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Feedback and Learning: AI Assisted & Reimagined Project (FLAIR)

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FLAIR Project (2025-2027)

Funded by the Digital Innovation Fund, Learning and Teaching Strategy

- Transformative potential of digital innovation for enhance educational and research efficiency (Li et al., 2025; Mollick & Mollick, 2023)



- Evidence-based approach: Develop evidence on effective feedback practices across disciplines & explore the potential of AI-assisted feedback approaches to inform chatbot development (i.e. Teaching-Focused Bot & Feedback-Focused Bot).
- Foster cross-faculty collaboration with staff and students as partners.
- Implement quality assurance to ensure accuracy, reliability, and inclusivity.

Human-centric: viewing AI as a tool to augment, not replace, human insight, judgment and creativity (Acar, 2023).

Student Focus Group Questions: Key Topic Areas

▪ **Perceptions and experiences of feedback**

- ✓ Helpful/ineffective feedback
- ✓ Understanding and using feedback
- ✓ Emotional responses to feedback (positive and negative)
- ✓ Ideal feedback in disciplinary contexts

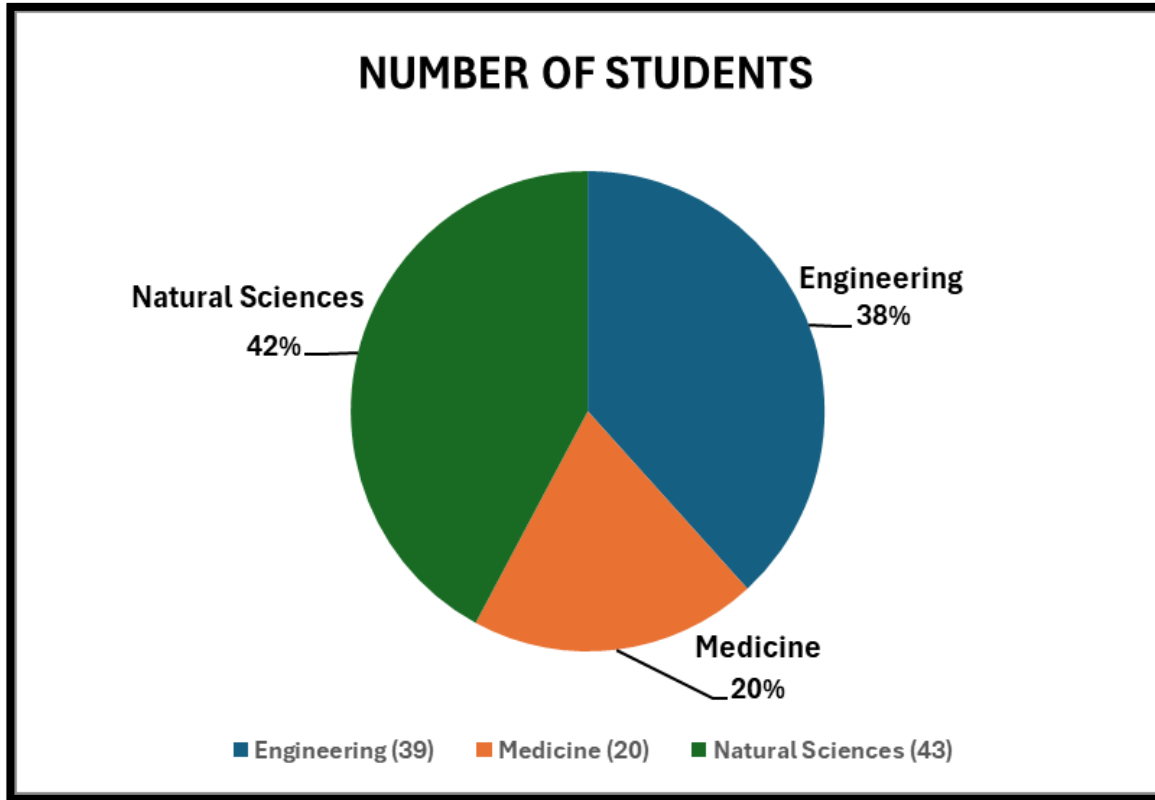
▪ **GenAI-assisted feedback experience** →

- ✓ Usefulness
- ✓ Limitations
- ✓ Tutor-polished feedback using GenAI
- ✓ Perceived impact on feedback quality

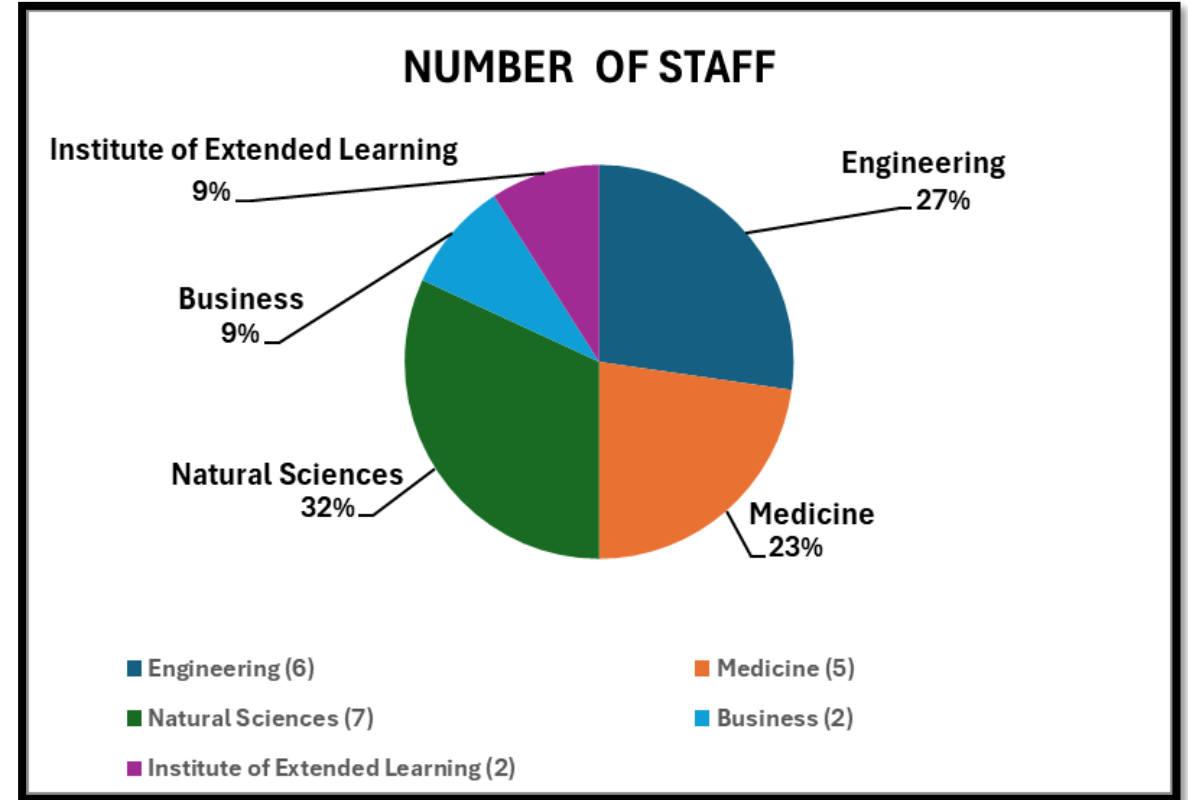
Educators retain responsibility for academic judgement and the production of feedback, while AI is used to refine, polish, or augment the process.



Data Collection



- **Student focus groups: 26**
- **UG students: 102**
- **Faculties: FoE, FoNS, FoMED**



- **Staff focus groups: 9**
- **Staff: 22**
- **Faculties: FoE, FoNS, FoMED, Business School, Institute of Extended Learning**

Preliminary findings

Do you think GenAI-assisted feedback would improve or **reduce** the quality of feedback?
Why?

- **GenAI hallucination (Thorpe, 2023)** →

“It's kind of wrong, especially in kind of like a medical context, because I guess it's a lot of stuff and it **does not keep up with the accuracy all the time**. So I always do kind of **cross-reference it back to the other sources**.” (Jean, Medicine)

- **Lack of human interaction (Corbin et al., 2026)** →

“I think an experience that you can't get... is... I'm explaining my steps as I go... and then my tutor is able to catch where I go wrong... And I think **that's an experience that I'm not able to have with GenAI**.” (Arjun, Mathematics)

- **Literal and prompt-dependent feedback (Jackobsen & Weber, 2025)** →

“When I ask AI for like to highlight parts where I could improve or parts where I could introduce complexity for example. I think it takes what you want to do **very literally and sort of looking to obey your command rather than like do what's actually right. It wants to do what you want to do**.” (Ryan, Engineering)

Preliminary findings, cont'd

Do you think GenAI-assisted feedback would **improve** or reduce the quality of feedback? Why?

- **Speeding up feedback (Banihashem et al., 2026)**



“AI summarised feedback would be able to speed up the process quite a bit.”
(Christian, Physics)

“Giving feedback takes quite a bit of time; you have to read what you're giving feedback on, analyse it, and then write something. That takes more time, **whereas GenAI is much quicker.**” (Andy, Chemistry)

- **Personalised feedback**



“**Tutor writes the feedback** and then the **AI turns that into more personalised** to me. I think it makes the job much **more refined** in that sense. So I personally I would favour it.” (Lalita, Medicine)

- **For polishing and proofreading**



“Maybe the assessor is struggling to **find the right words** and GenAI can help with that. Also being able to **suggest the structure**. So for example, an assessor could put in the requirements of a task and what they were looking for into the Gen AI and then the **GenAI can give suggestions** as to how the feedback can be structured and what students might like to see... so basically **using it as a way to structure and help assesses phrase feedback in a way that's useful without telling them exactly what to write.**” (Rohan, Chemistry)

Preliminary findings, cont'd

How would you feel about receiving tutor feedback that's been refined with GenAI support?

- **Students' preference for tutor feedback (Pozdniakov et al., 2026)**



“Tutor’s feedback would be **10 times** better than whatever GenAI uses, even if it sounds more fancy, like **I'd rather hear it clear cut a bit more harsh**, like because obviously this is clinical practice I'm talking about in terms of the clinical side of things.” (Saada, Medicine)

- **Tension between transparency and trust in AI-assisted feedback**

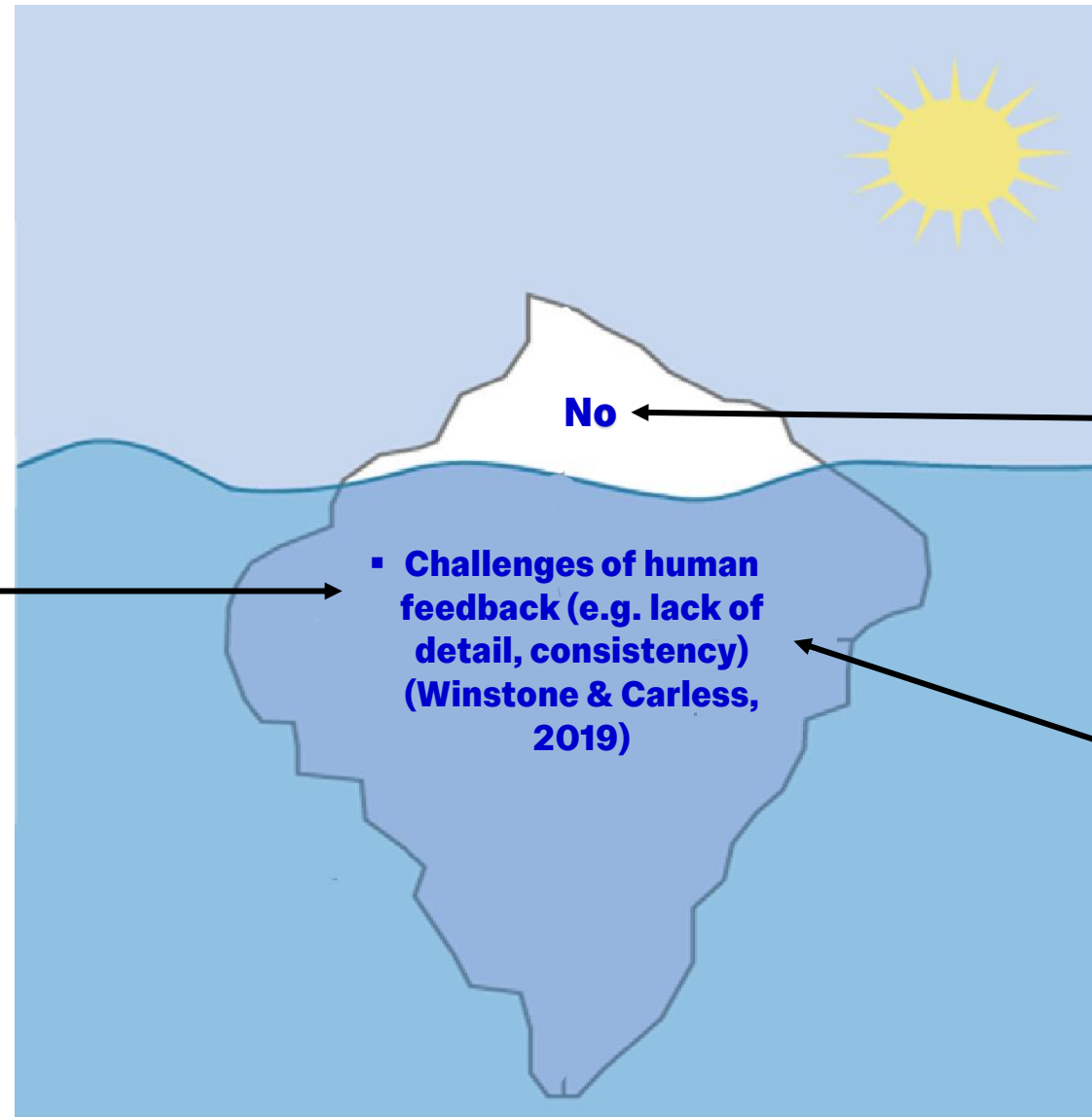


“If they want to use again for like phrasing or I can understand that because like to that I use as well. So, I don't know I can particularly complain if like I can understand other professors would use it just to help with phrasing but then. One thing I do feel is like... **if for let's say transparency reason, you'd say OK this feedback was helped using GenAI**, I feel like I might in a way I don't feel bad like... I don't know, **maybe trust it less**. So like I'd question it more, **how impactful or valid the feedback would be**... I feel a bit ironic because if in a way, **if you did not say** it was helped with AI... **I would not feel that way.**” (Andy, Chemistry)

GenAI in feedback: A complex balance between trust, transparency and efficiency

How would you feel about receiving tutor feedback that's been refined with GenAI support?

"I remember in year one when I was still getting to grips with uni. One of my first coursework I didn't do very well. I got the coursework back and it had my mark, which I wasn't very happy with. And **the only comment that I had in it was something like blunt statement like this is not correct and that's all it said on the paper. I don't know why it's not correct. I don't know how to make it correct.** But that was all it said was someone had just scribbled." (Sophie, Mathematics)



"I **wouldn't really accept** that." (Xiaofei, Chemistry)

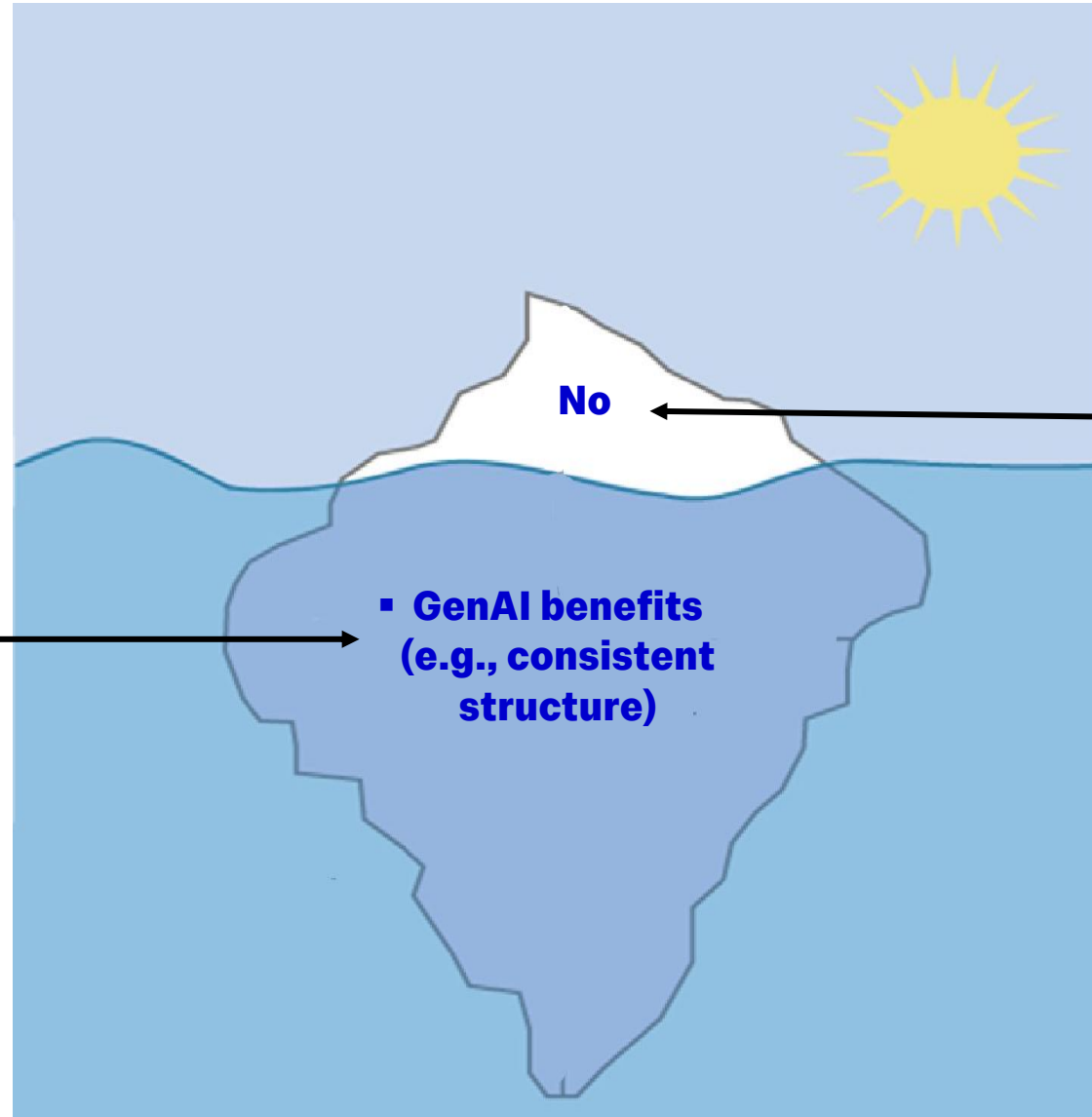
"I think it just doesn't seem real for some reason. **It takes away the person behind it.** And I think a person has so much experience under, you know, their belt of their clinical years, their education... I don't know, I just, **I trust human feedback more because I know that it's coming from someone who and not just a robot.**" (Esther, Medicine)

"When the **feedback is inconsistent**, it's sometimes not really annoying, but slightly disheartening because that sometimes it goes down to how lucky you are with the GTA that you got them **marked your work because some mark nicely and others mark more harshly.** So I mean, for me personally, that was something I didn't always like in some of the coursework that we had." (Nina, Engineering)

GenAI in feedback: A complex balance between trust, transparency and efficiency, cont'd

How would you feel about receiving tutor feedback that's been refined with GenAI support?

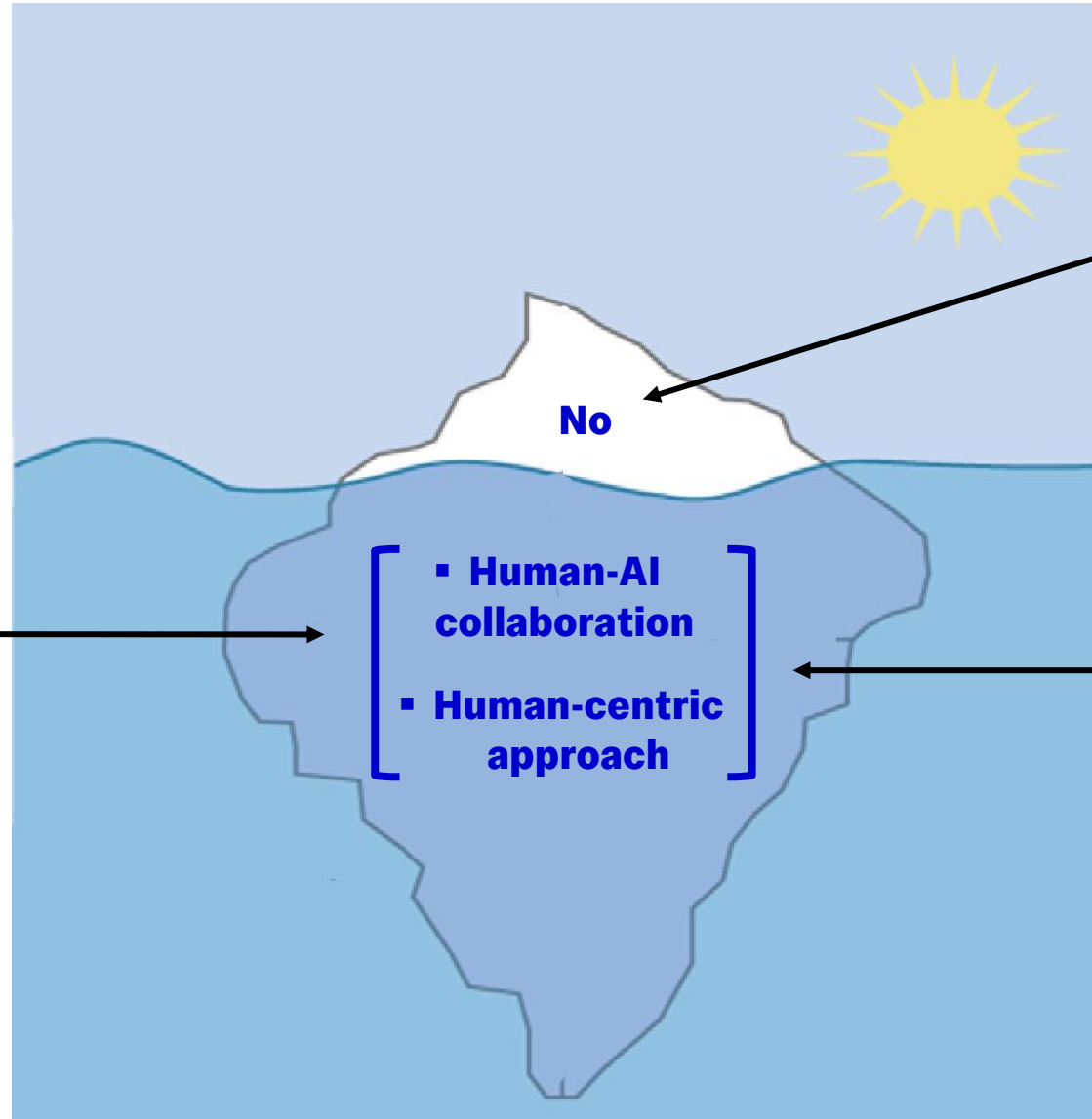
“Designing an AI to give feedback, I would make sure it **follows a clear structure**. For example, it should **start with positive comments**, so people feel motivated to continue reading and understand the feedback. Then it **should include constructive criticism**, telling you what you did well, while also highlighting areas for improvement.” (Nathan, Engineering)



“I **wouldn't really accept** that.” (Xiaofei, Chemistry)

GenAI in feedback: A complex balance between trust, transparency and efficiency, cont'd

How would you feel about receiving tutor feedback that's been refined with GenAI support?



"I **wouldn't really accept** that." (Xiaofei, Chemistry)

"... if a **human being** wrote the feedback and the **GenAI** was a tool that helped to make the feedback **easier to digest.**" (Reena, Mathematics)

"If the **core content for that feedback is all written by the tutor**, and then **ChatGPT just refines it**. I think what should be done is that the tutor also goes through what ChatGPT has written just to **make sure** that **none of the points are lost in translation**. It would be a pretty good idea." (Basri, Engineering)

Pedagogical Implications

Early Insights from the Study

GenAI-assisted feedback is not a simple 'Yes' or 'No' decision

It is a question of how, when and to what extent it is integrated into pedagogical practice.

Feedback design should remain human-centred

Students value authentic tutor input. GenAI should support, not replace this.

GenAI-assisted feedback is complex and multilayered practice

Shaped by emotions, relationships, and context, not just technology.

Perceived benefits of GenAI use: Disciplinary differences

Particularly in coding, mathematical tasks and in supporting formatting and proofreading, indicating that its use is prominent in STEM disciplines at Imperial.

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Get in touch to share and learn together



- **Do you work on GenAI-assisted feedback?**
- **Interested in sharing your work as a 'Case Study' with FLAIR?**

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FLAIR project website