

Using Generative AI in Teaching and Learning at City

a world café
discussion

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Learning at City Conference 2023





Aim of the session

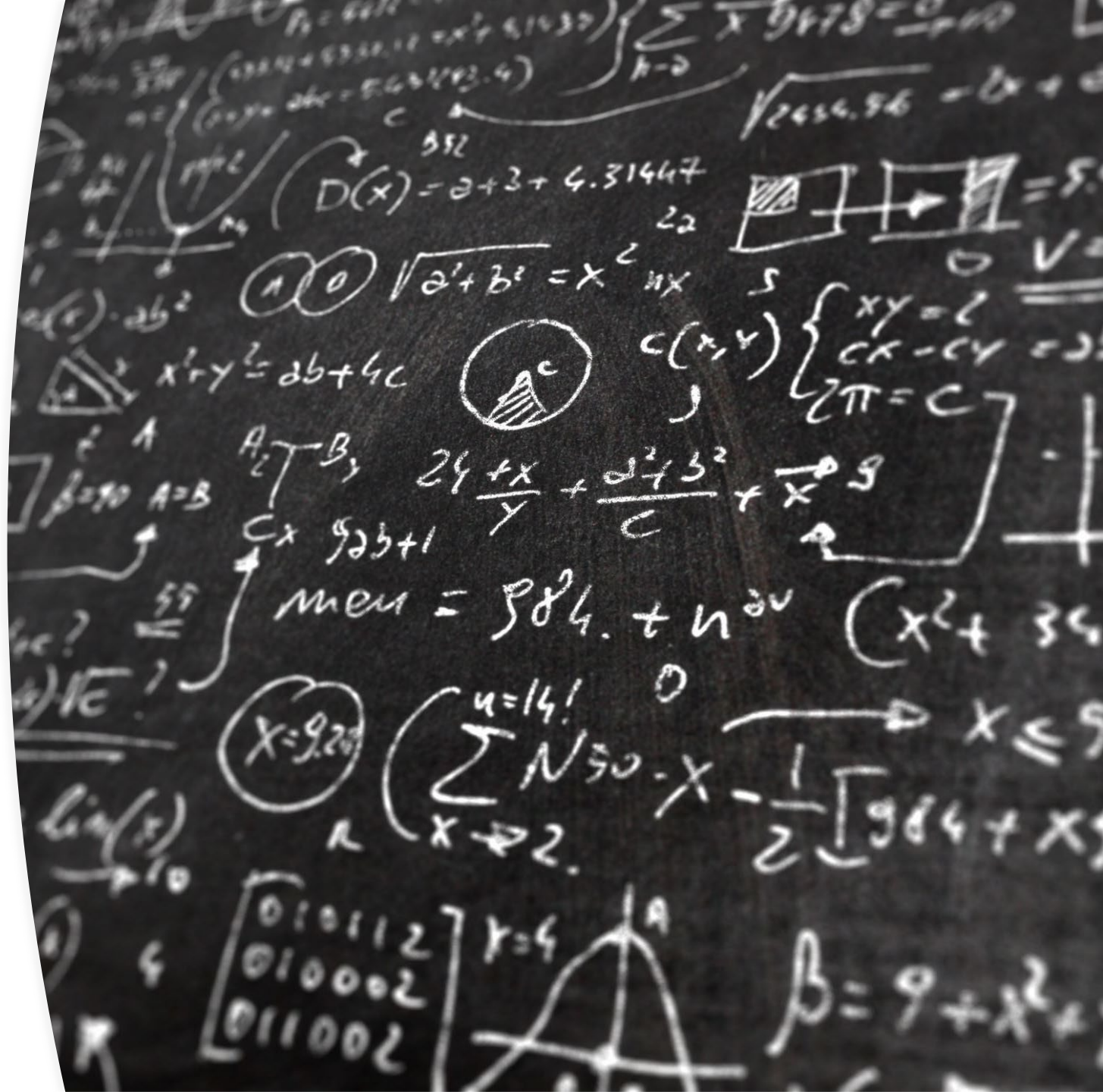
This session aims to give a clearer idea of the challenges and opportunities that Generative AI brings.

By the end of the session delegates will be able to:

- Critically evaluate the value, **impact** and use of Generative AI in higher education
- Review the challenges and opportunities that it presents for **assessment** in higher education
- Explore strategies and approaches for **using it** in our teaching

Key features of Generative AI tools and the challenges and opportunities for HE

- LLMs such as ChatGPT are not “intelligent”. They produce well-written text by predicting the next word, based on the task they have been given and available information sources.
- Trained on a large amount of data, this produces impressive results.
- Bing, Google AI-powered search engines. Microsoft is embedding AI (“Copilot”) into Office.
- There are many other specialised AIs (e.g. summarising and interrogating uploaded PDFs).



The Challenge: Designing Robust Assessments

- We cannot rely on detection to prevent AI use. AI detection tools are not accurate.
- Furthermore, we should not discourage students unnecessarily from using AI. Their future careers are likely to involve AI use.

This gives us three broad options...



Assessment Options

1. **Prevent** students accessing AI by using “live” assessments, e.g. exams, practicals, presentations (with Q&A), vivas.
2. Make it **harder** to use AI (“outrunning”)
 - Less description and summarising, more quantitative/analytic tasks, focused on appropriate use of technical concepts.
 - Analysis of information not available to AIs, e.g. interpreting information given with the assessment, rather than publicly-available data and well-known case studies. Interpreting charts, pictures, or videos, rather than text or numbers.
3. **Embrace** AI: assessments which require using AI appropriately and with critical judgement, e.g. analysing AI-generated output (“what is wrong with this analysis?”, “debug this code”). This could develop and test skills needed in future jobs.





A Spectrum of AI uses (acceptable to unacceptable!)

- Spell-check
- Grammar check
- Enhanced search capabilities
- “Assisted Writing”: correcting style and tone
- Summarizing/interrogating unread sources
- Generating a first draft.
- Uncritical copying of AI output!

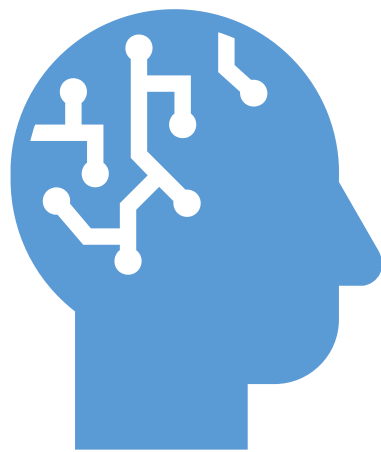
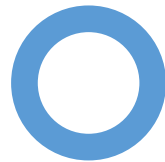
World Café Topics

(30 minutes) 3 X 10 mins

1. What policies, strategies and approaches are we taking individually, as a department and institution towards the use of generative AI by students in assessment? (Simon)
2. Do we need a new AI literacy to help staff and students? What are the ethics of using AI? And do we understand or need to understand how they work? (Jane)
3. How can we support staff and students to learn about Generative AI? What sort of guidance do we need? (Julie)



Jane



Wrap-up from the world Café
summary of the discussions
(10 minutes)



Student voice

Comments from City students

- "I am becoming *concerned that others may have an unfair advantage by using AI, particularly as it develops more over time. I feel as though I'm already behind* and that others have a head start because I choose to refrain from using AI as much as possible, especially during assessments."
Law UG student
- "I think they're *helpful when it comes to brainstorming ideas and potential topics* but should *not be used to write assignments or anything that is graded.*"
SPGA PG student
- "I think it is *nonsensical to prohibit use* of it considering AI is the future, so I think City should be ahead of the curve and work quickly to *make it part of the curriculum* and help students use it effectively."
Bayes UG student
- "As someone who is *Neurodiverse*, the support that AI can offer has been a revelation. Really *levelling the playing field.*"
LEaD PG student

Examples of how students address AI on social media

[Video 1](#)

[Video 2](#)

[Video 3](#)

Generative AI and policy at City

- [Student guidance on academic misconduct and AI student hub](#)
- [Staff guidance / Generative AI Task and Finish Group](#)
- **Can policy regulate the use of technology?**



References

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- Cotton, D. R., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating. ensuring academic integrity in the era of ChatGPT.
- Khalil, M., & Er, E. (2023). Will ChatGPT get you caught? rethinking of plagiarism detection. arXiv Preprint arXiv:2302.04335,
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- Mollick, E. R., & Mollick, L. (2023). Using AI to implement effective teaching strategies in classrooms: Five strategies, including prompts. SSRN id=4391243
- Techopedia (2023) Generative AI Available from: <https://www.techopedia.com/definition/34633/generative-ai>

Other slides

What Should We Teach?

- Many of our students are likely to need to use AI in their future careers. We should teach the analytic skills needed to critically interpret AI output.
- We already teach critical analysis skills appropriate to our subjects. But students might benefit from being taught how to use AI well:
 - Prompt Engineering (using AI effectively by giving clear instructions)
 - Computational thinking (concepts underlying machine learning & AI);
 - Ethical implications of AI;
 - Epistemology (how to assess good/bad sources, what constitutes a good argument or standard of proof).
 - Understanding potential biases in AI, and behavioural/psychological biases.
 - Build on existing “Critical Thinking” modules

AI as a Teaching Aid

- Mollick and Mollick (2023) give strategies for using AI to help HE teaching (but they stress the need for the human instructor to check the AI output).
 - Produce Many Varied Examples
 - Provide Multiple Explanations
 - Generate Low-Stakes Tests
 - Evaluate Student Learning for the Instructor
 - Generate recall tests of prior material (“Distributed Practice”) instead of students cramming for a single assessment.
- Khan Academy is embedding GPT-4 into its programmes to give individual AI-generated explanations to students as they work through problems. Other providers are moving into this space.

Other Ways AI Can Help Us

- Suggesting questions, aiding in producing materials (PPTs + videos). But module leaders must maintain editorial control.
- Testing assessment questions.
- Giving students hints on good writing style (especially important if we give students fewer essay-style courseworks).
- Monitoring student engagement and using AI-bots in “customer support” answering student queries.