The survey
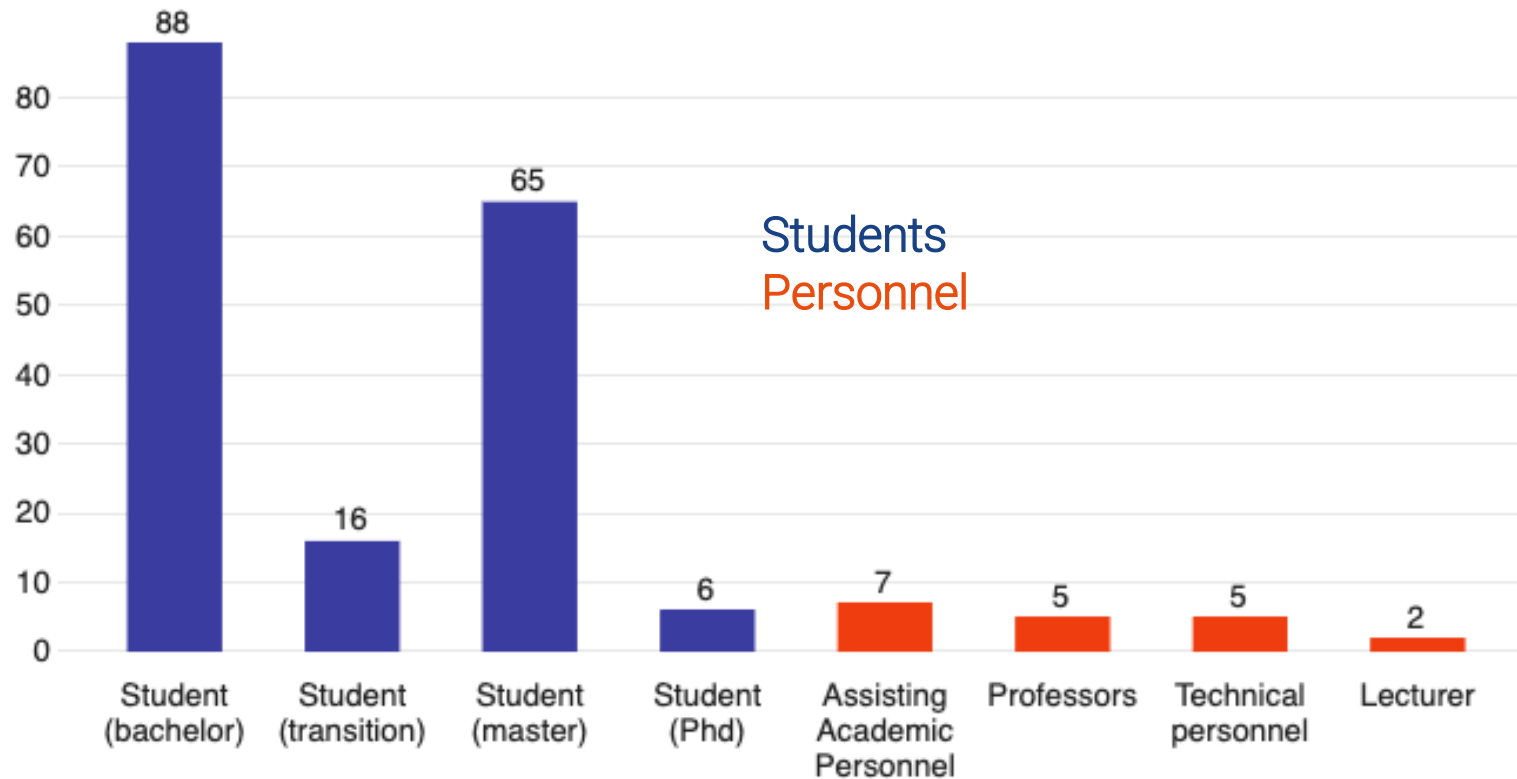
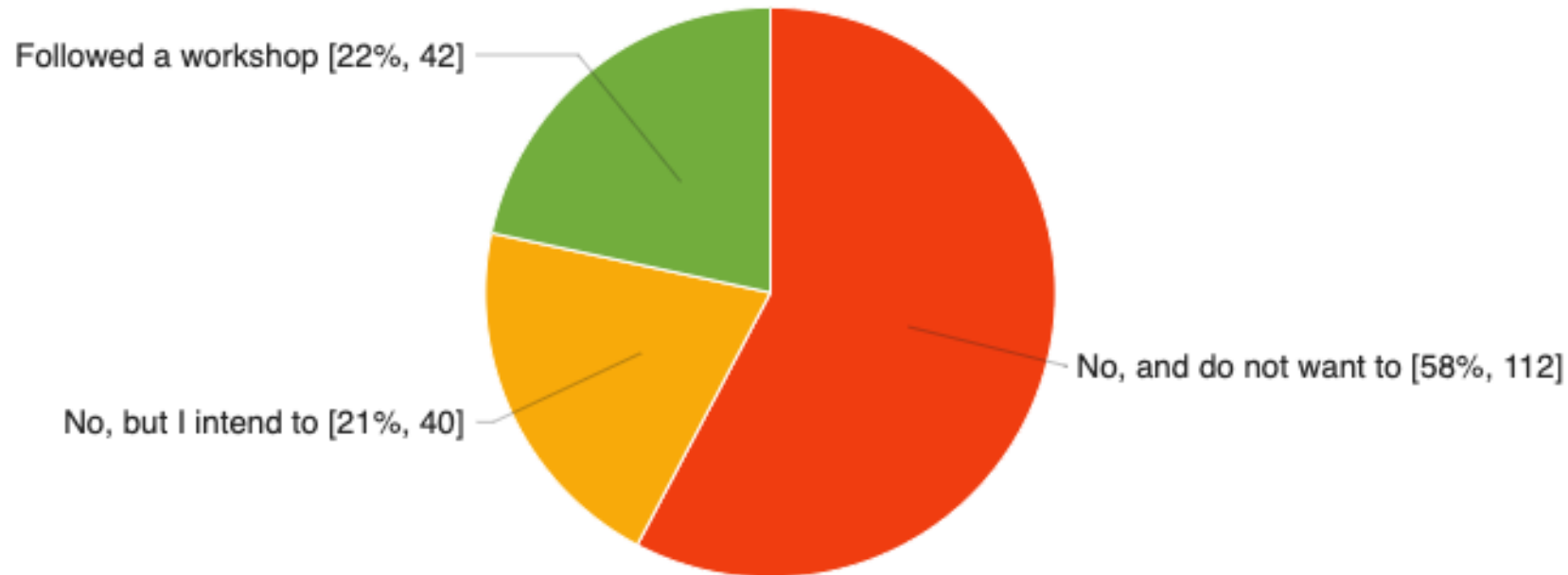# Our research questions

❱To what extent do students and staff use generative AI today?

❱Do they really know what responsible use comes too?

❱Are they willing to know more about it?

❱What are the consequences for the future of scientific knowledge?

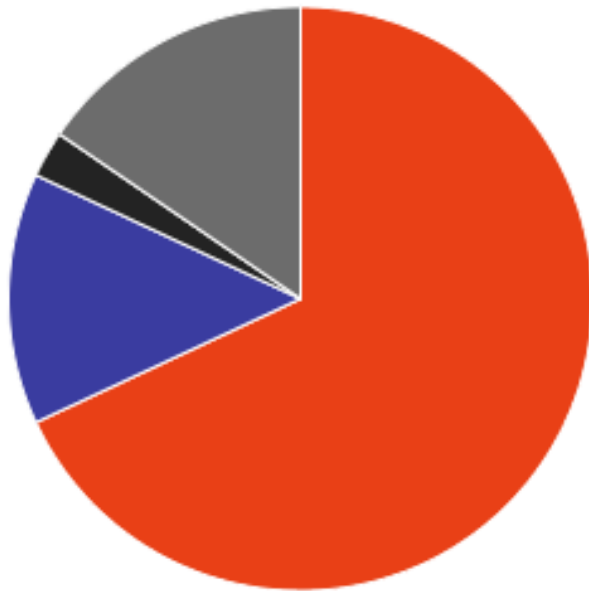# Our respondents (n=194)
Only nine questions

Students
Personnel

Did you follow a workshop on generative AI?

Followed a workshop [22%, 42]

No, but I intend to [21%, 40]

No, and do not want to [58%, 112]

Do you feel like you know what correct use means? (n=178)

- ● Yes, I can judge what is correct use
- ● I do not know   ● This is an irrelevant question
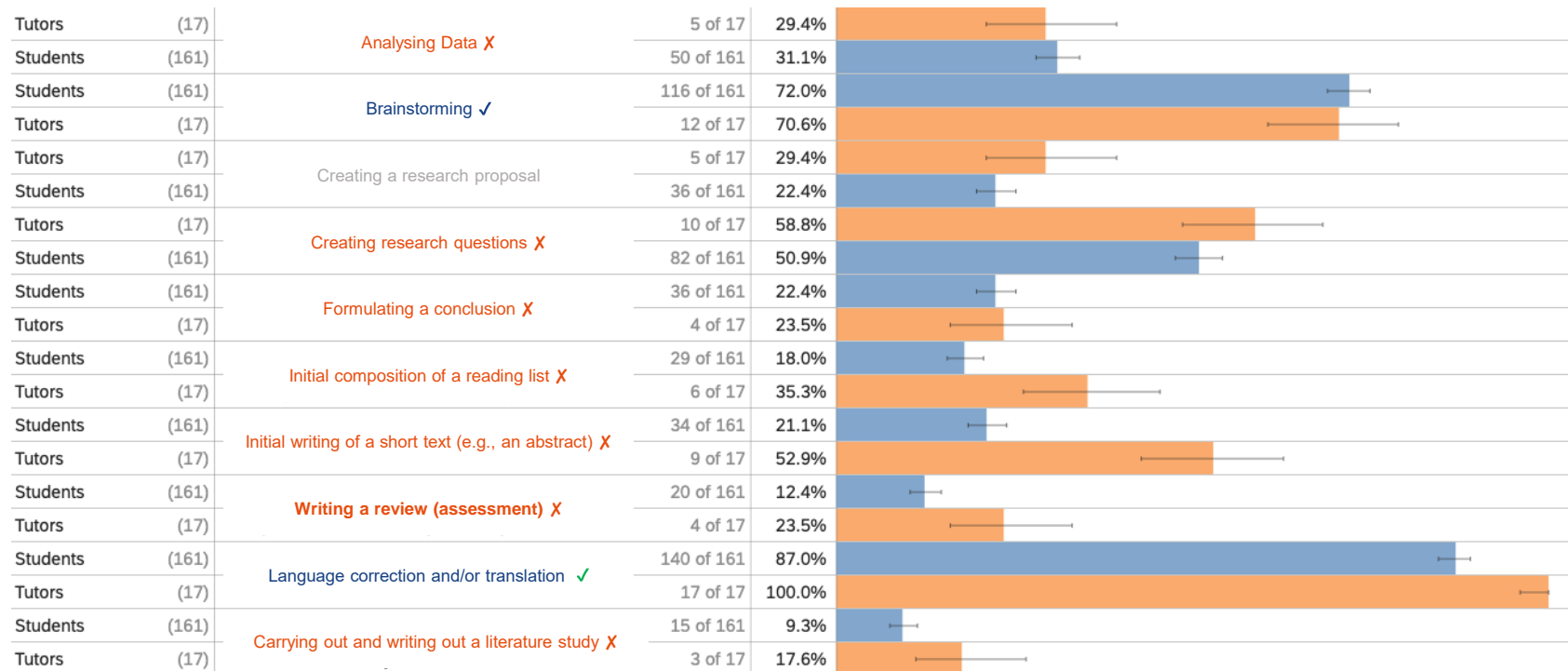- ● No, that is difficult for me

17% of those that followed a workshop on genAI still have difficulty to figure out what correct use is.

48% of those that have a difficulty to know what is okay don't want to follow a course on it.

62% of those that say to know what correct use is, don't have the intention to follow a workshop.

Where are academics using generative AI for?

It's clearly not the case that they know what correct use is.

Tutors	(17)	Analysing Data ✗	5 of 17	29.4%
Students	(161)		50 of 161	31.1%
Students	(161)	Brainstorming ✓	116 of 161	72.0%
Tutors	(17)		12 of 17	70.6%
Tutors	(17)	Creating a research proposal	5 of 17	29.4%
Students	(161)		36 of 161	22.4%
Tutors	(17)	Creating research questions ✗	10 of 17	58.8%
Students	(161)		82 of 161	50.9%
Students	(161)	Formulating a conclusion ✗	36 of 161	22.4%
Tutors	(17)		4 of 17	23.5%
Students	(161)	Initial composition of a reading list ✗	29 of 161	18.0%
Tutors	(17)		6 of 17	35.3%
Students	(161)	Initial writing of a short text (e.g., an abstract) ✗	34 of 161	21.1%
Tutors	(17)		9 of 17	52.9%
Students	(161)	**Writing a review (assessment) ✗**	20 of 161	12.4%
Tutors	(17)		4 of 17	23.5%
Students	(161)	Language correction and/or translation ✓	140 of 161	87.0%
Tutors	(17)		17 of 17	100.0%
Students	(161)	Carrying out and writing out a literature study ✗	15 of 161	9.3%
Tutors	(17)		3 of 17	17.6%

What is *responsible* use?

"I check the output" (130/130)
"I compare with the original sources" (104/130)
"I add something from myself" (92/130)

However, comparing with original sources is in many cases not possible because generative AI composes an answer out of many sources impossible to retrieve.
Adding something yourself is simply not good enough.

What is *transparant* use?

"I clearly state what is mine and what is generated by AI" (50/130)
"I say what I used generative AI for (47/130)"
"I give all the prompts (17/130)"

Although many universities tend to ask for all the prompts, only 17 respondents see that as transparent use.

Limits of our modest survey

❚ Local survey.

❚ No disciplinary differentiation (numbers too small).

❚ Short questionnaire (inductive).

❚ Pilot study.

❚ Further research needed.

Remarkable Results

❯ 70+% "We know how to use generative AI in a responsible way".

❯ 58% "We did not have any introduction about generative AI and we are not planning to follow one".

❯ 60% of the tutors uses genAI for developing research questions.

❯ 80% is convinced that they can verify the 'original sources', which is impossible:

  ❯ Chatrobots do not paraphrase as humans do,
  ❯ Chatbots sometimes hallucinate and make up sources.

Disturbing conclusions

❯ A majority does use generative AI already at this time.

❯ Actually, many just do not know what responsible use comes too.

❯ A threat to scientific integrity:

  ❯ users are not aware that they trick scientific development.

  ❯ with generative AI it is all too easy to cheat (willingly or unwillingly, at this stage):

    ❯ {Fabrication of data, Falsifying data, Plagiarism } = scientific misconduct!
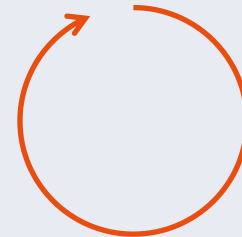
❯ A dystopy emerges.

The dystopy

The AI Feedback Loop: a Dystopian Threat to Science

❱ Academics clearly use genAI today for all aspects of the research cycle.
  ❱ Project proposals, abstracts, research questions, data-analysis, …
❱ Therefore they feed genAI with text over and over: <u>the feedback loop</u>.

❱ This results in:
  ❱ Lame science because genAI determines the trends.
  ❱ Volatile science because of catastrophic forgetting.
  ❱ Uncontrolled science and undetectable fraud.
  ❱ Accelerating scientific writing and reviewing, thus, increasing the number of publications.
  ❱ Diminishing human creativity and intervention, closer and closer to zero: science © AI.

Accelerators of the Dystopy

❚Unsafe training of chatbots.

❚OpenAccess: all scientific knowledge will become freely available.

  ❚Double feeling (it *was* a good idea):

    ❚Those articles are created by humans,

    ❚More and more with the help of AI,

    ❚Eventually completely created by AI.

❚Naivity of universities and governments: "there's no evil in it".

❚Growing use of generative AI (see survey) – academic culture.

Let's change what we value in research.

Sign DORA

San Francisco Declaration on Research Assessment (2013)

❚ Solely **qualitative evaluation** (~~indexes~~)

❚ **Inclusive** assessment.

❚ **Awareness** of assessment and research biases.

❚ Acknowledging **Slow Science**.

❚ DORA, something WCRI and you should consider signing.

Rawpixel

Take home messages

- Most of the academics live in an illusion.
- Unthoughtful use threats scientific integrity.
- Science gradually becomes copyright OpenAI.
- GenAI urges use with ingegrity and efficacity (not merely transparancy and responsibility)
- We need to train academics asap about genAI:
  - Use it **correctly**,
  - Understand related **ethics** and **epistemology**.

Thank you for attending

WCRI App Connect Gustaaf

WCRI App Connect Marijke

Stay in contact with us by e-mail