learn excellent teaching cases, improve teaching design and classroom teaching abilities, explore the application mode of platform course resources, and significantly enhance the initiative and ability of teachers to use the national platform.

3.2 "MOOC Goes Abroad" to Build an International Brand

China is vigorously promoting the digital transformation of higher education through MOOCs and online education. At present, MOOCs have launched over 76800 courses, serving 1.277 billion domestic learners[5]. The construction and application scale of MOOCs in China has become the world's largest, making China's contribution to higher education by implementing the "MOOCs going global" action. The main approach includes: firstly, leading the construction of the World MOOC and Online Education Alliance. In 2020, under the advocacy of the Ministry of Education, the World MOOC and Online Education Alliance was established, which is the first multilateral international organization in the field of digital higher education initiated and led by China. Secondly, the World MOOC and Online Education Conference is held annually. Since 2020, four World MOOCs and Online Education conferences have been held. Thirdly, deepen international exchange and cooperation in online teaching. Relying on the World MOOC and Online Education Alliance, we have opened 341 global integrated courses and launched 10 global integrated certificate programs, with nearly 25.4 million learners; We have collaborated with over 30 well-known universities and online education institutions worldwide to establish a two-way communication channel for course introduction and output. Fourthly, develop and release an international report on digitalization of higher education. Release the "Unlimited Possibilities - Digital Development Report of World Higher Education" and the "Digital Development Index of World Higher Education" to provide scientific basis and data support for the development of digital higher education in countries around the world.

3.3 Promoting Digital Empowerment and Serving Lifelong Learning

In technical and vocational education and training, learner agency, often understood in terms of self-direction and negotiated engagement, is considered to be important. The nurturing and supporting agency can be resource-intensive[6]. In order to cultivate learner agency in vocational education, we upgraded and transformed the vocational education section of the national smart education public service platform, strengthened the development and supply of digital resources, and added columns such as "Enterprise Resources", "Craftsman Spirit", and "Smart Teaching and Research Room". In 2023, 28000 new virtual simulations, online premium courses, and professional teaching resource libraries were added, bringing together more than 7.27 million high-quality resources of various types. Digitalization empowers the construction and upgrading of a learning society - The National Elderly Education Public Service Platform has launched 436000 courses in five categories of "morality, learning, and well-being", with a total duration of 4.089 million minutes. It has registered 2.341 million online users and served 56.4 million people for learning. Table 2 provides an overview of the

main measures taken by China to promote the digitalization of education and build a learning society and a learning country.

Table 2 The Main Measures for China to Promote the Digitalization of Education and Build a Learning Society and a Learning Country

Main Measures	Content
Main Measure 1	Develop the Implementation Plan for Promoting the Construction of a Learning Society and issue the Key Tasks for the Construction of a Learning Society.
Main Measure 2	Focusing on digital empowerment of learning cities, taking 10 cities that have joined the global learning city network as a demonstration, integrating urban and rural areas, and focusing on strengthening the digital foundation of cities, 80 cities will be promoted to apply to join the national learning city network in 2023.
Main Measure 3	Building a strong lifelong education platform, as of the end of 2023, the platform has accumulated over 1 million online resources and served more than 36 million learners.
Main Measure 4	In 2023, the vocational education sector of the National Smart Education Public Service Platform will have 28000 new access to virtual simulation, online premium courses, and professional teaching resource libraries, totaling over 7.27 million high-quality resources of various types.
Main Measure 5	In March 2023, the National University for the Elderly was established. As of the end of 2023, 40 branches of senior universities, 3000 senior learning centers, and 55000 senior learning points have been established.
Main Measure 6	In 2023, activities such as theme reading, digital reading sharing, online social lecture halls, and "President (Editor in Chief) recommendation letters" will be widely carried out, with more than 32 million people participating, reaching a new record high.

4 Leading: Providing a Digital Education China Solution for the World

Stephanie Giannini, UNESCO's Assistant Director-General for Education, praised China's National Smart Education Platform as an outstanding initiative to ensure universal access and effective use of public digital learning platforms. The digital transformation of education is in line with the construction of "digital China", which is a major breakthrough in the field of education to integrate the achievements of a new round of scientific and technological revolution. China has shown the world how to use digital technology to make teaching and learning easier. China actively innovates education scenarios, develops digital resources, enhances teachers' digital literacy, and elevates the level of the national digital education platform, so as to govern education digitalization with digital thinking, and provides useful experience for the global digital education transformation. As a responsible major country, China adheres to the vision of building a community with a shared future for mankind, and has

been calling on all countries to join hands to promote innovation, so that the fruits of digital education can benefit more people of all countries. China's National Education Digitization Strategy is about to enter its third year and will provide an effective choice for the development and transformation of digital education in the world[7]. China will work with other countries to explore the planning, standards, monitoring and evaluation of digital education, and carry out exchanges and cooperation in intellectual property protection, data security management, digital ethical risk prevention and privacy protection. China uses the BRICS mechanism to promote the smart education platform, docking standards, norms, interfaces, etc., and serves as the global lead country of UNICEF's "Public Digital Gateway" project, and actively promotes Chinese standards, Chinese experience and Chinese solutions, thus demonstrating its responsibility as a digital education power [8].

5 Conclusion

The 2024 World Digital Education Conference is a conference in which China takes the initiative to assume the responsibility of global digital education governance, showcasing the Chinese contribution and wisdom of higher education in the world [9]. China regards digitalization of education as an important component of educational modernization, and has achieved significant results in various aspects of its work. China will continue to open up new avenues for educational digitization, shape new advantages in educational development, adhere to the principle of application as the king, take the path of integration, empower educational governance with intelligence, expand new international space, lead educational reform and innovation, and tirelessly explore the path of digital development of education with Chinese characteristics.

References

- [1] Zhang, X.: Digitalization Leads a New Direction of Educational Reform, http://www.jyb.cn/rmtzgjyb/202401/t20240127_2111149600.html
- [2] Begona,G.: Four decades of policies to integrate digital technologies in the classroom in Catalonia: actions, achievements and failures. 37, 79-95(2020)
- [3] Huang, R.H.: The Connotation and Implementation Path of Digital Transformation in Education, https://paper-jyb-cn.vpnm.ccmu.edu.cn/zgjyb/html/2022-04/06/content_607611.htm?div=-1
- [4] Shrestha, S.: Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. 27, 243-265(2022)
- [5] Li, J.J.: How does Digitalization Empower "Teaching" and "Learning"? , <https://www.china-news.com.cn/cj/2024/01-29/10154733.shtml>
- [6] Moffitt, P.: Online tasks and students' transformative agency: double-stimulation as a design principle for synchronous online workshops. 73, 1-24(2021)
- [7] Huai, J.P.: Minister of Education Huai Jipeng's keynote speech at the 2024 World Digital Education Conference: Joining Hands to Promote the Application, Sharing, and Innovation of Digital Education, http://www.jyb.cn/rmtzcg/xwy/wzxw/202402/t20240201_2111151716.html
- [8] Zheng, C., Gao, Y.Z.: Digital Education Leads the Future, http://www.moe.gov.cn/jyb_xwfb/s5147/202401/t20240130_1113352.html

[9] Huang, L.L.: This is a Conference Where China Takes the Initiative to Take on the Responsibility of Global Digital Education Governance, http://www.jyb.cn/rmtzgjyb/202401/t20240131_2111150832.html