



GENERATIVE AI IN TEACHING

Webinar 11.12.2023



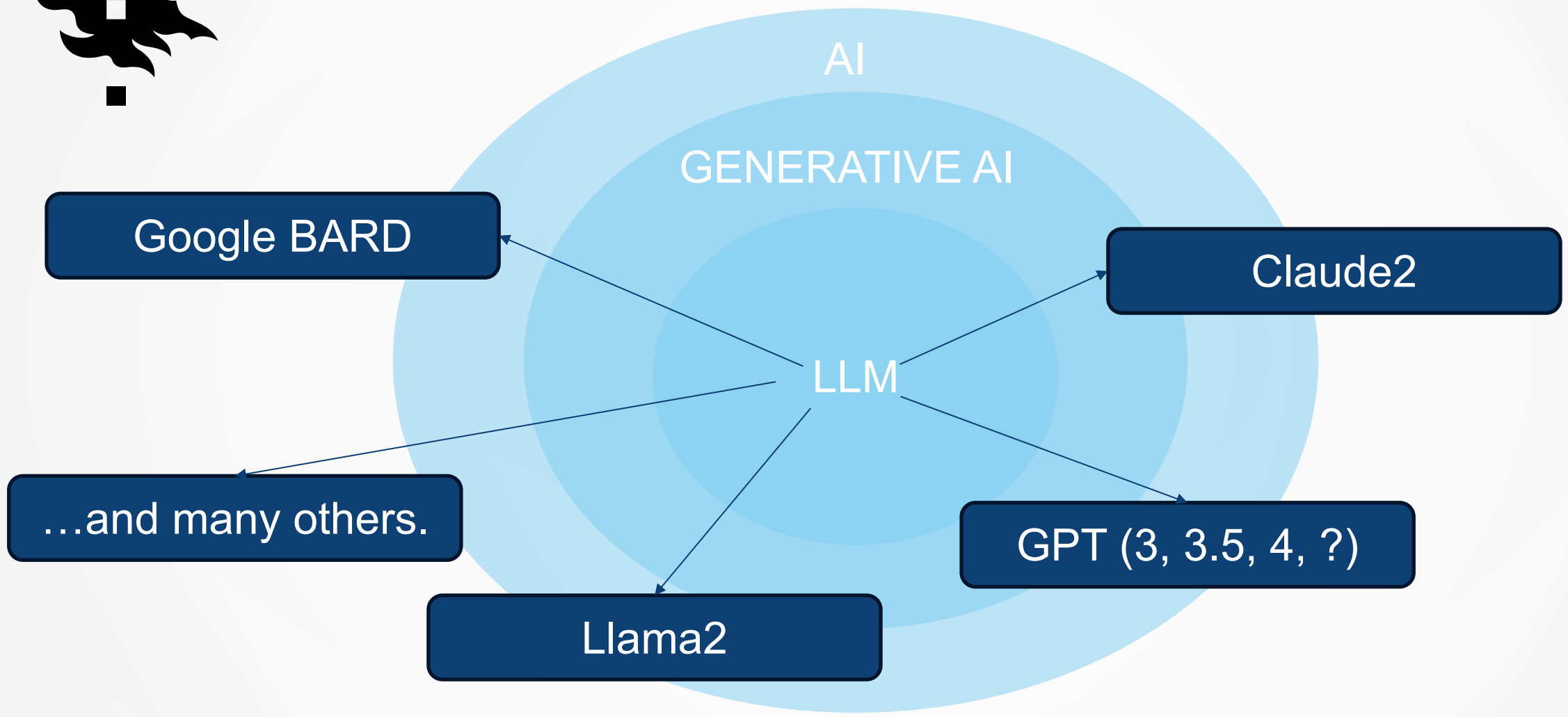
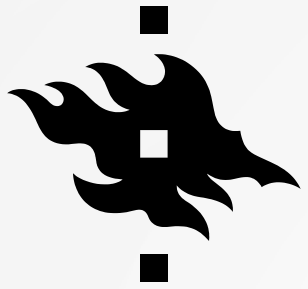
TODAY'S AGENDA

1. What is generative AI?
2. Where can I find information related to the use of AI in teaching?
3. Can I use it in teaching? How?
4. CurreChat
5. Examples of use in teaching
6. Heikki Wilenius – The use of generative AI to assist in the production of exam questions
7. Remarks from lecturers of HYPE

Q&A is open.

We aim to answer as many questions as possible.

The most relevant questions will be added to teaching instructions.





GENERATIVE AI

Generative AI refers to a **subcategory of artificial intelligence** that is capable of creating new content or solutions based on the data fed into it. This can include the generation of text, images, music, speech, or other types of data. Generative AI typically utilizes machine learning methods, such as deep learning and neural networks, to learn from a large amount of images or text, for example, and afterwards it is capable of creating similar material.

Written by: GPT4



SO IT ISN'T ONLY ABOUT GENERATING TEXT...



For pictures e.g.:
Midjourney
Stable Diffusion
DALL-E 3





CONSIDERATIONS RELATED TO USAGE

- Large language models are adept at producing text that appears to be of high quality, **but the accuracy of the text is not guaranteed.**
 - **No access to the internet**
- Biases in the training data can be reflected in the text produced.
- The quality of the output provided by these tools is largely dependent on the quality of the prompt
 - **a skill that needs to be learned**



CHATGPT CHAT.OPENAI.COM/

- Use requires the creation of an account in the service.
- The free account does not provide access to the latest features and language models.
- A paid account (\$20/month) grants access to the latest language models and features.
- ChatGPT = OpenAI's service that uses OpenAI's GPT language models.
- **For an account intended for personal use, the user needs to specifically prohibit the use of their data for purposes such as further training and improving the language model.**
- There is the possibility to use add-ons that enable ChatGPT to also search for information on the web.
- Currently, GPT-4's knowledge extends up to April 2023.



Can I ask ChatGPT if it wrote something?

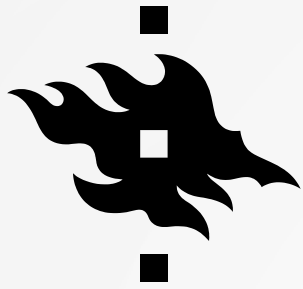


Written by OpenAI

Updated over a week ago

ChatGPT has no “knowledge” of what content could be AI-generated or what it generated. It will sometimes make up responses to questions like “did you write this [essay]?” or “could this have been written by AI?” These responses are random and have no basis in fact.

<https://help.openai.com/en/articles/8318890-can-i-ask-chatgpt-if-it-wrote-something>



How can educators respond to students presenting AI-generated content as their own?



Written by OpenAI
Updated over a week ago

Do AI detectors work?

- In short, no, not in our experience. Our research into detectors didn't show them to be reliable enough given that educators could be making judgments about students with potentially lasting consequences. While other developers have released detection tools, we cannot comment on their utility.
- Additionally, ChatGPT has no "knowledge" of what content could be AI-generated. It will sometimes make up responses to questions like "did you write this [essay]?" or "could this have been written by AI?" These responses are random and have no basis in fact.

<https://help.openai.com/en/articles/8313351-how-can-educators-respond-to-students-presenting-ai-generated-content-as-their-own>



WHERE CAN I FIND MORE BACKGROUND INFORMATION?

[Studia Generalia: What is ChatGPT?](#)

[Artificial intelligence in teaching instructions](#)

[Artificial Intelligence Collection](#)

<https://blogs.helsinki.fi/globalcampus/>

Spring 2024:

[Digipeda Café will feature a monthly AI-themed session every Thursday](#)

An event aimed at teachers discussing the use of artificial intelligence in teaching

...constantly updated instructions for the use of AI in teaching.

[**opetusteknologia@helsinki.fi**](mailto:opetusteknologia@helsinki.fi)





General Principles for the Use of Artificial Intelligence are being finalized.

University policy on the use of AI and large language models in teaching and learning

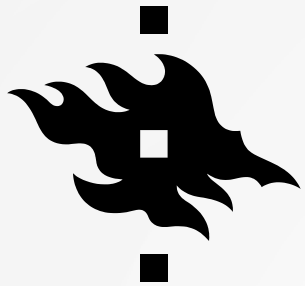
1. Large language models may be used in teaching and as a support for writing. The teacher responsible for the course decides on the use. If a risk is identified that the use of large language models in a way that impedes the achievement of the learning objectives, the use of large language models may be forbidden, including for independent work.
2. If a language model has been used to help produce the work to be returned, the student must indicate in writing which model has been used and in what way. This also applies to theses. Large language models or other AIs must not be named as authors of the text or other written output, as the AI cannot take responsibility for the content of the text. The responsibility for the linguistic and factual correctness of all written material lies with humans.
3. The use of language models is not allowed in maturity tests.
4. The Faculty council, the Degree programme's steering group or the Language Centre may make additional guidelines on the use of AI.
5. The responsible teacher must explain and motivate to the students the principles, disadvantages and benefits of using language models, as well as the limits of possible prohibited use in writing.
6. When planning your education, it is important to bear in mind that large language models such as Chat GPT may not always be available or there may be a charge for their use. Students cannot be expected to use a model that is not available for free, as this would put students at an unequal position.
7. If a student uses a large language model in a course, part of a course or examination where it is prohibited in advance or fails to report the use of a language model as instructed, this constitutes cheating and will be treated in the same way as other cases of cheating.



CURRECHAT

- The university's own interface for using GPT language models.
- Operates with university credentials.
- Available to all teachers at the University of Helsinki.

CURRE.HELSINKI.FI/CHAT



Ohjeistus

esim. Olet avulias avustaja

Kehote

Kirjoita viestisi tähän

LÄHETÄ

TYHJENNÄ

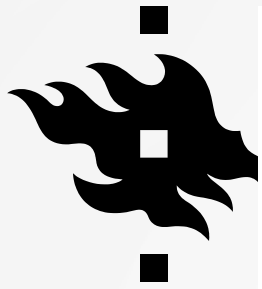
✉ TALLENNA SÄHKÖPOSTINA

Käytössä oleva kielimalli:

gpt-4

0 / 50000 tokenia käytetty

CURRE.HELSINKI.FI/CHAT



Instructions

e.g. You are a helpful assistant

The language model strives to follow the instructions in its responses very accurately. You can assign a "role" to the language model.

Prompt

Write your message here

Write your message or question to the language model here.

SEND

RESET

It's advisable to clear the conversation when you change the subject.

SAVE AS EMAIL

You can send the conversation to yourself via email.

language model in use:
gpt-4

The language model in use and the tokens used.

CURRENTLY HELSINKI.FI/CHAT
0 / 5000 Tokens Used



CURRECHAT - KÄYTTÖKUSTANNUKSET

- Every written message and received response costs..
- Costs are calculated using **tokens**.
 - **Tokens** are smaller units of text for the language model.
 - **Text length** is the biggest factor affecting the number of tokens.

100 tokens \approx 75 words

GPT3.5-Turbo: \$0,00175 / 1000

tokens

GPT3.5-Turbo16k: \$0,0035 / 1000

tokens

GPT4: \$0,045 / 1000 tokens

1 million tokens \approx 750 000 words

GPT3.5-Turbo: \$1,75

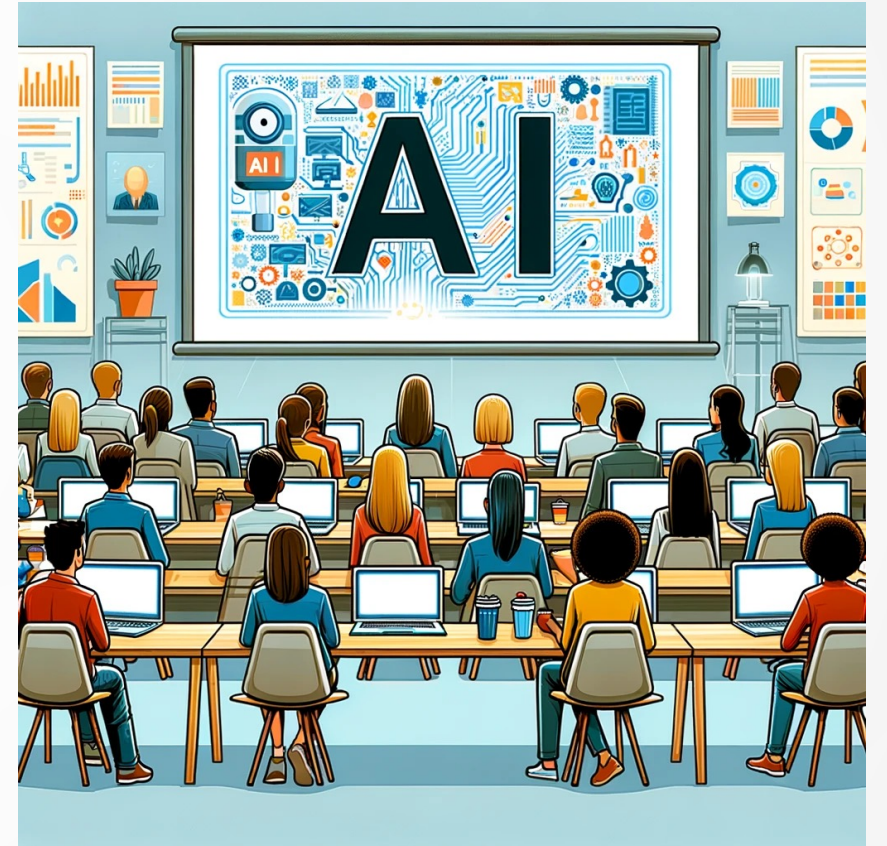
GPT3.5-Turbo16k: \$3,5

GPT4: \$45



CURRECHAT

- **No identifying information about the user is passed on to the language model.**
- **The administration does not see the conversations held in the service.**
- **Conversations held are not saved.**
- **Uses language models operating in Microsoft Azure cloud service.**
- **All information remains within the EU area.**





📘 Important

Your prompts (inputs) and completions (outputs), your embeddings, and your training data:

- are NOT available to other customers.
- are NOT available to OpenAI.
- are NOT used to improve OpenAI models.
- are NOT used to improve any Microsoft or 3rd party products or services.
- are NOT used for automatically improving Azure OpenAI models for your use in your resource (The models are stateless, unless you explicitly fine-tune models with your training data).
- Your fine-tuned Azure OpenAI models are available exclusively for your use.

The Azure OpenAI Service is fully controlled by Microsoft; Microsoft hosts the OpenAI models in Microsoft's Azure environment and the Service does NOT interact with any services operated by OpenAI (e.g. ChatGPT, or the OpenAI API).

<https://learn.microsoft.com/en-us/legal/cognitive-services/openai/data-privacy>



WHY USE CURRECHAT?

- Secure and GDPR compliant → A safe way to experiment with the use of generative AI.
- A unique interface that allows for changing the underlying language model in the future. → Not committing to a single language model in a rapidly evolving technology field. (=No vendor lock)
- The ability to create prompts and, for example, role-play the AI to respond in a certain way based on pedagogical needs.
- Equal access opportunity for all students in the course.
- The ability to restrict access based on tokens and timing (=CurreChat available to students only at certain stages of the course).



WHY USE CURRECHAT?

Currently available

- We gain experiences and create good practices for the use of generative AI in teaching and learning.
- We can better understand the potential impacts of rapidly evolving technology from the perspective of higher education.



HOW TO GAIN ACCESS TO CURRECHAT IN A COURSE?

- You can gain access to CurreChat through **Curre**.

CURRE.HELSINKI.FI

The screenshot shows the Curre website interface. At the top left is the Curre logo and the text 'CURRE'. At the top right are links for 'ADMIN' and 'EN'. Below the header, there is a 'Welcome to Curre' message with a help icon. A section titled 'Start by selecting your faculty' contains a dropdown menu with 'Faculty of Educational Sciences' selected. Below this is a 'Learning types' section with a paragraph of text and several colored buttons: 'Information acquisition' (orange), 'Production' (grey), 'Collaboration' (purple), 'Discussion' (blue), 'To research' (grey), and 'Practice' (grey). At the bottom of the main content area is a blue link that says 'PROCEED TO THE QUESTIONS'. On the right side, there is a sidebar titled 'Tools that you could use' with a help icon. It lists several tools: 'Eportfolio' (with a 'Col' tag), 'Flinga' (with a 'Col' tag), and 'Moodle' (with 'Inf', 'Col', and 'Dis' tags). Each tool has a short description of its use at the University of Helsinki.



HOW TO GAIN ACCESS TO CURRECHAT IN A COURSE?

- You can gain access to CurreChat through **Curre**.
- Fill in a short description of how you plan to use CurreChat in your course
- Choose “Proceed with these choices”

[CURRE.HELSINKI.FI](https://curre.helsinki.fi)

Using Artificial Intelligence in My Course

I would like to use artificial intelligence in my course

How would you use artificial intelligence in your course? *

PROCEED WITH THESE CHOICES



CURRECHAT OPETUKSESSA

- Within a few days, you will receive a message informing you that your course has been added to the CurreChat service.
 - Students will be able to log in to CurreChat through the course link.
 - Students will be able to log in to CurreChat through the course link.

GPTWRAPPER

COURSES ADMIN EN

Attention ? v

Instructions

e.g. You are a helpful assistant

Prompt

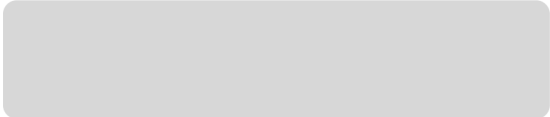


Write your message here

SEND RESET SAVE AS EMAIL



CURRECHAT IN TEACHING

- Choose your course from the course list.

	10.11.– 13.12.2023
	31.10.– 14.12.2023
Test Course test-course Course for testing purposes	01.01.–31.12.2023
	02.11.– 09.12.2023



CURRECHAT IN TEACHING

- Choose your course from the course list.
- You can create prompts for your students to use
 - Students can choose from prompts created by the teacher from a drop-down menu.
 - The prompts can be shown or hidden from the students.

New prompt

Prompt name Hide prompt text from students

Instructions

e.g. You are a helpful assistant

Message

[ADD MESSAGE](#) [RESET](#)

[SAVE](#)



CURRECHAT IN TEACHING

- You can modify the time period during which the students of the course can access the CurreChat service.
- You can try out the student view.

The screenshot displays a user interface for course management. At the top, there is a card for a 'Test Course' with the following details: 'Open: 01.01.–31.12.2023'. Below this, there are two links: 'EDIT ACTIVITY PERIOD' (with a pencil icon) and 'TO STUDENT VIEW' (with an external link icon). Below the 'Test Course' card is a list of activities. The first activity is 'test', which has an eye icon to its left. To the right of the 'test' activity, there is a 'DELETE' button and a dropdown arrow. Two large blue arrows are overlaid on the image, pointing from the 'test' activity card up to the 'EDIT ACTIVITY PERIOD' and 'TO STUDENT VIEW' links on the 'Test Course' card.



- The course-specific web address used by students.
 - Add, for example, to the Moodle area.
- The student can select the introduction from the menu.
- The selected introduction appears in the Instructions field.
- Choosing a hidden introduction removes the Instructions field from view.

A screenshot of a web browser showing a chat interface. The browser's address bar displays "https://curre.helsinki.fi/chat/test-course" with a 90% zoom level. The chat area has a header "Prompt" and a dropdown menu currently showing "Koealustus opiskelijoille 2". Below this is a large text input field with the placeholder "Write your message here". At the bottom of the chat area are three buttons: "SEND" (disabled), "RESET", and "SAVE AS EMAIL" (with an envelope icon). Below the chat area is another dropdown menu labeled "Language model in use:" which is currently set to "gpt-4". At the very bottom, it shows "0 / 50000 tokens used".

90%

https://curre.helsinki.fi/chat/test-course

Prompt

Koealustus opiskelijoille 2

Prompt

Write your message here

SEND RESET SAVE AS EMAIL

Language model in use:

gpt-4

0 / 50000 tokens used



OBSERVATIONS

- Large language models can generate not only spoken languages but also, for example, programming languages:
 - You can ask the language model for a function that works in Excel or for VBA code.
 - You can collaboratively create complex software with the language model, for example, in the Python programming language.
 - You can request the language model to comment on R code.

...essentially, you can ask the language model for almost anything, but remember:

**THE ANSWER MAY NOT
NECESSARILY BE CORRECT**



WHAT MAKES A GOOD PROMPT?

TIP: Ask CurreChat for help in generating a good prompt!

- 1. Clear Request:** Specify exactly what you want.
- 2. Necessary Background:** Provide enough information about your context.
- 3. Target Your Objective:** Consider what you want to achieve with your prompt.
- 4. Ask Openly:** Use open-ended questions to encourage creativity and conversation.
- 5. General or Specific Information:** Choose whether you want general information or something more specific.
- 6. Appropriate Language and Tone:** Use language and tone that match your goal.

Written by: GPT4



CURRECHAT USE EXAMPLES

- **Student explores thesis topic with the help of CurreChat in the course “Research in Economics” – Marja-Liisa Halko.**
 - **Use of generative AI as a student tool in the course (including VBA programming) “Forest Resource Inventory” – Ilkka Korpela.**
 - **Planning the final project topic and self-assessment in the course “Current Issues in Educational Research” – Kalle Juuti, Niklas Rosenblad.**
- Teacher's personal experiences, pedagogical and didactic observations, student experiences



Planning the final project topic and self-assessment in the course “Current Issues in Educational Research” – Kalle Juuti, Niklas Rosenblad



- Artificial intelligence can help narrow down and refine the research problem.
- AI assists in developing concepts and brainstorming ideas.
- Students learn to use AI, which motivates many to expand its use in other courses and even in their professional lives.
- Using AI offered a natural way to get acquainted with this type of technology as part of the course.



- The use of artificial intelligence was perceived as challenging and requiring detailed instructions.
- The answers produced by AI were often naive or lacked concreteness.
- The use of AI in the course sparked critical opinions regarding information management and privacy.



EXAMPLES: PEER REVIEWER

- "Give me feedback on..."
- "Provide me with a peer-review on..."
- "How can I make the language better..."
- "Help me improve my writing..."



Generated using Leonardo.ai



EXAMPLES: STUDY BUDDY

“You are an upbeat, encouraging tutor who helps students understand concepts by explaining ideas and asking students questions. Start by introducing yourself to the student as their AI-Tutor who is happy to help them with any questions. Only ask one question at a time.

First, ask them what they would like to learn about. Wait for the response. Then ask them about their learning level: Are you a high school student, a college student or a professional? Wait for their response. Then ask them what they know already about the topic they have chosen. Wait for a response.” ...

<https://openai.com/blog/teaching-with-ai>



Generated using Leonardo.ai



EXAMPLES: SUPERVISOR

You are an expert in educational science. Your task is to help me find a master's thesis topic that suits my interests. Instead of giving direct answers, guide me in finding a good topic by asking clarifying questions.

You are an expert in statistics, and your task is to help me improve the analysis methods used in my research. I have SPSS software at my disposal. Provide the answers in simple steps, and if possible, as code that can be directly copied into the SPSS software.



Generated using Leonardo.ai



QUESTIONS:
opetusteknologia@helsinki.fi
jussi-pekka.jarvinen@helsinki.fi

THANK YOU!