

## Questionnaire on the Usage and Perceptions of Generative AI in Teaching and Learning among University Students

The aim of this survey is to investigate the attitude of students toward the application of generative Artificial Intelligence (AI) tools in the educational process. Generative artificial intelligence refers to software system capable of generating new content (text, images, audio, video, program code or other types of data) based on learned patterns and information from previous examples.

For students, generative artificial intelligence provides a personalized experience, generates interactive learning materials and introduces new forms of student-teacher interaction through a text or voice interfaces, for example:

- A chatbot based on generative artificial intelligence technology can answer students' questions in natural language conversations.
- A generative artificial intelligence tool can assist students in selecting a paper topic or provide feedback on a written paper or assignment solution.
- An adaptive learning system, powered by generative artificial intelligence can personalize the learning process for individual students preferences by recommending content based on their strengths and weaknesses.

For educators, generative artificial intelligence can:

- Automatically generate assessment materials, such as test questions, based on the content covered in the course.
- Support the development of interactive learning materials, such as simulations or visualizations.
- Streamline administrative tasks, including planning and grading, enabling instructors to dedicate more time to teaching and engaging with students during seminar sessions.

The website <https://chat.openai.com/> serves as the gateway to access the ChatGPT chatbot (a generative artificial intelligence system). This chatbot prepares relevant text in response to user inquiries formulated in natural language. To access the system, you can utilize the “Continue with Google” option and authenticate yourself using your university email address (stuxxyyzaabb@uni-plovdiv.bg).

Filling out the survey card will take about 5 minutes, and anonymity is guaranteed.

Each respondent who completed the survey card will be given access to the summary results.

Thank you for your time!

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**\* Required field**

### 1. What is your academic level?\*

- ☐ Undergraduate
- ☐ Postgraduate

### 2. What is your major?\*

### 3. What is your gender?\*

- ☐ Female
- ☐ Male

### 4. Have you ever used generative AI technologies like ChatGPT?\*

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Very often

Please answer the following questions using a five-point Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

### **5. Knowledge of Generative AI Technologies\***

I understand generative AI technologies like ChatGPT have limitations in their ability to handle complex tasks.

I understand generative AI technologies like ChatGPT can generate output that is factually inaccurate.

I understand generative AI technologies like ChatGPT can generate output that is out of context or inappropriate.

I understand generative AI technologies like ChatGPT can exhibit biases and unfairness in their output.

I understand generative AI technologies like ChatGPT may rely too heavily on statistics, which can limit their usefulness in certain contexts.

I understand generative AI technologies like ChatGPT have limited emotional intelligence and empathy, which can lead to output that is insensitive or inappropriate.

### **6. Willingness to use Generative AI Technologies\***

I envision integrating generative AI technologies like ChatGPT into my teaching and learning practices in the future.

Students must learn how to use generative AI technologies well for their careers.

I believe generative AI technologies such as ChatGPT can improve my digital competence.

I believe generative AI technologies such as ChatGPT can help me save time.

I believe AI technologies such as ChatGPT can provide me with unique insights and perspectives that I may not have thought of myself.

I think AI technologies such as ChatGPT can provide me with personalized and immediate feedback and suggestions for my assignments.

I think AI technologies such as ChatGPT is a great tool as it is available 24/7.

I think AI technologies such as ChatGPT is a great tool for student support services due to anonymity.

### **7. Concerns about Generative AI Technologies\***

Using generative AI technologies such as ChatGPT to complete assignments undermines the value of university education.

Generative AI technologies such as ChatGPT will limit my opportunities to interact with others and socialize while completing coursework.

Generative AI technologies such as ChatGPT will hinder my development of generic or transferable skills such as teamwork, problem-solving and leadership skills.

I can become over-reliant on generative AI technologies

### **8. Benefits related to Generative AI Technologies\***

1. Personalized and immediate learning support

2. Writing and brainstorming support

3. Research and analysis support

4. Visual and audio multi-media support

5. Administrative support

### **9. Challenges concerning Generative AI Technologies\***

1. Accuracy and transparency

2. Privacy and ethical issues

3. Holistic competencies

4. Career prospects

5. Human values

**9. Has ChatGPT transformed your perception of artificial intelligence and intelligent chatbots? What advantages does it offer you as a student? Are there any disadvantages or limitations you have experienced?**

**Reference:** Chan, C. K. Y., & Hu, W. (2023). Students' Voices on Generative AI: Perceptions, Benefits, and Challenges in Higher Education. arXiv preprint arXiv:2305.00290. Online: <https://arxiv.org/abs/2305.00290>