Open Universiteit students' and teachers' experiences and perceptions of text-based GenAI for learning

Between June and July 2024, an online survey was distributed among all Open Universiteit students and teachers to gain insights into their use of text-based GenAI tools for learning and teaching purposes. The survey investigated students' and teachers' use of text-based GenAI for various learning activities, their perceptions of these tools, their views on institutional guidelines and support for GenAI use, and their AI literacy. This report offers a summary of the key findings from the students' survey (section 1) followed by findings from the teachers' survey (section 2).

Section 1: Students' experience and use of text-based GenAI

Participants information

A total of 164 students (62% master students) with a mean age of 45.71 (range = 22-78). Most of the responses were from students in the study programmes of: Educational Sciences (22%), Cultural Sciences (21%), Management (16%) and Environmental Sciences (15%).

Tools used by students

The large majority of the students (96%) reported using ChatGPT, only 18% use Gemini, while 37% also reported using other text-based GenAI tools. Most students (87%) use free tools, 30% also use paid tools, and 45% are willing to pay for these tools.

Other reported tools: Copilot, Claude, Bing Chat, Phi.ai, Perplexity, Chatpdf, Le Chat Mistral, Scribbr Paraphrasing, Edge, Llama, Opus, consensus, novel ai, character ai, Codiumai, Cursor.sh, Tabnine, GitHub Copilot, Canva ai, deepl, imc Express.

Purposes for using text-based GenAI tools

Students reported a wide range of usages including work-related (e.g., creating rubrics for evaluation; exploring innovative teaching methods). Some examples of mentioned uses include: literature search, simplifying complex text, formulating research questions, translation, making messages more formal, searching for information, using ChatGPT for feedback.

Frequency of using text-based GenAI tools for specific learning activities

We asked the students how frequently they used text-based GenAI tools for 19 different learning activities such as: testing understanding, getting explanations of new concepts, setting learning goals, getting feedback, improving written work, translation, data analysis, programming, and solving mathematical problems.

The results show that students primarily use text-based GenAI for *writing support* (paraphrasing, grammar and spelling improvement, paraphrasing, translation) and *knowledge enhancement* (clarifying concepts, summarizing materials, finding resources). These tools are less frequently used for active *learning and assessment* (e.g., testing understanding, reflection, getting feedback) and for data analysis, programming[1], or solving mathematical problems.

Transparency regarding use of text-based GenAI

Students seem to be transparent with their peers and teachers regarding their use of text-based GenAI (means range from 5.09 to 5.71 on a scale from 1 = never true to 7 = always true).

Students' perspective on institutional guidelines, policy and support

The majority of students do not know if there are clear institutional guidelines and policy regarding the use of GenAI for teaching, course work, and assessment purposes (Table 1). They also do not know if ethical issues surrounding the use of GenAI are sufficiently addressed by the university (Table 1), and whether the university provides support to equip teachers and students to use GenAI tools (Table 2).

Existence of clear Institutional guidelines and policy regarding use of text-based GenAI and addressing ethical issues

Table 1. Institutional guidelines on use of text-based GenAI tools and addressing ethical issues

Question	Yes	No	I don't know
Are there clear institutional policies and guidelines on the usage of text-based GenAI tools for *teaching purposes* in your institution?	17%	13%	70%
Are there clear institutional policies and guidelines for *student usage of text-based GenAI tools for course work*?	22%	15%	63%
Are there clear institutional policies and guidelines on the usage of text-based GenAI tools *for assessment purposes* in your institution?	10%	15%	75%
Are ethical issues surrounding the use of text-based GenAI tools sufficiently addressed in your institution?	12%	20%	68%

[1] Note that the majority of participants were from non-technical which might explain these results.

Institutional support to equip teachers and students to use GenAI

Table 2. Institutional support for teachers and students

Question	Yes	No	I don't know
Does your institution provide opportunities to equip the *teaching staff* with the necessary skills to use text-based GenAI tools?	12%	7%	82%
Does your institution provide opportunities to equip the *students* with the necessary skills to use text-based GenAI tools?	12%	30%	59%

Students' perceptions of text-based GenAI

Although students have high acceptance of text-based GenAI, they have relatively low level of trust in the information provided by text-based GenAI and they are very aware of the limitations of the technology (Table 3).

Table 3. Students' perceptions of text-based GenAI tools

On a scale from 1 (Strongly disagree) to 7 (Strongly agree)	M (SD)
Technology acceptance:	
Performance expectancy (usefulness)	5.33 (1.36)
Effort expectancy (ease of use)	5.55 (1.04)
Motivation (enjoyment)	5.28 (1.23)
Trust: I can trust the information presented to me by text-based GenAI	3.20 (1.55)
Awareness of text-based GenAI limitations	6.32 (.85)
Behavioural intentions to use text-based GenAI	5.07 (1.37)

Students' AI literacy[2]

The participants appear to be aware of the ethical issues surrounding the use of AI, but there is a lack of knowledge on human role in AI (how human influence the outcomes of machine learning). There was only a moderate understanding of the topics: recognizing AI, strengths and weaknesses of AI, and data literacy (with roughly half of the participants answering the questions correctly).

[2] Measured by 10 MCQs taken from a validated test

Section 2: Teachers' experience and use of text-based GenAI

Participants information

We received responses from 45 teachers (Mean age = 44.28; range = 27-70) with teaching experience ranging from half a year to 30 years. The majority of the participants were from the Faculties of Psychology (36%), Educational Sciences (27%), and Cultural Sciences (18%).

Tools used by teachers

Of the participating teachers, 95% reported using ChatGPT, 7% Gemini, and 13% also used other tools. While 90% of the teachers use free text-based GenAI tools, only 17% use paid tools and, around half of them are unsure if they are willing to pay for these tools.

Othe reported tools: Groq, Github Copilot, mistral, MicroSoft Bing chat, Copilot

Purposes for using text-based GenAI tools

Various usages were reported including activities related to: text improvement and editing, content generation (images, social media posts), translation, summarization, brainstorming ideas (for assignments, exam questions, research), and helping with programming tasks.

Frequency of using text-based GenAI tools for specific learning activities

We asked the teachers how frequently they use text-based GenAI tools for 21 teaching activities. More frequent use was reported for generating summaries of topics and exam questions, an preparing/improving teaching materials. The tools are very infrequently used to create activating learning activities (e.g., coaching collaborative learning, designing interactive learning activities, generating reflection questions).

Transparency regarding use of text-based GenAI

Teachers are overall transparent with their colleagues and students regarding their use of text-based GenAI tools. However, they seem to be less transparent with their students.

Teachers' perspective on institutional guidelines, policy and support

More than half of the teachers reported that there are no clear institutional policies and guidelines regarding the use of text-based GenAI for teaching, course work, and assessment purposes. Teachers are also unaware whether ethical issues about the use of text-based GenAI are sufficiently addressed by the institution (Table 4). About 60% of teachers agreed that there is no institutional support to equip teachers and students to use text-based GenAI tools (Table 5).

Existence of clear Institutional guidelines and policy regarding use of text-based GenAI and addressing ethical issues

Table 4. Institutional guidelines on use of text-based GenAI tools and addressing ethical issues

Questions	Yes	No	I don't know
Are there clear institutional policies and guidelines on the usage of text-based GenAI tools for *teaching purposes* in your institution?	-	62%	38%
Are there clear institutional policies and guidelines for *student usage of text-based GenAI tools for course work*?	22%	54%	24%
Are there clear institutional policies and guidelines on the usage of text-based GenAI tools *for assessment purposes* in your institution?	5%	62%	32%
Are ethical issues surrounding the use of text-based GenAI tools sufficiently addressed in your institution?	11%	38%	51%

Institutional support to equip teachers and students to use GenAI

Table 5. Institutional support for teachers and students

Item	Yes	No	I don't know
Does your institution provide opportunities to equip the *teaching staff* with the necessary skills to use text-based GenAI tools?	8%	60%	32%
Does your institution provide opportunities to equip the *students* with the necessary skills to use text-based GenAI tools?	-	62%	38%

Teachers' perceptions of text-based GenAI

Similar to the students, teachers overall have high acceptance text-based GenAI. Importantly, they are very aware of the limitations of this technology and have low levels of trust in the information presented by text-based GenAI (Table 6).

Table 6. Teachers' perceptions of text-based GenAI tools

On a scale from 1 (Strongly disagree) to 7 (Strongly agree)	**M (SD)**
Acceptance of text-based GenAI technology:	
Performance expectancy (usefulness)	4.77 (1.46)
Effort expectancy (ease of use)	5.11 (1.22)
Motivation (enjoyment)	5.18 (1.02)
Behavioural intentions to use text-based GenAI	4.56 (1.43)
Trust: I can trust the information presented to me by text-based GenAI	2.43 (1.22)
Awareness of limitations:	
Educational content created by text-based GenAI is NOT always correct	6.06 (1.21)
If I use text-based GenAI I think I would need to check its responses against other sources	6.31 (.87)

Teachers' AI literacy[3]

The results of the AI literacy test showed that nine out of the 10 questions were answered wrong by more than half of the participants. In particular, knowledge appeared to be more limited in areas such as ethical issues, learning from data, and recognizing AI.

[3] Measured by 10 MCQs taken from a validated test