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## **Digital Equity in the Age of Generative AI: Bridging the Divide in Educational Technology**

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The rise of educational technology (EdTech) has transformed the learning landscape, with generative artificial intelligence (AI) offering a new frontier in personalised and accessible education (Liu, Li, & Dong., 2024). Tools such as ChatGPT and other AI-driven platforms promise to revolutionise teaching by creating adaptive lesson plans, generating multilingual content, and offering real-time student feedback. Simultaneously, there is the demand for learners to become AI literate to effectively engage in modern society (Yuan, Tsai, & Chen., 2024). However, this transformative potential is far from evenly distributed. Ensuring fair access to technology and its benefits has become the central challenge in an increasingly AI-driven educational ecosystem. Digital equity refers to more than just access to devices or internet connections; it is about providing individuals with the resources, skills, and empowerment to participate fully in a digital environment (Canevez, et al., 2020). In the context of generative AI, equity must encompass access to quality AI tools, the infrastructure to support them, and the digital literacy required to use them effectively.

### The Impact of Generative AI on the Digital Divide

However, the global digital divide remains bleak. Wealthier schools and communities often have robust digital infrastructure such as high-speed internet, modern devices, and cloud computing resources which allow them to adopt cutting-edge EdTech solutions. In lower income or rural regions schools struggle with outdated hardware, unreliable internet, or no access to AI tools at all. Even within affluent countries, socioeconomically disadvantaged students may lack personal devices or reliable internet at home. In these situations, generative AI risks becoming a force that widens, rather than narrows, educational inequalities.

Even when generative AI tools are available, their content may not serve all learners equitably. AI systems trained predominantly on datasets from the Global North often fail to reflect the linguistic, cultural, and contextual needs of diverse populations (Tacheva & Ramasubramanian, 2023). For example, a student in a rural African community might struggle to find AI-generated content that aligns with their local curriculum or cultural context. This lack of inclusivity exacerbates disparities in learning outcomes, as students who do not see their realities reflected in educational materials may feel alienated or disengaged.

Access to generative AI tools is only one part of the equation. Schools in resource-poor settings often lack the training programs and technical support necessary to build the necessary skills, thereby widening the gap between schools that can integrate technology effectively and those that cannot. Without targeted efforts to build capacity, the promise of AI remains out of reach for many. Furthermore, generative AI's ability to automate tasks such as essay writing or problem-solving may undermine critical thinking and creativity (Gonsalves, 2024), especially if it is disproportionately used in underfunded schools as a "quick fix" for resource gaps. Wealthier schools might use AI as a supplement to high-quality

education, while poorer schools may rely on it as a replacement, leading to unequal educational experiences.

### Conclusion

Generative AI holds enormous potential to transform education, but its benefits will remain unevenly distributed unless digital equity becomes a priority. Without deliberate action, the digital divide risks becoming a chasm, with underserved students excluded from the educational advancements AI can offer. By investing in infrastructure, subsidising access, promoting inclusivity, and building AI literacy, we can ensure that the AI-driven future of education is one where all learners can thrive. Digital equity is not just a technological challenge; it is a moral imperative for a fairer, more inclusive educational system.

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