

CLM Faculty
TEACHING AND LEARNING UNIT

**STAFF GUIDELINES
FOR LEARNING AND
TEACHING WITH
GENERATIVE AI TOOLS
(Draft)**

September 2024



CLM Faculty: Staff Guidelines for Learning and Teaching with Generative AI Tools

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Introduction

Artificial Intelligence (AI) is a range of technologies that perform cognitive tasks, through machine learning, natural language processing, data mining, neural networks or an algorithm (Zawacki-Richter et al., 2019). One of the technologies within AI is Generative AI (GAI). ChatGPT is the most well-known GAI that has been in the spotlight since its public release in November 2022. ChatGPT, which stands for Chat Generative Pre-Trained Transformer, has a basic version available to anyone who signs up for a free account, while a more advanced version (ChatGPT Plus) is available as a subscription service. It can perform various natural language processing tasks, such as, generating and classifying text, providing answers to questions in a conversational style and translating texts from one language to another. Some claim ChatGPT will become the “[greatest cheating machine ever](#)”, while others suggest it will open [new possibilities](#) to augment our skills by helping to automate mundane and routine tasks.

The aim of this faculty guideline document is to recommend how lecturers can consider learning and teaching given the impact of GAI tools. This guideline document should be read in conjunction with the companion guidelines:

- [CLM Staff Guidelines for Generative AI Tools with Assessment](#)
- [CLM Guidelines for Effective Prompting with Generative AI Tools](#)
- [CLM Researcher Guidelines for the Ethical Use of Generative AI Tools](#)
- [CLM Student Guidelines for Generative AI Tools in Higher Education](#)

Guidelines and principles linked to assessment, learning and teaching in other institutional documents should also be taken into consideration when incorporating GAI:

- The five-year Wits Learning and Teaching Plan
- [Senate Standing Orders on the Assessment of Student Learning](#)

1. Common GAI Tools

Here is a comparison of well-known GAI tools (adapted from Ithaka S-R, 2024). Most of these have mobile apps too:

Tool	Website	Information
ChatGPT (Open AI)	https://chatgpt.com/	<ul style="list-style-type: none"> • Registration is required. • ChatGPT Free has limited access to 4.o (but no access to data after January 2022). • ChatGPT Plus requires a \$20 monthly subscription . • ChatGPT Plus can access real-time information from the internet, which means responses draw on more up-to-date sources.
Gemini (Google)	https://gemini.google.com/	<ul style="list-style-type: none"> • Google account is required to use. • Replaced Google Bard. • Linked to other Google apps.
Copilot (Microsoft)	https://copilot.microsoft.com/	<ul style="list-style-type: none"> • Our recommended GAI tool to use: If you login with your Wits credentials the user and company data are protected and not shared back to the tool for training. • No registration is required. • Replaced Bing. • Built using GPT-4. • Can access real-time information from the internet, which means responses draw on more up-to-date sources. It can provide sources as a search extension (but source verification is still required).
Claude (Anthropic)	https://claude.ai/	<ul style="list-style-type: none"> • Registration is required. • Claude Basic is free. • Does not have access to real-time internet information. • Claude Pro requires a \$20 monthly subscription.
Meta AI (Meta)	https://www.meta.ai/	<ul style="list-style-type: none"> • No registration required. • Free version integrated into Facebook and WhatsApp. • Built using Llama-3.

Also, there are many ways GAI is being built into a variety of tools and platforms to use in education and the work environment. Here are a few examples that have a free version (the free versions may have limited features):

- Interactive Chatbot ([You](#))
- Writing/text ([Grammarly](#), [Sudowrite](#), [Lex](#), [QuillBot](#))
- Visual ([DALL.E 2](#), [Midjourney](#), [DeepAI](#), [Leonardo.Ai](#))
- Video ([Haiper](#), [Invideo AI](#), [Descript](#), [D-iD](#), [HeyGen](#))
- Voice or text-to-speech ([ElevenLabs](#), [Murf](#))

- Presentations ([Tome](#), [SlidesAI](#))
- Lesson planning and teaching resources ([Eduaide](#), [Teachermatic](#))
- Research and summaries ([Elicit](#), [Scholarcy](#), [Perplexity AI](#), [SciSpace](#))

2. Principles for GAI Use in Education

While there can be negative associations with the use of GAI in higher education, these tools provide the opportunity for us to rethink how we approach learning, teaching and assessment. The Russell Group of Universities in the United Kingdom (2023, p. 1) note that:

The rise of generative artificial intelligence (AI) has the potential for a profound impact on the ways in which we teach, learn, assess, and access education. Our universities wish to ensure that generative AI tools can be used for the benefit of students and staff – enhancing teaching practices and student learning experiences, ensuring students develop skills for the future within an ethical framework, and enabling educators to benefit from efficiencies to develop innovative methods of teaching.

The Russell Group (2023) has further created a set of five principles, all of which are deemed applicable to the Faculty of Commerce, Law, and Management (CLM):

1. Support students and staff to become AI-literate.
2. Equip staff to support students to use GAI tools effectively and appropriately in their learning experience.
3. Adapt learning, teaching and assessment to incorporate the ethical use of GAI and support equal access.
4. Ensure that academic rigour and integrity are upheld.
5. Work collaboratively to share good practices as the technologies and their application in education evolves.

3. Managing Expectations

Outlining what schools, programmes or courses expect from students around the use of GAI tools in learning and teaching is essential, especially before any assessments are undertaken. Lecturers should set clear expectations of when it is admissible to use and when not. While the temptation may be to ban the use of these tools completely, we recommend that rather than aiming to prevent students from using GAI, lecturers should make expectations about the use of GAI explicit and visible to students. Additionally, engaging with colleagues and students alike to promote debate and knowledge sharing is essential and forms part of the development of new literacies for education and work.

Some higher education institutions have attempted to ban the use of GAI. In these institutions, students using GAI are considered to have been [academically dishonest](#), with severe penalties. While academic integrity is a concern, taking a punitive approach is not likely to stop the use of GAI. We recommend an approach that seeks to build key skills for

the future. It is likely that GAI will become increasingly integrated in the world of work, across the education landscape, and in everyday life. For this reason, trying to control its use and evolution could be considered futile. Higher education must adapt to incorporate the emerging uses of new technologies that our graduates will likely use. However, we need to be mindful of the ethical issues associated with using GAI in education. See the [CLM Researcher Guidelines](#) and [CLM Staff Guidelines on Assessment](#) for more information.

4. Considerations for Using GAI Tools in Higher Education

There are several considerations to keep in mind when staff and students use GAI tools.

Relevance of data set: Generative AI may not have the latest information or developments in a field. For example, ChatGPT version 3.5 was trained on data up until 2022. This means that the outputs have to be verified against other data sources. Additionally, the sources of the output from GAI tools cannot be easily verified.

Hallucinations: While GAI outputs may come across as authoritative and convincing, its responses are based on next word predictions. The software has no real understanding of the information it is providing. This leads to what are known as ‘hallucinations’, thus resulting in misinformation. When using GAI tools, the outputs must be verified for accuracy and reliability. It is also advisable to consult additional, trusted sources to ensure that the information provided is appropriate and accurate. In fact, it is recommended not to use GAI tools to prompt for “factual” outputs or rely on outputs as being factual (i.e., GAI tools should not be used in the same way as Google searches for example).

Dependence/Overreliance for Writing or Thinking: Assessments (such as written assignments) serve the purpose of helping students learn and practice skills relevant to their discipline. While GAI can help automate some tasks, it is important to guard against over reliance, to prevent individual’s ability to craft and think critically from being unnecessarily influenced. [Research](#) suggests that while GAI can lead to efficiencies in decision making, being over reliant on GAI can lead to cognitive overload.

Additional important ethical considerations for learning and teaching:

- **Academic integrity** – There should be an emphasis on the distinction between using GAI as an enabler or in a supporting way and using GAI as an authoring tool that impacts on academic integrity. Unless made explicit, it can be tempting for students to present AI generated work as their own, since it is not ‘copied’ as in the traditional form of plagiarism (see CLM [GAI Assessment Guidelines](#) for more information).
- **Privacy and data risks** – GAI systems collect a lot of data (for example, ChatGPT requires registration with an email and phone number), and these systems can track personal information and activity. Open AI’s [Privacy Policy](#) clearly states that “By using our Service, you understand and acknowledge that your Personal Information will be processed and stored in our facilities and servers in the United States and may be disclosed to our service providers and affiliates in other jurisdictions”. Therefore, users are strongly advised **not to submit any personal information to GAI tools**. Additionally, no student should be forced to make use of a specific GAI tool where they must give personal information.

- **Built in-biases** – GAI follows the “garbage-in-garbage out” principle. In other words, if the data that the system was trained on is biased, inaccurate, or questionable, then the responses generated will reflect that bias. GAI tools are trained using datasets that contain implicit and explicit biases (e.g., lack of cultural diversity, dominance of Western hegemonic knowledge, racism, sexism). Biases may include historical, representative, algorithmic, ranking, behavioural and social biases. Users must be aware of the potential biases contained in AI generated outputs and should critically evaluate the information before using it.
- **Exploitation of labour** – there have been allegations of [exploitative labour practices](#) in the training of GAI tools. There is often a significant human component required to support the continuation of GAI tools. There is also an [environmental impact](#) of running GAI tools.
- **Plagiarism** – GAI tools represent information developed by others and so there is the risk of plagiarised content and/or copyright infringement being submitted by a user as their own. [Artwork](#) used by AI-image generators may have been included in the AI database without the creator’s consent or licence.
- **Accessibility** – there is a risk that those with poorer access to connectivity, devices, data, and literacies will get unequal access to the opportunities being provided by GAI. More powerful AI capabilities may be monetised and only available to those with resources. In a context with existing inequalities, those planning to use these tools for learning and teaching should be cognisant of unequal access on the part of students.

5. Exploring GAI Tool Usage in Learning and Teaching

While we must be responsible in how we use the emerging capabilities of GAI tools, there are also interesting new opportunities to be explored, depending on your context and your students. The table of use cases below is not exhaustive but provides a glimpse of the potential for learning and teaching.

Staff Use	Student Use
Content Refinement: Using GAI to assist in refining or improving educational materials such as lesson plans, quizzes, rubrics, and interactive content.	Concept Understanding and Reinforcement: GAI-powered tools that help students understand and reinforce complex concepts through interactive explanations, visualisations, and practice exercises.
Intelligent Tutoring Systems: Deploying GAI-powered tutoring systems that adapt to individual student needs.	Virtual Mentor: Accessing a virtual mentor or tutor, powered by AI, to provide guidance and support throughout their learning journey.
Automated Administrative Tasks: Utilising GAI for automating administrative tasks such as scheduling, and record-keeping.	Language Learning Support: Using GAI-based language learning tools that simulate conversations, provide instant feedback, and generate language exercises.
Adaptive Learning Paths: Creating personalised learning paths for students based on their individual progress and needs. Canvas already supports differentiated assignments through Mastery Paths .	Personalised Learning Paths / Assessments: Students receiving tailored learning paths or assessments based on their individual strengths and weaknesses and that provide personalised feedback.

Virtual / Augmented Reality Simulations: Integrating GAI with virtual reality technology to create immersive educational simulations	Skills Development and Practice: Using AI-based platforms to develop and practice specific skills, such as coding or language proficiency.
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Additionally, the [UNESCO Quick Guide](#) (UNESCO, 2023) has also outlined 10 educational ‘roles’ for GAI tools, ranging from ‘Socratic opponent’ to ‘study buddy’.

6. The Importance of Critical AI Literacies

In addition to academic literacies, additional literacies are required for all stakeholders to navigate GAI effectively. AI literacy involves sound knowledge about the basic functions of AI, the ability to ethically use AI tools, a familiarity with AI concepts and applications in different scenarios, the ability to critically evaluate AI technologies, and the skill to communicate and collaborate effectively with AI (Ng et al., 2021). AI literacy includes understanding what AI can be used for and what it does not do well.

Users must understand the basic operation of large language models and be familiar with the inherent limits of the systems they are making use of. For example, the lack of common sense or real understanding contained in AI generated responses, which allows for unrealistic or inaccurate answers. A critical skill required in terms of AI Literacy is what is known as **prompt engineering** (see [CLM Prompting Guidelines](#)). In other words, how to formulate the prompts that are fed into the GAI tool, thus providing accurate parameters and guidelines for how the GAI should respond.

Bearing in mind that Large Language Models (LLMs) are based on predictions using the dataset they are trained on, and that AI-generated information is not always accurate and authentic, it is vital for users (both staff and students) to be critically literate when it comes to using GAI. This may mean creating components of courses that build students’ capacity to effectively understand and apply GAI tools both in their educational projects and their disciplines. Designing learning activities that challenge students to interact with GAI to get a sense of its capabilities, and to evaluate its value and outputs can be incorporated into courses. Treating GAI as another tool in learning and teaching that students are expected to gain skills and competence in, shifts the focus from the deficit and punitive to becoming a resource for achieving tasks and enhancing learning.

Opportunities to develop information literacy should form part of students’ learning experiences. Ultimately, students should be able to identify what information is required to complete their assignments or assessments, and then evaluate this information and communicate it in an ethical and appropriate manner. One way of achieving this is by scaffolding information literacy for effective learning across courses in a programme.

References

- Atlas, S. (2023). ChatGPT for Higher Education and Professional Development: A Guide to Conversational AI. University of Rhode Island. https://digitalcommons.uri.edu/cba_facpubs/548
- Claremont Colleges. (2018). Claremont Colleges Critical Information Literacy Habits of Mind. https://library.claremont.edu/wp-content/uploads/2018/02/Information_Literacy_Habits-of-Mind.pdf
- McCarthy, J. (2007). From here to human-level AI. *Artificial Intelligence*, 171(18), 1174-1182.
- Ng, D. T. K., Leung, J. K. L., Chu, K. W. S., & Qiao, M. S. (2021). AI literacy: Definition, teaching, evaluation and ethical issues. *Proceedings of the Association for Information Science and Technology*, 58(1), 504-509.
- Russell Group. (2023). Russell Group principles on the use of generative AI tools in education. https://russellgroup.ac.uk/media/6137/rg_ai_principles-final.pdf
- Ithaka S-R. (2024). Generative AI Product Tracker. https://docs.google.com/document/d/1yg7KJmMl7d_xZAGgHiXc-9iSNT5vmmp1iyK5zYcS2IE/edit?pli=1
- UNESCO. (2022). Recommendations on the Ethics of Artificial Intelligence. <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>
- UNESCO. (2023). ChatGPT and Artificial Intelligence in Higher Education. Quick Start Guide. https://www.iesalc.unesco.org/wp-content/uploads/2023/04/ChatGPT-and-Artificial-Intelligence-in-higher-education-Quick-Start-guide_EN_FINAL.pdf
- Van Rossum, D. (2024). Generative AI Top 150: The World's Most Used AI Tools. FlexOS. <https://www.flexos.work/learn/generative-ai-top-150>
- Vuorikari, R., Kluzer, S. and Punie, Y., (2022). DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes, EUR 31006 EN, Publications Office of the European Union. <https://publications.jrc.ec.europa.eu/repository/handle/JRC128415>
- Webb, M. (2023). A Generative AI Primer. JISC. <https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/>
- Zawacki-Richter, O., Marín, V. I., Bond, M., and Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? *International Journal of Educational Technology in Higher Education*, 16(39).