International Conference on Artificial Intelligence and Education

Planning Education in the AI Era: Lead the Leap

Concept Note

Beijing
People's Republic of China
16-18 May 2019

Working Languages

For plenary sessions, interpretation will be provided for six UN official languages.
For breakout sessions, interpretation will be provided for English, French and Chinese.

Background

Artificial Intelligence (AI) is a convergence of a widening spectrum of frontier technologies, and in recent years it has garnered the potential to bring new possibilities for sustainable development and societal change. AI has become pervasive in daily lives, giving rise to the Fourth Industrial Revolution (Industry 4.0), and is bringing human history to a new era where humans need to live and work together with AI. The arrival of the AI era is raising a fundamental question about how education can prepare individuals to live and work with AI effectively and to build sustainable societies.

The penetration of AI comes with a rising demand for a system-wide response to automation and AI-triggered unemployment and the growth of new occupations. A recent global estimation shows that 30% of "work activities" could be automated by 2030, and up to 375 million workers worldwide could be affected, from blue-collar workers to white-collar employees and managers, and reaching creative industries. Meanwhile, AI and other frontier technologies are increasing the number of high-skill jobs that require the utilization of unique human creative abilities and human interaction. Workers who are displaced will need to develop new skill sets required by new occupations in the AI-rich era. Education and training systems need to anticipate these changes and simultaneously equip the workforce and prepare the new generations with job skills to succeed in the AI era.

For education and learning, there is a consensus that the impact of AI has a benefit-risk duality. To reinvent education systems towards an AI era, policymakers will need to examine the benefits and potential risks of AI in the context of achieving the Sustainable Development Goal 4 (SDG 4) -Education 2030 agenda on the provision of inclusive, equitable, quality education and lifelong learning opportunities. As we enter the fourth year of implementing the Education 2030 agenda,

we are facing major challenges. Globally, there are 262 million children and youth out of school and a 617-million illiterate population, and in sub-Saharan Africa alone, fewer than 40% of female children complete nine years of education. Achieving the ambitious Education 2030 agenda will require unlocking all potential resources, particularly the potential of frontier technologies.

"Artificial intelligence can be a great opportunity to accelerate the achievement of sustainable development goals. But any technological revolution leads to new imbalances that we must anticipate."

Audrey Azoulay
UNESCO Director-General

AI holds the potential to overcome some of these challenges, such as reducing barriers to access education, automating management processes, analysing learning patterns and optimizing learning processes with a view to improving learning outcomes. There is no doubt that AI will revolutionize the delivery and management of education and learning, but the key question is how AI can improve learning outcomes. And while we believe that teachers will not be replaced by machines by 2030, we still need a dynamic review of how AI will transform teachers' roles. This will require a transformational approach to teacher education, and continuous support to teachers in order to help them work in an AI-rich education environment.

Of note is that the penetration of AI in education comes with concerns about equity, ethics and privacy protection. Policy interventions are critical so as to prevent the deployment of AI in education from exacerbating digital divides, deepening existing learning inequalities and accelerating the proliferation of gender bias in AI applications. At the same time, educational institutions, students and especially children are more susceptible to the threat of the misuse and commercial manipulation of personal data by machine learning across areas. It is imperative to call on governments to take action on data protection.

To maximize AI's benefits and mitigate its potential risks for education, system-wide planning and collective action to reinvent the core foundation of education and learning are required. To achieve this, the readiness of all stakeholders, particularly policymakers, system managers and teachers, is tested.

Building on its mandatory roles of laboratory of ideas, normative instrument development and consensus building, UNESCO is committed to acting as a convener among Member States and other key stakeholders in exploring the best possible ways to leverage Artificial Intelligence for sustainable development. UNESCO takes a human-centered approach to promoting international dialogue on the universal aspects of AI in the areas related to education, sciences, culture, and communication and information, with a specific focus on gender equality and Africa.

UNESCO and the Government of the People's Republic of China share a record of successful cooperation in the joint organization of international conferences on harnessing ICT to achieve SDG 4 in 2015 and 2017. The Qingdao Declaration was issued and adopted by Member States and key partners at the Conference in 2015. It states that to achieve the goal of inclusive and equitable quality education and lifelong learning by 2030, ICT must be harnessed to strengthen education systems, knowledge dissemination, information access, quality and effective learning, and more efficient service provision. As the use of ICT in education enters a new era characterized by the pervasive and transformative power of AI, it is timely for the international

education community to review the profound and far-reaching interaction between AI and education, and deliberate on a consensus about policies and strategies that could lead education's leap into the future, to be driven and enabled by AI.

The Government of the People's Republic of China has made a strong commitment to planning and achieving the Education 2030 agenda in the AI era. More specifically, the Government aims to build an education system with the openness and flexibility needed to support everyone's personalized lifelong learning, and to ensure the equitable right to education for everyone, irrespective of gender, social or economic status, or geographical location. To this effect, the Government of the People's Republic of China has expressed its interest in working with UNESCO and all Member States to promote the equitable and inclusive use of AI in education.

It is in this context that UNESCO, the Ministry of Education of the People's Republic of China and the National Commission of the People's Republic of China for UNESCO will co-organize an International Conference on Artificial Intelligence and Education to be held in Beijing from 16 to 18 May 2019. A half-day tour on 18 May to local institutions and leaders of the AI industry will also be organized to study emerging AI technologies and innovative practices in the use of AI in education. The Conference will be hosted by the Municipal Government of Beijing City with financial support from the Weidong Group and the TAL Education Group.

Goals and Objectives

The Conference aims to provide a platform for Member States, international organizations, civil society, and the AI industry to:

- debate whether skills needed to succeed in the AI era can be anticipated, and share experiences on the development of AI skills in order to enable humans to live and work together with AI;
- exchange information on the latest trends in AI and how the trends are shaping education and learning;
- assess lessons learned from emerging national policies and strategies for leveraging AI to achieve SDG 4; and
- strengthen international cooperation and partnership for promoting equitable, inclusive, and transparent use of AI in education.

Outputs

A synthesis report to document the main achievements and outcomes of the Conference will be published.

An outcome document, a Consensus, is expected to be developed and adopted by the high-level representatives of the Member States.

Target Participants

The Conference is expecting around 300 international participants, including approximately two high-level representatives from each participating Member State, representatives of United

Nations agencies and international organizations, leaders of the AI industry, academic experts, and policy makers.

Theme and Subthemes

Under the title of '***Planning Education in the AI Era: Lead the Leap'***, the Conference is designed to facilitate high-level, forward-looking debates, knowledge sharing, sector-wide strategy planning, networking, and partnership incubation. Keynote speeches of leaders of the Education Sector and the AI industry, ministerial roundtables, plenary panels, and breakout sessions will be held during the Conference under the following sub-themes:

- *Anticipation and development of skills needed for life and work in the AI era*

- *The latest trends in AI and how the trends will re-shape education and learning*

- *Emerging policies and strategies for leveraging AI to achieve SDG 4*

- *International partnerships for promoting the equitable, inclusive and transparent use of AI in education.*

Exhibitions will be staged in the vicinity of the main venue of the Conference.

Provisional Structure of the Programme

	Day 1, 16 May	Day 2, 17 May	Day 3, 18 May
Morning (3h + 30' break)	**Opening Ceremony**	**Plenary Session 3** *How trends in AI will re-shape education and learning*	**Study Visits** in local institutions
	Keynote speeches		
	Plenary Session 1 **Ministerial Roundtable** *Emerging policies and strategies for leveraging AI to achieve SDG 4*	Breakout Sessions	
Lunch (1.5h)	Lunch Break	Lunch Break	Lunch Break
Afternoon (3h + 30' break)	**Plenary Session 2** *Anticipation and development of skills needed by life and work in the AI era*	**Plenary Session 4** *International partnerships for promoting the equitable, inclusive and transparent use of AI in education*	**Plenary Session 5:** Review and adoption of the *Consensus on AI and Education*
	Breakout Sessions	Breakout Sessions	**Closing Ceremony**
Evening	**Reception**	--	--