



北京師範大學
BEIJING NORMAL UNIVERSITY



全球智慧教育大会
Global Smart Education Conference

2023

18-20 August, 2023 Beijing, China

GLOBAL SMART EDUCATION CONFERENCE

Education Transformation and Data Governance

Global Smart
Education Network



ISTE





Background

Smart Education: The Goal of the Digital Transformation of Education

As the new round of technological revolution and industrial transformation deepens, digital technology is increasingly becoming a driving force that fundamentally transforms human social thinking, organizational structures, and operational models. It not only provides significant opportunities for innovating pathways, reshaping forms, and promoting development but also brings new challenges. "What is education and its way forward?" has become a topic of collective consideration for countries worldwide. The United Nations Education Transformation Summit pointed out that global education faces severe challenges and a learning crisis. Therefore, it is urgent to promote educational transformation and fully tap into the power of the digital revolution to ensure that quality education and lifelong learning are provided as a common interest and a human right for all, with particular attention to the most marginalized groups. China has set the goal of promoting educational digitalization and building a society and country where everyone pursues lifelong learning.

The digital transformation of education is a systematic planning process carried out at the strategic level, implementing a comprehensive digitalization process across all elements, processes, businesses, and fields within the education system, expanding the coverage of "education for all," widening the spatial scope of "learning anywhere," and extending the temporal scale of "learning anytime." This will create a learning society that meets the demands of lifelong learning for all and is open, flexible, and sustainable. As the desired form of the digital transformation of education, smart education is an educational behavior (system) provided by schools, regions, or countries that offer high learning experiences, high adaptability of content, and high teaching efficiency. It leverages modern science and technology to provide a range of differentiated support and on-demand services to students, teachers, parents, and others. Furthermore, it comprehensively collects and utilizes



data on the status of participant groups and educational processes to promote fairness, continuous performance improvement, and the cultivation of educational excellence. The key to promoting the digitalization of education and developing innovative smart education lies in fostering digital thinking within the education system, strengthening digital support capabilities, developing high-quality digital learning content, and constructing a digital learning public service system for the entire population.

Cultivating Talents: The Central Focus of Smart Education

Education's original intention and mission are to enlighten people's wisdom and cultivate outstanding individuals. This is also the primary task and fundamental goal of smart education. The development of the times and the advancement of technology drive the changes in talent development goals and talent structures, prompting education to adapt and adjust accordingly. Smart education is a new form of education in the digital age. Smart education embodies "wisdom" emanating from teachers. Intelligent education represents "intelligence" empowered by the environment. The futures of education embodies the "transformation" of education forms. The new teaching models enlighten students' wisdom, have surpassed the formal learning provided by schools, and moved towards integrating formal and informal learning. The diversity of students and individual differences are given due attention, allowing the realization of a "learner-centered" educational philosophy. A smart learning environment is a place or space for learning that can perceive learning situations, identify learner characteristics, provide appropriate learning resources and convenient interactive tools, automatically record learning processes, and evaluate learning outcomes to promote effective learning. The modern education system nurtures human intelligence, and artificial intelligence and big data will play a crucial role in its evolution. They will provide reform proposals and decision-making foundations for national education, school management, teaching, and talent development systems, ultimately enhancing the quality of talent cultivation.



Technology Empowerment: The Driving Force behind Innovative Development in Smart Education

With the continuous upgrading of the intelligent technology ecosystem, such as generative artificial intelligence, big data, the Internet of Things, and mobile communication, the fields of technology and education are actively permeating each other. Technology empowers education, while education adds value to technology. Education holds a fundamental, pioneering, and comprehensive position and role that empower, store, and enhance national competitiveness. Education is one of the practical fields of technology. The driving force of technological innovation contributes to and supports the high-quality development of education. The continuous upgrading of the intelligent technology ecosystem will serve students' adaptive growth, support teachers' professional development, and facilitate the advanced enhancement of smart learning environments. The increasing demand for quality education will be the natural driving force behind technological development. The mutual empowerment of technology and education will promote cross-domain integration, realize the integration and innovation of data, information, business, applications, and services, and enhance educational intelligence. As a result, learners will experience high satisfaction and enjoyment in receiving smart education services.

Data Governance: The Systematic Approach Driving the Orderly Advancement of Educational System Reform

As a new production factor, data is the foundation for digitalization, networking, and intelligence, profoundly transforming production methods, lifestyles, and social governance. "Presenting with data, deciding with data, managing with data, living with data" constitutes the fundamental mindset for the digital transformation of education. The development of smart education not only accumulates high-quality resources but also generates massive data treasures. Educational big data provides objective evidence and fresh perspectives for optimizing educational policies, innovating teaching models, and transforming educational measurement and evaluation methods.



The transformative power of data elements in education relies on necessary external conditions. It requires accelerating the improvement of the education data element market, emphasizing the security and ethical issues in data application, establishing a classification, grading, and authorization system, and focusing on enhancing educational data governance capabilities and user data literacy. This approach drives the balanced allocation of educational resources, precise teaching, educational evaluation reform, and digitized governance by leveraging data.

The shift from "extensive management based on experience" to "intensive governance relying on data analysis" calls for a new model of data-driven educational governance. This entails building an education data brain, establishing secure and convenient data exchange channels, enhancing the perception, interconnection, computation, and processing capabilities of education data, promoting the orderly flow of educational data, realizing cross-regional, cross-level, and cross-departmental data sharing, supporting scientific decision-making, driving the reengineering of management business processes, achieving joint operations between internal and external school affairs, streamlining education services into a one-stop process, and improving the efficiency and quality of management services.

Global Smart Education Network (GSENet): The International Platform for Collaboration and Exchange.

To collectively address global learning crises and educational challenges and to further unlock the immense possibilities of integrating technology and education, Beijing Normal University (BNU), in collaboration with the UNESCO Institute for Information Technologies in Education (UNESCO-IITE), the Arab League Educational, Cultural, and Scientific Organization (ALECSO), the Commonwealth of Learning (COL), the International Society for Technology in Education (ISTE), and the Southeast Asian Ministers of Education Organization (SEAMEO), have jointly initiated the "Global Smart Education Network (GSENet)." The aim is to establish a partnership comprising researchers, practitioners, technology experts, and policymakers, to support the rethinking and redesign of education systems at the national, regional, and school levels. This initiative seeks to formulate strategic

solutions and approaches to reshape and innovate education and establish an equitable, inclusive, and high-quality smart education system that caters to individuals' diverse and personalized needs in the future world.

Agenda

To further advance the strategy of digitalizing education and promote the innovative development of smart education, the Ministry of Education has approved the "Global Smart Education Conference 2023," which will be held in Beijing from August 18 to 20th. As the annual conference of GSENet, the conference will focus on the theme of "Education Transformation and Data Governance." Through thematic forums, high-level dialogues, exhibitions, pre-conference workshops, webinars, and other formats, the conference aims to share new trends, theories, and technologies in the field of smart education, as well as disseminate smart education solutions and excellent case studies.



The conference will feature 19 thematic forums:

Date	Beijing Time	Agenda
Friday 18 August, 2023	9:00-12:30	Opening Ceremony & Forum on Educational Digitalization and Lifelong Learning
		Forum on Data Governance and Cognitive Development
	14:00-18:00	Forum on Artificial Intelligence and Educational Innovation
		Forum on Educational Digitalization Strategy and Policy Planning
		Forum on International Communication of Smart Education
		Forum on the New Ecology of Regional Smart Education
Saturday 19 August, 2023	9:00-12:30	International Forum on Generative AI Large Models and Psychological Assessment
		Forum on New Teaching and Learning Model Integrating Information Technology
		Forum on the Digital Transformation of Regional Education and School Education
	14:00-18:00	Forum on Information Technology-supported Innovative Comprehensive Evaluation of Students
		Forum on Youth Skills Development and Digital Transformation
		Forum on Teacher Digital Competences and Innovative Talent Cultivation Model
Sunday 20 August, 2023	9:00-12:30	Forum on Digital Campus and Intelligent Educational Equipment
		Forum on Smart Village and Rural Education Transformation
	9:00-16:30	Teacher Forum on Innovative Practice of Smart Education
		Student Forum on Design for Future Education
	14:00-16:30	Forum on Technology-Empowered Educational Transformation & Closing Ceremony
	14:00-18:30	Forum on Technology-Empowered Educational Transformation & Closing Ceremony
Sub-venues		
19 August, 2023	Forum on Digital Education and Digital Economy	
16-18 August, 2023	Forum on Ubiquitous Robotics Education & Excellent Teacher Workshop	



The topics discussed at the forum include:

Forum on Educational Digitalization and Lifelong Learning

The digitalization process of the entire education system, including all elements, processes, businesses, and fields; the digital foundation and public service system for a learning society; the transformative pathways and cooperative mechanisms for promoting digital transformation in lifelong learning; national strategies for smart education.

Forum on Data Governance and Cognitive Development

New policies and trends in data governance; intelligent algorithm design; cognitive development assessment; methods and case studies of social experimentation in education.

Forum on Artificial Intelligence and Educational Innovation

Opportunities and challenges of the generative artificial intelligence in education; reshaping education through artificial intelligence; human-machine collaborative teaching; ethical applications of artificial intelligence in education.

Forum on Educational Digitalization Strategy and Policy Planning

Addressing learning crises and educational challenges; policy planning and roadmaps for educational digitalization; development of educational think tanks in the digital age.

Forum on the New Ecology of Regional Smart Education

Connotation and characteristics of smart education; construction features of smart education demonstration zones; smart learning environments; public service systems for smart education; mechanisms for sustainable development of regional smart education; assessment of the development of smart education.

Forum on Digital Transformation of Regional Education and School Education

Implementation plan for digital transformation of education; construction and application of smart education platform; big data application in education; artificial intelligence-supported construction of teachers' team; new teaching and learning model integrating information technology; collaborative innovation mechanism for education digitalization.



Student Forum on Design for Future Education

Creative solution design for future campuses, intelligent learning spaces, virtual teachers, etc.; smart learning methods; excellent works of the Global Competition on Design for Future Education.

Forum on Information Technology-supported Innovative Comprehensive Evaluation of Students

Theories, models, and indicator systems for comprehensive quality evaluation of students; performance evaluation technology supported by multimodal data; data-driven reform and innovation of regional comprehensive quality evaluation of students.

International Forum on Generative AI Large Models and Psychological Assessment

ChatGPT compared to human abilities; ChatGPT-based psychological assessment; ChatGPT and emotional perception.

Forum on Youth Skills Development and Digital Transformation

The integration of job position, curriculum system, vocational skills competition and vocational skill certificate to cultivate skillful youth talents; construction of digital campuses for vocational education; teacher workforce development for industry-education integration; development of digital courses and reforms in teaching methods.

Forum on Teacher Digital Competences and Innovative Talent Cultivation Model

Definition, development and assessment of digital literacy and skills; selection criteria and methods, training models, and evaluation systems for innovative talents; characteristics and growth patterns of digital generation students; education informatization leadership; smart campus and new form of future school.

Forum on Smart Village and Rural Education Transformation

Rural education revitalization and revitalizing rural areas through education; opportunities and challenges of digital transformation in rural education; teacher workforce development in rural areas; online and distance education in rural areas.

Forum on Digital Campus and Intelligent Educational Equipment

Construction standards and application of digital campus; intelligent education equipment and technical solutions; assessment of intelligent education products; industry-university-research collaborative innovation.

Forum on Digital Education and Digital Economy

Cultivation of digital economy talents; education-empowered development of digital economy; digital education in the perspective of digital economy; digital application scenarios.

Forum on Technology-Empowered Educational Transformation

Research achievements of major scientific and technological projects in the field of smart education; pathways for mutual empowerment of technology and education; application scenarios and development trends of intelligent technology in education.

Partnership

The conference will be co-organized by Beijing Normal University (BNU) and the UNESCO IITE and jointly hosted by the Smart Learning Institute of BNU, the Faculty of Education and the Faculty of Psychology of BNU, the China Institute of Education and Social Development, and the National Engineering Research Center of Cyberlearning and Intelligent Technology. It is also co-hosted by ALECSO, COL, ISTE, and SEAMEO, as well as the International Centre for Higher Education Innovation under the auspices of UNESCO, UNESCO International Research and Training Centre for Rural Education, Collaborative Innovation Centre of Assessment for Basic Education Quality, the State Key Laboratory of Virtual Reality Technology and Systems, the Educational Informatization Strategy Research Base of the Ministry of Education, and the Journal of China Information Technology Education, etc.

The conference will invite educational institutions, research institutions, international organizations, industry associations, enterprises, media outlets, and



journals to co-host thematic forums, parallel sessions, pre-conference meetings, workshops, webinars, etc.

The conference plans to invite media outlets for media coverage of the conference, such as Xinhua News Agency, People's Daily, China Daily, Guangming Daily, China Education Daily, Science and Technology Daily, China Youth Daily, Social Sciences in China Press, Outlook Weekly, China Media Group, China Education Television, People.cn, Xinhuanet, CCTV, Guangmingwang.cn, Huanqiu, China Education News Network, China Daily Website, Sina.com, Sohu.com, Phoenix.com, TouTiao.com, as well as Weibo, Douyin, Tencent Video, Bilibili, Facebook, and Edmodo.

The conference will collect and include excellent cases and solutions in smart education in the conference proceedings. Furthermore, it is planned to invite journals to publish excellent selected conference speeches and summaries, such as e-Education Research, China Educational Technology, Modern Educational Technology, Open Education Research, Modern Distance Education Research, Journal of Distance Education, Distance Education in China, Modern Distance Education, Journal of World Education, Chinese Journal of ICT in Education, China Information Technology Education, Primary and Secondary School Information Technology Education and China Education Network.

Participants

The conference plans to invite academicians, experts, scholars, representatives from international organizations, government officials, principals, teachers, and students, and representatives from companies and media outlets in the global education and technology field to deliver speeches.

The conference invites policymakers, researchers, practitioners, technology developers, teachers, students, and enterprise representatives in smart education worldwide to participate in the conference in person or online.

Exhibition

The conference plans to host on-site or online exhibitions for industries and companies, educational institutions, and research organizations in the field of smart education to showcase intelligent educational equipment, systems and platforms, tools and software, digital resources, integrated solutions, cases, projects, and research achievements.

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GSENet

Organizing Committee of GSE2023

8 March, 2023



全球智慧教育大会
Global Smart Education Conference

Past Conferences Review





Stefania Giannini

UNESCO Assistant Director-General for Education

“The design and use of technology should be in the service of people - to enhance human capacity, protect human rights, and ensure sustainable development. Going forward, inclusion must be the yardstick of every policy.”

Branko Ruzic

First Deputy Prime Minister; Minister of Education, Science and Technological Development, Serbia

“The practical exploration of China’s digital transformation of education has brought great inspiration to Serbia. Serbia is actively improving the construction of educational infrastructure, enhancing the digital ability of schools, teachers and students, promoting the digital transformation of education, and improving the flexibility and quality of education.”



Azat Athalye

Vice Minister of Education, Turkmenistan

“The application of digital technology in education is a trend for future development. With the development of network technology, online learning methods and traditional education models will gradually be integrated. Turkmenistan is committed to building a digital education system, improving the digital infrastructure, establishing an international cooperation network, and promoting the technological upgrading of the education system.”



Adejoke Orelope-Adefulire

Senior Special Assistant to the President on SDGs, Nigeria

“High-quality education is the best investment, in which everyone can receive education in a healthy and sustainable society. The Nigerian government is implementing the requirements of the United Nations SDG4 in increasing investment in education, eliminating the digital divide, and promoting the supply of sustainable educational resources. She also referred to the cooperation between Nigeria and the Chinese Digital Technology Company that has played a positive role in curriculum reform and the improvement of teachers’ teaching levels.”



Muhammad Yunus

Nobel Prize Laureate

“Exploring the right path for educational development in rural areas is crucial to the future of humanity. The world of the future will be safer, fairer and more peaceful by fostering creative thinking and ensuring the well-being of students.”



Qinping Zhao

Academician of Chinese Academy of Engineering



“As an important supporting technology for smart education, virtual reality is immersive, interactive, imaginative and intelligent. It has the potential to revolutionize existing technologies and generate new teaching methods and modes. VR and AI may become ultimate education technologies, which will have a profound impact on future education.”

Yunhe Pan

Academician of Chinese Academy of Engineering

“The world is moving from binary space to the new ternary space. This is the driving force that moves AI toward a 2.0 stage. Binary space refers to the physical space and social space. With the advent of the big data era, the world has entered the ternary space, which means the new information space has emerged, compared with the previous binary space.”



Hequan Wu

Academician of Chinese Academy of Engineering

“5G technology has promoted the upgrades of high-definition video and VR/AR/MR. It realized not only the low-delay live-streaming for teacher-student real-time interaction but diverse functions including virtual teachers and teacher assistants. These made home-schooling and personalized learning for students possible during the pandemic, promoting the innovation of talent cultivation mode.”

Jun Zhang

Academician of Chinese Academy of Engineering

“Based on the concept of smart and interconnection as well as the framework of Internet of Intelligences, the loop of 'human-computer-object' relationship can be reshaped. The construction of 'Smart Classroom' could break the barriers between space, time and knowledge, forming a synergistic integration of two dimensions (i.e. three-dimensional space and time, three-dimensional space and knowledge).”



Yaonan Wang

Academician of Chinese Academy of Engineering

“The digital technology system consisting of memory technology, perception technology, action planning, and machine learning as the core is the cornerstone of a highly autonomous and networked closed-loop control system and multiple application scenarios, providing a wide range of possibilities for the government's educational supervision function, the school's teaching transformation model, and the students' new learning style.”



Zhanyuan Du

Then Vice-Minister of the Ministry of Education, China

“Increasing efforts to promote the deep integration of information technologies and education and reforming the education system under the framework of traditional industrial society are the necessary ways to achieve the development goal of the Education Modernization 2030 Plan.”

Wushouer Silamu

Academician of Chinese Academy of Engineering

“In the future, the intelligent education will be reformed in terms of teacher resources and teaching resources. That is, the research result is based on the accumulation of scene data and high-quality teaching methods. Image recognition, speech recognition and adaptive technology can be used to match relevant teaching content intelligently, create artificial intelligence courses, and improve high-quality teacher resources.”



Jingzhong Zhang

Academician of Chinese Academy of science, China

“The discipline-based education software is resilient and dynamic. The mathematics intelligent education software can reduce the difficulty of teaching, increase the fun of teaching, and promote the digital transformation of education.”

Chaozi Lei

Director of the Department of Science, Technology and Informatization of the Ministry of Education, China

“Digital transformation of education is not only an important element of building digital China, but also a strategic choice to seize the high ground of development. It is an inherent demand for high-quality development of education, and a necessary path for Chinese education to achieve from basic equity to high equity and from educational powerhouse to a powerful nation of education.”



Changwei Qin

Secretary-General National Commission of the Peoples Republic of China for UNESCO

“AI-supported online education has greatly reduced the loss of education during the pandemic, and unprecedented large-scale online teaching innovation cases have opened a door to the exploration of the futures of education. Online education and AI-support education applications have made it possible to share high-quality educational resources on a global scale, providing new solutions to global educational problems.”





Conference Data

Attendees

8 Academicians

1000+ Invited Guests

80+ Countries

Forums

800+ Keynote Speeches

60+ Thematic Forums

300+ Regions and Schools

Enterprises

100+ Exhibitors

30+ Supporting Enterprises

2 Smart Education Exhibition

Achievements

100+ Best Practices

10+ Thematic Research Reports

5 Platforms

Media

10 million+ Online and Onsite Participants

20+ Live Channels

100+ Supporting Media

Conference Features



Professional
Gathering

Outcome Release
Best Practices Sharing

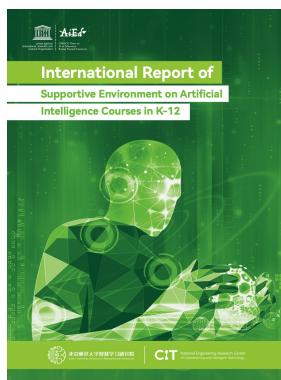
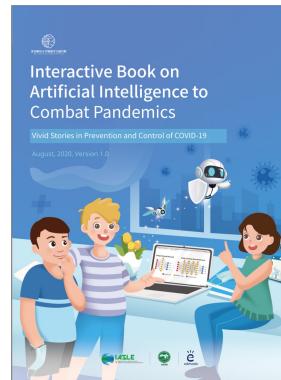
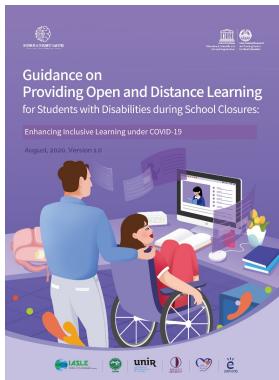
International Communication
Industry-university-research Integration
Media Salon

MICE, Metaverse,
Human-machine Interaction, On-site Interaction

Director Forum, Principal Forum, Teacher Forum
Student Forum, Enterprise Forum



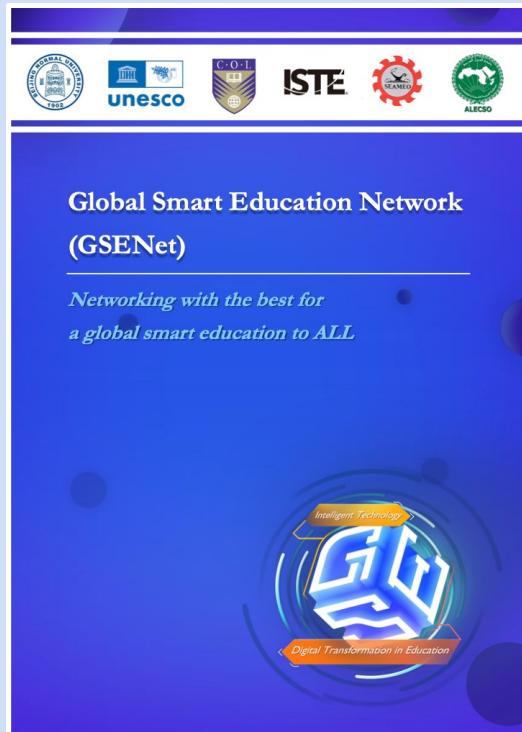
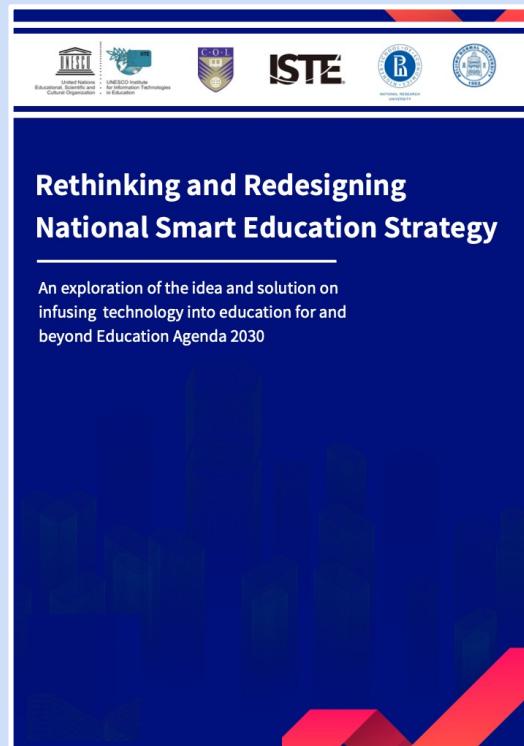
Conference Outcomes





Rethinking and Redesigning National Smart Education Strategy

UNESCO Institute for Information Technologies in Education, Commonwealth of Learning, International Society for Technology in Education, National Research University - Higher School of Economics, Beijing Normal University collaboratively launched the joint UNESCO project on Rethinking and Redesigning National Smart Education Strategy (SmartEDU) since August 2020, and worked together to identify the major issues and trends of education and explore the solution of infusing technology into education to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



Global Smart Education Network

The founding members of GSENet are Beijing Normal University, UNESCO Institute for Information Technologies in Education, Commonwealth of Learning, International Society for Technology in Education, Southeast Asian Ministers of Education Organization, and Arab League Educational, Cultural and Scientific Organization. The Secretariat is Smart Learning Institute (SLI) of BNU. GSENet aims to connect educational technology organizations for disseminating generic policies and innovative strategies at national, regional, and school levels towards achieving SDG 4 targets, and to promote state-of-art technologies, practical experiences, and best practices to serve researchers, teachers, and technicians in supporting the development of smart education.



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Cyberlearning and Intelligent Technology