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Review of documents of international and regional organisations on artificial intelligence in education

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MGIMO Centre for AI

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**«Review of documents of international and regional organizations on artificial
intelligence in education »**

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Over the past few years, more than 30 countries have published national artificial intelligence (AI) policy strategies. The research work set out plans and expectations for how AI will impact policy sectors, including education, and typically discusses the social and ethical implications of AI. The work is devoted to a thematic analysis of 6 national AI policy strategies, considering the role of education in the global political discourse in the field of artificial intelligence, as well as the impact of documents of international organizations on the development of regional concepts. Artificial intelligence development strategies are designed to stimulate competition in the public and private spheres, UNESCO calls for the creation of an international community with common values in the development of AI and its use in education. This is accompanied by a recommendation to Member States to promote the fair use of AI in education by sharing AI technologies, programs and resources for capacity building.

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Introduction

The rapid development of artificial intelligence (hereinafter - AI) has a serious impact on education. Advances in AI-based solutions hold enormous potential for the public good and the achievement of sustainable development goals. To make this happen requires system-wide policy adjustments and requires strong ethical oversight, as well as in-depth engagement with practitioners and researchers around the world.

Politicians and educators have entered uncharted territory that raises fundamental questions about how the future of learning will interact with artificial intelligence. The bottom line is that the introduction and use of artificial intelligence in education should be based on the basic principles of inclusiveness and fairness. For this to happen, policies must promote equitable and inclusive access to and use of AI as a public good, with a focus on empowering girls and women and disadvantaged socioeconomic groups. The growing use of new artificial intelligence technologies in education will only benefit all of humanity if – by design – it strengthens human-centered approaches to pedagogy and respects ethical norms and standards. AI should be focused on improving learning for every student, empowering teachers, and strengthening learning management systems.

In light of its powerful transformative power and profound impact on various societal domains, AI has sparked a broad debate about the principles and values that should guide its development and use. Concerns that artificial intelligence could endanger people's jobs, be misused by malevolent actors, elude responsibility, or inadvertently spread bias and thereby undermine fairness, have been at the forefront of recent scholarly literature and media coverage. Several studies have discussed the topic of ethical AI, especially in meta-evaluations or in relation to systemic risks and unintended negative consequences such as algorithmic bias or discrimination.

National and international organizations have responded to these public concerns by creating ad hoc AI expert committees, often tasked with developing

policy documents. These include High-level Expert Group on Artificial Intelligence (AI HLEG) appointed by the European Commission, the OECD Expert Group on AI (AIGO), the Advisory Council on the Ethical Use of Artificial Intelligence and Data in Singapore, and the United Kingdom Artificial Intelligence Task Group on (UK) House of Lords. As part of their institutional appointments, these committees have produced or are reportedly preparing reports and guidance documents on AI. Similar efforts are being made in the private sector, especially among corporations that rely on artificial intelligence for their business.

In addition, preparing students and all citizens to live and work safely and efficiently using artificial intelligence is a global challenge. Future training and retraining systems should provide all people with core competencies in the field of artificial intelligence, including an understanding of how artificial intelligence collects and can manipulate data, as well as skills to secure and protect personal data. Finally, AI by its nature transcends sectors, planning effective AI and education policies requires consultation and collaboration with stakeholders across disciplines and sectors.

Review of documents of international and regional organizations

UNESCO plays a leading role in promoting dialogue and knowledge dissemination in all these areas with key actors in the public and private sectors. A number of events and publications have raised awareness of the vast potential and implications of artificial intelligence for education and have helped Member States begin to respond to complex challenges.

The Beijing Consensus on AI and Education (UNESCO), the first ever document to offer guidance on the use of AI technologies to achieve the 2030 Education Agenda, has been adopted by more than 50 government ministers, international representatives from more than 105 countries members and almost 100 representatives of UN agencies, academic institutions, civil society and the private sector. The consensus affirms a humanistic approach to the use of artificial

intelligence to protect human rights and prepare all people with the appropriate values and skills necessary for effective human-machine interaction in life, learning and work, and for sustainable development. He advocates for human-controlled and human-centric AI development, where AI deployment should be in the face of human empowerment; that AI must be developed in an ethical, non-discriminatory, fair, transparent and verifiable manner; and that the impact of AI on people and society must be monitored and measured across all value chains.

Based on these general principles, the consensus sets out specific recommendations for planning education policy ; education management and delivery; empowerment of teachers; learning and assessment of knowledge acquisition; and developing values and skills for life and work.

In 2019, the relationship between artificial intelligence and sustainable development was explored at «Mobile Learning Week», the flagship event of the United Nations on information and communication technologies in education. In the same year, in cooperation with the Government of the People's Republic of China, UNESCO organized the «International Conference on Artificial Intelligence and Education» in Beijing on the theme «Planning Education in the AI Era: Lead the leap». This conference looked at the system-wide impact of AI on education, and it was here that the Beijing Consensus was adopted and published as the first ever paper to make recommendations on how best to use AI technologies for Education 2030¹. The Beijing Consensus specifically recommends that UNESCO develop guidelines and resources to support capacity building for education policy makers and the integration of AI skills into competency frameworks. More broadly, it calls on UNESCO to take a holistic approach to strengthening international cooperation in the field of artificial intelligence and education with relevant partners.

«Artificial Intelligence and Education: Guidance for Policy-makers» was developed as part of the implementation of the Beijing Consensus aimed at helping

¹ Miao, F; Holmes, W; (2021) Artificial Intelligence and Education. Guidance for policy makers. United Nations Educational, Scientific and Cultural Organization (UNESCO): Paris, France.

education policymakers ready for the use of artificial intelligence. This complements UNESCO's growing body of intellectual work in this area and will be of interest to a range of practitioners and professionals in the policy and education communities. It aims to build a common understanding of the opportunities provided by AI for education, as well as its implications for the core competencies required in the age of AI. It presents a benefit-risk assessment to provoke critical thinking about how AI should and can be used to solve problems related to achieving goals, and how potential risks should be identified and mitigated. It brings together new national strategies and best practices for using artificial intelligence to improve education and learning.

UNESCO works in collaboration with UN agencies, Member States and public and private partners to support the development of shared resources and shared values on this topic.

As noted by the Committee of Ministers of the Council of Europe in 2019, artificial intelligence (AI) is having an increasing impact on education, creating both opportunities and multiple threats. It is these observations that led to the preparation of this report, which aims to explore the links between artificial intelligence and education.

In fact, Artificial Intelligence in Education (AIED) has already been the subject of numerous international reports. The goal is to provide a holistic view to help ensure that AI is empowering rather than overwhelming teachers and students, and that future developments and practices truly serve the greater good.

As of 2021, over 30 countries have released national artificial intelligence (AI) policy strategies. These papers outline plans and expectations for how AI will impact policy sectors, including education, and typically discuss the social and ethical implications of AI.

An independent position regarding the use of artificial intelligence in various public spheres has also developed in South and Central America. This regulation is carried out not only at the level of regional organizations, but is also directly enshrined in the legislation of countries. In particular, this applies to the largest

countries, such as Brazil, Argentina and Mexico, where this is carried out even at the level of the constitution, which indicates the great elaboration of this issue and a serious emphasis on the development of technologies that can ensure the future.

First of all, it is worth referring to the American Convention on Human Rights, where, as one of the guarantees that each of the countries is called upon to provide, is the opportunity to fully realize the potential that contributes to the development of social progress. Based on this document of a regional organization, one can conclude what is the reason for the focus of Latin American countries on technology.²

Of course, with a deep study of the legislative database of countries, one can come to the conclusion that the provisions regarding artificial intelligence are predominantly declarative, they still determine the trend that countries strive for when planning long-term development, which makes it possible to determine priorities for the coming years. .

It is also interesting to carefully study the legal regulation of our issue in Asian countries, where China stands out first of all, where the use of technology is due to the need to maintain socio-political stability in the country. It was for this purpose that the "Program for the Creation of a Social Credit System for 2014-2020", adopted by the State Council in 2014, was formed, according to which a universal system for assessing citizens and companies should be formed throughout the PRC . Each individual and entity will be assigned a "social trust" rating based on their social behavior data. With the help of artificial intelligence and in accordance with algorithms approved by the state, all available data about a person or company, including their behavior on the Internet, will be analyzed. Holders of a high rating will receive social and economic benefits; low-ranking holders will be subject to restrictions. Thus, the party expects to receive an

² American Convention on Human Rights, 1969

instrument that allows not only to exercise social control, but also to regulate social behavior.³

If we look at the broader regulation being carried out in Asia, then there is the development of artificial intelligence, there it was concluded that it would be necessary to rethink the goals of everyone following intellectual property law, which has traditionally been focused on protecting the product of the human mind. The tension at the heart of intellectual property law is the tension between giving adequate reward to the individual and maximizing the benefits to society. Thus, AI law will have to take into account the new role of the individual and the question of whether traditional tensions will remain relevant as a key guiding factor in the development of AI law in IP. This will require relevant stakeholders to keep abreast of developments in the field of artificial intelligence and understand the exact role of both humans and artificial intelligence in the application of artificial intelligence technology. To this end, the various due diligence activities undertaken by law reform agencies and bodies around the world, including the Intellectual Property Office of Singapore and the Law Reform Committee of the Singapore Academy of Law, represent a welcome first step in the right direction.

The strategy implemented in this area by the Russian Federation, as well as its constituent entities, also deserves special attention, where the main vector of direction is set by the National Strategy for the Development of Artificial Intelligence for the period up to 2030, which tries to strike a balance between the efficiency of using modern technologies that can imitate human cognitive functions, and the security of the individual of the state and the whole society in the process of direct use. The Strategy takes into account already existing achievements, from a technical point of view, however, there is scope from the point of view that within ten years there may be significant changes in the approach to studying such a phenomenon, which is also taken into account in this

³China's program on the establishment of a social credit system for 2014-2020.

Strategy, since these issues are effectively addressed on the basis of principles enshrined both in the strategy itself and in the law of April 24, 2020.⁴

The strategy also solved some of the problems that were acute for the state before its adoption. One of these problems was the ambiguity of some terminology, which calls into question all further activities due to emerging legal conflicts and uncertainties in legislation and law enforcement. The formation of an unambiguous position of the legislator on the issue of the concept of Artificial Intelligence contributed to the fact that the available resources can be directed to solving more pressing problems.

The Strategy also combines those principles that we have previously studied at the international level, which provides a more expected and understandable development in this area and which, as expected, cannot be underestimated in the process of studying. In particular, this concerns the principle of protecting human rights and freedoms in the implementation of the goals of the Strategy, which sets priorities in the legal regulation of this issue also at the level of the Russian Federation. The principle of non-discrimination, in conjunction with the previously studied principle, is also the basis for the development of technology. This is reflected both at the regional level and at the level of the constituent entities of the Russian Federation, which are assigned tasks based on the experience gained in organizing their activities by the federal center.

Thus, it can be concluded that the legislative framework developed for this issue is essential, and the main task remains its effective implementation through the achievement of the objectives set in the Strategy.

The approach of the countries of North America and Europe is, more in detail, very similar. In this case, it is necessary to take into account the fact that Europe, like the United States, includes several dozen subjects at once that have their own legislative powers (European countries and states, respectively).

⁴Federal Law "On conducting an experiment to establish special regulation in order to create the necessary conditions for the development and implementation of artificial intelligence technologies in the subject of the Russian Federation - the city of federal significance Moscow and amending Articles 6 and 10 of the Federal Law "On Personal Data" dated April 24, 2020 N 123-FZ

In legal regulation, this feature is taken into account, including the fact that the main powers are concluded in the center, where in Europe such, in particular, is the European Union, and in the USA - the federal level of power. The regulatory approach in Washington, Pennsylvania and Oklahoma is brought together by the US AI Convention.

In the EU, the key document is the European Union Regulation on Artificial Intelligence, which establishes a single undifferentiated approach for a number of countries.

The African approach to regulating the organization and development of artificial intelligence is the most differentiated in view of the fragmented approach in the legislation of each country. If in the countries of the southern part of the continent an approach aimed at protecting individual and human rights, including intellectual rights, has an advantage, then in the countries of northern Africa, such as Algeria and Tunisia, the priority is to create conditions conducive to the most effective industrial application of the created and implemented technologies, which can be traced when studying the principles, tasks and goals of the strategies of African states.

If we turn to the experience of South Africa, then the University of Pretoria recently indicated in a report that artificial intelligence is an opportunity for growth, development and democratization, if it is properly implemented.

However, the wording is so prone to over-optimism that it is difficult to keep a sober view throughout the entire report. On the other hand, this can also be said for some national strategies, so it is not unique to this document in particular.

AI in South Africa is still in its relative infancy with several upcoming use cases and no government strategy to promote the use or discussion of the ethical or industry aspects of AI. There is a promising focus in South Africa with recent private and public initiatives that could really move the AI community forward in the coming years. However, the answer to the question in the introduction is still no: there is currently no clear strategic focus on AI in South Africa.

At the 37th session of the General Conference of UNESCO, which adopted the priority of gender equality, another strategy was adopted, “Africa Priority at UNESCO: Operational Strategy for its Implementation 2014-2021”, which was then launched the following year.

In 2021, it was updated with a dedicated flagship program on Leveraging new and emerging technologies for sustainable development in Africa, including through the implementation of the Recommendation on the Ethics of Artificial Intelligence (UNESCO, 2021e). The main goals of this flagship program include:

- Strengthening the capacity of African countries to implement artificial intelligence;
- Strengthening the capacity of all AI actors in Africa to promote ethical solutions and evaluate the impact of AI on individuals, society and the environment;
- Increasing gender equality in the development and use of artificial intelligence systems;
- Help build inclusive knowledge societies in Africa by mainstreaming open educational resources; and
- Development of digital skills and competencies, as well as bridging the gap in knowledge and digital technologies.

As evidenced by the Strategy for Technological Innovation in Education (2021-2025), adopted at the 212th session of the Executive Board in April 2021, UNESCO is committed to mobilizing resources and providing capacity development to support Member States in planning and managing resilient and crisis-resilient systems learning with the use of technology. The strategy also commits UNESCO to strengthen the capacity to use big data in learning management systems and to stimulate the development of the global information space. All of this together will facilitate the human rights-based, secure and ethical exchange of trusted data and algorithms that can help improve teaching and learning (UNESCO, 2021).

However, the use of digital technologies, especially artificial intelligence, must not be allowed to negatively affect cultural diversity. Every country in Africa is unique, and a digital humanist approach requires that this wide diversity of cultures be taken into account and celebrated. In particular, stakeholders should recognize that the portability of existing algorithms is weak, which means that algorithms based on data from one user group cannot be used directly to solve similar problems for groups in other contexts. This creates problems with the possibility of transmission between countries within the same region, as well as between developed and developing countries. In other words, algorithms trained on data outside of Africa will inevitably lead to inaccurate predictions, recommendations, and decisions. However, there is hope that developing countries that adopt AI later can learn some of the lessons from the early use of AI and channel algorithms for the common good in education.

If African countries want to close the digital and economic divide between themselves and other countries around the world, they cannot wait for the countries of the global north to do what is needed. Instead, they should learn from each other and share experiences, knowledge and perspectives. At the same time, African countries need to develop their own local human capacity. This requires a digital transformation that is committed to human rights and is context sensitive to ensure they don't just consume artificial intelligence, but can guide and inform its effective and ethical development – all dependent on giving children across Africa equal and inclusive access to education . However, as noted earlier, less than ten countries of all UNESCO Member States are implementing public artificial intelligence curricula for schoolchildren.

In order to comprehensively study all aspects of the issue we are studying, it is worth turning to the legal regulation of artificial intelligence in the Middle East, which also has its own significant features that require careful study from different positions.

The 2018 Arab League Policy on the Use of Artificial Intelligence in the Health Sector seems to be the most appropriate source to study, as it provides a

flexible and evidence-based approach to regulation to quickly address specific risks without the unintended consequences of broader legislation . As the pace of technological innovation grows exponentially and real risks arise (as opposed to theoretical ones), laws will need to continue to evolve (albeit at a much faster rate than we are used to), and more industry regulations will likely be introduced as new use cases for artificial intelligence emerge. intelligence and the associated risks to crystallize.

The conclusion is that the level of integration and coherence of the Arab states in this case is higher than, for example, in the African states, since there is a unified and organized approach that makes it possible to comprehensively resolve this issue by establishing the principles and goals of activities, albeit only in the field of healthcare.

A similar issue, only in relation to the education sector , is also resolved in an act of a regional organization, in this case, in the Pact of the League of Arab States regarding the use of artificial intelligence in the health sector of 09/01/2020, in which states emphasize the need for interaction between all subjects of lawmaking and law enforcement.

The desire to carry out such interactions is probably caused by studying the experience of Europe.

Conclusion

The analysis shows that education is a priority topic at the international level, explicitly stated or given significant attention in special sections of national artificial intelligence policy strategies. The key finding of the analysis is that the papers are mainly related to education for artificial intelligence, substantially surpassing the discussion of artificial intelligence for education. All 6 improvement papers contain discussion of at least one of the three Education for AI topics. National AI policy strategies can cover all policy sectors in a similar way, considering only how social and economic infrastructure can drive AI innovation,

not how AI itself can be used to drive change in those policy sectors. . In fact, the dual role of education seems to be a unique case, as many papers discuss the use of artificial intelligence not only for healthcare, but also for transport, agriculture, finance and many other sectors. Secondly, it can be argued that there are other sources through which national approaches to education can be studied, such as policy papers and guidelines prepared by national education agencies. While examining additional sources can certainly provide a more complete picture, examining national AI policy strategies allows for a more direct look at top-level priorities—strategic and financial—of top decision makers.

In this paper, the currently existing agreements and legal acts are considered, depending on the territorial affiliation. Having studied the international legal regulation of artificial intelligence on the example of various states and continents, we can conclude that the dominant position of states is comprehensive integration and cooperation in this area, which, in some cases, does not exclude a more independent approach. Often, these acts regulate a fairly wide range of issues, including education, but based on the existing trends, it can be predicted that further regulation will regulate narrower areas, including education, in more detail. This can be explained by the fact that over the past time there has been a sufficient basis on which to build more specific areas of life.

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MGIMO Centre for AI was established to enhance international cooperation and support collaboration with all the actors of digital economy both at national and international levels. Our multidisciplinary research is focused on international cooperation agenda, national policies for AI and business opportunities. International trade and trade policy (prioritising digital trade), sustainable development, AI ethics are the key areas of our activities.

On the basis of MGIMO-University we promote an international AI expert platform with regular conferences and round tables, peer-reviewed articles and research papers. Our enlarging network of strategic partnerships makes it possible to provide AI consulting and policy solutions both for business and government agencies.

The Centre was founded in October, 2021

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