

ChatGPT: Frequently asked questions about artificial intelligence and how it could impact teaching

ChatGPT was released in November 2022 and made artificial intelligence text-generation easily accessible to all, including teachers and students. Many might worry that students will misuse this technology by presenting AI-generated text as their own work. At the same time, this technology can also help transform teaching and learning if used correctly. Below you will find some frequently asked questions about this technology.

What is artificial intelligence?

Artificial intelligence (AI) refers to a computer system that can perform tasks that simulate human-like intelligence. AI systems can perform tasks like compute natural language, language translation, recognizing images and speech, making decisions. These systems can learn from data (i.e., the acquisition of information and rules for using the information), reason (i.e., using the rules to reach approximate or definite conclusions), and self-correct.

What is ChatGPT?

ChatGPT (Generative Pre-trained Transformer) is an artificial intelligence tool, also referred to as a chatbot. It can generate human-like text based on a given prompt or context. The more specific the prompt, the more specific the text response will be. It uses a neural network trained on a huge dataset of text, mostly written by humans, using a technique called transformer architecture, it is pre-trained on a massive amount of internet text data to produce texts with the help of next-word prediction algorithms. The more people use ChatGPT, the better it will get at generating responses to prompts.

Although it provides perfectly written texts that seem to answer the given prompts, ChatGPT output presents some problems. Users should be aware of 'false fluency', the fact that a perfectly sounding sentence or text can be non-sensical. Making a parallel with machine translation output which also relies on huge corpora, we can assume that ChatGPT output presents cultural, racial and gender bias. It has also been documented that ChatGPT often presents information that is factually inaccurate or even completely made up. This includes references, citations, and even the names of researchers. Finally, even if the system works very well on sentence and paragraph level, overall coherence and cohesion of the whole text is still not optimal.

ChatGPT requires users to create an account which is currently free of charge. The tool is sometimes down due to intensive, simultaneous, use. A simple refresh of the webpage usually gets the user back in.

Why is ChatGPT and artificial intelligence a potential threat to teaching?

Teachers are afraid that students will use ChatGPT to write their assignments for them, which, if not included in the assignment description, would be a threat to academic integrity.

Why is ChatGPT and artificial intelligence a potential threat to learning?

If not used appropriately, ChatGPT could be detrimental for student learning, in particular for critical thinking and analytical skills.

Should the use of ChatGPT and AI be forbidden in higher education?

Banning ChatGPT and AI at the university might be problematic for several reasons. Three arguments for why this might not be realistic:

1. It is currently almost impossible to detect whether a text has been generated by ChatGPT, so even if the tool is forbidden, it would be difficult to control. Additionally, a punitive and forbidding culture does not make for a motivating environment in which our students want to study, or in which our teachers want to teach (note: the current policy about *academic integrity* specifies that it is against the rule to use work made by someone else as one's own; which should also include work made with AI*);
2. Even if ChatGPT and AI would be forbidden at the university, these tools will continue to exist outside of the university and it might be unrealistic to forbid them entirely. Forbidding ChatGPT and other AI tools might create disadvantages for our students by not helping them understand what AI is and how to use it to enhance their learning and work;
3. Many new technologies are initially seen with a lot of skepticism (e.g., calculators, spell- and grammar-check programs, Internet search-engines, Wikipedia, automatic translators, etc.) but once they are generally accepted they become indispensable tools and help us produce work of higher quality.

*NOTE: Le texte suivant du [Guide sur le plagiat](#) à l'UniNE ainsi que le [Règlement en matière de respect de l'intégrité scientifique](#) pourront être modifié pour inclure AI : « *Le plagiat est une fraude visant à s'approprier un travail qu'on n'a, en tout ou en partie, pas accompli soi-même. Le plagiat peut se définir ainsi : dans un travail écrit, reprendre la création d'une tierce personne et la faire passer pour sienne, en ne mentionnant pas (ou pas correctement) ses sources.* »

How to address artificial intelligence and ChatGPT in courses?

ChatGPT can be integrated into courses in a thoughtful and strategic manner. By being transparent about the existence of ChatGPT and clearly communicating the purpose and

limitations of ChatGPT, teachers can explain how ChatGPT will be used in the course (or not), and what its limitations are. They can explain that ChatGPT is a tool to assist learning, but not a replacement for human instruction. In this way, teachers can invite students to discuss ChatGPT in an effort to develop a culture of trust and academic integrity.

It is important to make sure all students can benefit equally from incorporating the use of ChatGPT in their course work.

How can ChatGPT and AI help improve student learning?

Teachers can use ChatGPT to support learning, for example, by providing students with additional resources and feedback. Integrated into assignments, ChatGPT can help students with problem-solving skills and critical thinking.

How can ChatGPT be useful for teachers for preparing a course?

ChatGPT can be useful for developing a course plan or lesson plan, to prepare teaching activities and materials, to create evaluations as well as grading rubrics to help evaluate student work. Using specific prompts about level, content, type of activities, etc., ChatGPT can come up with quite interesting and useful material that can help teachers save time on the preparation for teaching. And, when mentioning clearly the use of ChatGPT to prepare course material, show how to use this technology critically, what it can achieve and its limits.

How can teachers adjust assignments for (or against) the use of ChatGPT?

There are many ways to adjust assignments.

First, changing the type of assignment to make it harder for students to use ChatGPT. For example:

- Ask students to make a video, podcast or audio file instead of a written assignment;
- Switch to oral evaluations instead of written evaluations;
- Have students make mind-maps to show how concepts are related (as well as other performative tasks);
- In-class writing assignments make it impossible for students to use ChatGPT (however, this might be time-consuming and assignments need to be shorter);
- Create open-ended questions that require critical thinking and analysis;
- ...

Second, another way to adjust assignments is to embrace the AI tools and include them in the assignments, providing new opportunities for learning and engagement.

For example:

- Use ChatGPT for brainstorming activities to help students come up with ideas;

- Generate prompts for creative writing assignments to explore different perspectives and ideas;
- Ask students to analyze texts produced by ChatGPT to judge their quality and accuracy;
- Use ChatGPT and AI to assist with language learning assignments, for example: translations, grammar corrections, and suggestions for sentence structures;
- Use ChatGPT to help students with their research by providing them with relevant information and resources on a given topic;
- Have students use ChatGPT to get started with a writing assignment;
- Have students ask for a number of alternative answers and then debate which one is best;
- Add precise constraints of what has to be included in the written assignment, e.g. ask students to add direct quotations;
- Focus on the writing process rather than on the final product, have students submit several versions of the text with a meta-analysis of their writing process;
- ...

Teaching and learning support / Language Centre

Resources:

**French resources marked with an asterisk*

Alby, Cynthia. "ChatGPT: A Must-See Before the Semester Begins." Faculty Focus. January 9, 2023. Accessed 26 January 2023 at: https://www.facultyfocus.com/articles/teaching-with-technology-articles/chatgpt-a-must-see-before-the-semester-begins/?st=FFdaily%3Bsc%3DFF230109%3Butm_term%3DFF230109&mailingID=4330

Bruff, D. (2023). A Bigger, Badder Clippy: Enhancing Student Learning with AI Writing Tools. Derek Bruff's blog Agile learning, January 5. Accessed 26 January 2023 at: <https://derekbruff.org/?p=3995>

Center for innovative teaching and learning at Indiana University Bloomington (2023). How to productively address AI-generated text in your classroom. January 25. Accessed 26 January 2023 at: <https://citl.indiana.edu/teaching-resources/academic-integrity/AI-Generated%20Text.html>

*Herft, A. (2023). Guide de l'enseignant, L'usage de ChatGPT : ce qui marche le mieux. Herft educator. Accessed 26 January 2023 at: <https://www.innovation-pedagogique.fr/article13780.html>

Lee Skallerup Bessette, assistant director for digital learning at CNDLS at Georgetown University, has a public reference list on Zotero with resources about ChatGPT. Accessed 26 January 2023 at: <https://www.zotero.org/groups/4888338/chatgpt/items/YLN6I5XL/library>

McMurtrie, B. (2022). AI and the future of undergraduate writing. The Chronicle of higher education, December 13. Accessed 26 January 2023 at: <https://www.chronicle.com/article/ai-and-the-future-of-undergraduate-writing>

McMurtrie, B. (2023). Will ChatGPT Change the Way You Teach? The Chronicle of higher education Newsletter, January 5. Accessed 26 January 2023 at: https://www.chronicle.com/newsletter/teaching/2023-01-05?cid2=gen_login_refresh&cid=gen_sign_in

*Pedagoscope, podcast episode with Amaury Daele (2023). ChatGPT et Enseignement supérieur. January 13. Accessed 26 January 2023 at: <https://pedagoscope.ch/chatgpt-et-enseignement-superieur/>

*Rioux, M. (2023). Attention : L'intelligence artificielle qui change l'éducation est arrivée et vous devez vous y intéresser aujourd'hui. Ecole branchée : Enseigner à l'ère du numérique, publié le 9 décembre 2022 et modifié le 16 janvier 2023. Accessed 26 January 2023 at: https://ecolebranchee.com/attention-lintelligence-artificielle-qui-change-leducation-est-arrivee-et-vous-devez-vous-y-interesser-aujourd'hui/?fbclid=IwAR0jQS89C29oPHZ4R9IB2rExf0QWXGHmbYmDZR4sbqy9lue7fCc_9yIkX24

Teaching in higher ed podcast with Cynthia Alby (2023). How artificial intelligence is impacting higher education, January 12. Accessed 26 January 2023 at: <https://teachinginhighered.com/podcast/how-artificial-intelligence-is-impacting-higher-education/#transcript>

*Turrettini, E. (2022). L'utilisation de ChatGPT par les étudiants inquiète les enseignants. Bilan 22 décembre 2022. Accessed 26 January 2023 at: <https://www.bilan.ch/story/lutilisation-de-chatgtp-par-les-etudiants-inquiete-les-enseignants-817223178542>

Ryder, D. (2022). AI is here – If we fight it, we'll lose and so will our students! The AHEAD Journal, 15, Winter issue. Accessed 26 January 2023 at: <https://ahead.ie/journal/CEOs-Corner-AI-is-here-If-we-fight-it-we-ll-loose-and-so-will-our-students!>