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Analysing The Role of Artificial Intelligence in Education

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Introduction

Emerging as a transformative force in numerous sectors, Artificial Intelligence (AI) has the potential to address some of the biggest challenges in education today by offering innovative solutions according to UNESCO (Unesco). It also helps with the progression of the United Nations Sustainable Development Goal (SDG) 4: to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (Goal). The integration of AI in education proposes a multitude of advantages, such as facilitating access to high-quality educational resources regardless of economic status or geographic location and adapting to individual student needs (Rmontalvo). Nevertheless, the swift and continuous development of Al and technology allows for the introduction of numerous unavoidable challenges and risks, causing the topic to be of significant global interest. The absence of national regulations on Generative AI (GenAI) in most countries also leaves the data privacy of users unprotected and educational institutions largely unprepared to validate the tools that it may offer (Unescodoc). Aspects of avoiding the overshadowing of Al over human educators (Thao) as well as potential issues of bias and inaccuracy emphasise the imperative need to understand to what extent AI has an effective role in education, further calling on the international community to analyse the long-term implications of Als inevitable involvement in pedagogy.

Key Terms

Artificial intelligence (AI): Technology that enables computers and machines to simulate human intelligence and problem-solving capabilities. In an educational context, AI can involve personalised learning and lesson plans, language processing, and AI-assisted tutoring and revision (What).

Educational technology: A focus on the technological tools and media that assist in the communication of knowledge, and its development and exchange (Educational).

Digital Divide: The gap between demographics and regions that have access to modern information and communications technology, and those that do not or have restricted access. In the context of AI and education, the implementation of AI within education may not be equitable in regions that do not have access to these resources.

Digital Literacy: The ability to use, understand, and critically evaluate information through digital technologies.

Digital Ethics/Data Privacy: Ethical standards relating to the use of information by organisations, such as asking for permission to collect and store data that has been used. This relates to the protection of users' personal information, and considering how student data may be used.

Algorithm Bias: The systemic and repeatable errors in a computer system that create fair outcomes. In an educational environment, Al may present biased information and a partisan perspective.

General Overview

Inequality and the Digital Divide: The integration of AI in education plays a dual role in the digital divide, having the potential to both exacerbate and alleviate inequality. Al tools used for education can enhance personalised learning experiences by identifying areas in need of support and providing targeted assistance (Cohen), further providing support for specific students' needs and fostering inclusivity. However, UN Secretary-General António Guterres says that "it [Al] must benefit everyone, including the one-third of humanity who are still offline." The current technological developments being considered "the fourth industrial revolution" (Adi) have enhanced Al usage in everyday life. However, around 2.6 billion people remain offline worldwide according to UN data (Economic), further increasing the digital divide. Without urgent action to close this gap and promote equitable access to Al technologies, billions of people around the world will be excluded from the benefits of this technological revolution, while suffering its disruptions (Don't). Although affluent communities may readily introduce AI in education, economically disadvantaged regions may struggle to integrate such tools. Therefore, efforts to promote fair distribution by addressing socio-economic disparities are crucial to ensure equitable access to Al-enhanced educational resources.

Privacy and security issues: The integration of AI in education requires the collection and processing of personal student data. The European Union's General Data Protection Regulation (GDPR) is the most comprehensive privacy regulation in the world, governing data protection and privacy for all individuals within the EU. In the United States, the Children's Online Privacy Protection Act (COPPA) similarly protects specific types of data (www.reuters.com). However, there is currently no overarching federal privacy law in the US that comprehensively addresses AI-driven data processing. The main privacy concern surrounding AI is said to be the potential for data breaches and unauthorized access to personal information (AI and).

Disinformation and misinformation: According to Bloomberg, misinformation and disinformation generated by AI are seen as one of the top global threats this year by the World Economic Forum (Tsio). According to many AI researchers, generative AI will make it easier to create realistic but false or misleading content (Simon). According to Javin West, co-founder of the Center for an Informed Public, AI can create misleading information on its own. Although it is meant to respond based on actual data when prompted, it can "hallucinate" its own sources (AI). This provides potentially catastrophic outcomes for public information, allowing for the potential of misinformation when AI is used in an educational context. This also means that AI models may promote biased beliefs or ideals. As educational materials generated using AI algorithms may lack accurate and reliable information, it can mislead students therefore compromising the quality of education that they are receiving with AI involvement.

Plagiarism and academic integrity: An overreliance on Al-related educational content may contribute to a decrease in critical thinking skills. If students are not encouraged to analyse information, their ability to evaluate the reliability and validity of information is hindered. Thus, Al may be misused to generate essays or reports, which is considered plagiarism. Using Al in an educational context may benefit students, but also can be misused.

Major Parties/Countries Involved

United States: The U.S. Department of Education Office of Educational Technology addressed the "clear need for sharing knowledge, engaging educators, and refining technology plans and policies for Al use in education (Artificial). The Science and

Technology Policy Office has identified a "Blueprint for an Al Bill of Rights" to guide the design, use, and deployment of automated systems to protect the American public in the age of Al (Blueprint). A significant amount of attention has also been directed towards Al's impact on the upcoming Presidential election.

China: China has acknowledged the development of Al's profound impact on human society and aims to build a world-leading Al industry by 2030 (Full). In August of 2023, a new Chinese law designed to regulate generative Al came into force. It introduces new restrictions for companies providing these services to consumers regarding both the training data used and outputs produced (The). The Cyberspace Administration of China also drafted legislation regarding protecting minors from harm and upholding user rights (Making).

European Union: The use of AI in the EU is regulated by the AI Act, which is the world's first comprehensive AI law [Effective in 2025]. This assesses the potential risks of AI's usage as well as general requirements for transparency (EU). Following the EU's GDPR data protection laws, all AI systems must respect and adhere to the data subject rights granted under it (The Impact). The EU emphasizes the importance of data privacy and protection regarding the usage of AI, particularly for minors.

India: According to the International Monetary Fund, by the end of this decade more Indians will use AI every day than in any other country in the world. Moreover, India is on the cusp of a technological revolution that could alter the trajectory of its social and economic future (NANDAN). India's IT minister informed the Parliament that they are not planning to regulate the growth or set any laws for AI in the country (TOI).

UN Involvement & Relevant Resolutions

United Nations' Involvement: The United Nations has recognized the importance of ethics in AI, as promoted through The Recommendation. Approved by consensus by all 193 UNESCO member states, it places a special emphasis that the promotion of human rights must be the basis of any AI regulation. It also focuses on particular areas that have been neglected in discussions about AI, such as countries' level of development and potential bias. One of its key requirements outlines that policies must be aimed at providing adequate AI literacy education to the public to empower users and reduce digital divides. (www.unesco.nl). The United Nations also recognizes AI's ability to

progress in achieving SDG 4, ensuring quality education. UNESCO emphasises that AI tools will not help address fundamental challenges in education or achieve SDG 4 unless such tools are made inclusively accessible and advance equity, linguistic diversities, and cultural pluralism. (Unescodoc)

General Assembly Plenary resolution draft: In December of 2023, the UNGA drafted a resolution on "Seizing the Opportunities of Safe, Secure, and Trustworthy Artificial Intelligence Systems for Sustainable Development" (DocumentCloud). This condemns any misuse of Al that undermines peace and human rights, applying to an Al system's entire "life cycle" (Axios). It commits UN member states to promote "responsible and inclusive design, development, deployment, and use" of Al towards global challenges such as providing quality education to all people. More Economically Developed Countries (MEDCs) are also encouraged to fund Al development in the Global South.

Possible Solutions:

Reducing AI and the Digital Divide: Member States could extend educational AI resources in the Global South to provide quality learning opportunities to students who lack consistent or any internet access and reduce disparities in educational opportunities.

Ethical Frameworks: Member States could call for the implementation of robust ethical guidelines for the use of Al in education to address issues of responsible, honest use of technology and misinformation.

Cybersecurity: Encrypting student data during its transmission and storage as well as monitoring and addressing potential security risks assists in the avoidance of security breaches.

Spreading Awareness about Misinformation: Educating students about potential misinformation from AI, and encouraging them to critically evaluate the validity of information presented.

Bibliography

- Adi, Bart Valkhof and Omar, et al. "Fourth Industrial Revolution." World Economic Forum,
 - www.weforum.org/focus/fourth-industrial-revolution/#:":text=The%20Fourth%20In dustrial%20Revolution%20is,inclusive%2C%20human%2Dcentred%20future.

 Accessed 29 Feb. 2024.
- "Al and Privacy: The Privacy Concerns Surrounding Al, Its Potential Impact on Personal
 Data." The Economic Times,
 economictimes.indiatimes.com/news/how-to/ai-and-privacy-the-privacy-concerns-surroundin
 g-ai-its-potential-impact-on-personal-data/articleshow/99738234.cms?from=mdr. Accessed
 01 Mar. 2024.
- "Al Misinformation: How It Works and Ways to Spot It." CNET,
 www.cnet.com/news/misinformation/ai-misinformation-how-it-works-and-ways-to-s
 pot-it/#google_vignette. Accessed 01 Mar. 2024.
- "Artificial Intelligence and the Future of Teaching and Learning." Office of Educational Technology, 24 May 2023, tech.ed.gov/ai-future-of-teaching-and-learning/. Accessed 01 Mar. 2024.
- Awan, Abid Ali. "What Is Algorithmic Bias?" DataCamp, 17 July 2023,
 www.datacamp.com/blog/what-is-algorithmic-bias. Accessed 29 Feb. 2024.

- "Blueprint for an Al Bill of Rights." The White House, The United States
 Government, 22 Nov. 2023, www.whitehouse.gov/ostp/ai-bill-of-rights/. Accessed
 O1 Mar. 2024.
- Cohen, Kobi. "The Best Al Tools for Students: IU International." IU International University of Applied Sciences, IU International, 6 Nov. 2023, www.iu.org/blog/ai-and-education/best-ai-tools-for-students/#:~:text=Al%20power ed%20Tutoring%20Tools%20for%20Students&text=By%20analyzing%20student% 20responses%20and,their%20learning%20pace%20or%20style. Accessed 29 Feb. 2024.
- DocumentCloud,
 www.documentcloud.org/documents/24220144-draft-unga-plenary-resolution-on-ai_20231211. Accessed 29 Feb. 2024.
- "Don't Let Al Become the Newest Digital Divide." Council on Foreign Relations, www.cfr.org/blog/dont-let-ai-become-newest-digital-divide. Accessed 29 Feb.
 2024.
- "Economic and Social Council Adopts Resolution, as Integration Segment Explores Role of Frontier Technologies in Fulfilling Sustainable Development Goals | Meetings Coverage and Press Releases." *United Nations*, press.un.org/en/2019/ecosoc6998.doc.htm. Accessed 29 Feb. 2024.
- "Educational Technology." Wikipedia, Wikimedia Foundation, 23 Feb. 2024,
 en.wikipedia.org/wiki/Educational_technology. Accessed 29 Feb. 2024.

- "EU Al Act: First Regulation on Artificial Intelligence: Topics: European Parliament."
 Topics | European Parliament,
 www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence. Accessed 01 Mar. 2024.
- "Full Translation: China's 'New Generation Artificial Intelligence Development Plan' (2017)."
 DigiChina, 1 Oct. 2021,
 digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-devel
 opment-plan-2017/. Accessed 01 Mar. 2024.
- "Goal 4 | Department of Economic and Social Affairs." United Nations,
 sdgs.un.org/goals/goal4. Accessed 29 Feb. 2024.
- Hanna, Katie Terrell. "What Is The Digital Divide and How Is It Being Bridged?"
 WhatIs, TechTarget, 11 Aug. 2021,
- "Making Sense of China's AI Regulations." Holistic AI,
 www.holisticai.com/blog/china-ai-regulation#:~:text=Drafted%20by%20the%20Cyberspace%
 20Administration,tags%20about%20their%20personal%20characteristics. Accessed 01 Mar.
 2024.
- NANDAN NILEKANI is the chairman and cofounder of Infosys and founding chairman of UIDAI (Aadhaar)., and TANUJ BHOJWANI is head of People+AI.
 "Unlocking India's Potential with AI by Nilekani and Bhojwani." *IMF*, 1 Dec. 2023, www.imf.org/en/Publications/fandd/issues/2023/12/POV-unlocking-india-potential-with-AI-Nilekani-Bhojwani. Accessed 01 Mar. 2024.
- www.reuters.com/legal/legalindustry/privacy-paradox-with-ai-2023-10-31/.
 Accessed 01 Mar. 2024.

- www.techtarget.com/whatis/definition/digital-divide#:~:text=The%20digital%20divide%20is%20a,personal%20computers%20and%20internet%20connectivity.
 Accessed 29 Feb. 2024.
- Rmontalvo. "The Benefits of AI in Education CIS University." CIS University EN, 3 Oct.
 2023, www.cis-spain.com/en/blog/the-benefits-of-ai-in-education/. Accessed 29 Feb. 2024.
- Simon, Felix M., et al. "Misinformation Reloaded? Fears about the Impact of Generative AI on Misinformation Are Overblown: HKS Misinformation Review." *Misinformation Review*, 22 Nov. 2023,
 misinforeview.hks.harvard.edu/article/misinformation-reloaded-fears-about-the-impact-of-gen erative-ai-on-misinformation-are-overblown/. Accessed 01 Mar. 2024.
- Thao, and Edublogger. "Negative Effects of AI in Education Sector." EDU Blog, 12 Oct. 2023, blog.edupassport.io/2023/07/negative-effects-of-ai-in-education-sector/. Accessed 29 Feb. 2024.
- "The Future of Al Policy in China." East Asia Forum, 2024,
 eastasiaforum.org/2023/09/27/the-future-of-ai-policy-in-china/. Accessed 01 Mar.
 2024.
- "The Impact of the GDPR on Artificial Intelligence." Securiti, 29 Sept. 2023, securiti.ai/impact-of-the-gdpr-on-artificial-intelligence/#:":text=Al%20systems%20 must%20respect%20and,and%20the%20right%20to%20object. Accessed 01 Mar. 2024.
- TOI News Desk / TIMESOFINDIA.COM / Updated: Dec 9, 2023. "As European Union
 Passes World's First Law to Curb Artificial Intelligence, India Set on Different Approach Times of India." The Times of India, TOI,

timesofindia.indiatimes.com/world/europe/as-european-union-passes-worlds-first-law-to-curb -ai-india-set-on-different-approach-artificial-intelligence-pm-modi/articleshow/105859769.cms

. Accessed 01 Mar. 2024.

- Tsoi, Tiffany. "Al-Generated Misinformation Is a Top Concern for Leaders at Davos." Bloomberg.Com, Bloomberg, 2024, www.bloomberg.com/news/articles/2024-01-18/ai-generated-misinformation-is-a-t op-concern-for-leaders-at-davos. Accessed 01 Mar. 2024.
- TVETipedia Glossary,
 unevoc.unesco.org/home/TVETipedia+Glossary/show=term/term=Digital+literacy.
 Accessed 29 Feb. 2024.
- Unesco. "Artificial Intelligence in Education." UNESCO. Org, 1970,
 www.unesco.org/en/digital-education/artificial-intelligence. Accessed 29 Feb. 2024.
- *Unesdoc.Unesco.Org*, unesdoc.unesco.org/ark:/48223/pf0000386693. Accessed 29 Feb. 2024.
- "What Is Artificial Intelligence (AI)?" IBM, www.ibm.com/topics/artificial-intelligence.
 Accessed 29 Feb. 2024.
- "What Is Digital Ethics?" Charity Digital,
 charitydigital.org.uk/topics/what-is-digital-ethics-7593#:~:text=This%20places%20a%20numb
 er%20of,data%20about%20them%20is%20deleted. Accessed 29 Feb. 2024.
- www.axios.com/2023/12/13/us-ai-united-nations-global-resolution. Accessed 29
 Feb. 2024.

www.unesco.nl/sites/default/files/inline-files/Unesco%20Al%20Brochure.pdf.
 Accessed 29 Feb. 2024.

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