



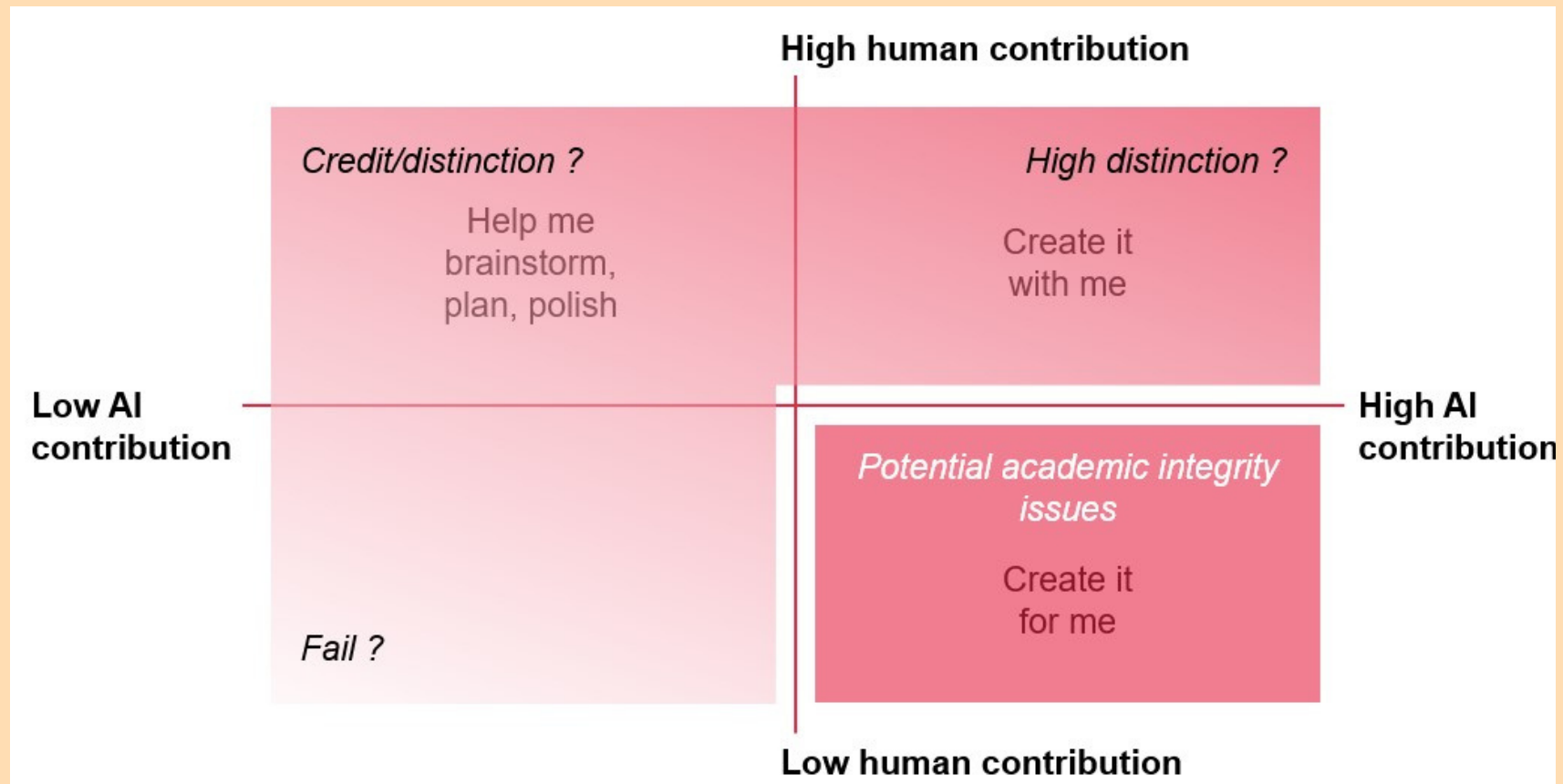
Rethinking the Relationship between Assessment and AI

Corinne Nulton & Brian Snapp

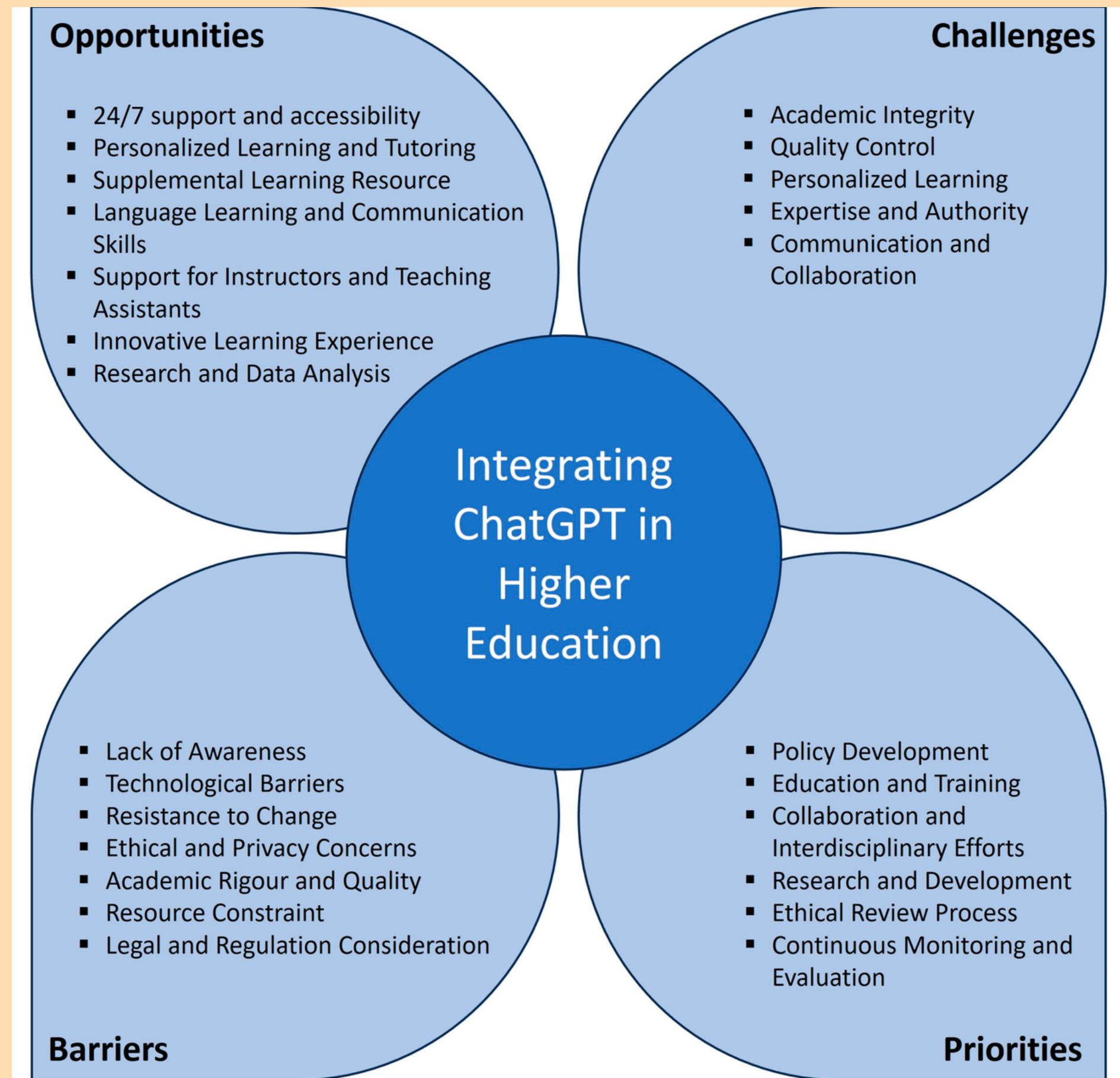


AGENDA

1. Higher Education and AI
2. Student Perspectives on AI
3. AI and Assessment of Written Assignments: Pros and Cons of various methods
4. AI Copilots and Rubrics

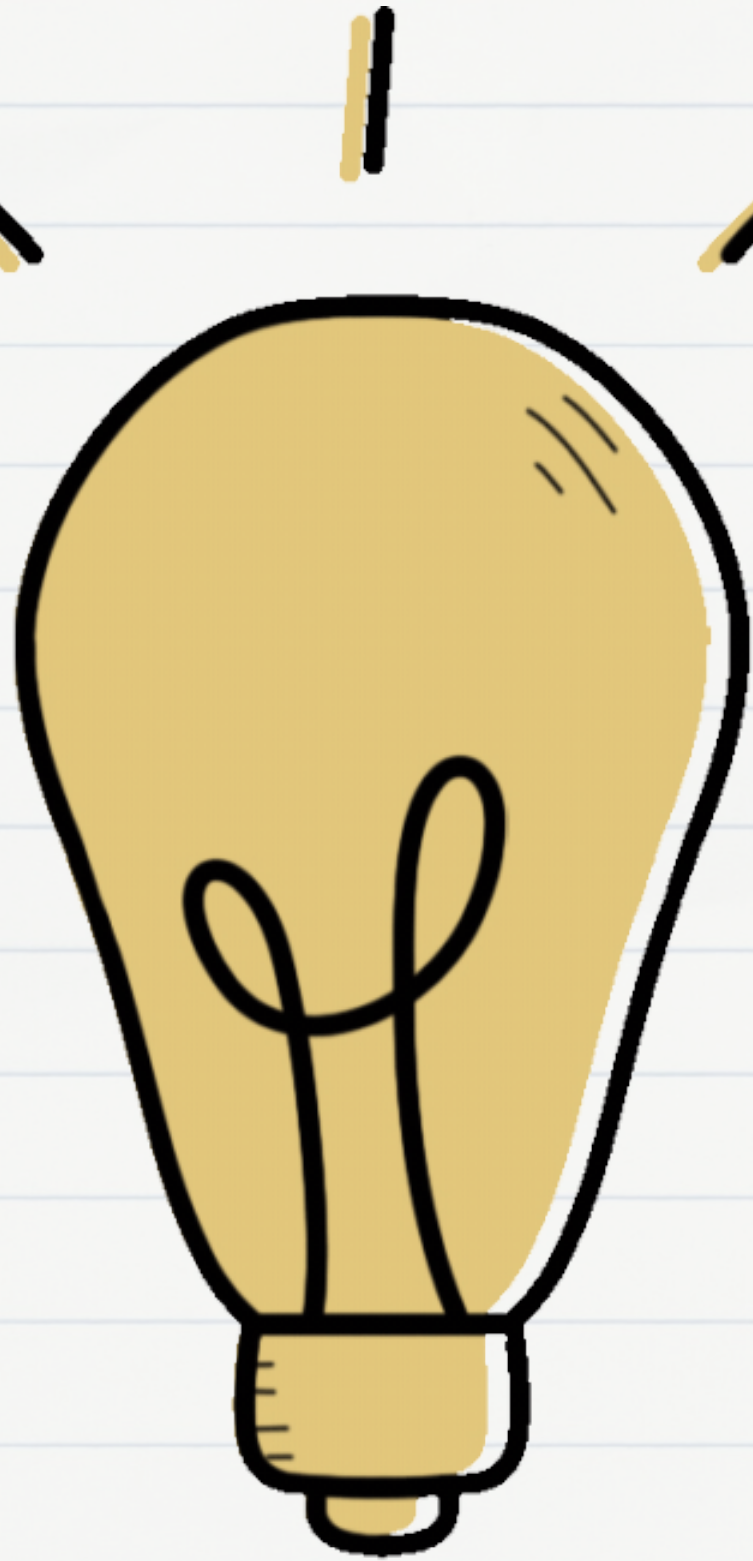


(Liu & Bridgeman, 2023)



(Michel-Villarreal, Vilalta-Perdomo, Salinas-Navarro, Thierry-Aguilera, & Gerardou, 2023).

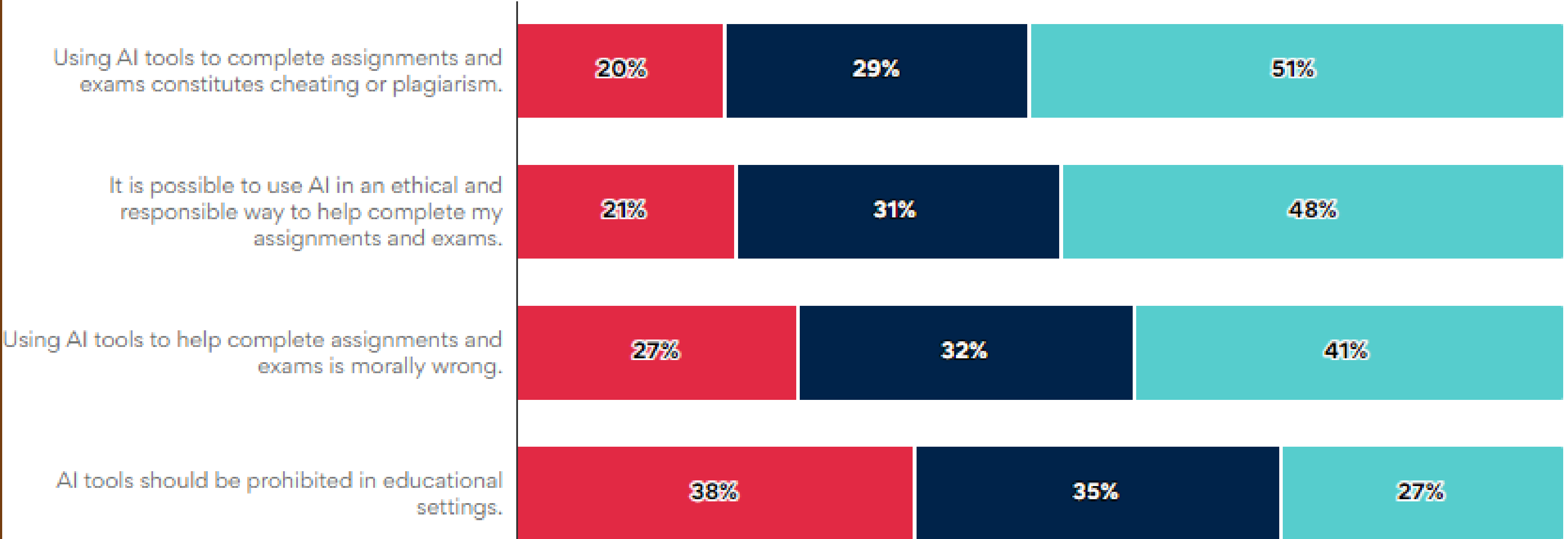
Student Perspectives . . .



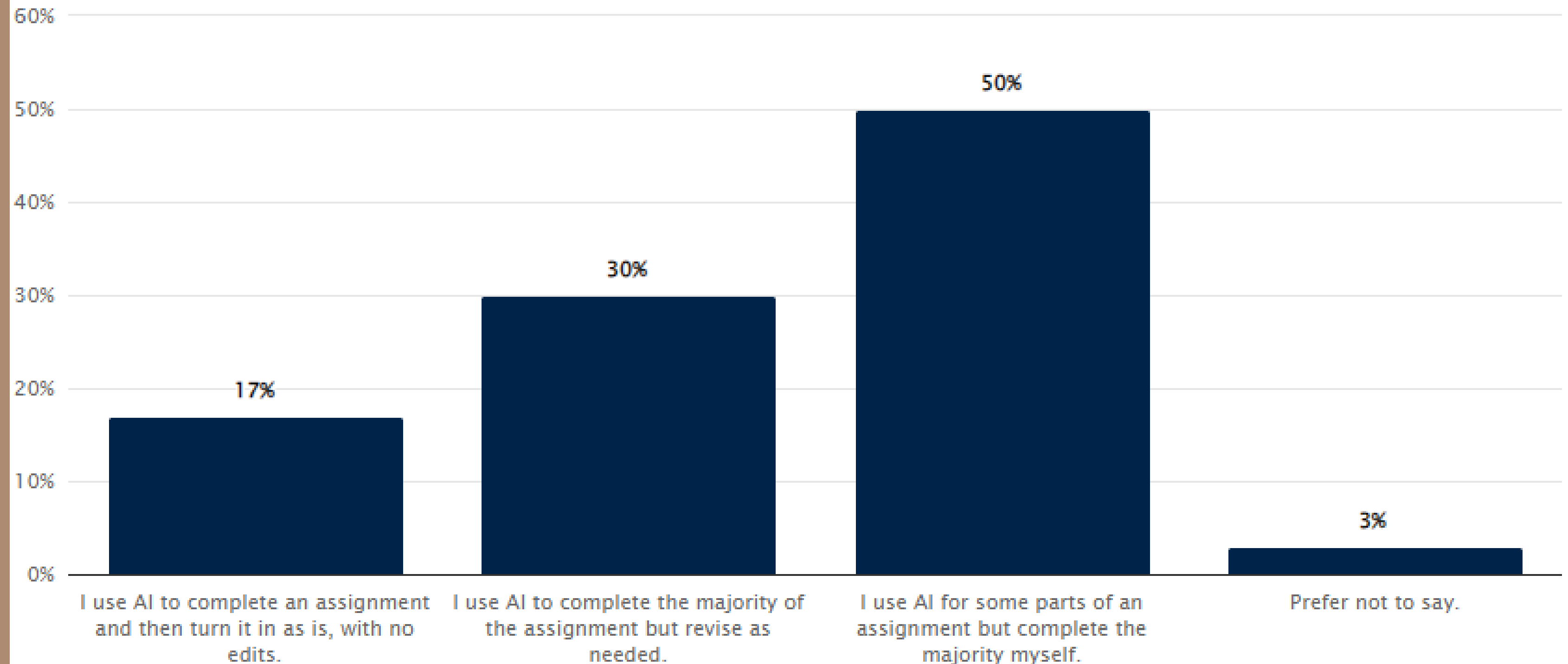
- 1000 current grads and undergrads were surveyed in November by Best Colleges.
- 1 in 5 college students used AI to complete their schoolwork.
- Of these, 89% used it for homework, 53% for essays, and 48% for at-home tests.
- 51% of students thought using ChatGPT for assignments was cheating, but 22% of that 51% still did it.
- AI can generate text that passes as human quality (51% agree)
- AI produces better work than I do (36% agree)
- Instructors cannot detect when I submit assignments with AI (31%)
- Only 4 in 10 students felt that using AI defeats the purpose of education (Red Ventures Company, 2023).

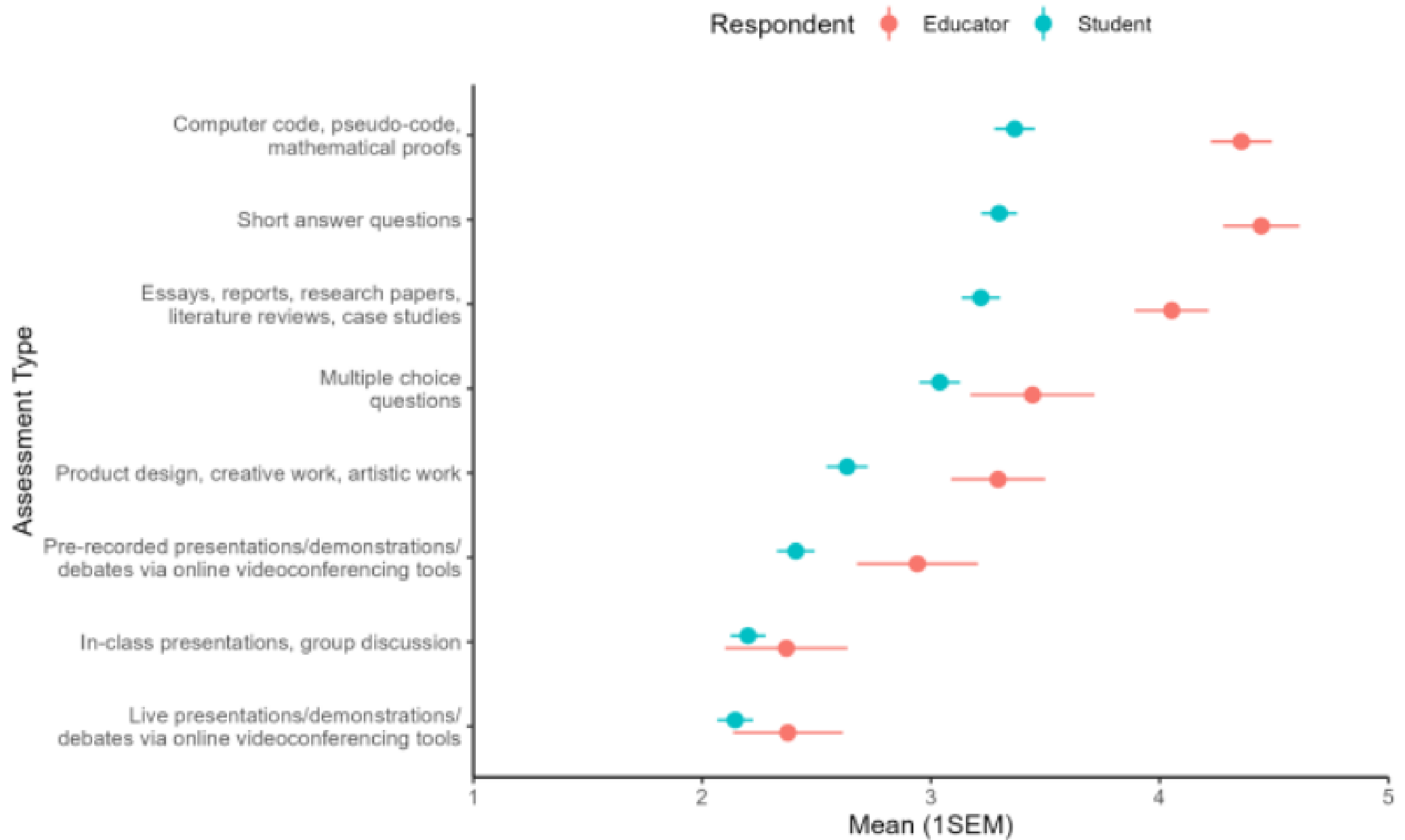
Students and AI Ethics . . .

■ Disagree ■ Neutral ■ Agree



To what extent do you use AI tools like ChatGPT to complete your assignments, exams, or related schoolwork? (N=216)





(Smolansky et al., 2023)

EDUCATORS ARE USING AI, TOO

- Responses from 389 students and 36 educators across two universities, one in US and one in Australia
- All knew about ChatGPT
- Most frequently mentioned ChatGPT, Anthropic, Bard, BingChat, ClaudeAI, DALL-E, Midjourney, and Stable Diffusion
- One in four students used it weekly or daily for coursework (29% Australia; 24% US)
- “. . . educators were using it weekly or daily for professional purposes (35% Australia; 10% US), for research (15% Australia; 30% US), and for fun (31% Australia; 40% US) . . .” (Smolansky, 2023, p.380).



Process Based Grading

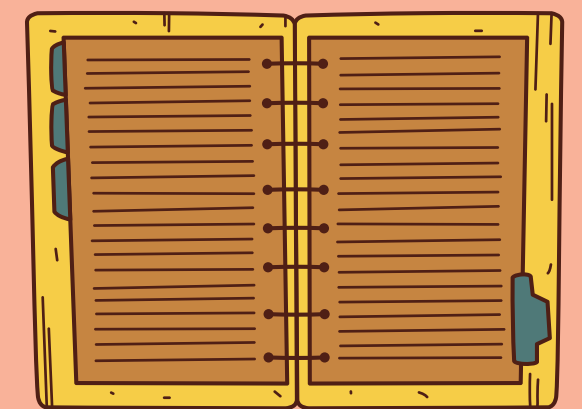
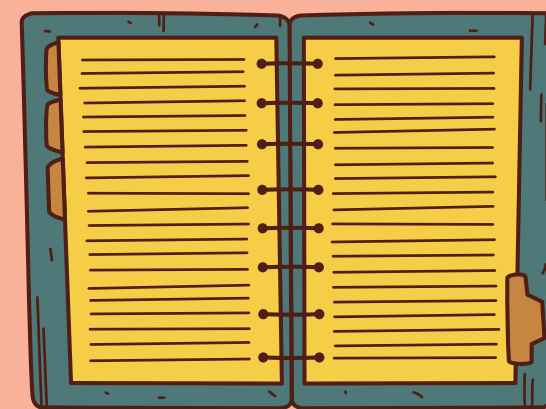
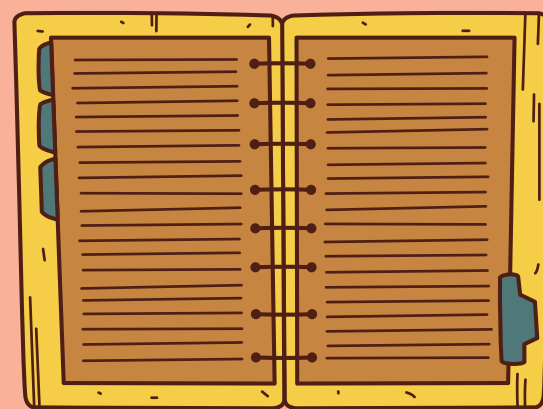
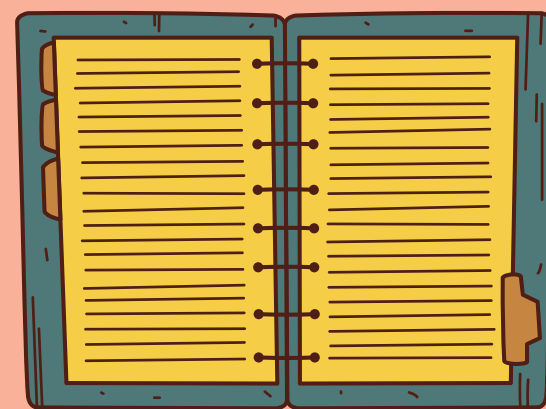
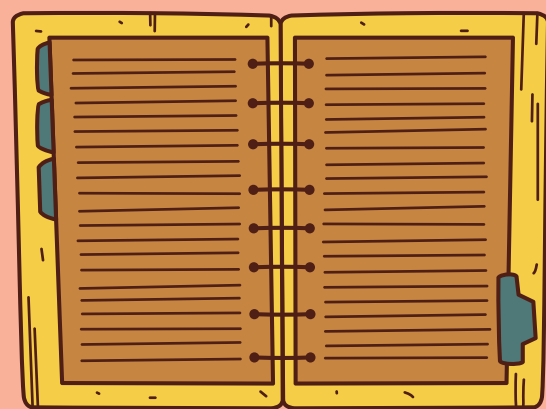
This requires instructors to scaffold assignments while collecting and evaluating student work throughout the writing process (Warner, 2021).

AI Use is Difficult because . . .

- Multiple examples of authentic student writing
- Transparency in idea development
- Half-baked essays are possible, but difficult to prompt through AI

Implementation is difficult because . . .

- Requires more grading/feedback
- Conscious dividing of larger assignments
- Less writing opportunities for a variety of prompts



PROCESS BASED GRADING

01

Collect Sources

Evaluate the quality and quantity of sources a student collects

03

Draft #1

Examine thought process for flaws or gaps

02

Thesis/Idea/Introduction

The student is able to take an informed stance on a topic and expresses that in a thesis or introduction or abstract.

04

Final Draft

Give feedback on final product

Real-Time, In-Person

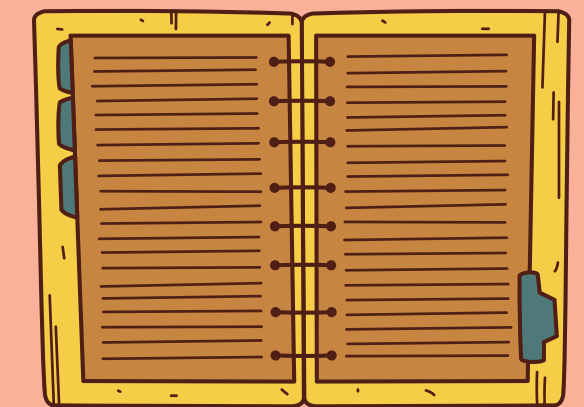
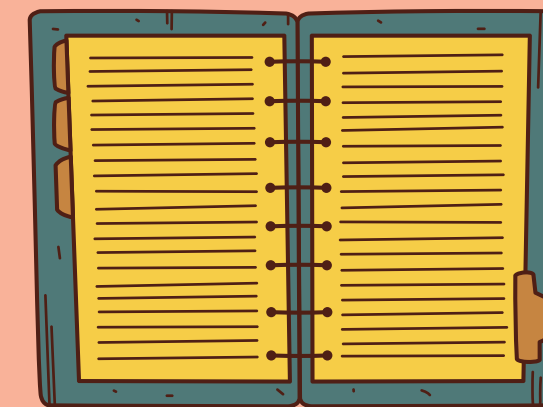
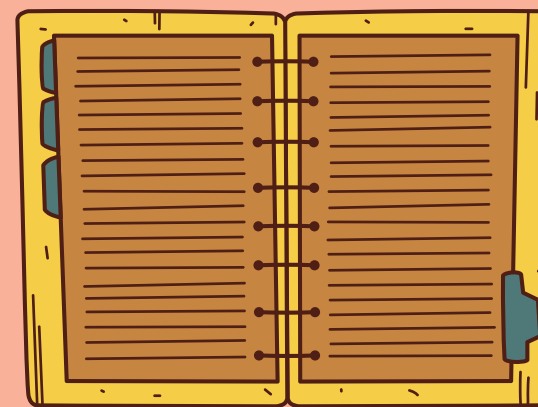
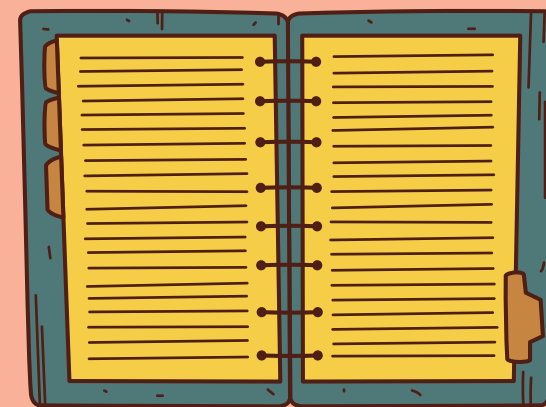
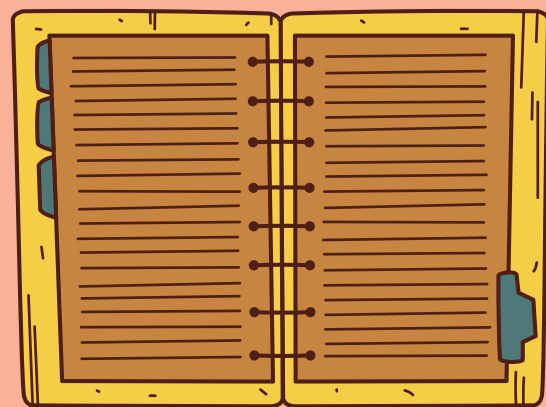
Incorporating in-class essays, presentations, or discussions that are graded based on how the student demonstrates their knowledge in-person and in real-time, (Lo, 2023).

AI Use is Difficult because . . .

- They'd have to justify answers in a live atmosphere

Implementation is difficult because . . .

- It takes up class time
- It is not conducive for all learning styles/abilities
- They can still use AI to prepare



Paper Conferences

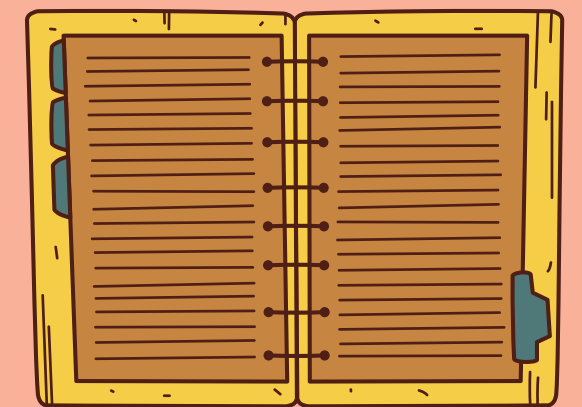
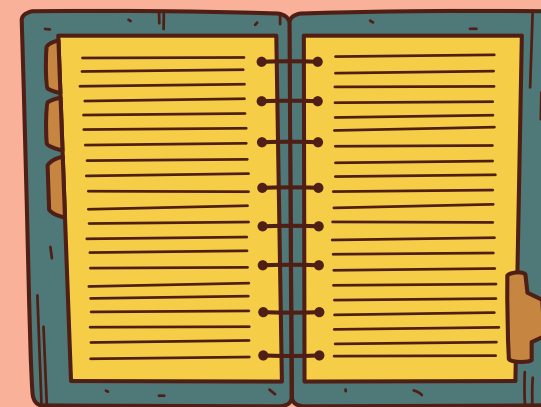
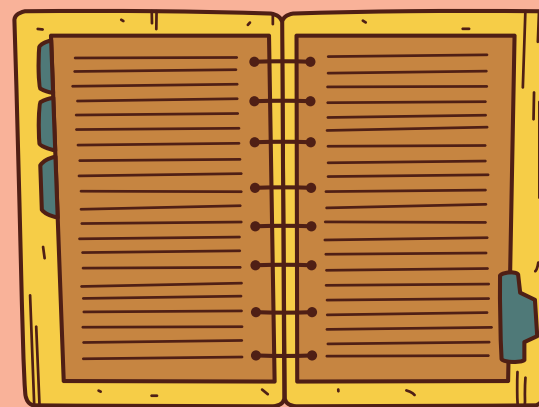
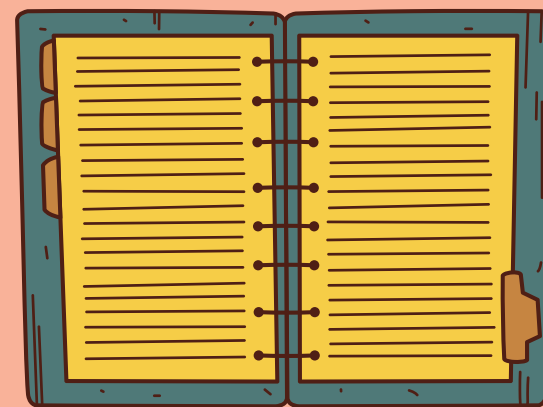
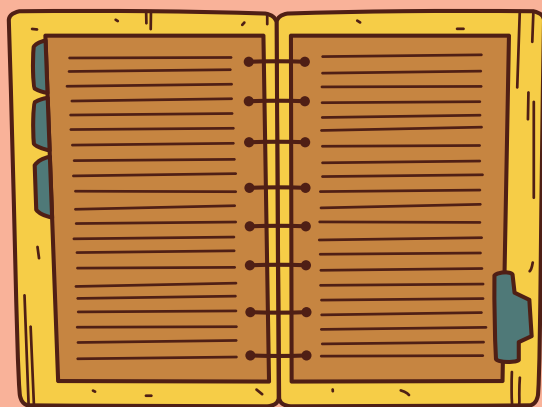
Teachers meet one-on-one with the student to discuss/grade their paper, discuss their ideas, their writing process, and how to improve their skills. Students are an active part of the evaluation process (Lo, 2023).

AI Use is Difficult because . . .

- If a student knows they will be asked to justify their use of ideas, evidence, and word-choice, they will likely be too afraid to use AI for the entirety of an assignment.

Implementation is difficult because . . .

- Requires 20 minutes to an hour per student depending on the length of the paper, the complexity of the ideas, and the skills to improve.



Self-Assessment

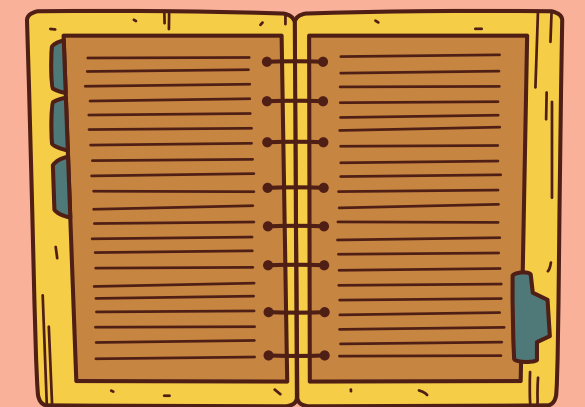
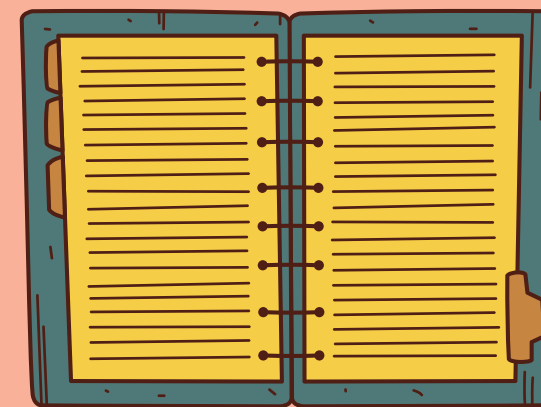
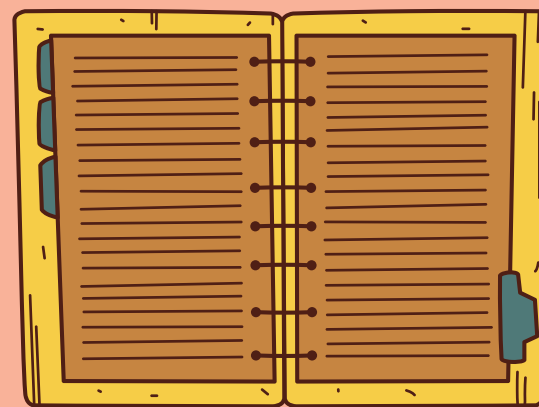
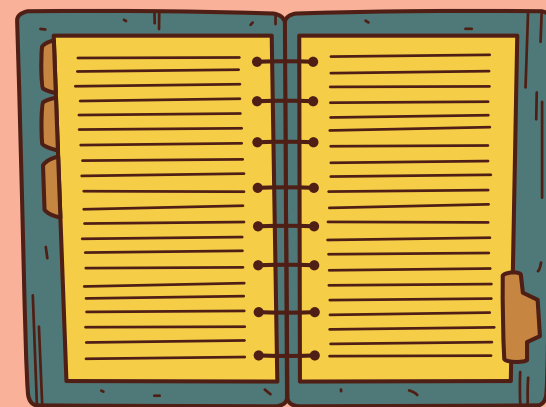
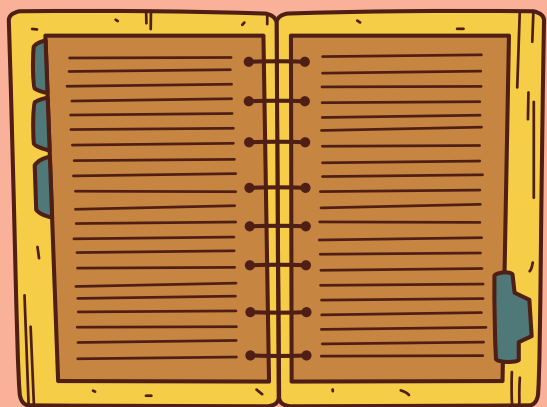
This would involve students assessing their completion of one or more written assignments and justifying their self-evaluation based on guided- reflection of their work and process (Ventayen & Magno, 2023).

AI Use is Difficult because . . .

- If a student knows they will be asked to justify their use of ideas, evidence, and word-choice, they will likely be too afraid to use it for the entirety of an assignment.

Implementation is difficult because . . .

- Really each assignment doubles, right?
- How many points is the self-evaluation compared to the actual essay?
- AI can generate a self-assessment



Document History

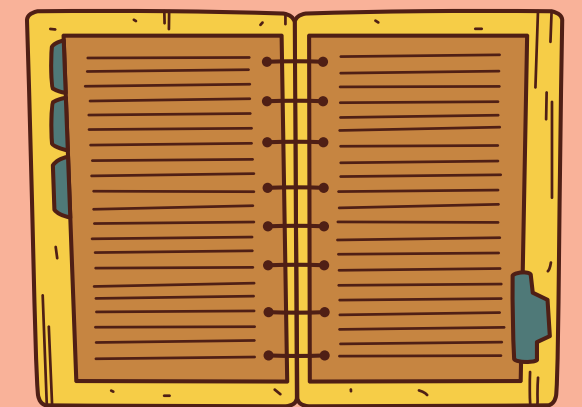
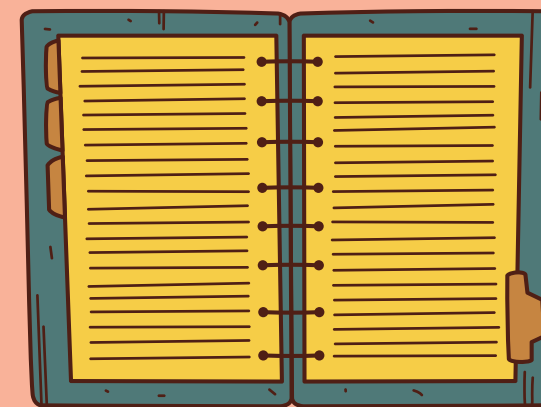
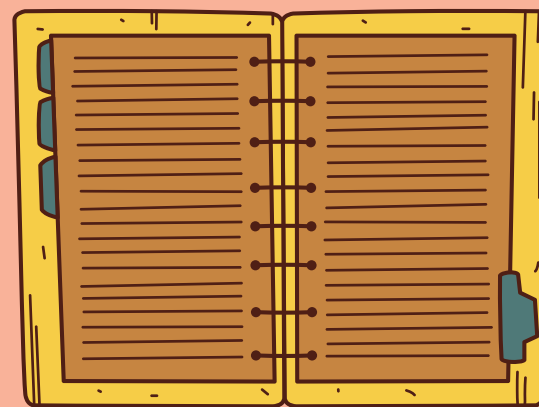
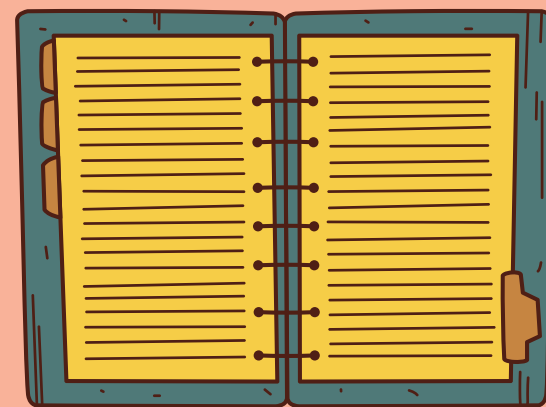
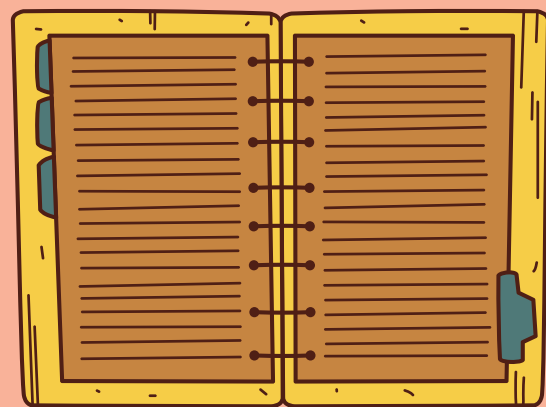
Closely related to process-based grading, but requires less dramatic course changes. Student submits a document with the entire version history of the file. An example would be track changes in MS Word throughout the writing process or access to a document's history in Google Docs.

AI Use is Difficult because . . .

- The instructor can see the development of text and ideas.
- Text that is copied and pasted into a document is clearly indicated.

Implementation is difficult because . . .

- Grading may be more time consuming if you review every document's history.
- May work better as a deterrent or confirmation of AI.



Compare and Integrate Sources

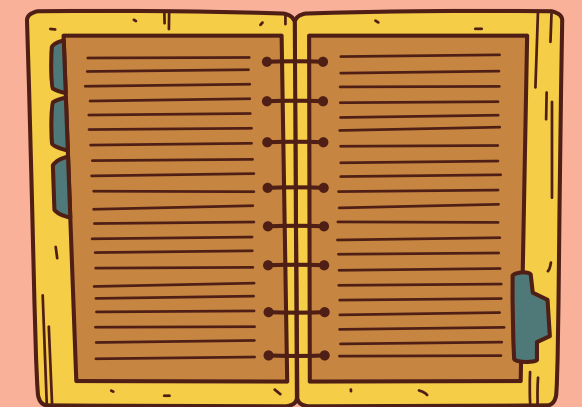
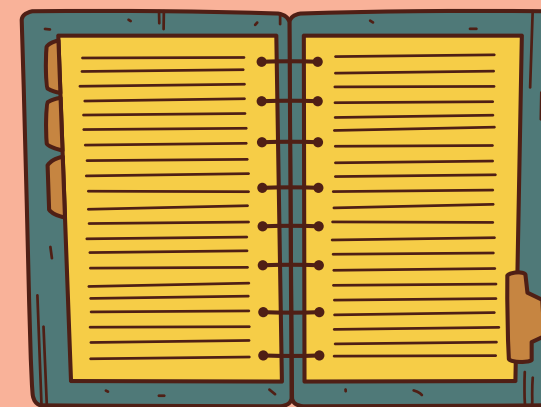
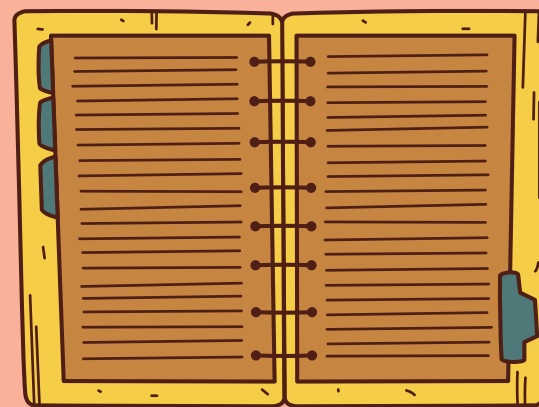
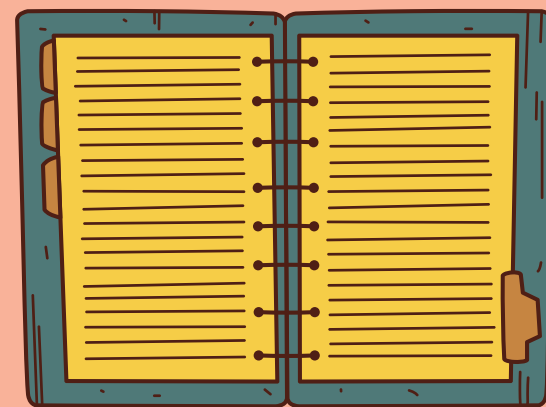
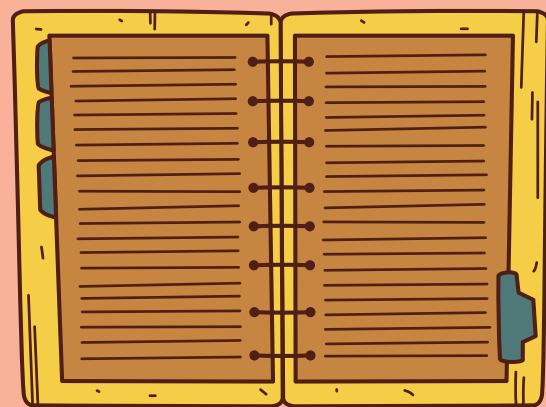
AI can paraphrase, summarize, and synthesize well. It struggles to put specific, credible sources in conversation with each other in a complex way due to paywalls. It can generate abstracts, but not specific textual evidence or details (Overono, & Ditta, 2023)

AI Use is Difficult because . . .

- The student would have to upload their research first, and then ask for paragraphs

Implementation is difficult because . . .

- Students can have AI improve a complete draft, and it's difficult (if not impossible) to prevent



Make it Personal

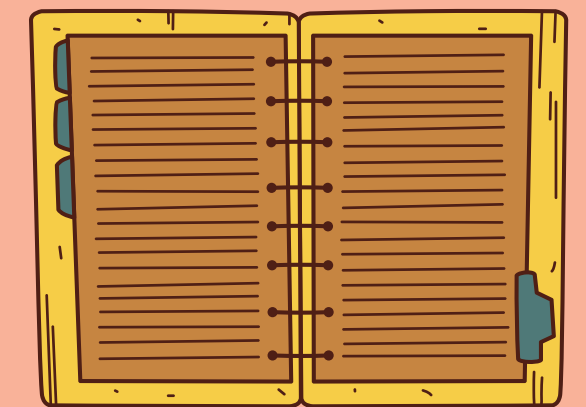
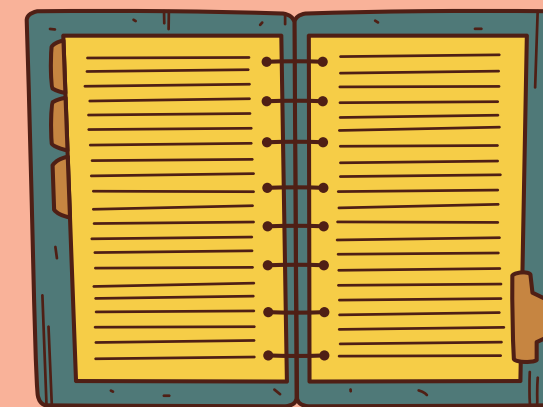
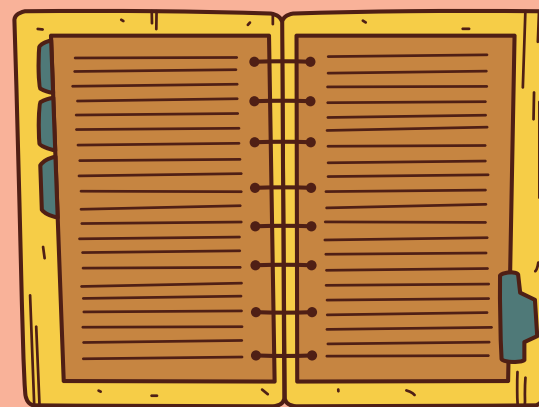
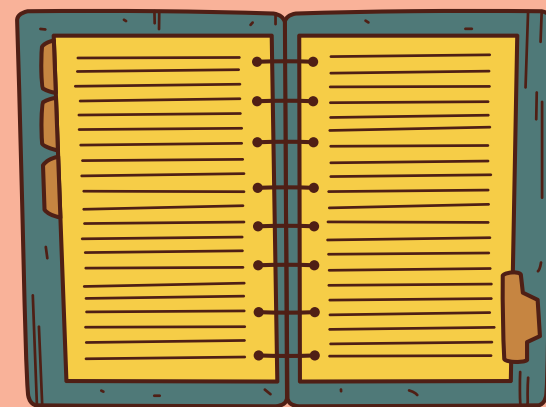
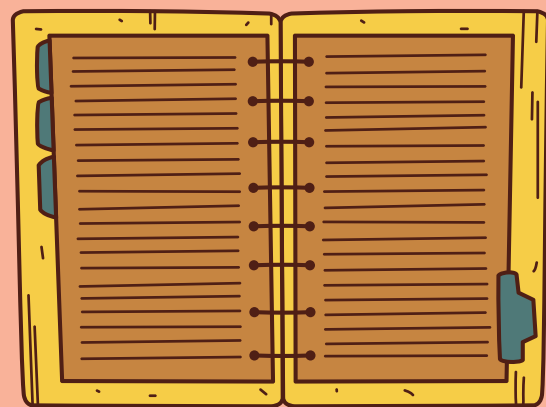
Ask the student to apply the knowledge gained in a personal essay. AI can generate detailed personal narratives, but they do not have the creativity or uniqueness of an actual student (Ventayen & Magno, 2023).

AI Use is Difficult because . . .

- The essay generated would not be about the specific student, so they would need to revise it or amend it.

Implementation is difficult because . . .

- Students can have AI improve a complete draft, and it's difficult (if not impossible) to prevent. They can input specific details they'd like to be included.



Growth-Based Grading

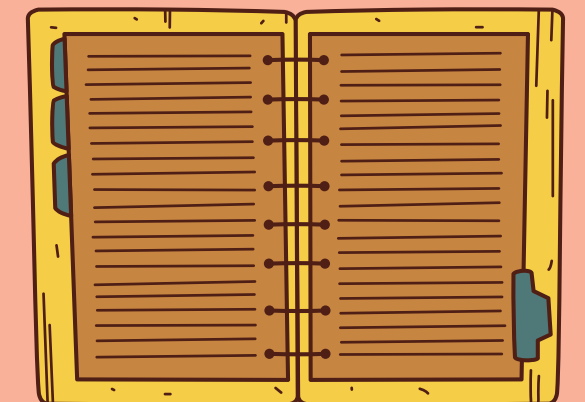
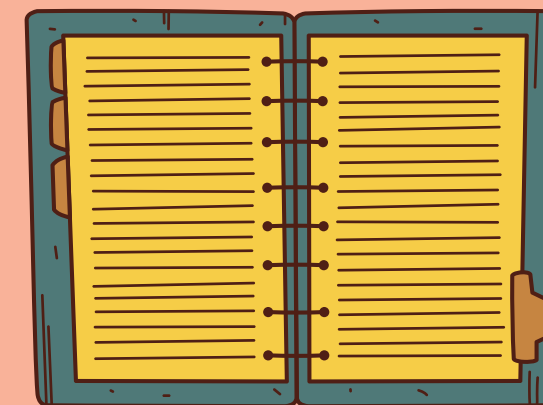
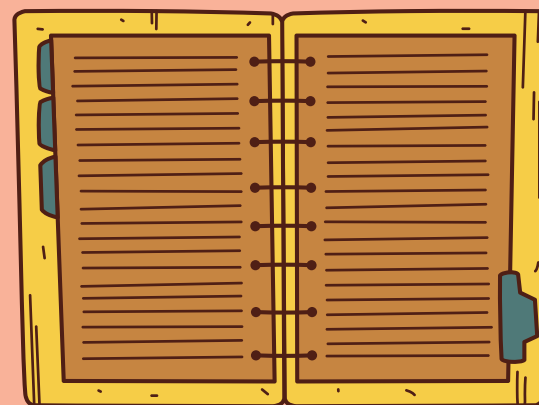
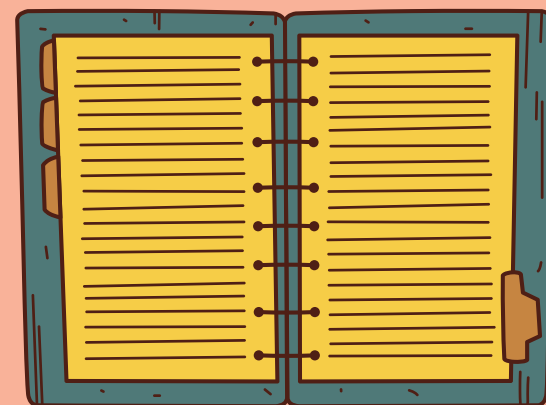
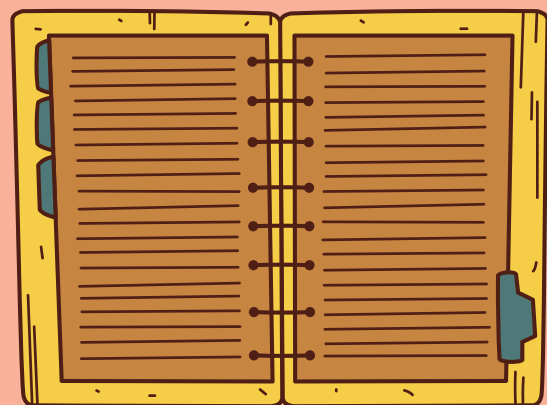
Similar to process model, but focused more on the student's growth or how their perspective has developed. An assignment like this might consist of a student writing their understanding of a topic at the beginning of the semester, and then revising that document at the end with their new knowledge/perspective, (Warner, 2021).

AI Use is Difficult because . . .

- The students will likely want to reflect on growth and ChatGPT will not have access to all of their current and previous knowledge on the topic .

Implementation is difficult because . . .

- ChatGPT will still generate generic growth for an assignment like this.



Tasked-Based Rubrics

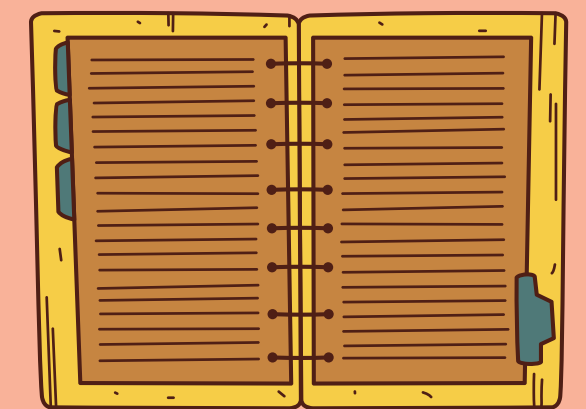
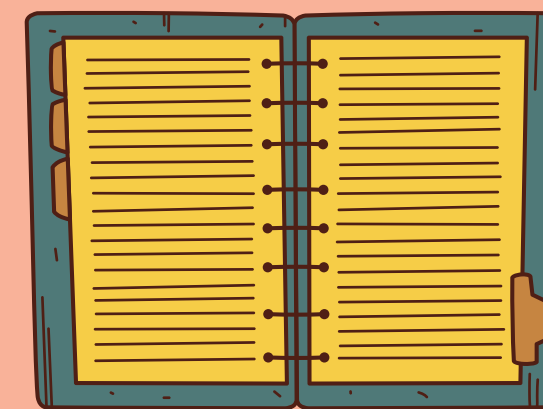
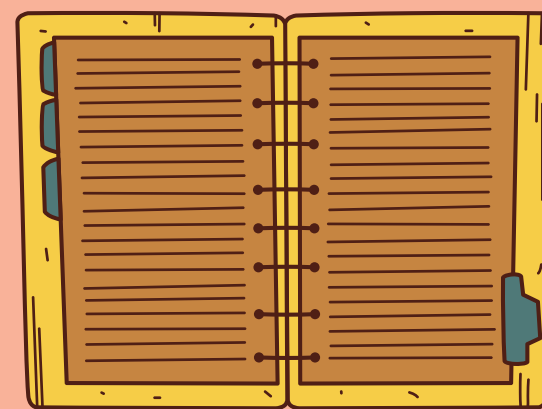
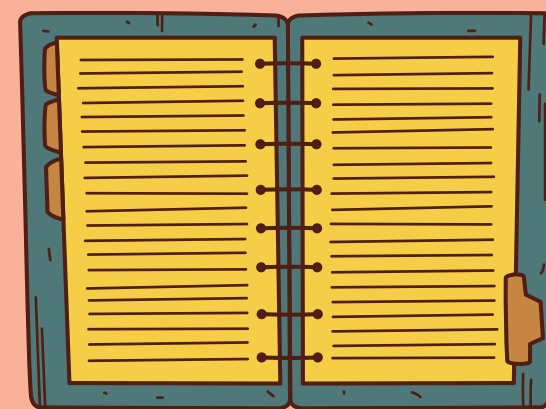
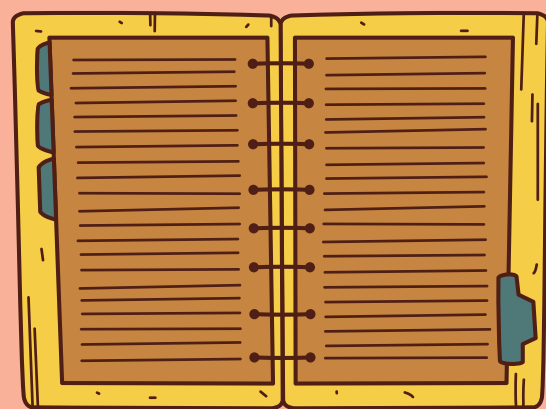
These are also known as activity-based rubric. Students demonstrate skills/knowledge by incorporating predefined elements in their writing. This works well when exposing students to writing norms within a discipline

AI Use is Difficult because . . .

- AI can be prompted to complete the written tasks one-by-one, but it will be very difficult to generate an essay based off a task-based rubric.

Implementation is difficult because . . .

- Expressionists, rightfully, hate this, because it reduces writing to formulas.
- Students love it because expectations are clear, so clear they may intentionally omit sections or create choppy papers.



Limit Information Used

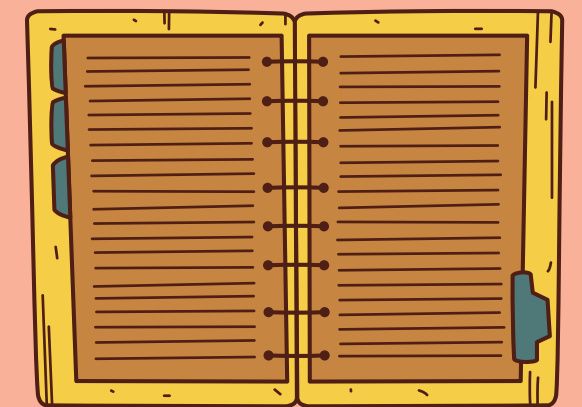
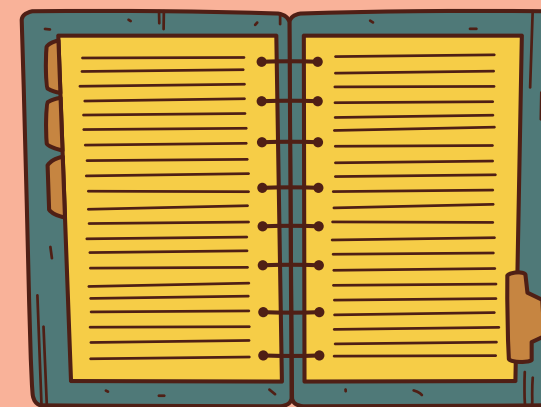
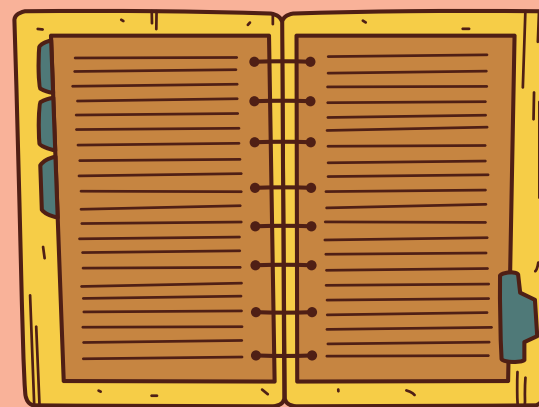
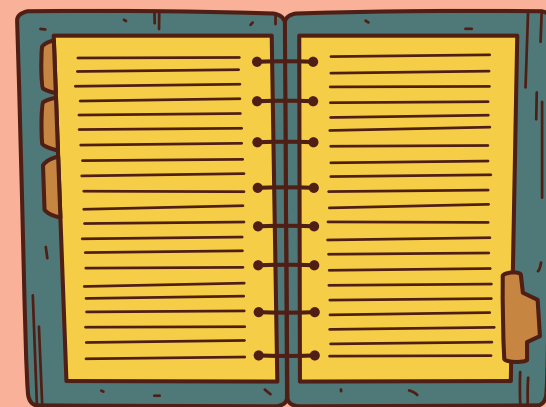
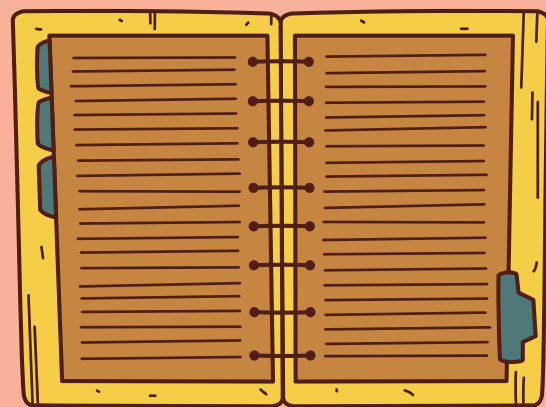
AI cannot access recent information or information presented in class discussions. If you limit the written assignment to specific information, it could be a challenge to use AI. You could ask students to apply skills to a situation or case study.

AI Use is Difficult because . . .

- The student would have to upload their class notes or a recent news article, and then ask for paragraphs

Implementation is difficult because . . .

- Students can have AI improve a complete draft, and it's difficult (if not impossible) to prevent



Make it Multimodal

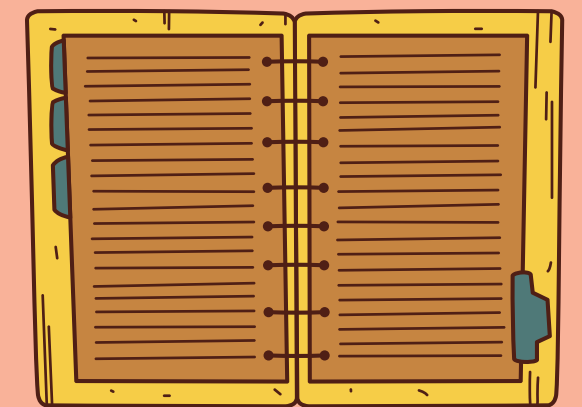
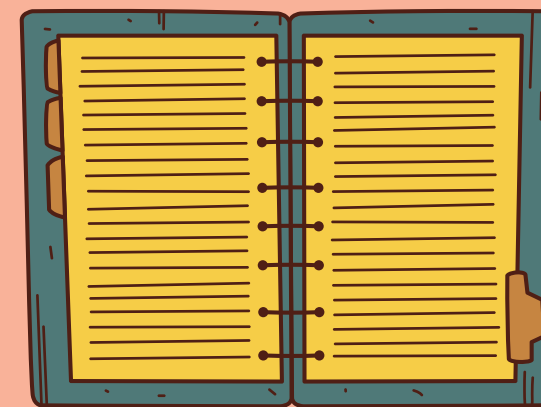
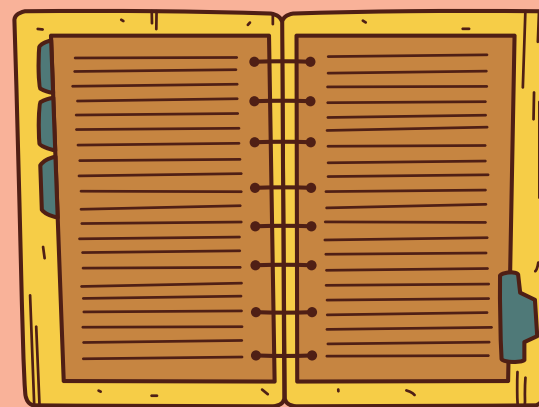
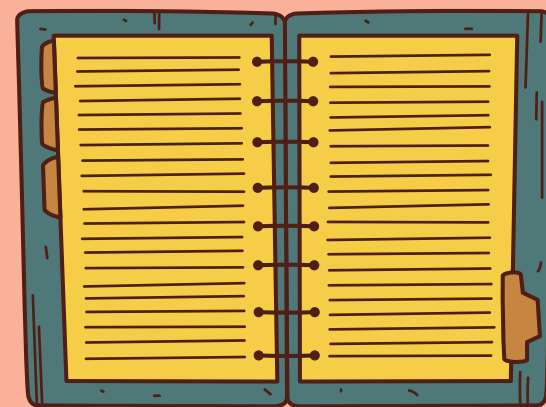
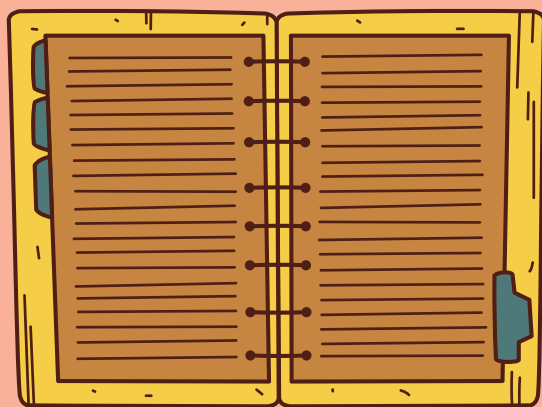
Use images, audio, and video as well as text. Assign a presentation rather than a paper etc. (Overono & Ditta, 2023).

AI Use is Difficult because . . .

- The assignment calls for more than text and it would not be able to smoothly integrate the mediums (as of today)

Implementation is difficult because . . .

- Are students really good with technology these days?



Make it Collaborative

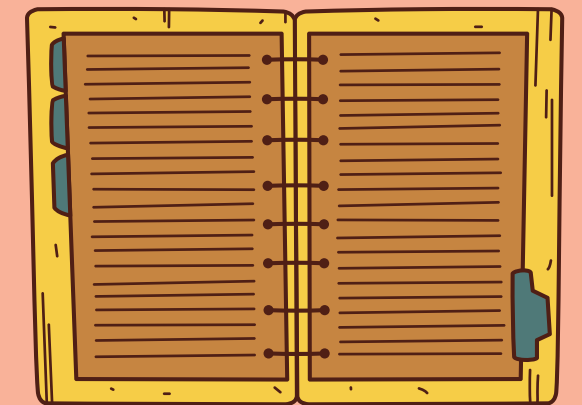
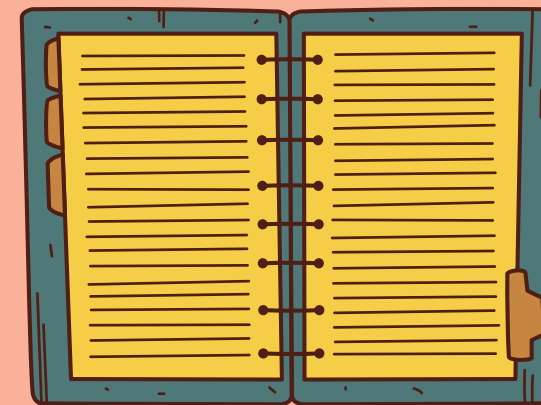
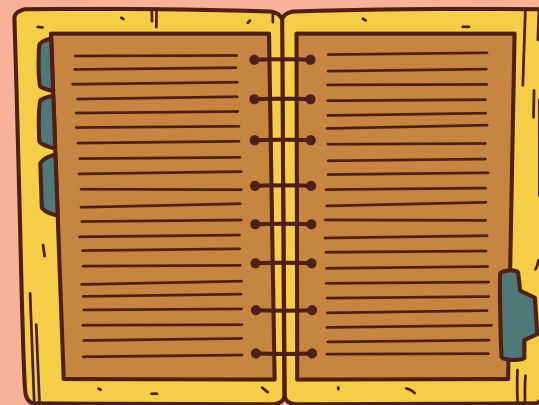
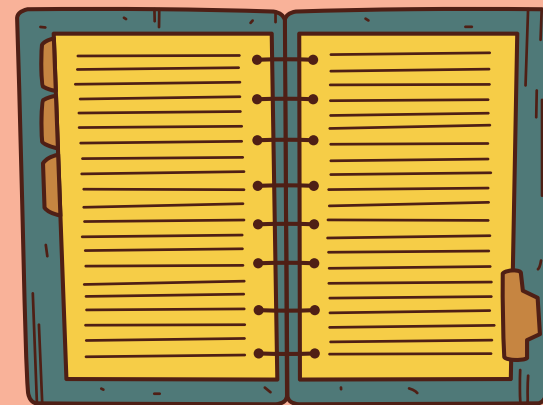
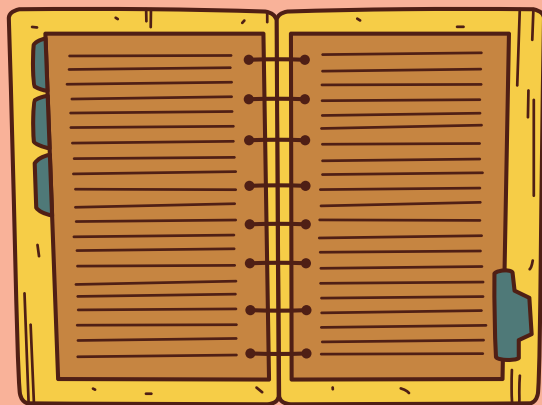
Co-authorship is an authentic real-world experience that can improve the quality of student work . It simulates collaboration in future profession.
(Overono & Ditta, 2023).

AI Use is Difficult because . . .

- Students can hold each other accountable.

Implementation is difficult because . . .

- All the same challenges as group work . . .



THE FUTURE OF AI IN WRITING SPACES

- AI writing copilots
- “Microsoft 365 Copilot and Google Duet are the names of new AI generative technology that will embed AI directly into software like Microsoft Word and Google Docs. This means that we will all have access to text generation AI right from within the spaces where we write,” (Liu & Bridgeman, 2023).
- AI integration will lead to rubrics that assess AI usage.



THE FUTURE OF AI IN WRITING SPACES

The image is a video thumbnail for a Microsoft 365 Copilot in Word video. It features a blurred background of a person's hands typing on a laptop. Overlaid on this is a screenshot of the Microsoft Word interface, showing the ribbon and a document page with text. A large red play button icon is centered over the screenshot. In the top left corner, there is a Microsoft 365 logo and the text 'Microsoft 365 Copilot in Word'. In the top right corner, there is a 'Share' button with a right-pointing arrow. In the bottom left corner, there is a black box with the Microsoft logo and the text 'Watch on YouTube'.

Microsoft 365 Copilot in Word

Share

Copilot in Word

Microsoft

Watch on YouTube

EVALUATING CO-CREATION WITH AI

A Potential Assessment Template (Liu & Bridgeman, 2023)

1. AI prompt design that demonstrates disciplinary expertise
2. Critical evaluation of AI suggestions
3. Revision process
4. Information and digital literacy
5. Documentation and reflection on the co-creation process
6. Ethical considerations



Consider your current written assessments . . .

- 1.) How do your assessments reflect your pedagogy or your beliefs about how knowledge is attained, connected, and applied?
- 2.) How does AI impact your current means of student assessment? What sort of challenges does it pose?
- 3.) Have you changed your assessments to deter or encourage AI usage? If so, how?

How Does AI Change our Understanding of Pedagogy?



Constructivism

Can AI help students construct knowledge as a peer would?

Behaviorism

If students learn from repetition, drills, and routine, can AI provide out-of-classroom learning opportunities?

Cognitivism

If information is given rather than gathered, how does it impact information processing and conversion to memory?

Humanism

Can AI offer more individualized, student-centered learning environments without classroom constraints?

Connectivism

Can AI teach students how to gather high quality information?
Will it eventually be the way in which we gather or condense information or address knowledge gaps?

RESOURCES

A quick overview of AI and Assessment Challenges and Suggestions

<https://blogs.deakin.edu.au/cradle/wp-content/uploads/sites/188/2023/06/CRADLE-Suggests-Assessment-and-genAI.pdf>

University of Queensland Australia Authentic Assessment Factory:

<https://aif.itali.uq.edu.au/node?search=&op=Search&filter%5B111%5D=111&level=All>

Prompt engineering to improve assessments: <https://educational-innovation.sydney.edu.au/teaching@sydney/prompt-engineering-for-educators-making-generative-ai-work-for-you/>

Human vs. ChatGPT Essays/Discourse Markers: Herbold, S., Hautli-Janisz, A., Heuer, U., Kikteva, Z., & Trautsch, A. (2023). A large-scale comparison of human-written versus ChatGPT-generated essays. *Scientific Reports* (Nature Publisher Group), 13(1), 18617. <https://doi.org/10.1038/s41598-023-45644-9>



ADDITIONAL RESOURCES

Pros and Cons of ChatGPT as a Writing Assistant: Imran, M., & Almusharraf, N. (2023). Analyzing the role of ChatGPT as a writing assistant at higher education level: A systematic review of the literature. *Contemporary Educational Technology*, 15(4), ep464.

Another writing assessment model for an AI Age: Hsiao, Y. P., Klijn, N., & Chiu, M. S. (2023). Developing a framework to re-design writing assignment assessment for the era of Large Language Models. *Learning: Research and Practice*, 9(2), 148-158.
<https://www.tandfonline.com/doi/pdf/10.1080/23735082.2023.2257234>

Strengths and Weaknesses of ChatGPT, plus some assignment recommendations: Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education?. *Journal of Applied Learning and Teaching*, 6(1).



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Deakin University . (2023). Assessment and genAI. Deakin University Blogs. <https://blogs.deakin.edu.au/cradle/wp-content/uploads/sites/188/2023/06/CRADLE-Suggests-Assessment-and-genAI.pdf>

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Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences*, 13(4), 410.

Smolansky, A., Cram, A., Radulescu, C., Zeivots, S., Huber, E., & Kizilcec, R. F. (2023, July). Educator and student perspectives on the impact of generative AI on assessments in higher education. In *Proceedings of the Tenth ACM Conference on Learning@ Scale* (pp. 378-382).

Michel-Villarreal, R., Vilalta-Perdomo, E., Salinas-Navarro, D. E., Thierry-Aguilera, R., & Gerardou, F. S. (2023). Challenges and opportunities of generative AI for higher education as explained by ChatGPT. *Education Sciences*, 13(9), 856.

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Red Ventures Company. (2023, November 27). Half of college students say using AI is cheating: BestColleges. BestColleges.com. <https://www.bestcolleges.com/research/college-students-ai-tools-survey/>

Ventayen, Randy Joy Magno, ChatGPT by OpenAI: Students' Viewpoint on Cheating using Artificial Intelligence-Based Application (February 16, 2023). Available at SSRN: <https://ssrn.com/abstract=4361548> or <http://dx.doi.org/10.2139/ssrn.4361548>

Warner, J. (2021). An ultra-sophisticated language AI shows the way toward better writing assessment. *Higher Education News, Events and Jobs*. <https://www.insidehighered.com/blogs/just-visiting/ultra-sophisticated-language-ai-shows-way-toward-better-writing-assessment>.