FORUM ON ARTIFICIAL INTELLIGENCE IN AFRICA

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Background

Artificial Intelligence (AI) is a major example of interdisciplinary research, combining computer science, psychology, cognitive science, mathematics and philosophy.

Artificial intelligence is both a centerpiece of the new industrial revolution, and a carrier of technological progress that is changing societies and economies. It is drawing increasing attention from the private sector, researchers, civil society, the international community and development actors.

Never has artificial intelligence been so much at the heart of world debates given that it is likely that it will promote social well-being and human progress, in line with the United Nations Sustainable Development Goals. The African Continent is not immune to this trend.

The development of AI in African countries has a direct impact on UNESCO's fields of competence:

- AI-based technology modifies the role of teachers and enhances education systems by ensuring access to knowledge, including lifelong learning, and by encouraging the inclusion of digital learning in school curricula and the digitization of data.
- AI improves scientific research in the fields of the natural, human and social sciences, and it promotes the collection and analysis of scientific data. This makes accessible and improves solutions in the areas of health, environmental protection, and the mitigation of and adaptation to climate change. For example, initiatives that sometimes involve businesses and NGOs rely on AI to protect wildlife, as well as to improve the resilience of people and farmers to climate change.
- Artistic content is no longer a human enterprise as it can be generated by AI-based technologies. As such, it disrupts artistic creation, cultural and creative industries, copyright and cultural heritage.
- AI can contribute to the protection of cultural heritage through the review of the evolution of heritage sites, the monitoring of illegal traffic and cultural property destruction, as well as the evaluation and collection of data that is useful to restoration and reconstruction, including in difficult terrain - for humans.
- AI modifies the production, management and sharing of information and knowledge. Artificial agents that generate and disseminate information transform the practice of journalism. At the same time, AI promotes open and inclusive knowledge societies, especially for marginalized groups, including through the automation of translation and speech recognition systems in multilingual countries or countries with high illiteracy rates.

However, AI is experiencing uneven development in Africa because the institutional, economic and social conditions of African countries do not always create an enabling environment to unleash its potential. Indeed, for the moment, the real advancement and development in this area is generally taking place in Kenya, Nigeria, Rwanda and South Africa - the countries that are the Continent's main technological champions. Several issues lie at the root of this uneven development, such as the lack of quality education and of an education that is universally accessible in science, technology, engineering and mathematics (STEM); the lack of gender equality and women's economic empowerment, and, the

lack of public policies that promote research, entrepreneurship and open data in a regulated environment.

It is interesting to note, nevertheless, that many countries have chosen to take part in the technological revolution and to ensure the development of AI in order to position themselves on the international scene of technological innovation. This is the case of Morocco, which in 2016 adopted the Morocco Digital 2020 Strategy and created, in December 2017, the Digital Development Agency, under the supervision of the Ministry of Industry, Commerce, Investment and Digital economy.

The same is true for Rwanda, where technological innovation is seen as a driver of social transformations and economic growth. With a Ministry of Information and Communication Technologies (ICT) and an ICT Chamber, Rwanda is poised to become the African leader in financial technology (Fintech) thanks to a partnership, signed in May 2018, between KLab, the first Rwandan incubator for technological innovation and Finance Innovation, Global Competitiveness Cluster (France). The Rwandan Innovation Fund, which is expected to raise hundreds of millions of dollars, will soon receive support to the value of USD 30 million from the African Development Bank, to promote technology and innovation.

These initiatives and national measures are still rare on the African Continent. Indeed, AI-based solutions are being developed punctually and in an undefined framework; one that does not inherently include public policy, values or human rights.However, while the lack of a defined framework can be an asset in enabling greater innovation, there is the real risk that it may be detrimental to human rights and ethics.

In terms of ethics, rights, and freedoms, AI raises a number of issues:

- The right to information, freedom of expression and the principle of transparency can be set in motion by the use of AI in the management of information and content on the internet, which can lead to false information, be threats to journalistic work or a dangers to democracy.
- The collection, management and use of the data necessary for the development of AI may threaten the right to privacy.
- Gender, social or cultural inequalities can be induced or reinforced by AI-based technologies if their design is biased by inequalities or discrimination in data or algorithms selection.
- The use of machines and other AI-related technologies undoubtedly will have serious consequences on human relations, on the human "being" and on society, in the private and professional spheres.
- The question of accountability arises: who should be responsible for any technological error when using AI? Who owns the supposedly autonomous decision-making capacity and the notion of AI device intentions?
- The design and use of AI-based technologies can have an impact on the environment.
- AI can raise questions on the social cost. Even if it would create jobs, the new technology in essence compensates for – or even substitutes – people, especially in agrarian and service-based economies such as those in Africa.
- In a society where wealth would be generated in part by the AI mainly developed in countries in the northern hemisphere, what would be the distribution of wealth to foresee for the countries of the south?
- If the development of AI is not equal between the various regions of the world, the digital divide could become more tangible and prejudicial for the poorest societies.
- There is a risk that artificial intelligence programs designed in developed countries may not be adapted to the socio-economic and cultural realities and specificities of the African countries where they are implemented, which may cause unwelcome effects.
- The question of the malicious use of artificial intelligence also raises questions.

In Africa, these issues vary across societies and economies, as well as in institutional and governance systems. In this context, the development of AI functionalities must be accompanied by critical reflection and ethical considerations.

The role of UNESCO

In the face of the popularity of artificial intelligence, UNESCO must rely on its multidisciplinary expertise to distinguish itself as a leader in the reflection on AI.

A process is currently under way at the institutional level, led by an *ad hoc* intersectoral working group, to give the Organization a decisive role in the reflection on AI.

This role, as a platform of reflection, is in line with the mandate of the Organization, because it gives substance to its function as a laboratory of ideas. In addition, it is in line with the general orientation of the United Nations system.

The value of a UNESCO Forum on AI in Africa

UNESCO could enrich the global reflection on AI by placing the discussions within the African framework, through the organization, jointly with Mohammed VI Polytechnic University (UM6P), of a high-level forum. The regionalization of the debate of ideas would make it possible to raise the stakes of AI while taking into account the challenges, opportunities and stakes peculiar to local contexts.

To date, the issue of AI in Africa is rarely dealt with when it is not restrained in a North-South relationship. A debate on a continental scale about AI in Africa will help to ensure its expansion. This gap represents an opportunity for UNESCO to develop a reflection with and by African actors. Moreover, it would allow Africa to be at the forefront of global thinking and, to avoid being confronted with the same ethical pitfalls faced by Western countries with regard to artificial intelligence.

This high-level Forum will finally address these issues and endeavor to promote and maximize the potential of artificial intelligence as a lever for development.

Themes

The Forum will focus on the issues and challenges of artificial intelligence in Africa.

The sub-themes of the Forum should direct reflection on different dimensions of AI in the African context. Such discussion would reveal the interest of AI as a lever for development and would highlight in particular the importance of public policies in the ethical development of new technology.

Objective of the forum

To discuss the issues and challenges related to the development and use of artificial intelligence in Africa.

Expected results

- Promote artificial intelligence in Africa as a lever for development
- Encourage regional African cooperation and promote an ethical framework for artificial intelligence on the African Continent
- Influence national strategies that maximize the potential of AI in Africa
- Establish an African Forum of Artificial Intelligence Associations in Africa

Methodology

The format of the Forum will consist of plenary sessions and thematic workshops over 2 days. Side-events will be organized in the form of round tables.

An exhibition space, in which UNESCO will hold the main stand, will be dedicated to exhibitors wanting to present their work on artificial intelligence.

Partners

- OCP Foundation

- Mohammed VI Polytechnic University (UM6P), Benguérir, Morocco

- Other partners: UNESCO Member States, African Union (AU), Regional Economic Communities (RECs) in Africa, People's Republic of China, Microsoft.

Participants

About 150 participants :

- Ministers and Representatives of African governments
- Representatives of the African Union, African Regional Economic Communities and regional organizations such as AfDB and IDB as well as the private sector
- Representatives of civil society in Africa
- Representatives of international organizations, including the United Nations System

UNESCO

- UNESCO's Director-General
- President of the 39th session of UNESCO's General Conference
- UNESCO's Chairperson of the Executive Board
- Permanent Delegates to UNESCO
- UNESCO personnel

OCP Group

- OCP Foundation, Policy Center, Mohammed VI Polytechnic University