



HOW GHENT UNIVERSITY / FBE IS ADDRESSING THE USE OF GENERATIVE AI IN TEACHING AND LEARNING

24/10/24 – Prof. Ir. Mieke Uyttendaele

"SO OFTEN TEENS DO HOMEWORK WITH AI: "A NOVICE TEACHER?
SHE JUST DOESN'T NOTICE IT"

Zo vaak maken tieners huiswerk met AI: "Een beginnende leerkracht? Die ziet dat gewoon niet"

Zo vaak maken tieners huiswerk met AI: "Een beginnende leerkracht? Die ziet dat gewoon niet" | Het Nieuwsblad



Tieners die handig zijn met de artificiële intelligentie van ChatGPT kunnen veel werk overlaten aan de computer.

NEWSPAPER IN FLANDERS, OCT. 21TH "SO OFTEN TEENS DO HOMEWORK WITH AI: "A NOVICE TEACHER? SHE JUST DOESN'T NOTICE IT"

- "It's more widespread than many parents think, and students are more adept at it than many people realize."
- *"Talking about AI is not really done here in my school"*
- "I've also been caught once, I was just super lazy then, but I don't want that kind of situation anymore"
- *"If you handle it right, though, they can never see that"*
- "At school, they're not necessarily against it. There they often say, 'Better have it checked by ChatGPT instead of submitting it full of mistakes.'"
- *"I have dyscalculia. Math questions I don't understand I submit to AI to explain me"*
- "If I have a test the next day and I haven't learned anything or summarized anything, I ask AI to summarize my course quickly and simple"
- *"I do double check often, because it does happen that AI just says wrong things"*
- "For creative courses, AI then gave me a rough idea, and then I started looking everything up separately."



VISION ON GENERATIVE AI SYSTEMS

WHAT IS OUR VISION ON GENERATIVE AI SYSTEMS?

@Ghent University

- The use is not prohibited
- Responsible and ethical use is supported

@FBW

- Extra classmate



GENERATIVE AI

Generative AI relies on artificial intelligence (AI) methods to create new contents based on user questions (prompts) by analysing huge amounts of existing data (among other things). Contents may comprise text, code, images, video clips or a combination thereof.

UGENT VISION ON GENERATIVE AI SYSTEMS

Education and examination code AY23-24

AY 24-25

PLAGIARISM

At Ghent University, plagiarism is considered to be a form of fraud and an irregularity. To commit plagiarism is to present (parts of) a source as one's own original work, or to present it as one's own original work without (correctly) crediting the source. Plagiarism also comprises the use of text or a product created by a generative system (unless, and to the extent that, a lecturer-in-charge has allowed the use of such a system) or by a ghost writer as one's own. Plagiarism can affect various product types such as text (written, oral), image (photos, videos, graphs, diagrams, figures...), music, data files, structures, line(s) of reasoning, ideas.



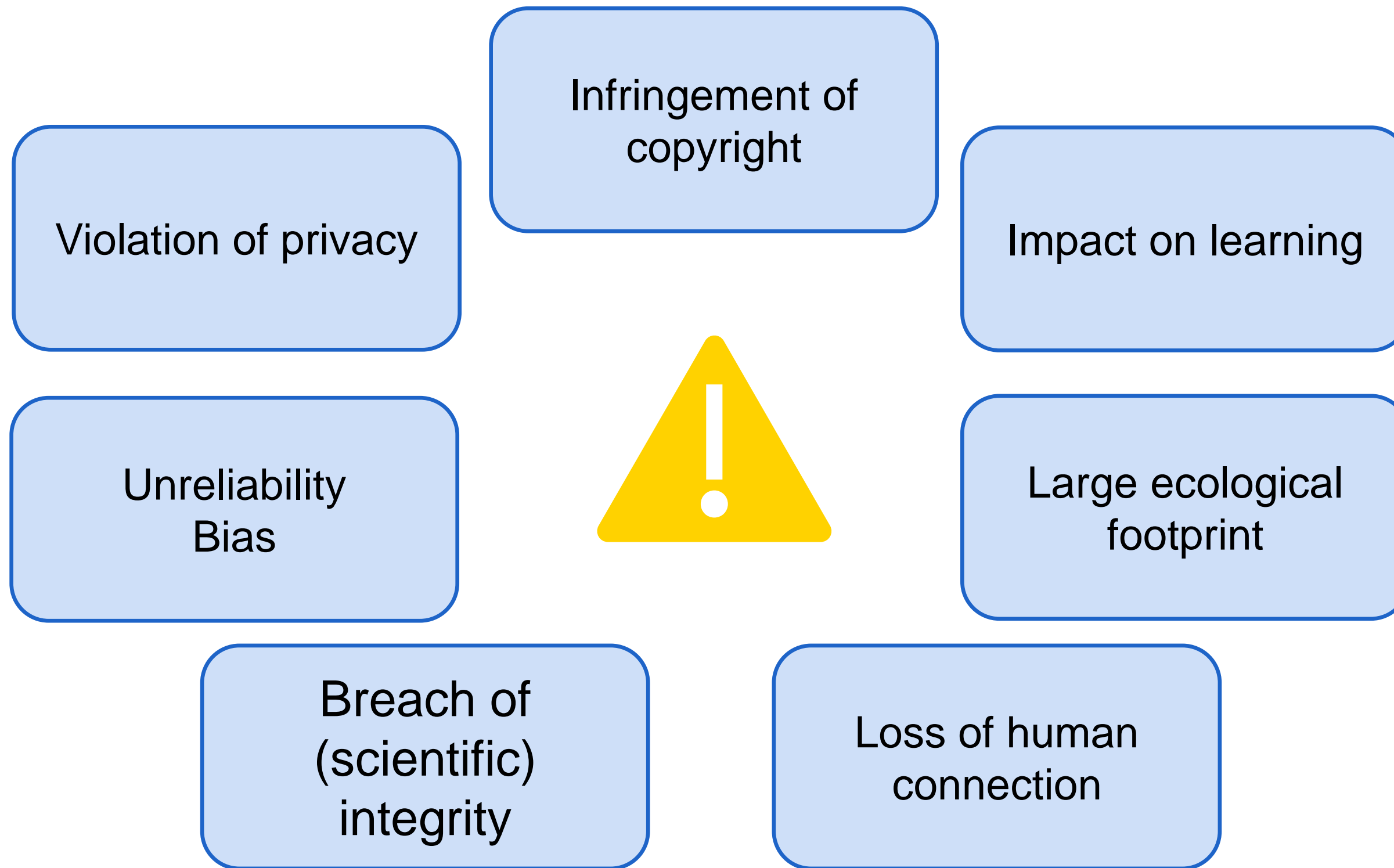
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Although Ghent University supports a responsible and ethical use of generative AI, the use of generative AI systems or other (digital) tools can be considered to be a form of fraud or an irregularity if this has previously been prohibited for (a part of) the assessment of a specific course unit, and communicated as such.

“RESPONSIBLE AND ETHICAL USE”



“RESPONSIBLE AND ETHICAL USE”

POSSIBILITIES OF GEN AI USE



READING BUDDY



WRITING ASSISTANT



IDEAS GENERATOR



MULTIMEDIA CONTENT
DEVELOPER



ADMINISTRATIVE
ASSISTANT



ANALYST



ACADEMIC SEARCH ENGINE



PROGRAMMER



GUIDELINES AND SUPPORT

GHENT UNIVERSITY GUIDELINES

Op deze pagina

- [I. Generative AI: Use, Opportunities, Risks](#)
- What GenAI Tools Are There?
- GenAI in the Teaching Practice
- Using GenAI: Risks
- **II. Gen AI Policy for Education at Ghent University**
- Validity of Assessment: Approach
- An Approach to Fostering AI Literacy
- An Approach to Mitigating the Impact on the Curriculum
- Want to Know More?
- Appendix

Generative AI in Ghent University Education: Impact and Approach

Latest update: 11 September 2024

Generative AI tools impact Ghent University education, the intended competencies/learning outcomes we want to foster, and the way we teach and assess. Read the following Education Tip to learn about generative AI and the Ghent University guidelines. Take a look at the outline of options for incorporating tools into your teaching practice and learn how to promote AI literacy.

I. Generative AI: Use, Opportunities, Risks

Generative AI is a type of AI technology that can create new, original content (e.g. texts, images, sounds) based on patterns and structures it has learnt from existing data. Based on advanced algorithms and neural networks, GenAI generates output (text, images, audio, videos and computer code) that closely resembles human output.

GenAI models are trained on huge quantities of data sourced from the internet. They can generate new content statistically similar to the training data but unique and adapted to specific input or instructions. This technology has permeated various fields, including the arts, entertainment, communication, and academic research.

Want to find out more about these systems? Please take a look at the infosite [GenAI: on Learning, Creating and Lecturing, Module One](#).

Have you never used GenAI tools such as ChatGPT before? These [experimentation guidelines](#) will lead first-time users on a step-by-step journey through this Brave New World of GenAI.

FACULTY GUIDELINES

Focus on **written tasks** such as bachelor and master's dissertation

- Responsible use of Generative Artificial Intelligence (GAI) is permitted. What does that mean?
- As a student, you are and remain responsible for the content of the submitted text and your use of the source material;
- The basic literature must remain known;
- You are **obligated to search for a reliable, unambiguous source** (which can still be consulted months, years later for verification by others) and to read references if 'ideas/inspiration' for topics are provided by GAI;
- You are responsible for the **correct use of the source material and the references** in the text to that source material;
- You can and may use GAI to generate a better written formal grammatical text than the text you would write entirely on your own;
- You must honestly and clearly indicate that you have used GAI (ChatGPT and others) as a tool. ChatGPT (or other GAI) should not be included in the references. Questions posed to ChatGPT are not traceable. Even if the same question is asked, the answer may be different.
- Be careful with confidential and personal privacy-sensitive information: you should not import it into open source AI!

[Master's dissertation @FBW](#)

UNIVERSITY-WIDE SUPPORT

Both students and educators need solid foundational knowledge to use AI effectively.

1) Learning paths

- For students: [Generative AI for Students: From Concepts to Creation](#)
- For teachers: [Generative AI for teachers: Concepts, Creations and Classroom Practice](#)

UNIVERSITY-WIDE SUPPORT

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2) Lunch and learn sessions

University-wide sessions where lecturers from diverse faculties discuss how they incorporate generative AI into their teaching and research practice.

UNIVERSITY-WIDE SUPPORT

Both students and educators need solid foundational knowledge to use AI effectively.

3) Taskforce

There is a working group consisting of educational developers from the 11 faculties and the central service, focusing on generative AI.

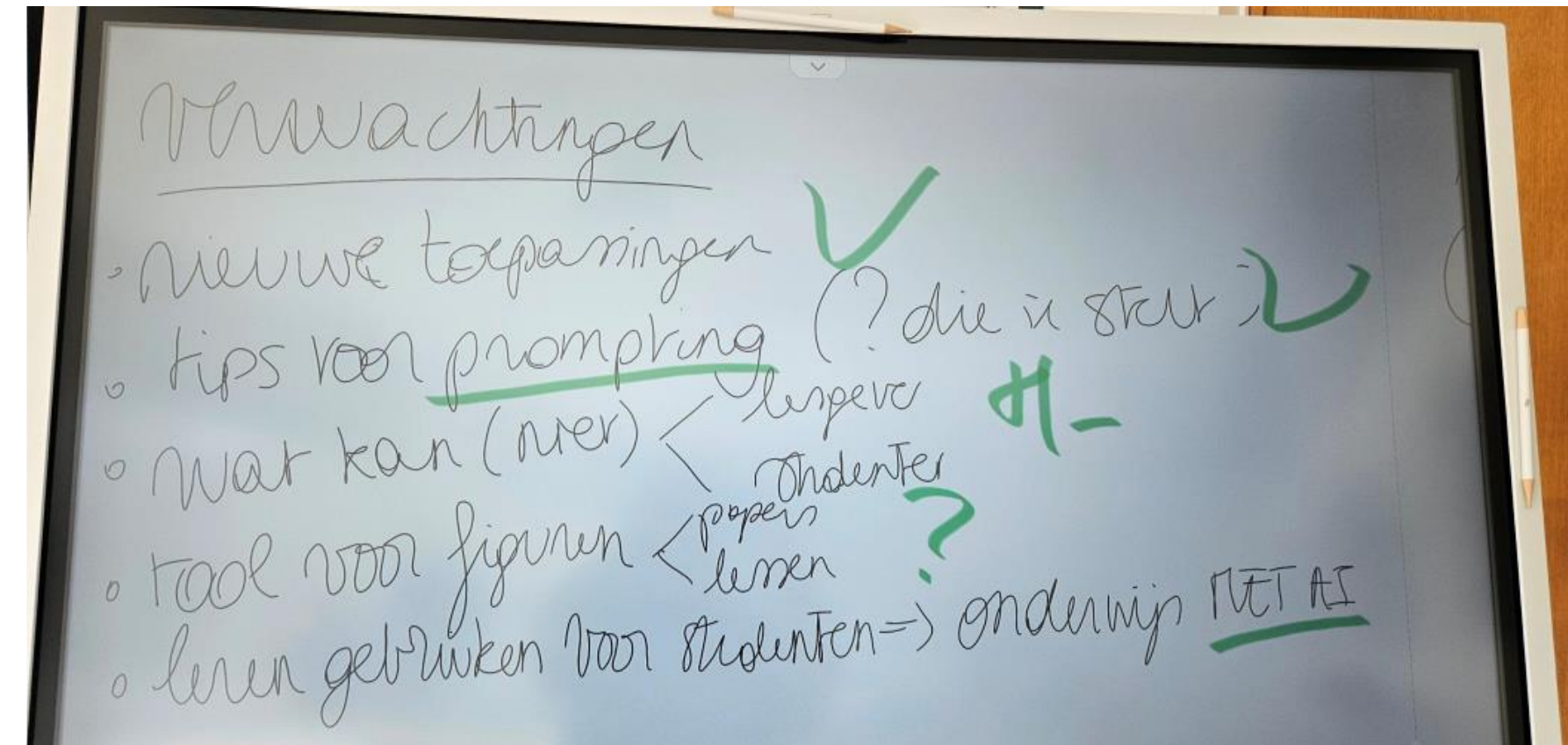
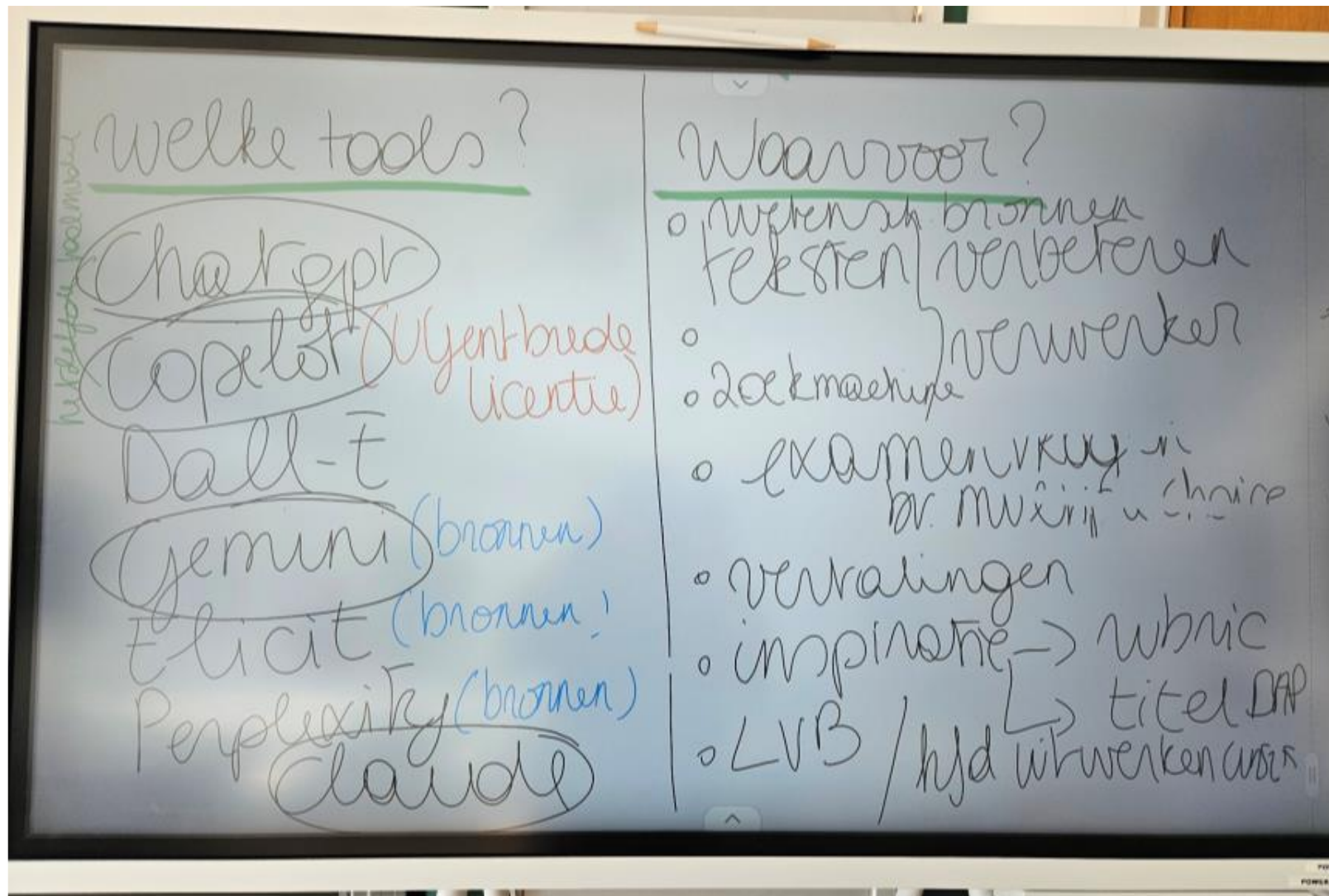
FACULTY SUPPORT

- Faculty-led **inspiration** session (spring 2024)

Title	Speaker
Critically dealing with ChatGPT: assessing an AI-generated answer as an exam question for students to 'correct/discuss'	Bruno De Meulenaer (food chemistry)
Generative AI as an extra student in the classroom	Wim Cornelis (soil physics)
ChatGPT versus data: let students discover for themselves that AI is not a fact machine	Carl Lachat (food and nutrition epidemiology)
Prompt engineering for quick and objective rubrics	Florence Van Herreweghen (teaching assistant)
<i>You can test GPT-4 during the break</i>	
Ignoring is not an option: make agreements and explain why	Jan Verwaeren (programming)
Teaching research methods with AI as a private tutor	Michaël de Clercq (teaching assistant)
ChatGPT: a help in creating exam questions?	Jan Baetens (mathematics)
How do students use generative AI and what are their expectations of teachers?	Emma Willaert & Helena Van Tichelen (StuBio – students)
Reflect on the impact on your Course sheet (<i>official UGent course description including learning objectives, content, evaluation</i>)	Janis Baeten (faculty support on education)

FACULTY SUPPORT

- Faculty-led **workshops** on generative AI literacy among teachers



WRITTEN TASKS





Should we continue requiring a master's dissertation in a world where AI can generate content?

FACULTY DISCUSSIONS


The answer is **YES** we should still require a bachelor & master dissertation

Reasons?

- Competences: *to carry out scientific research in a proper way.*
refer to: [Master dissertation course sheet 1001481](#)
- @FBE: international literature review in domain (concise writing), experimental setup, critical discussion of the results, propose (partial) solutions and reflection
- @FBE : good guidance & interaction between promotor-tutor-student
- @FBE: presented and defended orally before a jury

Changes to be made @FBE ? evaluation?

- It has been discussed ([handleiding_masterproef_herbekijken.pdf](#))
- Conclusion: keep it the way it is

WAT	BEOORDEELD DOOR	Huidig AANDEEL	Voorstel nieuw AANDEEL
Proces	Promotor	30%	30%
Masterproefrapport	2 leescommissarissen	40%	30%
Mondelinge verdediging:	 Voltallige jury	30%	40%
- Presentatie		- 10%	- 10%
- Beantwoorden		- 20%	- 30%
Slagen voor elk onderdeel → Voorstel NIET weerhouden - Keep as			

DID STUDENTS USE GENERATIVE AI IN THEIR AY 23-24 MASTER DISSERTATION?

Conclusion informal questionnaire

- 83% of students used GenAI tools while writing their thesis
- Most-used tool: ChatGPT
 - Mainly as a writing assistant (correcting errors, rephrasing, translations).
 - Also used for code generation/improvement and as a search engine.
- Supervisors observed more fluent writing and fewer language errors.
- Impact on student scores without GenAI is difficult to determine.

Points of Attention (Students)

- Confidential information: Limitation on the use of GenAI !
- Acknowledgement of inaccurate information from ChatGPT: use critically!
- Language complexity of GenAI texts: sometimes too advanced or archaic.

FBE (Faculty of Bio-science Engineering) Guidelines

- “Go through the [UFORA learning path ‘Generative AI for Students: From concepts to creation’](#) so that you are well-informed about what you can, may, and want to do with generative artificial intelligence (GAI) in your master’s dissertation.”
- Fill in a “**AI usage template**”
- Gen AI tools ‘not to be cited as a reference’ because not reproducible, no reliable ‘source’

Other UGent faculties?

- e.g. Faculty of Sciences
- ➔ More detailed: [GenAI in Master's dissertation \(sharepoint.com\)](#)

IMPACT ON TEACHING & LEARNING





Today: AI complements the professor as a tutor.
Future: Will professors become assistants to AI tools?

IMPACT ON TEACHING AND LEARNING

- For students a 'no brainer' → digital natives
- Skepticism and concerns by lecturers about the self-sufficiency of students, especially amidst pressures and insecurities within **Generation Z**.
- **Critical reflection, analytical thinking, and independent problem-solving** remain core educational values at UGent.
- **Responsibility and integrity** : Being accountable for one's actions and commitments - Being truthful in all academic endeavors and valuing contributions of others are important academic values

IMPACT ON TEACHING AND LEARNING

“The lack of that knowledge and digital skills could potentially lead to a **bigger gap between groups** that are **beginners** or experts. The **experts** can work better with AI tools because of their already acquired knowledge, which allows them to **grow further as AI Elite users**, while the **beginners** can lose further ground due to poor prompts and insufficient critical thinking. This **Matthew effect**, where the strong become stronger and the weak weaker, can also be observed in student groups.”

FUTURE PLANS

Designing a **digital skills learning line** in our study programmes
+ integrating GenAI in courses

Already 'early adopters'

e.g. Faculty-led inspiration session (spring 2024)

refer to example of Nutrition Epidemiology : "ChatGPT versus data:
let students discover for themselves that AI is not a fact machine"

➔ promoting 'reflection' on outcomes

➔ need 'knowledge context' for interpretation !

CONCLUSIONS

- **Core knowledge and skills** are still essential, but Gen AI is there to stay!
- Implementing generative AI is a **challenging & gradual process** needing learning trajectories and considering ethical concerns.
- Generative AI forces a **re-evaluation of education fundamentals**: curiosity, critical thinking, and integrity.
- **Look forward to open discussion** on unresolved issues and comparing approaches at other institutions.



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THANK YOU
FOR YOUR ATTENTION!



GROUP DISCUSSION

Does your institute explicitly allow (or explicitly forbid) the use of Generative AI tools in writing (or programming) tasks in Bachelor's or Master's programs, and why?

Or is there no **GenAI policy**?

Do you know if (or which proportion of) **students** actively use GenAI tools in learning or report writing?

Which GenAI tools?

And how or for which purpose they use these GenAI tools?

Do you have (detailed or vague) instructions, recommendations, or ideas on how students might use GenAI responsibly?

Do you work on improving '**GenAI-literacy**' of your lecturers or teaching assistants?

Do you provide training, information or support to your teaching staff about which GenAI tools exist, how to use them smart for preparing course notes, presentations (or exams) or how they can be used or integrated in (a different kind of) teaching approach?