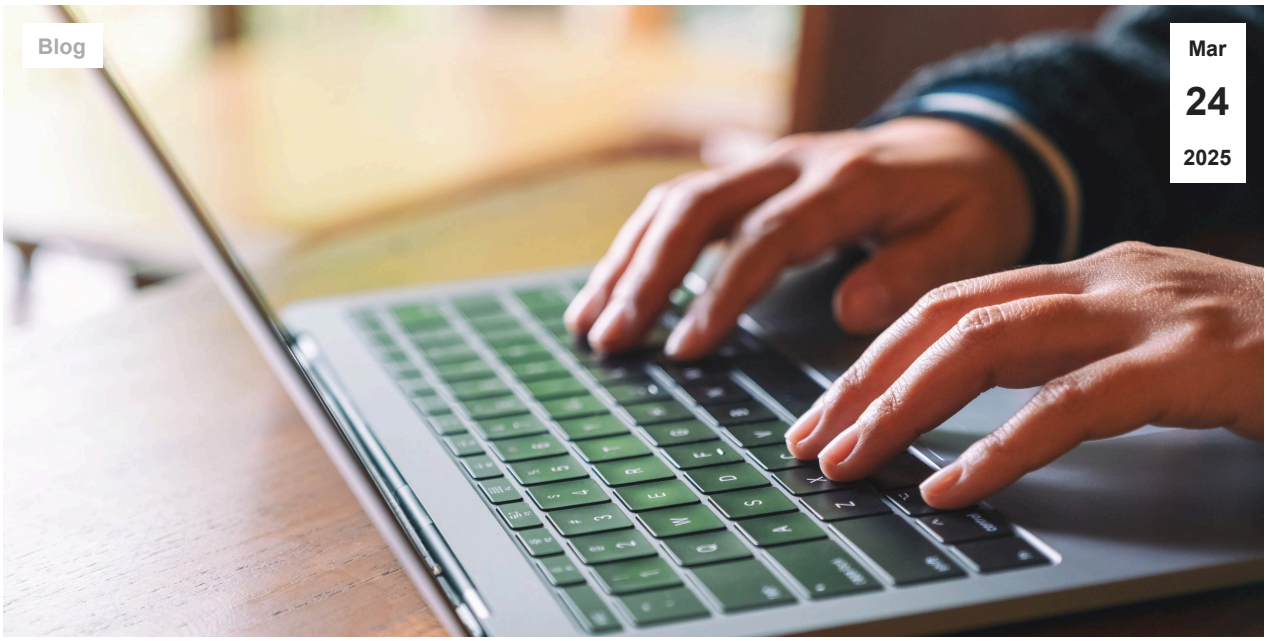
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# Generative AI in Higher Education Teaching and Learning – Dr James O'Sullivan






*Dr James O'Sullivan, Higher Education Authority*

It is not unreasonable to position generative AI—artificial intelligence that can mimic human creativity to produce new content, such as text, images, music, or code, based on the patterns it has learned from existing data—among the greatest threats to the value and integrity of higher education.

Higher education serves Ireland's people and communities by fostering independent, critical thinking; ensuring our social, cultural, and economic wellbeing through the provision of spaces of learning and understanding designed to cultivate new ideas and ethical approaches to complex problems. Generative AI threatens such spaces by diminishing the opportunities for students to interrogate knowledge and solve problems. Generative AI homogenises creative and intellectual outputs, undermining diversity of thought, eroding the authenticity and rigour that underpin academic work, ultimately weakening the transformative potential of higher education as a site for intellectual growth and critical inquiry.

But, when used thoughtfully and ethically—which is, admittedly, no small feat—generative AI also holds significant opportunities for higher education. Generative AI has the potential to facilitate more inclusive learning environments, adapting materials to individual needs and enabling broader participation in academic and civic discourse (Addy et al. 2023; Evmenova, Borup, and Shin 2024). For educators, it can automate administrative tasks, so that they can expend more time and energy on research-based teaching and student consultations. Generative AI can simulate complex systems, create synthetic data, model natural phenomena, and—though lacking in spontaneity and emotional nuance—replicate the dialogic exchange typical of higher learning.

While individual educators will be best positioned to determine what is best for their own courses and cohorts, outright bans on generative AI are problematic. In terms of enforcement, there is no reliable way—despite claims to the contrary by commercial service providers—to detect content that has been written by AI (Chaka 2024; Halaweh and Refae 2024). And even when the instructor just knows—as any experienced instructor will—that a piece of work has been produced with AI, without student admission it is effectively impossible to prove. But more importantly, outright bans deny learners access to the positive enhancements offered by generative AI, and furthermore, leaves them lacking in what will be considered essential digital literacy in their future professional and personal lives.

If the opportunities of generative AI are to outweigh the threats for those 250,000 students enrolled across Ireland's institutes of higher education, then staff and learners must be equipped with critical digital literary skills, as well as clear, robust ethical guidelines and best practices designed to ensure that any use AI in teaching contexts complements, rather than compromises, the core tenets of higher education.

Teaching staff and policymakers across the country, and beyond, are already developing course and institution-specific guidelines for the ethical use of generative AI. It is crucial that such momentum is maintained, that we share resources, policies,

and learnings in an open and collegial fashion so that all of Ireland's institutes of higher education can realise the opportunities of generative AI while mitigating its threats (Hoernig et al. 2024; Batta 2024).

The complex undertaking of developing a collective, national response goes far beyond a binary decision on whether AI is 'permissible'. AI literacy must be a priority, with institutions providing mandatory training that is equivalent in necessity to cybersecurity and GDPR training. Generative AI is not a monolithic tool but a collection of diverse technologies, so institutional and disciplinary taxonomies must be developed so staff are positioned to make informed decisions on what is—and is not—an allowable use of AI in the context of specific subject matters.

Some decisions on the place of generative AI in higher education will be unambiguous. Models trained on opaque datasets hold the potential for second-degree plagiarism and so are not aligned with academic values. Institutions must ensure equitable access to AI, as well as ensure that staff and students are aware of how commercial service providers process their data. Generative AI has a significant carbon footprint, so institutions should pursue the most energy-efficient solutions and practices available. State and institutional sovereign AI systems could ensure that such technologies are used ethically and transparently.

Exploring the use of generative AI to enhance education must be prioritised, so that Irish education can retain its reputation as a leader in inclusive, public education, but any enhancement will need to preserve the distinct values and epistemologies of differing academic disciplines.

Generative AI has, understandably, given rise to considerable trepidation amongst educators. But lecturers, learning technologists, and university leaders are rising to the AI challenge, and while a sustained effort will be needed in the years to come, a future where generative AI serves rather than endangers the values of higher education is achievable.

*Ten Considerations for Generative Artificial Intelligence Adoption in Irish Higher Education*

https://hub.teachingandlearning.ie/ten-considerations-for-generative-artificial-intelligence-adoption-in-irish-higher-education/

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References

Addy, Tracie, Tingting Kang, Tim Laquintano, and Vivienne Dietrich. 2023. 'Who Benefits and Who Is Excluded?: Transformative Learning, Equity, and Generative Artificial Intelligence'. *Journal of Transformative Learning* 10 (2): 92–103.

Batta, Anuj. 2024. 'Transforming Higher Education Through Generative AI: Opportunity and Challenges'. *Paradigm*, November, 09718907241286221. https://doi.org/10.1177/09718907241286221.

Chaka, Chaka. 2024. 'Reviewing the Performance of AI Detection Tools in Differentiating between AI-Generated and Human-Written Texts: A Literature and Integrative Hybrid Review'. *Journal of Applied Learning and Teaching* 7 (1): 115–26. https://doi.org/10.37074/jalt.2024.7.1.14.

Evmenova, Anya S., Jered Borup, and Joan Kang Shin. 2024. 'Harnessing the Power of Generative AI to Support ALL Learners'. *TechTrends* 68 (4): 820–31. https://doi.org/10.1007/s11528-024-00966-x.

Halaweh, Mohanad, and Ghaleb El Refae. 2024. 'Examining the Accuracy of AI Detection Software Tools in Education'. In *2024 Fifth International Conference on Intelligent Data Science Technologies and Applications (IDSTA)*, 186–90. https://doi.org/10.1109/IDSTA62194.2024.10747004.

Hoernig, Steffen, André Ilharco, Paulo Trigo Pereira, and Regina Pereira. 2024. 'Generative AI and Higher Education: Challenges and Opportunities'. Lisbon: Institute of Public Policy. https://www.ipp-jcs.org/wp-content/uploads/2024/09/Report-AI-in-Higher-Education-IPP-1.pdf.

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