Generative Artificial Intelligence (GAI) in Education

Fast Facts

- 'Generative AI is a broad label used to describe any type of artificial intelligence (AI) that can be used to create new text, images, video, audio, or code'[1]
- ChatGPT (November 2022), Microsoft Copilot (September 2023) and Google Gemini (February 2024, formerly known as Bard) are versions of generative AI
- Much of the coverage around such systems focuses on the negative consequences for teaching and learning
  - ChatGPT robs pupil of skills, teacher warns. The Times. 21/3/23[2]
- In March 2023 the International Baccalaureate published guidance on the use of GAI in education
  - *Latest developments in artificial intelligence (AI) software, such as ChatGPT, that can write sophisticated essay responses have generated a great deal of interest and discussion. The IB will not ban the use of AI software. The simplest reason is that it is an ineffective way to deal with innovation. However, the use of AI tools should be in line with the IB's academic integrity policy. We expect all our schools to discuss the various types of academic misconduct with their students.[3]*
- In November 2023 the UK government published its advice on the use of GAI in schools in England[4]
- The Australian Government also launched its Australian Framework for Generative Artificial Intelligence (AI) in schools[5]
- Many universities have developed their own guidance including Aberdeen[6], Dundee[7], Edinburgh[8] and Glasgow[9]

How can GAI based tools potentially be used to support teaching and learning?

  - 'For producing text, throwing around ideas and playing with them, it's transformative.' [University of Cambridge](...)
  - 'ChatGPT can perform high-level tasks related to language learning and teaching'. [University of Tokyo](...)
  - 'I started with planning and asked it to create a 6-week plan to teach a specific unit. The sequencing of the topics to be covered was logical; it started with the basics before moving onto more advanced techniques.

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[1] [Guidance to civil servants on use of generative AI - GOV.UK (www.gov.uk)](...)
[2] [ChatGPT robs pupils of skills, teacher warns (thetimes.co.uk)](...)
[3] [Statement from the IB about ChatGPT and artificial intelligence in assessment and education - International Baccalaureate® (ibo.org)](...)
[4] [Generative artificial intelligence (AI) in education - GOV.UK (www.gov.uk)](...)
[5] [Australian Framework for Generative Artificial Intelligence (AI) in Schools - Department of Education, Australian Government](...)
[6] [Generative Artificial Intelligence | StaffNet | The University of Aberdeen (abdn.ac.uk)](...)
[7] [Use of generative artificial intelligence for students | University of Dundee, UK](...)
[8] [universityguidanceforstudentsonworkingwithgenerativeai.pdf (ed.ac.uk)](...)
[9] [University of Glasgow - MyGlasgow - Student Learning Development - Artificial Intelligence - Info for Students](...)

It identified three areas per week to be covered and suggested accompanying practical activities.' [FE Week](#)

- o 'We believe the emergence of ChatGPT creates an opportunity for schools and post-secondary institutions to reform traditional approaches to assessing students that rely heavily on testing and written tasks focused on students' recall, remembering and basic synthesis of content'. [World Economic Forum](#)

What are the challenges?

- o 'ChatGPT is not a replacement for critical thinking, creativity, and human interaction. As educators, we should allow our students to use ChatGPT as a tool to support their learning, but we must also warn them not to rely on it.' [University of Kent](#)
- o 'BCS, The Chartered Institute for IT, said a survey of its Computing at School network of teachers found that 62% said AI-powered chatbots such as ChatGPT would make it harder to mark the work of students fairly.' [The Independent](#)
- o 'Fact check everything it does. Take nothing at face value and double check against other sources.' [The Whiteboard Blog](#)
- o 'We are very much in the early stages of getting to grips with what the new technologies represented by ChatGPT will mean for our work or even identity as academics and educators.' [University of Oxford](#)

Links/Further Reading/Viewing

- [Navigating the Impact of ChatGPT on Scotland's Education System](#)
  - o The outcomes from a ChatGPT discussion held by the Datalab (10/4/23). The Datalab is part of the University of Edinburgh.

- [Generative AI + Education: Reinventing the Teaching Experience (youtube.com)](#)
  - o The Massachusetts Institute of Technology (MIT). 18/12/23

- [Learning To AI Series - Centre for Innovation in Education - University of Liverpool](#)
  - o Learning to AI series of podcasts

- [Journal of AI. Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning (dergipark.org.tr)](#)
  - o Baidoo-anu, D., & Owusu Ansah, L. (2023). Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning. Journal of AI, 7(1), 52-62. https://doi.org/10.61969/jai.1337500

- [Guidance for generative AI in education and research | UNESCO](#)
  - o UNESCO, September 2023