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Evaluation of Smart Education Development Session Held in Beijing



On February 14, the Evaluation of Smart Education Development of World Digital Education Conference (WDEC) Parallel Session was held in Beijing. Mr. Chen Jie, Vice Minister of Education, attended the conference and delivered a speech.

Chen Jie pointed out that promoting the digital transformation of education and developing smart education are strategic choices to cope with the changes of the times and the society, and a common goal pursued by all countries in the world. The WDEC specially set up a parallel session on "Evaluation of Smart Education Development", aiming at conducting in-depth research and discussion on how to establish a new evaluation paradigm and evaluation system that is inline with the characteristics of the digital age, adapts to the development of smart education, and leads the trend of smart education. Chen Jie emphasized that China is willing to, under the framework of equality, mutual learning, dialogue, and inclusiveness, work with other countries, international organizations and relevant experts to extend a pragmatic cooperation and build an academic research network to share practical experiences, create a sound development environment, jointly promote the digital education reform, so that we can open a new chapter in the development of smart education.

Nadiem Makarim, Minister of Education, Culture, Research and Technology of Indonesia, pointed out in his speech that Indonesia has carried out the most thorough reform in education supported by the largest digital transformation in the country's history, and formulated the policy of emancipating learning. The government can use technology as an important equalizer in the education system. Learning from the best practices of countries in the digital transformation of education will pave the way for a better future for Indonesia.

Niki Kerameus, Minister of Education and Religious Affairs of Greece, said that Greece realizes that while hardware and software are important, it is more important to have a healthy ecosystem that contains at least three keys to learning: connectivity, content, and competency, enabling teachers, learners, and families to use new digital tools to advance the goals set for teaching and learning.



Experts attending the conference delivered keynote speeches on the "Evaluation of Smart Education Development". More than 200 representatives from four countries and two international organizations in China, relevant departments of the Ministry of Education, directly affiliated units and universities, the national education and scientific research units, educational administrative departments in some areas and representatives from primary and secondary schools attended the offline conference. In addition, nearly 80,000 people from 14 countries watched the live broadcast online.

Evaluation of Smart Education

Mr. Andreas SCHLEICHER, Director for the Directorate of Education and Skills at the OECD



Smart education is not just about technology, but it's about a radical reimagination of what teaching, what learning can be when powered by technology. The objective of smart education is not to conserve existing teaching practice, but to truly transform them and to move people ahead of the technologies of our times.

The digital revolution is already showing great prospects in teaching practice. Firstly, the combination of technology and education has great potential, and make learning more personal, make learning experience more granulous, adaptive, and interactive. We can reintegrate learning and assessment through technology.

Secondly, technology empowers teaching and learning. Smart education is not about technology, but it is really about a radical reimagination of how we can empower learning and teaching through technology. The use of artificial intelligence is to empower teachers and learners, not to disempower them. Thirdly, technologies create a more innovation-friendly ecosystem.

For the future development of smart education, we need to advance from learning technology to learning activity, and put that learning activity front and center in pedagogy. We need to ensure that there are, in all, strong standards set around. We have a level playing field for innovation. We have to develop teachers' digital literacy and empower teachers through technology. We have to explore how to empower people in a technology-driven world and enhance digital citizenship skills to prepare young people for the digital world of tomorrow.

Digital Transformation in Education towards Smart Education

Prof. ZHU Zhiting, Tenured Profession, East China Normal University

Smart education is the organic embodiment of science, technology, art and humanities, and its core lie in providing students with a good experience of learning and development. The value increment of digital transformation in education comes from the smart fusion of technology, design and culture, and the lasting and healthy development of smart education depends on further explorations of the principles of ecological learning. Education is a cultural phenomenon. The digital transformation of education involves the implantation of advanced cultural genes, and it should be learning-centered, adaptive, demand-driven, open, innovative, human-computer-synchronized, data-empowered,



evolutionary, plus creative. China is undergoing a digital transformation for high-quality and equitable education, which will last about two to three decades. The most important are innovations in culture, flow, function, and emotion.

There are three principles of digital transformation. First, it should be led by culture and vision; second, its system should be evolutionary and innovative; third, it should have value assessment and iterative optimization. The ecology of smart education platforms needs enhancement, and it should incorporate the platforms of state, country, district, and school levels, record the teaching and learning process with data footprint, and adopt open certification systems.

Smart Education in Digital Reform

—Experience and Insights from NIE in Singapore

Prof. Christine GOH, Director of National Institute of Education, Singapore



Regarding the global trends of using technology in education, there are six prominent features of the use of technology in education. These are personalized, self-paced learning, blended learning modes and spaces, artificial intelligence for learning analytics, interdisciplinary teaching and learning, micro-credentialing for lifelong learning and new modes of assessment.

Second, the impact that the 4th Industrial Revolution has had on education was analyzed. Technologies now blur the lines between the physical, digital and biological spheres. The six features of the use of technology in education were also elaborated.

Focused on the six features, there are some NIE examples of pedagogical innovations enabled by technology. The technology-driven teaching innovation has affected all levels from learners to schools, and various technologies enable universities to provide teaching experience anytime and anywhere, so as to make borderless, seamless, personalized cooperative learning become a reality.

The designing spaces and modes of digital education is not simply a question of buying or building. It will require educators to invest time and thinking to prioritize the purpose and design of pedagogy, to understand why certain spaces and designs might work better than others for their particular education goals, and for the students they serve. What equally important is that being aware of how these tools and spaces can be used in an ethical manner, so that technology does not harm or dehumanize teachers and learners. This is also lie in the heart of smart education and digital reform.

Commonalities and Characteristics: A Global Look at the Digital Transformation of Education

Prof. ZHANG Minxuan, Director of Teacher Education Center under the Auspices of UNESCO

In the digital era, only with the help of digital technologies can teaching and learning become vivid, lively, appealing, and adaptive to individualized needs. The common tendencies are demonstrated in the digital transformation of education across the world. First, the majority of international organizations and countries have arranged resources and started their research. Second, transformation and iterations are taking place, driving policy changes. Third, strategic plans are being made. The European Union, the United States, Japan and other countries have started a series of strategic planning. Fourth, key projects are being constructed. According to the “3C” theory of the United Nations, namely connectivity,



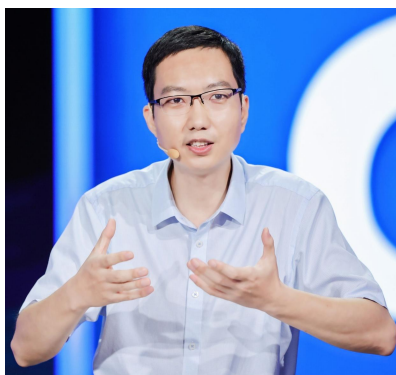
contents and capacity, the establishment of databases is key to the digital transformation of education. Fourth, attention is being given to the various risks involved. Governments and international organizations are highly alert to the ethical risks imposed by the digital transformation of education.

In the future development of digital transformation, importance must be attached to the construction of databases for digitalization. The transformation must be based on the content of education itself, so as to increase the appeal of educational resources. The funds can be raised by introducing venture capital and market mechanism. International cooperation should be strengthened to promote the sharing and development of resources. The capacity of teachers should be enhanced, the integration of digital technologies and teachers' capabilities should be promoted, and the human-computer interaction should be promoted.

Smart Education

—A New Form of Education towards Future Society

CAO Peijie, China National Academy of Educational Sciences



Education has distinctive characteristics of the times. As the new mode of education of the digital era, smart education distinguishes itself from its predecessors regarding environment, teaching, governance, and talent development.

First, it constructs the ubiquitous smart learning space, realizes the dynamic interaction between physical and virtual space, real-time connectivity and two-way empowerment, and allows learners to learn anywhere and anytime.

Second, it delivers the individualization of teaching,

innovates the organization mode of teaching using digital technology, implements the learner-centered blended learning, provides precisely individualized learning aids, and conducts whole-process and all-round assessments of morality, intelligence, physical health, beauty and labor.

Third, it provides precise and smart governance, scientific data-driven decision-making, data exchange and business collaboration across different regions, different departments and levels, constructs an integrated public service system for education, and establishes educational and scientific ethics of beauty and benevolence.

Fourth, it cultivates innovative and creative talents who will develop values and convictions rooted in the new era, digital literacy adapted to the future, innovative capabilities and lifelong learning ability.

In a word, we should pay close attention to the characteristics and principles of smart education. This talent cultivation mode is empowered by digital technology, the data-driven paradigm of education governance, and the approaches to the digital transformation of education.

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