
Generative AI in School Education: A Strategic Perspective on Risks and Opportunities

Turing Analytics Team info@turinganalytics.org

Generative artificial intelligence (Gen AI) tools such as ChatGPT and DALL·E are increasingly shaping the learning and leisure environments of children. It is used in classrooms, games, and social platforms, yet research and policy have only begun to catch up. This report brings together recent survey findings, qualitative insights from school-based workshops, and international guidance to assess the opportunities and risks Gen AI presents to children. It is hoped that this short perspective will add insights to the discussions among decision-makers, educators, and developers committed to responsible AI governance that places children's well-being, rights, and diverse needs at the centre of design and deployment.

Although Gen AI tools are still in development or beta testing, they are already being widely used. According to a survey conducted by researchers at the Turing Institute*, one in five children aged 8 to 12 were found to be using Gen AI tools, mainly for entertainment, creative play, and educational support. Interestingly, children still tend to prefer offline, hands-on activities when it comes to expressing their creativity. While it is not entirely unexpected, it provides compelling evidence that Gen AI will *supplement*, rather than *replace*, the traditional developmental experiences in the long run. From a policy point of view, it is clear that a moderated hybridised implementation of Gen AI within schools and the school curriculum is essential.

All stakeholders, including children, parents, and educators, raise concerns about the current use of Gen AI, with each group expressing issues that are distinct and closely tied to their specific roles and interests. While children identify bias, underrepresentation, and the environmental impact of AI tools as critical issues, parents worry about inappropriate content (82%), misinformation (77%), and diminishing critical thinking skills (76%). Teachers, meanwhile, highlight risks to academic integrity, with 52% reporting students submitting AI-generated work as their own. Considering the concerns of different stakeholders, it is very clear that the path ahead needs to be tread carefully. For example, bias and exclusion in AI outputs can harm children's sense of identity. If children rarely see themselves represented in AI-generated content, they may internalise harmful stereotypes.

Secondly, in a world already grappling with misinformation and disinformation, Gen AI has the potential

to exacerbate it immensely. Hyperrealistic outputs are already making it difficult to distinguish truth from fabrication, particularly for children whose critical reasoning is still developing. In a similar context, creating indistinguishable content raises serious challenges in ensuring academic integrity and honing the critical thinking skills of young students. The ease of generating content risks replacing learning with shortcutting, thereby seriously jeopardising the development of creative skills.

Among the risks unrelated to learning outcomes, privacy and data protection stand out as major concerns, particularly where the boundary between data harvesting and the use of data for model training remains poorly defined. Children often lack a clear understanding of the data implications of their interactions, increasing the risk of compromised data security. Despite these concerns, all the

stakeholders agree that the potential benefits of Gen AI are notable. Teachers, for example, report substantive benefits. Three in five teachers surveyed by Turing Institute researchers report using Gen AI in their work, mainly for lesson planning or research, and 64% agree that it could be valuable for developing materials for pupils with additional learning needs. Children echoed this optimism regarding accessibility; those with learning difficulties enjoyed using AI and felt it could help others who “find certain topics difficult or have different ways of learning”. A notable and encouraging finding is that 53% of children with special educational needs reported “always” using Gen AI tools to express thoughts they might otherwise struggle to communicate, compared to just 20% of children without such needs. It is, therefore, abundantly clear that Gen AI holds significant potential to support adaptive, individualised learning by tailoring content and pace to each learner’s needs, while also enabling teachers to design more bespoke instructional materials.

To avail these benefits, it is vital to contextualise them when implementing and using Gen AI in school education. Children, for example, still prefer hands-on creative outlets, and they must be treated as active stakeholders in AI policy and development. Their voices provide insights often missed by adults, from concerns about representation to preferences for offline alternatives. Structured participation through youth advisory panels, co-design sessions, and manifestos must become the norm in education and technology planning.

AI literacy is the enabling skill set. Equipping children with an understanding of how AI works, its limitations, ethical implications, and potential risks will empower them to make informed choices and advocate for their rights. Privacy and data protection are non-negotiable, and thus, AI tools interacting with children must default to strict privacy settings, prohibit behavioural profiling, and be subject to rigorous oversight. These systems must be designed to safeguard children irrespective of their ability to provide informed consent. Gen AI is here to stay. Its influence on childhood across learning, play, and socialisation is only beginning to unfold. The task ahead is to ensure that this influence is positive, equitable, and empowering. For example, curricula should evolve to incorporate foundational AI education from an early age, but educators must also be equipped with tools and pedagogies that foster originality and deep cognitive engagement. In addition, it is paramount that the developers ensure that Gen AI models are trained on diverse datasets to make sure that children see themselves reflected in them.

We believe that with these measures in place, stakeholders can ensure that Gen AI sustainably enriches, rather than endangers, the next generation. This is not just about managing risk, it is about building futures where children are empowered participants in the digital world they will inherit.

**The Turing Institute is the United Kingdom’s national institute for data science and artificial intelligence, and should not be confused with Turing Analytics, an independent consulting organisation.*

Sources

- *Understanding the impacts of generative AI use on children* (Alan Turing Institute, 2025)
- *How will generative AI affect children?* (UNICEF, World Economic Forum, 2023)
- *Generative AI: Risks and Opportunities for Children* (UNICEF Innocenti, 2023)
- *UNICEF says urgent to investigate generative AI's impact on children* (Moonshot News, 2023)
- *Responsible and Sustainable GenAI for our Children* (Didem Un Ates, WEF, 2023)
- *AI Literacy for Youth Framework* (OECD, 2024)