



# The Hague International Model United Nations

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**Forum:** Special Conference on Artificial Intelligence Sub-Commission 2

**Issue:** Measures to Develop Artificial Intelligence for the Benefit of Global Development (Education)

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## Introduction

Artificial intelligence can potentially become a great tool in the world's multifaceted development. If used correctly, it holds the power to bring equality for the masses; however, if misused, it can increase inequality and further deepen socioeconomic divides.

This report focuses on AI's role in improving education by providing AI-based education tools to bolster global development. The report is structured by key terms essential to understanding the problem, background information, issues to be discussed in the conference, organizations and nations involved, a timeline of relevant events, and example solutions to problems in the report. The appendix contains material that will be beneficial to read before the conference. Further reading of other academic papers or books regarding this issue is greatly encouraged.

The study guide was completed upon study of academic literature. The research is also based on the white papers of organizations like the UN and the OECD and governments like the US and UK, which are leaders in the AI industry. The key themes of economic development and education were examined, emphasizing the UN SDGs, to explore the diverse application of AI. Quantitative data was also used to highlight the impact of AI on various stakeholders.

AI will undoubtedly play a prominent role in fostering sustainable global development. This report is a guide to finding measures to develop artificial intelligence, especially in the context of education, to fuel global growth.

## Definition of Key Terms

### Artificial Intelligence (AI)

“Artificial intelligence (AI) is a set of technologies that enable computers to perform various advanced functions, including the ability to see, understand and translate spoken and written language, analyze data, make recommendations, and more.” (Google, 2024). AI has many applications in machine learning, natural language processing, and robotics. As a result, AI has become integrated into almost all aspects of daily life, ranging from educational applications to Open AI’s ChatGPT. The characteristics of AI include its ability to analyze and interpret vast amounts of data in seconds (ISO, 2024) and constantly improve itself.

### AI Safety

AI safety refers to measurements developers take to ensure that their models behave according to their intentions, without any unintended consequences or harm. Bias or hallucinations are two examples of risks presented by AI models. Hallucination refers to AI models generating information that is wholly or partially false (Securiti, 2024).

### Global Development

Global development refers to improving the standard of living of all people worldwide. The UN defines development as “a multidimensional undertaking to achieve a higher quality of life for all people” (UN, 1997).

### Economic Development

Economic development aims to improve a community's economic well-being. It is the eighth goal of the UN Sustainable Development Goals (SDG) (UN, 2012). It depends upon sustained economic growth and sustainability and creating work opportunities for marginalized groups like women or people with disabilities. Economic development increases people's standard of living, and it can be measured by single indices like the GNI per capita or infant mortality rate or by using a composite index like HDI (Harper College, 2024). Measures to improve economic development include investment in financial institutions and increasing youth employment (UNEP, 2024).

### Education

The American Psychological Association defines education as “the process of teaching or acquiring knowledge, skills, and values.” (APA, 2024). Education is vital in achieving global development, the fourth goal of the UN SDG (UN, 2012). According to the fourth SDG of the UN, emphasis is placed on access to education for all, quality learning, lifelong learning, and equity. Education leads to social development in many ways, such as providing upward social mobility and creating community

cohesion. Education is a driver of global development.

## EdTech

Using software, hardware, and education theory in conjunction to engage in learning. EdTech encompasses various technology applications, such as software and hardware, to make education more personal and accessible. EdTech helps to support both educators and students. Examples include online courses and virtual classrooms.

## Background Information

Artificial intelligence can catalyze global development, using education as a driver for growth. As stated, AI has many educational applications, such as personalized learning, intelligent tutoring systems, and accessibility. Many measures are taken, especially in education, to develop AI further to fuel global development.

## Industrial Applications of AI

AI has become integral to a wide range of industries. AI has uses in agriculture, emphasizing machine learning and computer vision. Precision agriculture uses sensors to collect data, and AI to analyze this data aims to improve cost efficiency, yields, and labor efficiency (Singh, 2020). AI is prominent in sectors like finance and digital spaces (Forbes, 2023), using AI to do repetitive tasks quickly and efficiently, with AI being used to predict trends in e-commerce and manage inventories. As a result, the use of AI in digital spaces is continuously growing and improving. AI has benefited both consumers and businesses in the finance sectors. Customers can track their banking and investment accounts, potentially helping their financial stability. Businesses like banks can detect customer transaction patterns using models, allowing them to detect fraudulent transactions. Additionally, AI helps banks determine the risk levels of lending money to borrowers. Digital advisers are also built on AI, assisting customers in making investment decisions.

AI has become an increasingly significant part of education. Developments in AI have the potential to revolutionize education through improvements in personalized learning, administrative efficiency, and broadening access to education. However, these technological leaps have brought along a myriad of ethical considerations and challenges that must be addressed.

## Personalized Learning

One of the most important uses of AI in education is personalized learning, where AI is used to create “adaptive learning approaches” (Pratama, 2023) suited for each individual. Personalized education refers to changing teaching approaches to best fit the student's personality to maximize learning. An example of AI-based personalized learning is DreamBox. Tools like DreamBox analyze the responses of students in real time to tailor their teaching methods to each student, trying to maximize

learning. This teaching method allows students to learn at a comfortable pace, neither rushing nor holding them back. AI may also supplement teachers by providing software to transcribe speeches and help students with hearing disabilities or dyslexia (University of San Diego, 2024). Based on the study “*Revolutionizing education: Harnessing the power of artificial intelligence for personalized learning*,” students are aware of the role of AI in education, with 88% of students “strongly agreeing” on the importance of AI in education with only 1% of students “strongly disagreeing.” However, students are less keen on AI replacing teachers entirely, with 57% of students “strongly disagreeing” that AI-based models should replace teachers. Additionally, AI inherently produces data privacy concerns that must be addressed before full integration with school systems. Even though AI has enormous educational potential through tools like personalized learning, it is still not ready to replace human teachers entirely.

### Administrative Efficiency

AI may bolster administrative efficiency in education. Administrative tasks include grading, attendance, and plagiarism checks. AI may be used to increase the effort required to do these tasks, reducing the burden on both students and teachers. A school in Brisbane, Australia, has implemented an AI-based teaching assistant that helps teachers plan lessons or arrange schedules, with the tool reportedly saving teachers around 10 hours a week (The Australian, 2024). AI is very efficient in repetitive tasks like grading, which requires lots of time and effort. With AI assistance, teachers may focus on more engaging and focused teaching, benefiting students greatly. However, AI tools may only be somewhat reliable and fair. Therefore, teachers may have to re-check the work of AI, making AI’s implementation redundant.

### Broadening Access to Education

AI-based tools like text-to-speech or language translation can broaden access to education by providing education opportunities to marginalized and underserved communities. Many education platforms, such as Coursera, have implemented AI-based models to help with learning (Coursera, 2024). Surveys have revealed that 60% of teachers have implemented AI in their classrooms (Forbes Advisor, 2024), and AI in education is projected to reach a market value of \$17.28 billion by 2032 (360MarketUpdates, 2024). These figures reflect that the provision of AI-based tools in education is projected to increase in time, bringing the cost of implementing AI-based tools for education down and benefiting marginalized communities. However, the digital divide hinders achieving equity in implementing AI into education.

### Ethical Implications

Integrating AI into education has ethical implications. The EU labels “Human Agency and Oversight,” “Transparency,” “Diversity, non-discrimination, and fairness,” “Societal and environmental well-being,” “Privacy and data governance,” “Technical robustness and fairness,” and “Accountability” as the requirements to “trustworthy” AI (European Commission, 2022). Data security and algorithm biases

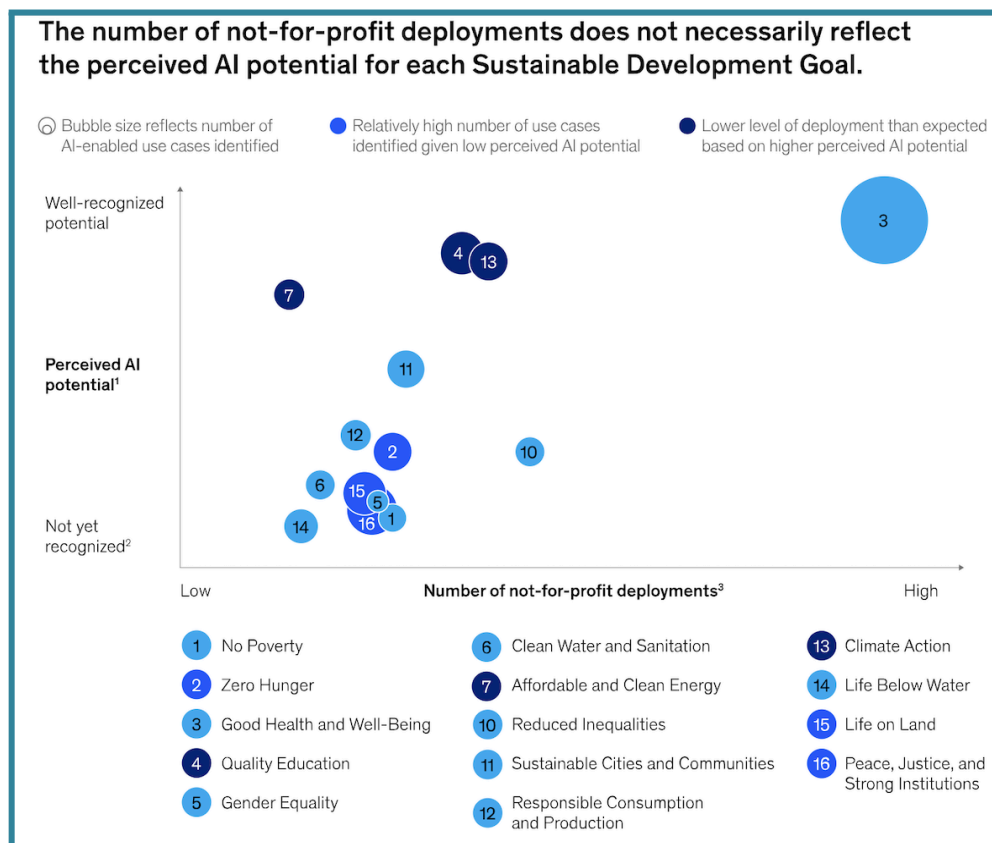
are key issues inherently present in AI models that must be effectively addressed as AI becomes integrated into education. Additionally, the increased use of AI has the inherent consequence of the dehumanization of teaching. As mentioned before, the digital divide is another issue that is standing in the way of AI reaching its full potential in education. 5.44 billion people are internet users (Statista, 2024), roughly two-thirds of the world's population.

### AI and the Fourth SDG

The fourth SDG of the UN clearly shows that education is required for global development. Implementing AI into education may catalyze global development by promoting equitable learning and reducing inequality.

The world is “severely off-track” (UNStats, 2024) in achieving its SDGs by 2030, with only 17% completed; while AI may help progress in attaining the fourth SDG, implementing AI into education will not be possible worldwide. For instance, GSMA data estimates that internet penetration in East Africa is 26.7%, making providing AI-based teaching tools to students and teachers extremely challenging.

The role of AI in accelerating global development is not limited to the fourth SDG. For instance, AI-based tools may greatly enhance workforce efficiency. Software developers reportedly accept 30% of suggestions by GitHub Copilot; the increased productivity may increase global GDP by \$1.5 trillion by 2030 (Dohmke, 2023). AI also has the potential to help entrepreneurs, leading to international development. A study by McKinsey & Company has identified 600 AI-based startups that were directly linked to supporting the SDGs.



The bubble size reveals the number of non-profit institutions that have applications in addressing the SDGs. The color of the bubble reflects the potential use of AI in the sector.

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AI has vast potential in the education industry. Providing equitable education and creating a productive workforce can positively affect economic and global development. The true potential of AI in education to achieve global development will be realized through the collaboration of private companies, governments, and international organizations.

### Balancing human-centric education with the implementation of AI

Firstly, the dehumanization of the teaching profession must be addressed. Integrating AI with education risks reducing the teacher's role to only a regulator of the AI model. Teachers' over-dependence on AI may reduce teachers' autonomy and harm the teacher-student emotional bond. Legal frameworks on data privacy must be strengthened as well. Strong legal frameworks are required to protect sensitive data stored in AI-based education frameworks, which have the inherent risk of data breaches. The EU's General Data Protection Regulation (GDPR) may be a good starting point for future privacy laws. Finally, the collaboration of governments and AI developers for education must be encouraged. Collaboration between AI developers and governments is essential for the increased provision of AI-based education tools. Pooling resources will allow for greater technological development and lower production costs, benefiting consumers worldwide.

### Role of AI-based education tools in achieving economic growth for global development

Small and medium enterprises (SMEs) must be supported with AI-based education tools. AI-based education can bolster SMEs by providing flexible training solutions. AI-based platforms offer training opportunities in digital marketing and financial literacy. By empowering SMEs, economic growth may be achieved, aiding global development. AI can be used to revitalize aging workforces. AI tools can help upskill populations. Through personalized education for aging workforces, laborers can keep up with new technologies. Sectors like healthcare will significantly benefit from the upskilling of aging workers. Finally, AI-based education tools must be integrated to include refugees in the workforce. AI-based tools will help integrate refugee laborers into the domestic workforce, potentially increasing the economy's productive capacity. AI tools may provide language education or help with cultural integration, unlocking the economic potential of refugee populations.

## Major Countries and Organizations Involved

**United States Agency for International Development (USAID):** USAID released the AI in the Global Development Playbook in 2024. The agency has called for the “Enhancing Capacity, Promoting AI-Related Skills Across All Sectors and Levels, and Protecting the Workforce” and “Building Trusted and Sustainable Digital Infrastructure” (USAID, 2024). The report aims to reveal the potential of AI in harnessing sustainable global development.

**Organization for Economic Co-operation and Development (OECD):** The OECD has called for increased research on generative AI in 2023 (OECD, 2023). The OECD has said that AI can improve

productivity. The organization is also warm to the idea that AI integration may increase job prospects in the future, enabling global development.

**United Nations Educational, Scientific, and Cultural Organization (UNESCO):** UNESCO has organized forums to discuss the potentially revolutionary role of AI in education, such as the 2021 forum, “International Forum on AI and Education: Ensuring AI as a Common Good to Transform Education.” UNESCO has also adopted the Beijing Consensus on AI and Education.

**Group of 7 (G7):** G7 nations have initiated the “Hiroshima AI Process” to promote safe and secure AI. The process aims to address the challenges presented mainly by generative AI. The policy aims to develop a safe and secure framework to help address the increased use of AI.

#### **United Nations (UN):**

- Seizing the Opportunities of Safe, Secure, and Trustworthy Artificial Intelligence Systems for Sustainable Development, 21 March 2024, **(A/RES/78/265)**
- Enhancing international cooperation on capacity-building of artificial intelligence, 1 July 2024, **(A/RES/78/311)**
- Right to education, 16 October 2024, **(A/79/520)**

**China:** China has invested significantly in AI and hopes to become a global leader in AI technologies. The Chinese AI industry may face \$1.4 trillion in investment in the next 6 years (Yahoo Finance, 2024). China is aiming to become an industry leader by 2030.

**Greece:** Greece is finalizing its national AI strategy, emphasizing the use of AI to stimulate social change (European Commission, 2021). Greece has partnered with technology companies like Google to enhance its AI education. Greece is trying to foster societal development while avoiding traditional risks associated with increased AI usage.

**India:** The Indian government has launched programs like the National Program on AI, focusing on AI research and deploying AI-based solutions for education. The government has pledged \$1.25 billion to invest in the AI sector. India is trying to leverage its competent workforce to become a leader in the AI industry.

**Russia:** Russia has struggled with the development of AI after NVIDIA (a producer of microchips) stopped selling its products in Russia after the Russian invasion of Ukraine. The nation has also struggled with the “mass exodus” (Borak, 2023) of workers in technology after the war.

**South Korea:** South Korea was one of the first countries to adopt a national AI strategy and has pledged to invest \$7 billion in developing microchips (Korean Economic Institute of America, 2024). The

nation aims to become a top 3 nation in the AI industry by 2027. The nation adopted the Seoul Declaration to address challenges related to AI usage.

**Türkiye:** Türkiye aims to incorporate AI into its education system to boost digital literacy and create a workforce adept at using AI tools. Türkiye has outlined its strategy relating to AI in the report “*Türkiye’s National Artificial Intelligence Strategy (2021-2025)*.”

**United Kingdom (UK):** The UK has released a 10-year AI strategy to turn the nation into an AI superpower. The plan focuses on promoting innovation by ensuring ethical AI innovation. The government has highlighted the role of AI in fostering innovation and contributing to sustainable development worldwide.

**United States (US):** Secretary of State Anthony Blinken pledged to invest \$15 million in AI technologies to achieve the UN’s SDGs. The US has been the leader of the AI sector since 2018. The majority of the AI startups have been based in the US.

## Timeline of Events

Date	Description of event
October 1950	Alan Turing proposes the Turing Test to measure a machine’s behavior to exhibit intelligence behavior similar to a human.
Summer 1956	Dartmouth Conference, the term “Artificial Intelligence” is coined.
1966	ELIZA chatbot is developed.
May 1997	IBM’s Deep Blue defeats Kasparov.
February 2011	IBM Watson AI system wins in Jeopardy!
23-25 March 2015	Qingdao Declaration, policy recommendations to harness the power of ICT systems in education.
March 2016	AlphaGo beats Lee Sedol in a game of go.
2017	AI algorithms have been used to analyze medical images and data.
16-18 May 2019	Beijing Consensus, providing recommendations to use AI to achieve educational objectives.
2019	The use of AI become prevalent in education.
April 8, 2021	“AI and Education: Guidance for Policy-makers” released, underlining the potential of AI in education, with emphasis on ethics.
November 30, 2022	ChatGPT released.
September 8, 2023	“Guidance for Generative AI in Education and Research” has been released. It supports the implementation of human-based AI tools in educational settings.
November 27, 2024	Sir Keir Starmer inaugurates a Google AI Campus in London.



## Possible Solutions

### Balancing human-centric education with the implementation of AI

The role of AI in education must be increased. However, the increased role of AI curtails the risk of replacing teachers with AI-based models. The implementation of AI must be balanced with human-centric education and the preservation of human elements.

The first step in achieving the balance between human-centric education and AI is the creation of clear ethical guidelines. AI must enhance and support teachers, not replace teaching as a profession. Implementing clear ethical guidelines and limits on what AI can be used for in education will ensure that AI does not replace the teaching profession. These guidelines must be created by organizations like UNESCO, who will have the burden of enforcing them worldwide. Finally, there must be transparency in the decision-making system of AI systems and the creation of ethics guidelines by UNESCO to ensure teachers have autonomy over their decisions.

Another approach is the adoption of hybrid learning models. AI will handle repetitive tasks, such as attendance or grading, while the teacher will handle active teaching and the social and emotional parts of learning. AI may also create personalized learning plans tailored to individual students.

The collaboration between governments, teachers, and AI educators is essential for realizing AI's true educational potential. AI should be a tool to supplement teachers and the human-centric nature of learning.

### Use of AI to address skill gaps in the workforce to stimulate global development

AI-based education tools may be used to address skill gaps in workforces worldwide. A productive workforce allows for the easier achievement of the SDGs. Tools like personalized learning will provide the necessary education to improve the workforce's productivity, increasing the economy's productive capacity.

The digital divide will challenge the increased use of AI in workforces worldwide. AI tools may not readily work with all languages, which will be another challenge. Finally, the requirements of each industry are different worldwide; different tools may be required to integrate AI tools into the workforce fully.

To circumvent these issues, governments may subsidize internet connectivity in rural areas. Governments may subsidize AI startups to foster the creation of a wide range of AI tools with industry applications. Developers must leverage open-source software to reduce the cost of producing AI tools and make them accessible to everyone.

### Role of AI-based education tools in achieving economic growth for global development

AI has the potential to revolutionize education and contribute greatly to global economic growth and development. AI tools also increase laborers' productivity and provide education to marginalized communities.

AI-based education tools enhance workforce skills. Workers will benefit from tailored learning and rapidly revitalizing workforces. A skilled workforce has many macroeconomic upsides, such as increased labor productivity and innovation. Additionally, AI will empower SMEs, yield economic diversification, and create new jobs.

AI tools may help provide education in underdeveloped areas. AI-based learning tools provide low-cost and scalable learning opportunities. AI-based equitable education will integrate more people into the workforce and drive sustainable growth.

AI-based education can create a skilled and inclusive workforce, stimulating economic growth and contributing to global development. International collaboration will catalyze AI's impact on achieving the UN SDGs.

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## Appendix

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