

Practicalities of generative AI for teaching and assessment

Danny Liu

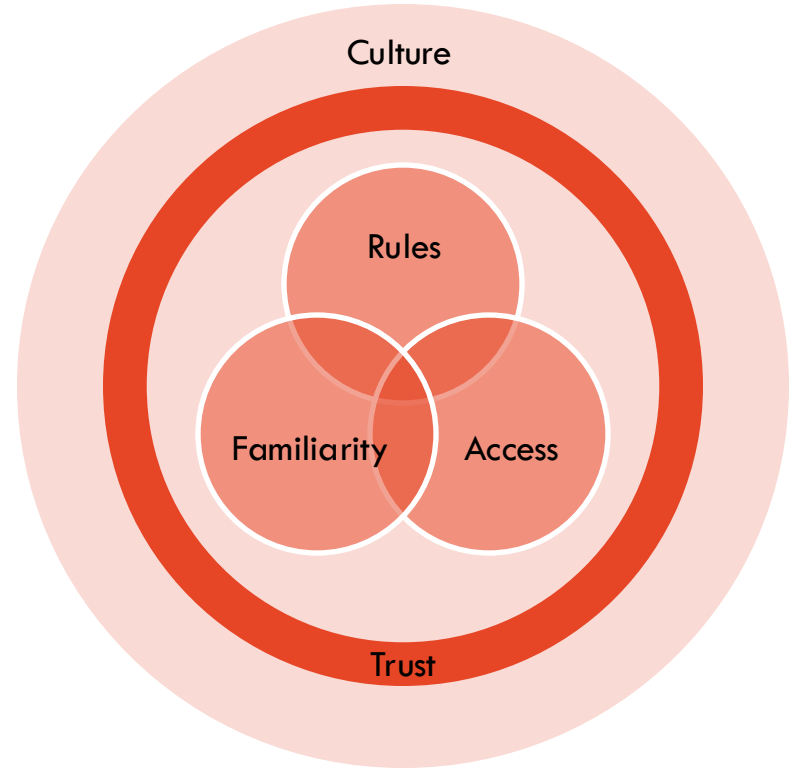
DVC (Education and Students) Portfolio



Five key areas of action

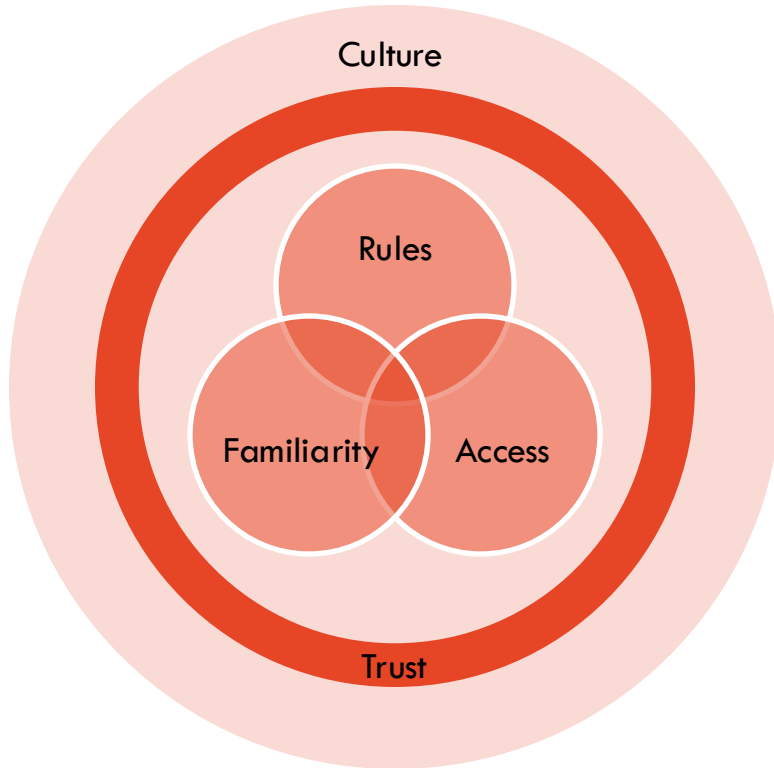
Five key areas of action

bit.ly/ai-whitepaper2025



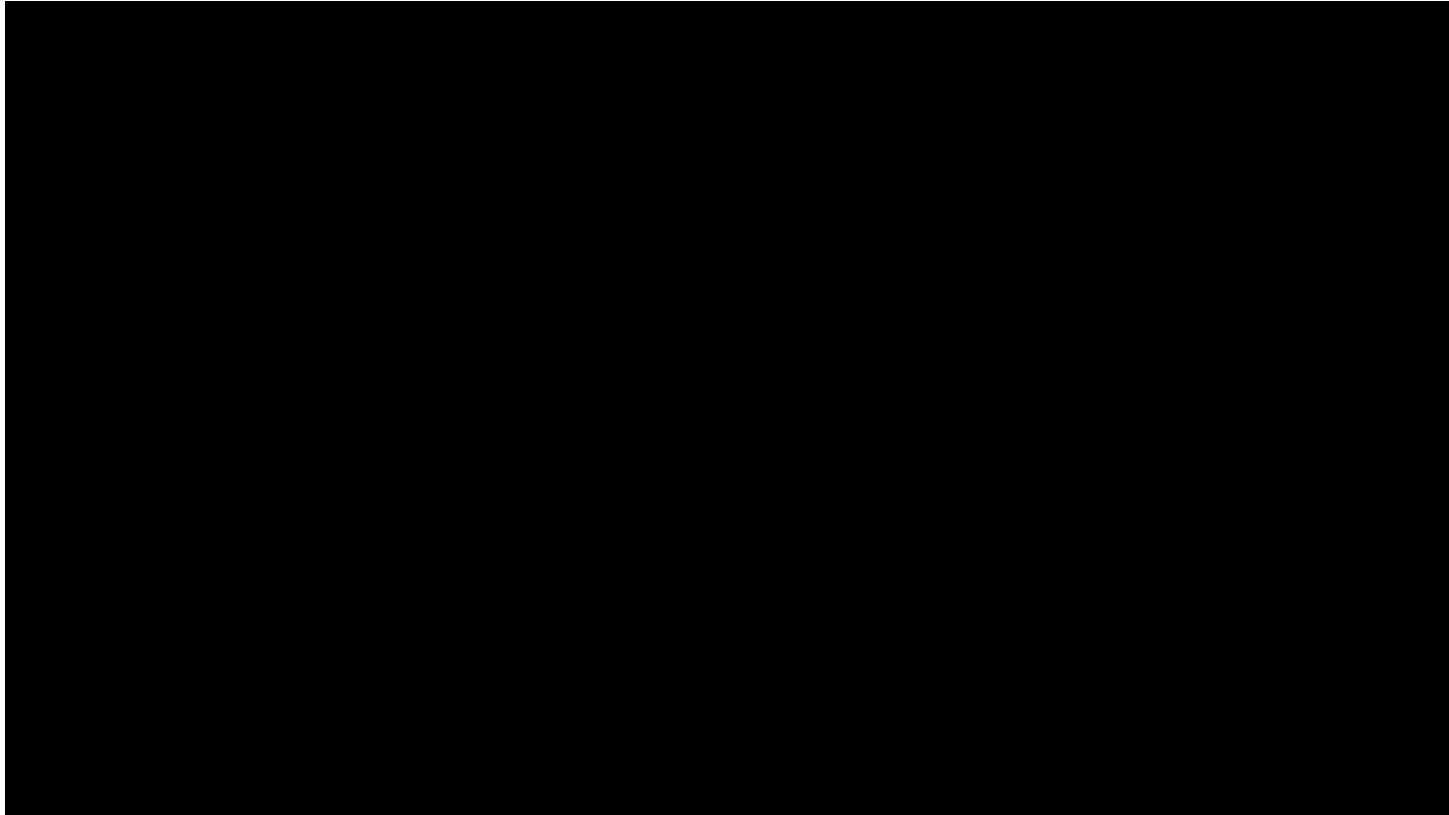
Five key areas of action

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- **Culture:** departmental, disciplinary, regional, etc
- **Rules:** principles, policies, guardrails, guidelines, etc
- **Access:** equitable availability of AI & infrastructure
- **Familiarity:** awareness, comfort, skill, etc
- **Trust:** between teachers, students, leaders, AI, etc

CRAFT applied: Two lane approach to assessment



John Nash - <https://www.youtube.com/watch?v=Dw1EzKxiqQc>

HIGHER EDUCATION

Everyone Is Cheating Their Way Through College ChatGPT has unraveled the entire



By James D. Walsh, *Intelligencer staff writer*

MAY 7, 2023

Illustration: New York Magazine

This article was featured in One Great Story, New York's reading recommendation newsletter. Sign up here to get it nightly.

Chungin “Roy” Lee stepped onto Columbia University’s campus in the fall of 2021, and, by his own admission, proceeded to use generative artificial intelligence to cheat on nearly every assignment. As a computer-science major, he had depended on AI for his introductory programming classes: “I’d just copy the prompt into ChatGPT and hand in whatever it spat out.” By his senior year, AI wrote 80 percent of every essay he turned in. “At the end of the semester, I’d be on the finishing touches. I’d just insert 20 percent of my humanity into it,” Lee told me recently.

The Professors Are Using ChatGPT, and Some Students Aren’t Happy About It

Students call it hypocritical. A senior at Northeastern University demanded her tuition back. But instructors say generative A.I. tools make them better at their jobs.



Share full article

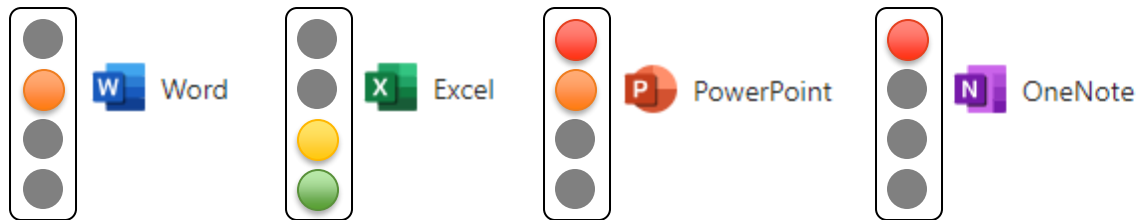


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Developing contemporary capabilities

- Which app would you use to create a balance sheet for an annual report?



- For these technologies, do we:
 - Restrict their use per assessment
 - Or, help students learn responsible & productive ways to use them?

The challenges with traffic lights and scales

1: AI for planning, idea generation, research



How do you know?
How do you restrict?

2: AI for editing and improving clarity



“Any restrictions that cannot
be enforced harm
assessment validity”
– Phill Dawson

3: AI for drafting text, refining, evaluating



Lights and scales and
numbers imply a linear
gradation of AI use in
assessment.

4: Full AI

A different metaphor: AI ✕ assessment menu



As a critical friend - Soups

- Suggest analyses
- Provoke reflection
- Provide study/organisation tips
- Practicing



Getting started - Entrees

- Suggesting structure
- Brainstorming ideas



Engaging with literature - Bread service

- Suggesting search terms
- Performing searches
- Summarising literature
- Identifying methodologies
- Explaining jargon
- Fixing reference list



Generating content - Mains

- Writing some text
- Making images, video, audio
- Making slides/decks



Analyses - Lighter mains

- Performing analyses of data, text
- Suggesting counterarguments



Editing - Coffees

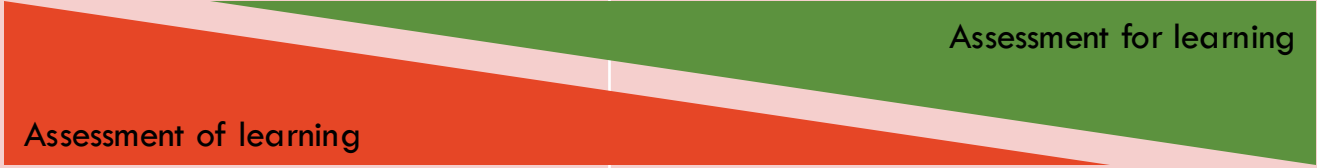

- Editing tone
- Improving clarity and readability
- Fixing grammar
- Shortening



Feedback - Desserts

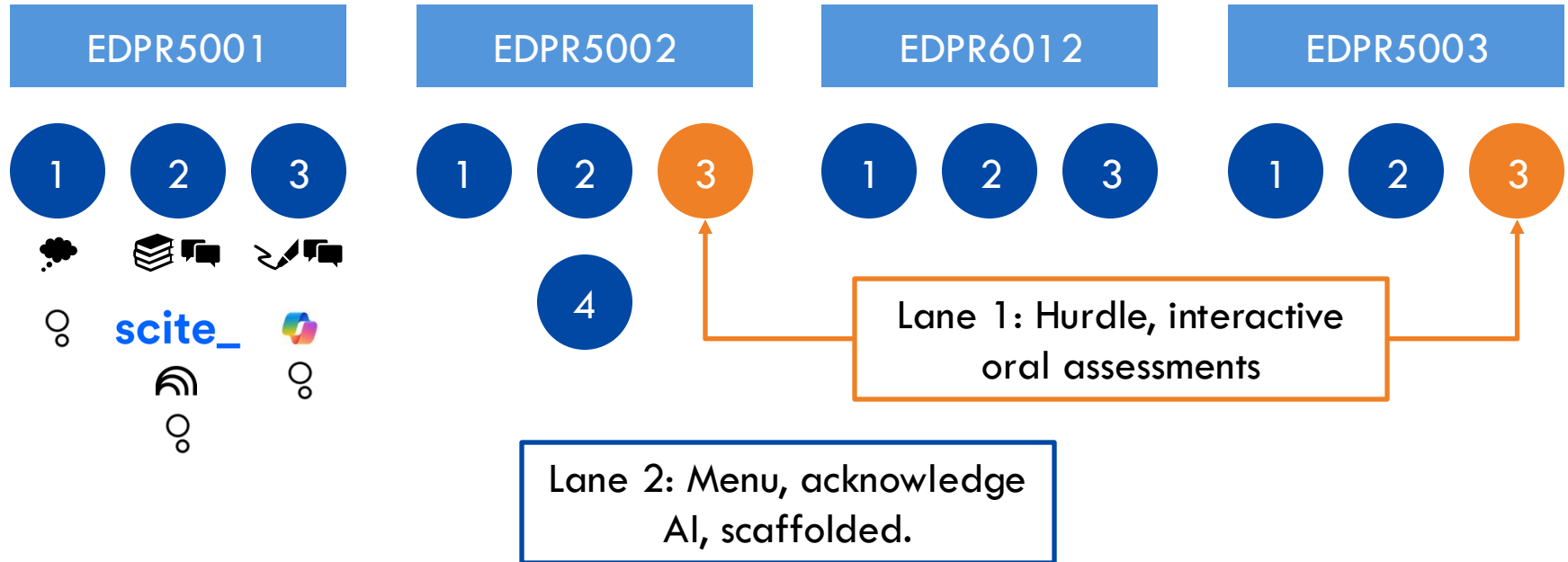
- On all of the above elements
- Specifically on rubric criteria

Two-lane approach to assessment

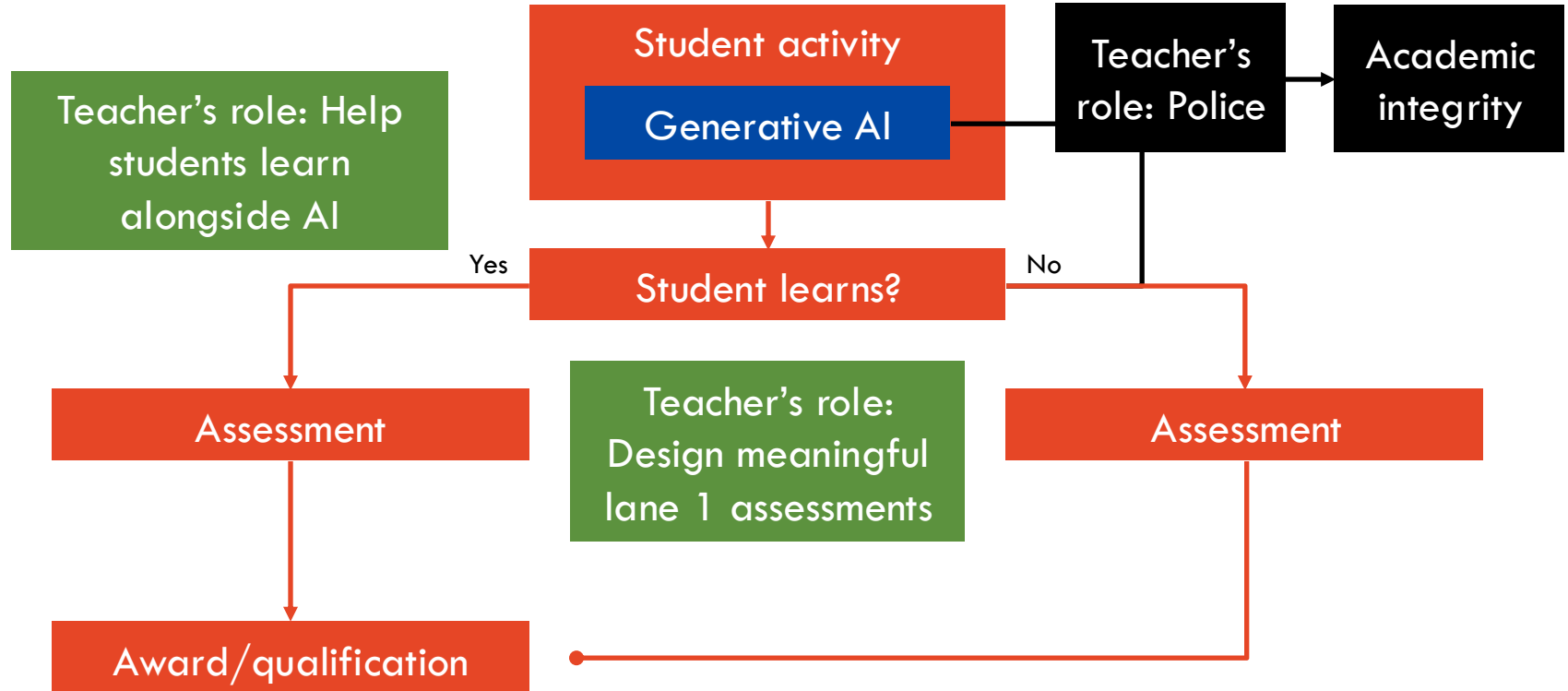
	Lane 1	Lane 2
Purpose of assessment	 <p>Assessment of learning</p> <p>Assessment for learning</p>	
TEQSA alignment	 <p>Trustworthy judgements of capability</p> <p>Equipping students for a world of AI</p>	
Scale of operation	Mainly at program level	Mainly at unit level
Security & integrity	Observed, in person	Not observed live
Position on generative AI	May or may not be allowed by examiner	As relevant, use of AI scaffolded & supported

Two-lane approach at a program level

– Graduate Certificate in Educational Studies



Main messages of the two-lane approach



Building familiarity: open access resources

Welcome to AI for Educators

This site is a resource designed for educators by educators of Sydney and beyond.

How to use this site

To get started, we've highlighted some key topic areas:

- Rules and guardrails**
 - Using generative AI responsibly
 - What are students allowed to do?
 - What are teachers allowed to do?
 - Policies and procedures
- Access to AI tools**
 - Available AI tools at the University of Sydney: Microsoft Copilot Chat, Cozi
 - Other third party generative AI tools
- Building familiarity**
 - What is generative AI?
 - Common misconceptions

Generative AI in teaching

- How might generative AI help me as an educator?
- How do I talk to students about generative AI?

AI in planning and preparation

- Supporting analogies and examples
- Supporting discussion topics

Generative AI in assessment

The context for change

- The impact of generative AI on our assessments
- The reality of assessments that are not supervised in person
- Legislative and policy requirements

What is changing

- Semester 1, 2025 - Integrity settings and unit outlines
- From semester 2, 2025 - The new Sydney Assessment Framework (the two-lane approach)
- Frequently asked questions about the two-lane approach
- Semester 2, 2025 - Support and next steps in assessment mapping and redesign

New assessment categories and types

Open (Lane 2) assessments

These are assessments for learning that help students gain disciplinary knowledge, skills, and dispositions, through the supported and scaffolded use of AI in educationally meaningful ways.

- Practice or application - open: In-class quiz, Out of class quiz, Practical skill
- Inquiry or investigation - open: Experimental design, Data analysis, Case studies, Research analysis
- Production and creation - open: Portfolio or journal, Performance, Presentation, Creative work, Written work, Dissertation or thesis
- Discussion - open: Debate, Contribution, Conversation, Evaluation

Secure (Lane 1) assessments

These are assessments of learning that measure and validate learning, assuring us and the community that graduates have achieved program learning outcomes.

- Final Exam - secured: Written exam, Practical exam, Oral exam
- In-semester test - secured: Written test, Practical test, Oral test
- In-class - secured: Interactive oral, In person, practical skills, or performance task or test, In person written or creative task, OLSA following presentation, submission or placement
- Placement, internship, or supervision - secured: Peer or expert observation or supervision, In person practical or creative task, Clinical exam

Welcome to AI in Education!

This site is a resource designed for students by students of Sydney and beyond.

How to use this site

To get started, click the arrows at the hand menu.

What is generative AI?

- How generative AI works
- Different generative AI options
- Writing prompts
- Assessing your generative AI readiness

Using generative AI responsibly

- Using generative AI responsibly
- General principles for use of generative AI
- University of Sydney guidelines
- Acknowledging the use of AI

How to use generative AI

- Prompts to help you learn
 - Overview of new concept
 - Connecting new concepts with previous knowledge
 - Learning through conversations and questions
 - Breaking down topics using the Feynman technique
 - Planning your study
 - Exploring scenarios through guided case studies
 - Training with simulated scenarios
 - Applying concepts to current events
 - and more!
- Prompts to help you with assessments
 - Providing reflection
 - Overcoming writer's block
 - Understanding the marking rubric
 - Supportive ideas
 - Looking for literature sources
 - Summarising sources
 - Drafting presentations
 - Proofreading your work
 - Getting standards-based feedback
 - and more!
- Prompts to help you progress
 - Navigating social situations
 - Preparing for meetings
 - Creating resumes and cover letters
 - Making sense of job descriptions
 - Preparing for job interviews
 - Preparing for networking events & career expos
 - and more!

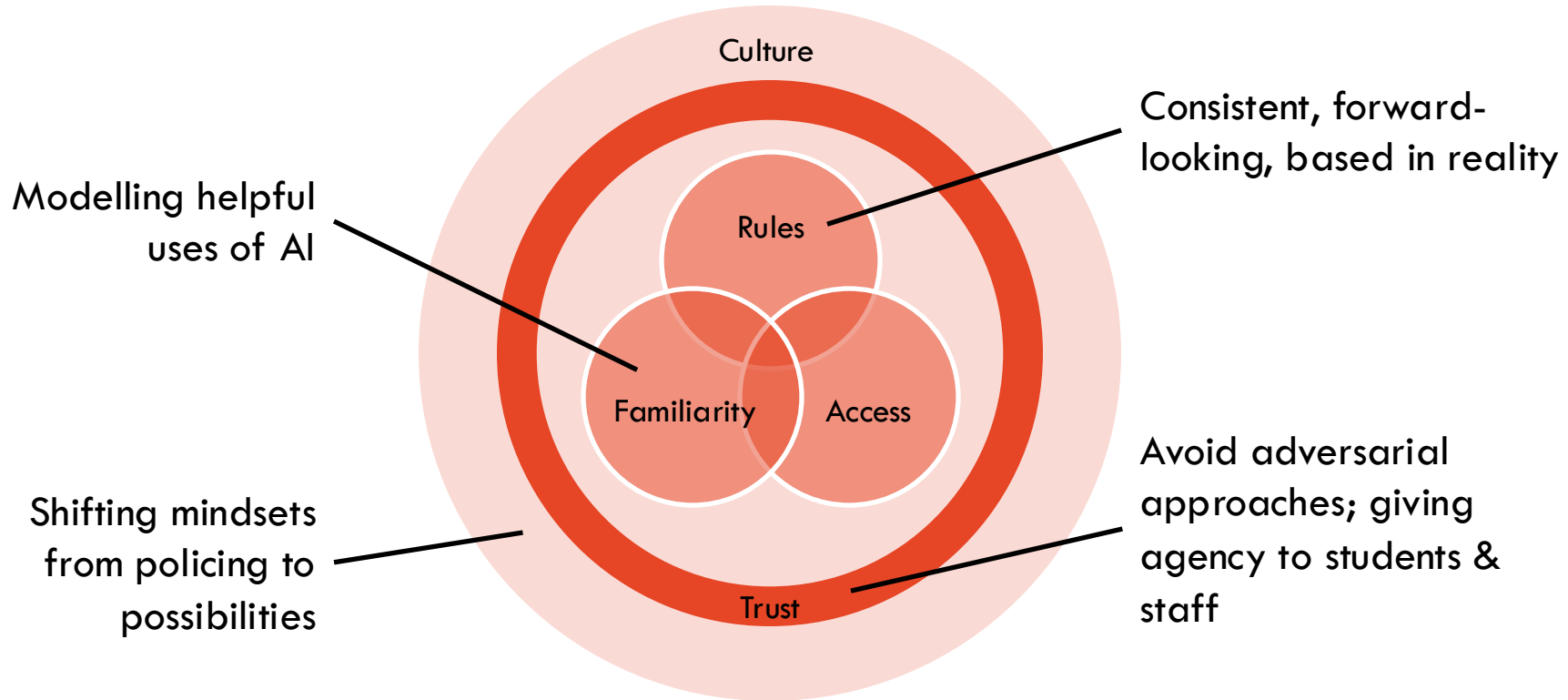
Applying generative AI in different disciplines

- Architecture, Design and Planning
- Arts and Social Sciences
- Business
- Engineering and IT
- Law

Using generative AI for different learning or assessment activities

- Annotated bibliographies
- Case studies
- Class discussions
- Coding
- Essays

CRAFT applied: Two-lane approach to assessment



CRAFT applied: Educator-steered AI to improve assessment

Beyond 'AI tutors'

Tutor explains concepts

Substitution

AI tutor explains concepts and gauges understanding

Teacher-written feedback

Augmentation

Students working with AI on feedback before submission

Written case study

Modification

Interactive case study with AI

Not yet possible

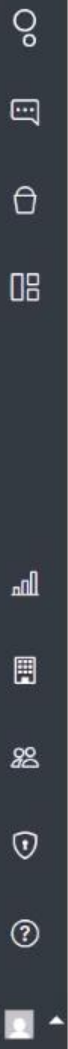
Redefinition

Mock, guided AI client interaction

Stunt doubles



<https://www.instagram.com/p/BLm4rCBzyJ>



Welcome to Cogniti



Chat with agents



Proudly led by
THE UNIVERSITY OF
SYDNEY

What might an 'AI double' of you do?

- If every student had a version of you available to them 24/7, what would you tell that clone to do?
- Answer student questions
- Provide instant and personalised feedback on drafts
- Provide advice on writing/structure
- Help understand the marking rubric
- Help give detailed feedback during marking
- Break down complex concepts
- Encourage exploration, creativity, curiosity
- Coach students on study techniques
- Facilitate groupwork
- Mimic workplace interactions

Example: Pre-submission feedback and ideation



Chat with this agent to get feedback and ideas on your FHEA teaching case. Enter your message in the box at the bottom of this page. This agent has already been trained on the assessment rubric and the UKPSF so there's no need to provide these separately.



please give feedback on the below case for A2:

By pre-recording lectures, I enable students to engage with the material at their own pace, pausing and reviewing complex sections as needed. This initial exposure outside the classroom empowers them to come to class prepared to delve deeper into the subject matter. Consequently, class time is dedicated to applied learning, which typically involves discussions, problem-solving sessions, and collaborative projects, fostering a dynamic environment where students synthesize and apply their knowledge in practical contexts. This approach has also allowed for increased differentiation in learning, catering to a diverse range of student needs. Advanced students are challenged with higher-order tasks, while those needing reinforcement receive targeted support. The role of technology has been pivotal in this transition, utilizing learning management systems for seamless distribution of materials and fostering an interactive online community.

Moreover, I employ formative assessments during classroom activities, which provide immediate feedback and inform my teaching in real time. This feedback loop ensures that no student falls behind, as misconceptions can be addressed promptly. The impact of the flipped classroom model on student learning has been evidenced by the measurable improvement in exam performance and the positive feedback received from students, who report a greater sense of control over their learning journey. The flipped classroom model aligns with the UK Professional Standards Framework (UKPSF) in promoting active learning and student engagement (A5), integrating appropriate technologies to enhance learning (K4), and providing quality support to students (V1). My reflective practice in this area demonstrates my commitment to continuous professional development (V3) and to fostering an inclusive learning environment (V2).



Your teaching case for A2 (Teaching and/or supporting learning) shows a clear application of the flipped classroom model and how it supports varied student needs. You have highlighted the use of technology in creating a dynamic learning environment, which aligns well with the digital content of Domain 2 (DC) of the

Example: Coaching client



Please introduce yourself to your client.



Hi I'm Danny, i'm your coach for today



Hi Danny, I'm Morgan. I've been looking forward to this session, but to be honest, I'm not entirely sure where to begin. There are just a lot of things going on right now, and it's a bit overwhelming. Maybe you can help me sort through it?



Sorry to hear it's a bit overwhelming. Can you tell me a bit more about something that happened this week?



Yeah, sure. Well, this week was just... chaotic, like most weeks, honestly. Work has been so intense—meetings back-to-back, deadlines piling up—and on top of that, my kids had a school event that I almost missed because a work call ran late. I managed to get there, but I felt like I was a complete mess, rushing in at the last minute. Then I ended up working late that night to catch up, so I barely slept, and the cycle just keeps going. It's like I'm constantly dropping the ball somewhere—either at home or at work—and I can't seem to catch my breath. I don't know how to make it all fit.



It sounds quite challenging. How are your co-workers supporting you?

Enter your message



done... but lately, I'm realizing I can't keep this up forever. I just don't know how to delegate without feeling like I'm letting people down or losing control.

! You are chatting with a generative artificial intelligence (AI). The AI may provide information which might not be 100% accurate or up to date. Ensure you verify important information with trusted sources. Do not enter any private, personal, or sensitive information. All conversations with the AI are recorded. [Privacy Policy](#) [Terms of Service](#) [AI Transparency Statement](#) [University of Sydney Collection Notice](#)

Example: Feedback expander



Hello, please type a feedback prompt (i.e. no error bars) for the BIOL1007 scientific report and I can help you expand on it. Please do not submit students' work.



fig legend vague



Your figure legend could be more informative. Make sure you include the variables being presented with units, the study species, the treatments and their sample sizes, and what the error bars represent. This will allow the reader to understand the data without needing to refer to the main body of the text.

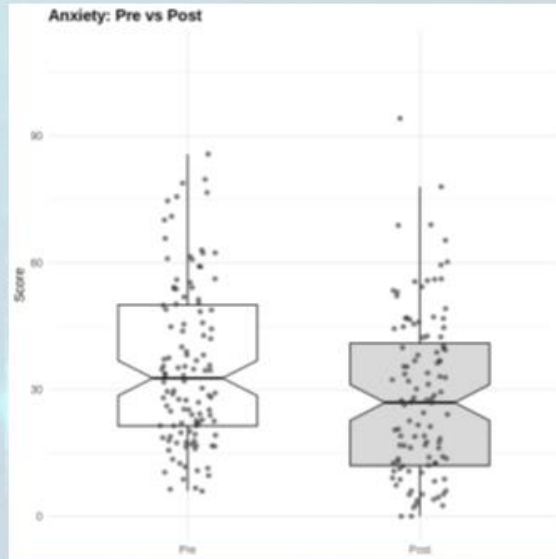
methods lack detail

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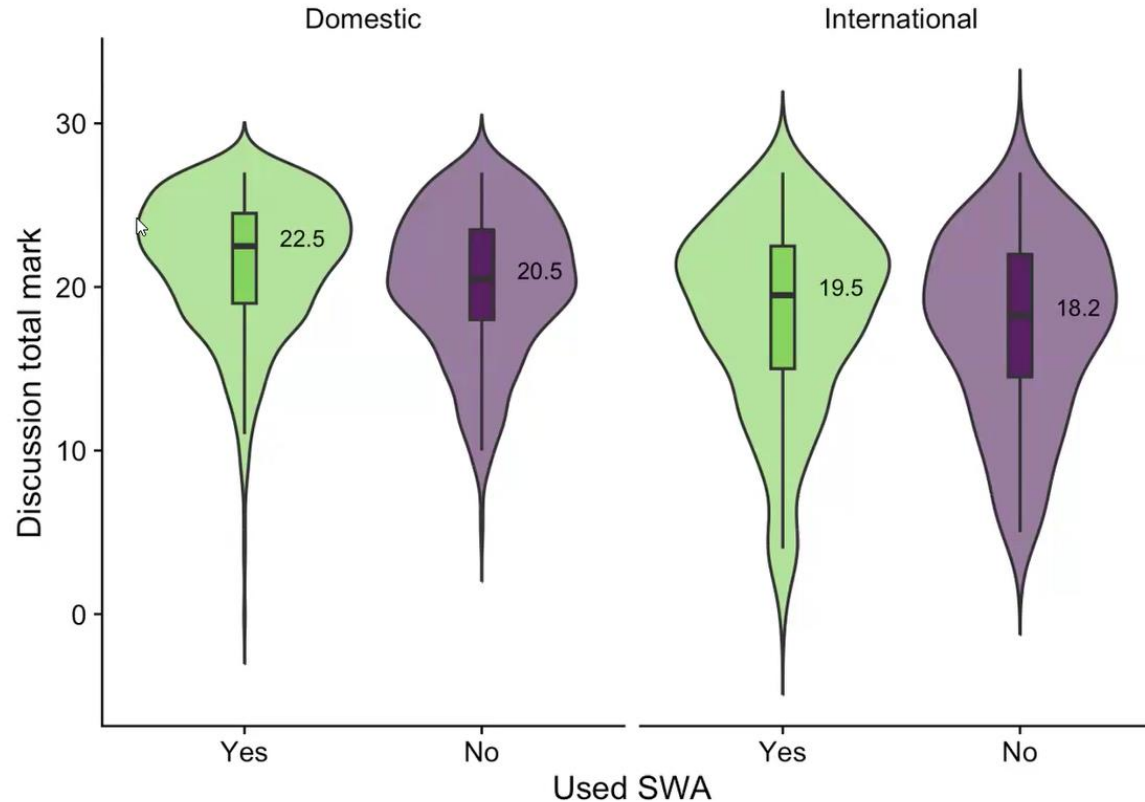


PILOT 3: SURVEY RESULTS

- **Analysis:** Paired-samples *t*-tests conducted on all items and total averages.
- **Anxiety:** Significant reduction from pre to post ($p < .001$, $d = 0.40$; medium–large effect).
- **Trust:** Significant increase from pre to post ($p = .020$, $d = 0.22$; small–medium effect).
- **Other outcomes:** No significant change in engagement, success, or wellbeing, but **critical thinking** significantly improved ($p = .008$, $d = 2.63$; large effect).

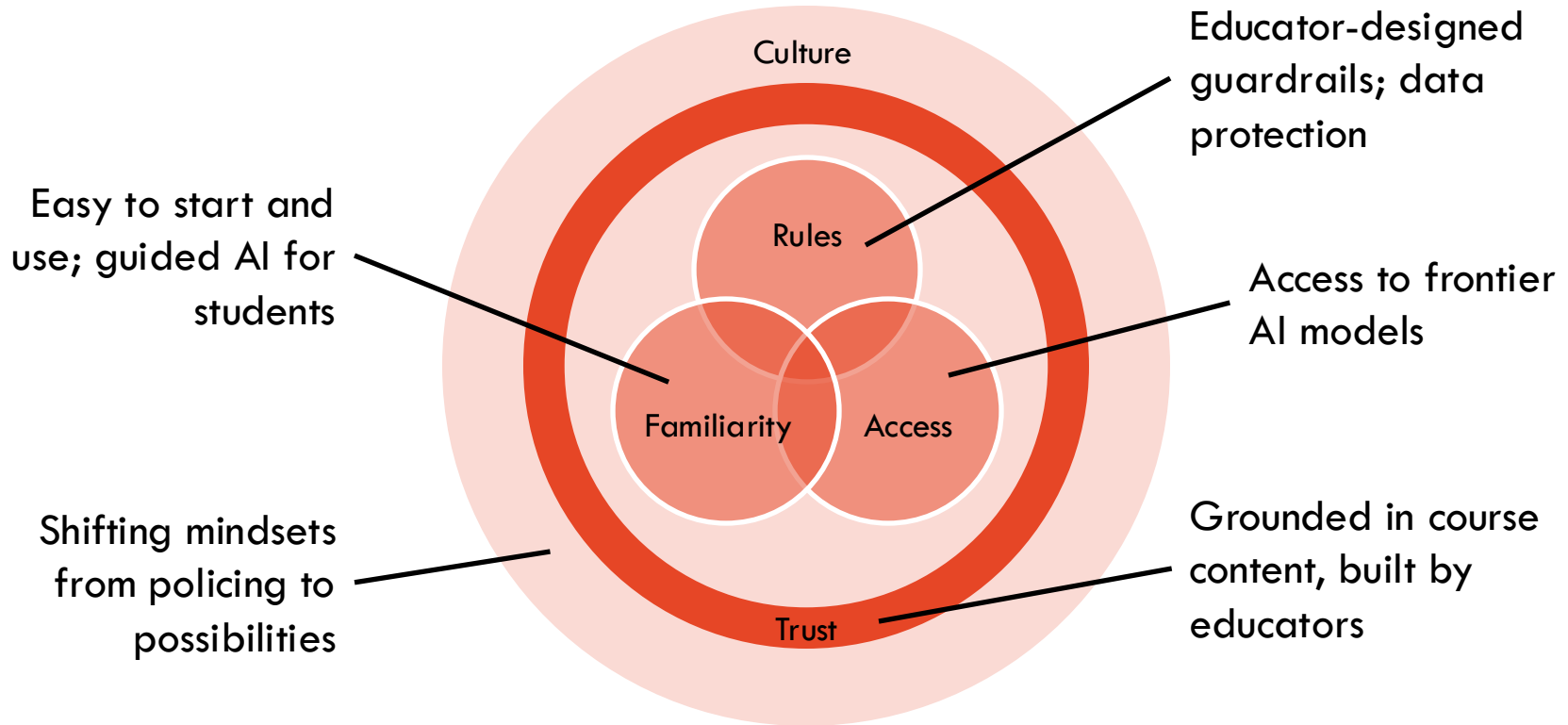


Domestic and international students



Scores improved in both groups, but domestic students consistently score higher than international students regardless of SWA use (around **4 – 5 marks** difference) – *eyeball statistics*

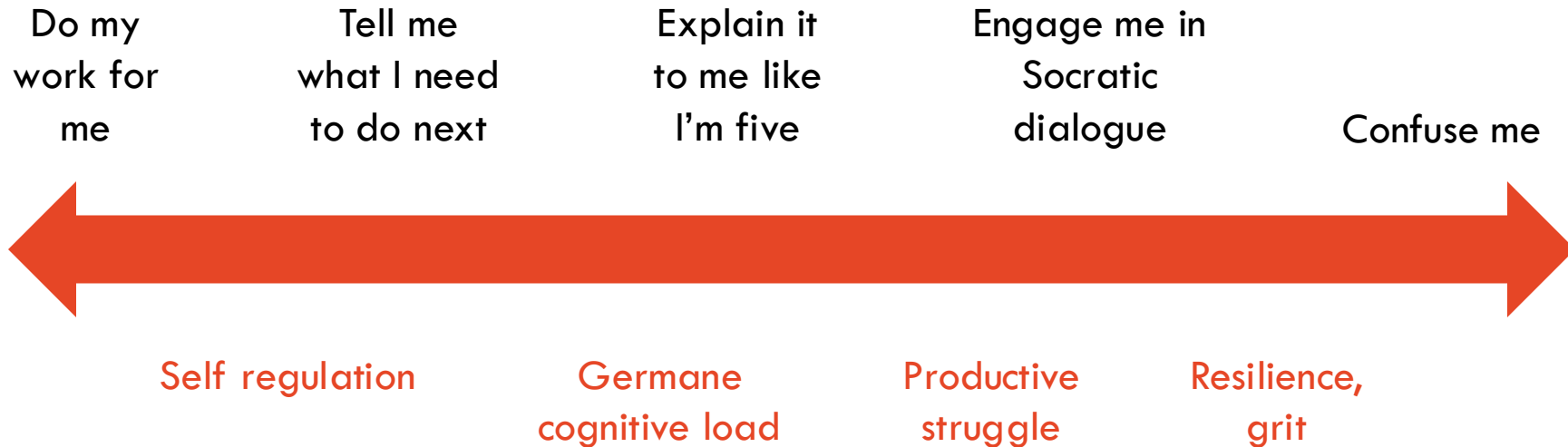
CRAFT applied: Cogniti



Some big questions

Does AI personalise learning or pamper learners?

- What is lost when learners use generative AI in certain ways?



Are we asking the right questions?

How are we teaching, learning, assessing?

2022

2023

2024

2025

2026

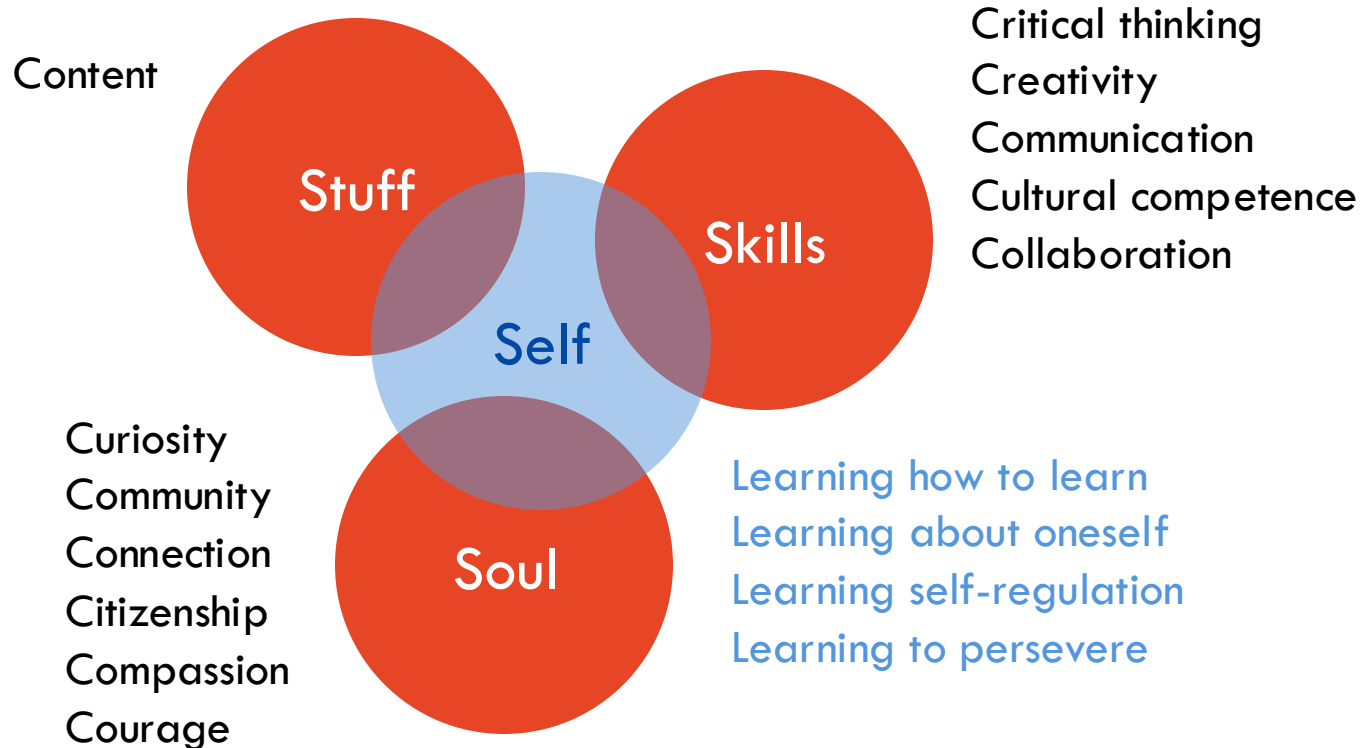
2027

What are we teaching, learning,
and assessing?

Why are we doing this?

Who do we want our students to
become?

What do we value in higher education?



Thank you

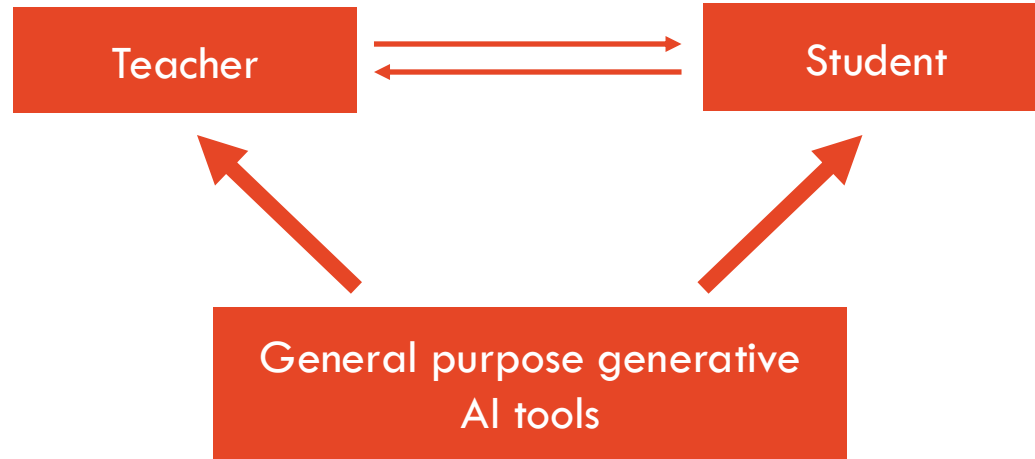
danny.liu@sydney.edu.au

Trust is key

bit.ly/ai-whitepaper2025

Trusting party	Party being trusted	Consequence of trust erosion
Students	Educators	Feelings of hypocrisy and unfairness
Educators	Students	Suspicion and shame, descension into adversarial mindsets, reliance on AI detection
Leaders	Educators	Managerialism, overbearing rules, removal of access, discouraging experimentation
Educators	Leaders	Fear of retribution, lack of experimentation
Students	AI	Fear and avoidance
Educators	AI	Fear, avoidance, and negative advocacy
Community	Researchers	Disbelief in research outcomes
Institution	Vendors	Overbearing procurement processes, lack of engagement and access
Community	Institution	Doubting the validity of awards, doubting the value of a university education to prepare graduates

Issues with mass-market generative AI tools



- Inequitable access
- Lack of control and visibility
- Not grounded in course content/context
- Privacy and IP concerns