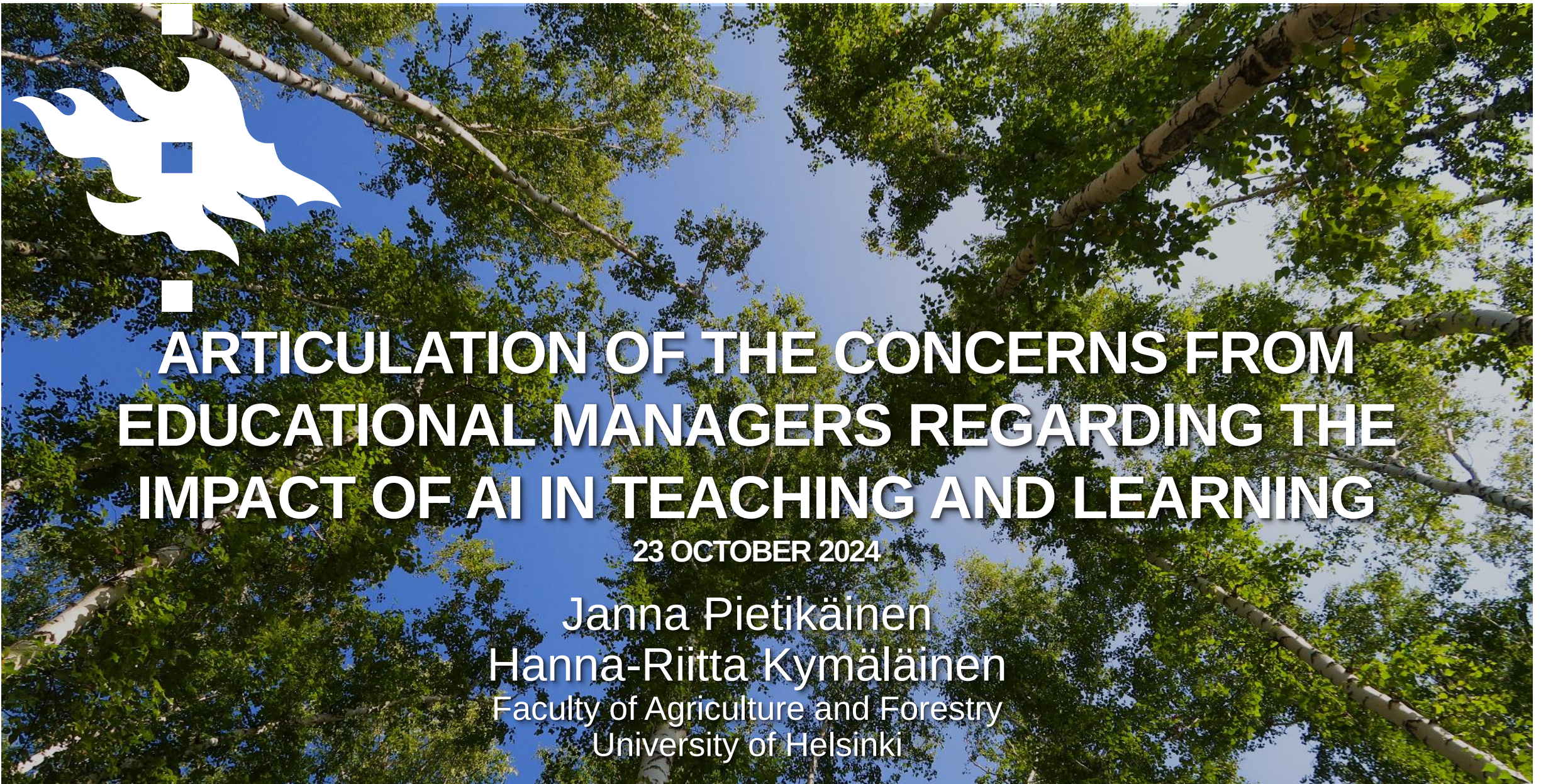




ARTICULATION OF THE CONCERNS FROM EDUCATIONAL MANAGERS REGARDING THE IMPACT OF AI IN TEACHING AND LEARNING

23 OCTOBER 2024

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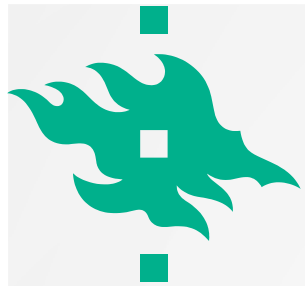


FACULTY OF AGRICULTURE AND FORESTRY

2500 STUDENTS

550 EMPLOYEES

FOOD AND NUTRITION SCIENCES, AGRICULTURE, FORESTRY, ECONOMICS,
MICROBIOLOGY



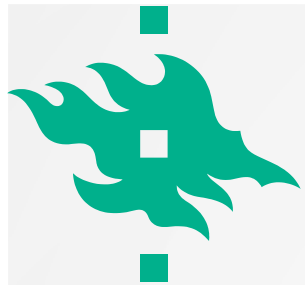
WE ARE EDUCATIONAL MANAGERS IN THE FACULTY OF AGRICULTURE AND FORESTRY AT THE UNIVERSITY OF HELSINKI



Janna Pietikäinen is the Vice-dean of Academic affairs and Sustainability



Hanna-Riitta Kymäläinen is the Director of the Bachelor's Programme in Agricultural Sciences



IN THIS PRESENTATION

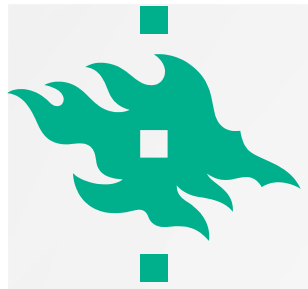
We will discuss the views (with focus on concerns) of different groups within the university community regarding the use of AI in teaching and learning.

- Teachers
- Students

We will also present our perceptions of

- how the University as an organisation has responded to the challenge posed by AI
- and give our recommendations to the University

The presentation is based on discussions held in events at the University, internal discussions in various internal meetings and committees, interviews, student surveys and workshops.



TEACHERS'S CONCERNS REGARDING INTEGRATION OF AI IN TEACHING AND LEARNING

Examples of concerns mentioned in discussions and interviews

Various levels of teachers' own AI literacy, fear of being left behind

Lack of time

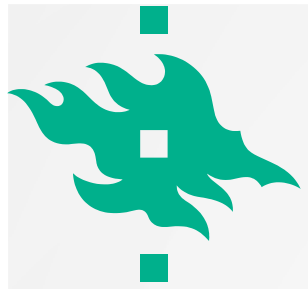
Lack of competency to teach AI skills in one's discipline

Hesitant or cautious attitude

Ethical and sustainability questions remain open and these are not being discussed

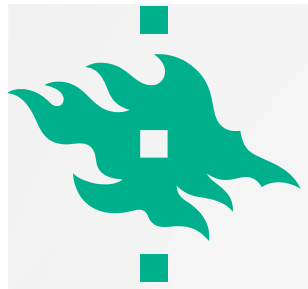
Unclear vision of future working life skills

Concerns about student learning: what students need to be able to do on their own and what can be done with AI assistance



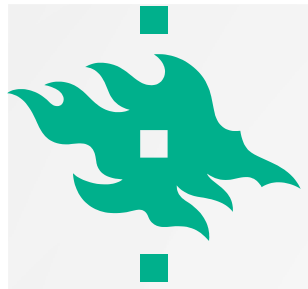
- LACK OF TIME
- LACK OF SKILLS

Everybody is talking about how AI will make work easier and reduce the workload, but so far all I can see is that I should be familiar with all different AI tools and be trained to use them, but I have not yet reached the point where AI would make my work more efficient, but I am left wondering what AI could be used for.



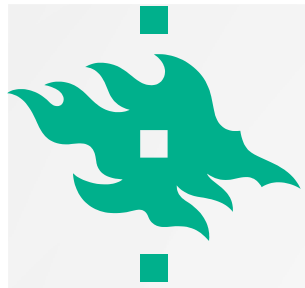
-HESITANT OR CAUTIOUS ATTITUDE/ -ETHICAL AND SUSTAINABILITY QUESTIONS REMAIN OPEN

It's really unnerving to think about sustainability issues (risks and problems, especially the ecological burden) AND to encourage students to use AI, because otherwise they risk being excluded from society



-UNCLEAR VISION OF FUTURE SKILLS -WHAT STUDENTS NEED TO BE ABLE TO DO ON THEIR OWN AND WHAT CAN BE DONE WITH AI ASSISTANCE

The dilemma of teaching has yet to be solved: on the one hand, AI skills are a future working life skill that must be taught; on the other hand, how can we ensure that students themselves can analyse information, combine what they have learned and apply it and solve problems. And how to assess learning : do we need a partial return to traditional pen and paper style teaching and assessment?



AI READINESS OF THE STUDENTS AT THE VIIKKI LIFE SCIENCE CAMPUS

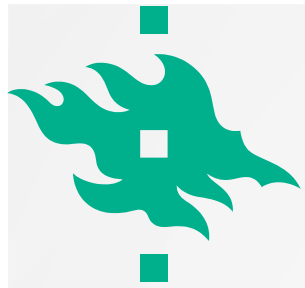
- A 5-point Likert scale questionnaire [1] with 18 items, adapted for this research context [2,3]
- Four dimensions
 - Ethics ("I can use AI ethically")
 - Cognition ("I know what AI is")
 - Skills ("I can use AI")
 - Vision ("I know strengths and weaknesses of AI")



(1) Karaca, O., Çalışkan, S. A. & Demir, K. 2021. Medical artificial intelligence readiness scale for medical students (MAIRS-MS) – development, validity and reliability study. Medical Education 21: 112.

(2) Elo, K., Kymäläinen, H.-R. & Södervik, I. The artificial intelligence readiness of first-year Agricultural Sciences students. Submitted.

(3) Asikainen, H., Elo, K., Katajavuori, N., Kymäläinen, H.-R. & Södervik, I. Unpublished data.



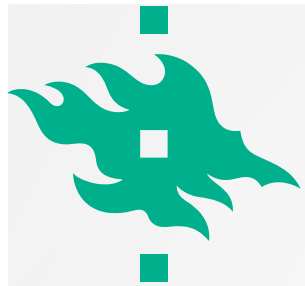
AI READINESS OF THE STUDENTS AT THE VIIKKI LIFE SCIENCE CAMPUS

Clear differences between the Degree Programmes [3],
for example

- Students of Forestry and Agriculture expressed the greatest confidence on knowledge and skills, Veterinary and Environmental students the least
- Students of Pharmacy, Molecular Biosciences and Environmental Sciences had the greatest confidence on rules and restrictions
- Great variation between students [2, 3]



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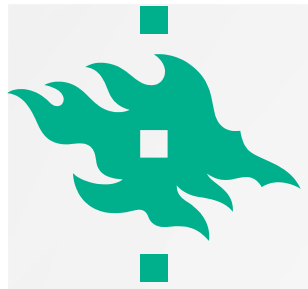
AI READINESS OF THE STUDENTS AT THE FACULTY OF AGRICULTURE AND FORESTRY

- Agriculture students provided the highest confidence for ethics, and the lowest for cognition [2]
- Similar signal from [3]: more confidence on competency in rules and restrictions than on knowledge and skills
- Most of the Agriculture students (appr. two thirds) had a positive opinion, approximately a third did not have an opinion and a minority had a negative opinion about the use of AI in studying and research [2]
- Many students saw AI useful in studies although not that many had used it earlier [3]



(2) Elo, K., Kymäläinen, H.-R. & Södervik, I. The artificial intelligence readiness of first-year Agricultural Sciences students. Submitted.

(3) Asikainen, H., Elo, K., Katajavuori, N., Kymäläinen, H.-R. & Södervik, I. Unpublished data.



CONCERNS AND OPINIONS OF BSC STUDENTS OF ENVIRONMENTAL SCIENCES AND AGRICULTURAL SCIENCES ABOUT AI

You need to be awake all the time when using AI because it may hallucinate

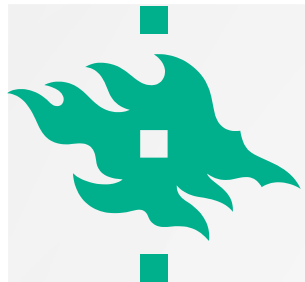
Due to the poor ethics and hallucinations of AI I will not use it in studies, research nor in creative work

AI is a great risk for Homo sapiens" (human being will not be needed any more)

Prisoners train AI

Copyright

Energy consumption



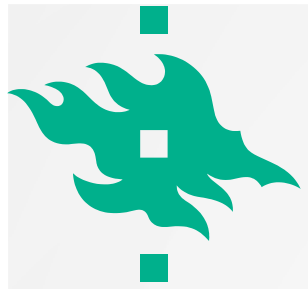
CONCERNS AND OPINIONS OF BSC STUDENTS OF ENVIRONMENTAL SCIENCES AND AGRICULTURAL SCIENCES ABOUT AI

I don't use it for getting an answer for a course assignment but I use it for teaching me to solve the assignment step by step

I had quite a negative opinion about AI, but the AI workshop showed that AI could be used in a reasonable way in studies, as long as you understand the AI tool you are using

I don't want to use AI because it feels wrong, but at the same time it feels unfair because I think that some others use it and get better scores for the same course assignment

I use it for ideation but not for writing the answer for a course assignment



PRACTICAL EXPERIENCES ABOUT STUDENTS AND AI

The experiences of using AI and attitudes towards AI vary a lot

- Experienced users -> mostly positive opinion about AI
- Users with some experience -> opinions from disappointed to cautious or curious
- Inexperienced users -> (very) negative or curious opinion about AI

It is important to justify the reasons for discussing and testing AI with students

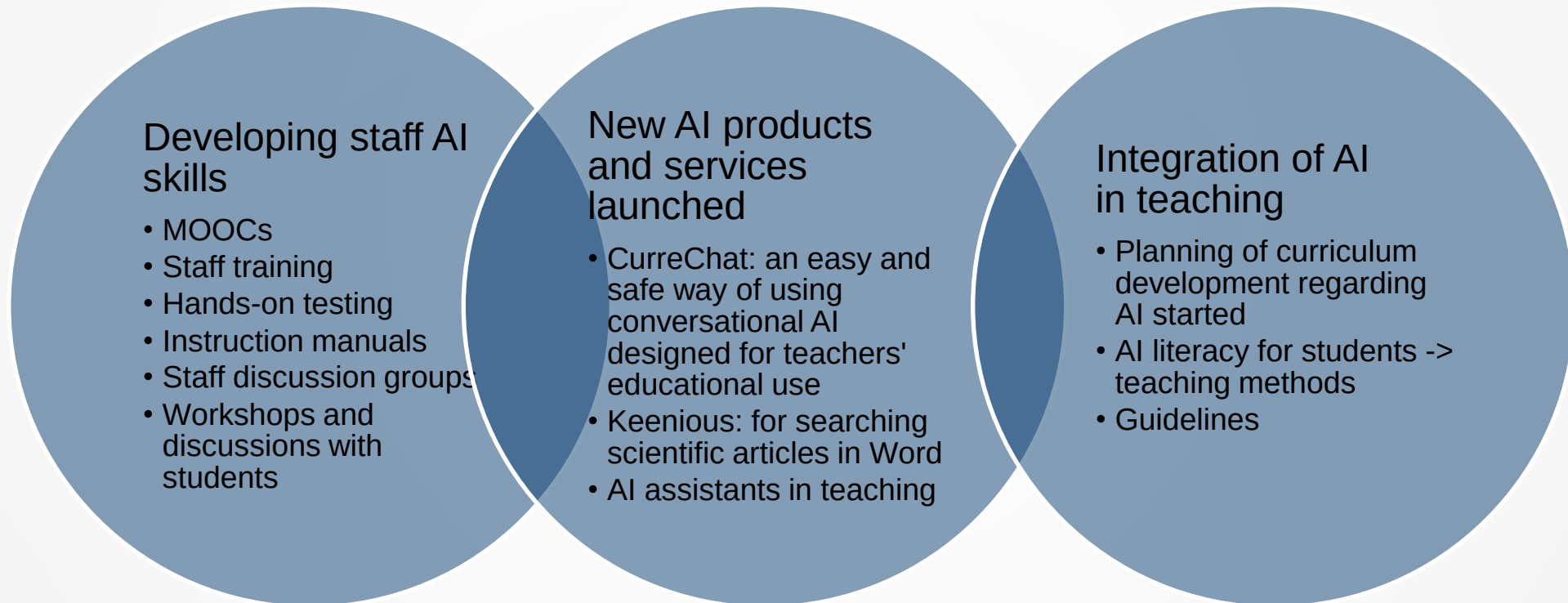
AI applications develop rapidly -> updating AI know-how is important for all

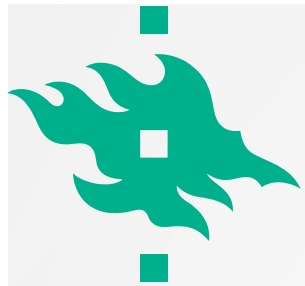
For what AI applications should or should not be used

- Rules, limits and policies of the University are followed
- Trials with AI applications help to conceptualize AI, develop skills, understanding, ideas and basis for use and critical evaluation of AI
- Critical discussion with teachers and other students is important



ORGANISATIONAL MEASURES WE HAVE TAKEN - WITH FOCUS ON TEACHING

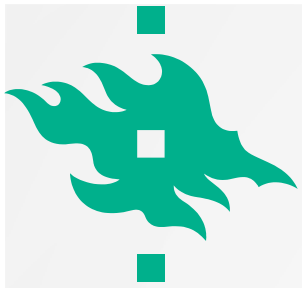




GUIDELINES FOR THE USE OF AI IN TEACHING AT UH

1. Large language models can, **as a rule**, be used in teaching and as a support for writing. The teacher for the course has the final call on the topic. The teacher can prohibit the use of AI.
2. If you use a language model to produce the work you are returning, you must **report in writing** which model you have used and in what way.
3. The responsible teacher should tell the student about the principles, disadvantages and benefits of using language models.
4. Students should never be required to use a language model that is not available free of charge.
5. If a student uses a large language model in a course, part of a course or examination where it is prohibited in advance, this constitutes cheating.

Confirmed on 16 Feb 2023. Available at <https://studies.helsinki.fi/instructions/article/using-ai-support-learning>



RECOMMENDATIONS WE PROPOSE TO THE UNIVERSITY

- Systematic training for all staff members
- Discussions should move to the level of educational programmes to reach every teacher
- This should lead to discussions about integrating AI literacy in the curricula
- Forming and constantly developing/updating pedagogical approach to teaching AI literacy
- University-level AI services need to be tested, designed and delivered to teachers
- Engaging all teachers in proactive thinking on the AI skills of the future experts



THANK YOU!

<https://www.helsinki.fi/en/faculty-agriculture-and-forestry>