

Yael Erez, Kevin Lin, Geoff Challen, Orit Hazzan

Adapting Computing Assignments for the AI Era

What Are You (Not) Changing, and Why?

Shared Vocabulary: Four Dimensions

gr
ou
p

AI Collaborative

Students are expected to use AI; the work would be unreasonable without it.

sp
ee
d

AI Feedback

AI provides rapid feedback at a volume a human grader cannot match. Final grading can still be human.

ps
yc
ho
log
y

AI Reflective

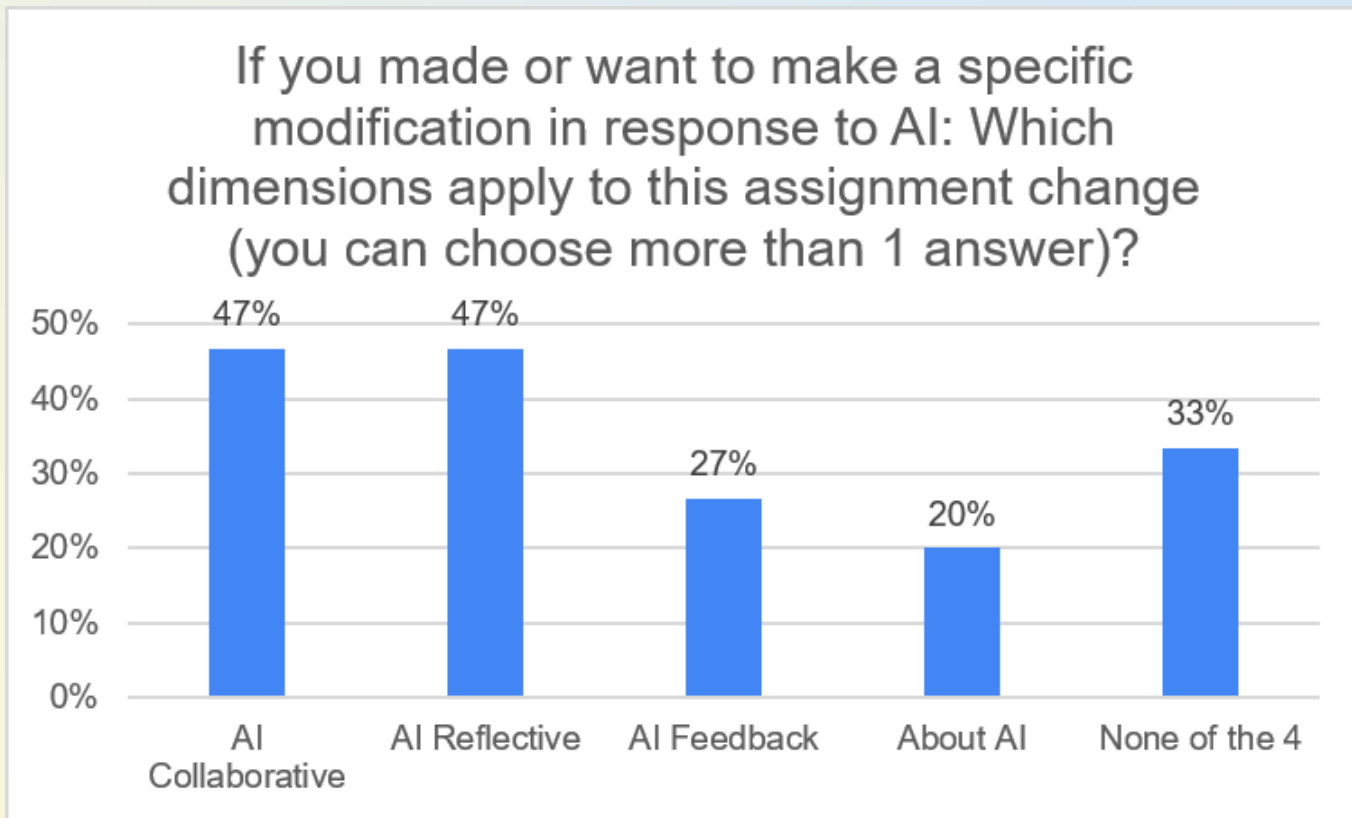
What is assessed includes how effectively students work with AI e.g. logs, process reflections, prompt histories.

sci
en
ce

About AI

AI itself is the subject matter: object of analysis, interlocutor, or generator to critique.

Shared Vocabulary: Four Dimensions, N=15



Participant Example 0

What they did

We increased the weight of proctored written exams (midterm+final) from being worth 60% of students' final grade to 75%

Why they did it

Our increasing of written exam weights was reactive to the rampant AI-aided cheating that we observed when LLMs started becoming more prominent. We panicked and increased the weight of what we could proctor in person to hopefully mitigate this. This is clearly not enough and our formative changes (which we hope to implement soon) aim to create a better learning experience for students and develop skills which they can use alongside AI tools if they so choose

Participant Example 1

What they did

We have transitioned to more proctored assessments, adding oral homework assignments, and more frequent exams and quizzes. But that really is not as useful to get to really deep algorithmic thinking (i.e. the “shower moment” questions).

Why they did it

The goal was to peer into students understanding in the absence of AI. For this course, it's hard to see how collaboration can really be a part of learning.

Participant Example 2

What they did

Students are randomly selected for an interview about their problem set. They have to explain their answers as well as minor follow-up questions. They are not graded on correctness, but on their ability to explain what they did and why.

Why they did it

The goal was to make sure students have “put in the sweat” in their assignments. Even if they used AI, if they could explain their answer and answer follow-up questions then presumably they learned the material at a sufficient depth.

Participant Example 3

What they did

In [my course], we added “structured comments” which allowed students to document the provenance of their code in line in the code. We added a linter tool to check if the documentation was complete. We also had the student co-design our AI use policy at the beginning of the course.

Why they did it

I know the cats out of the bag at this point and we have to react to the fact that AI is here - students are going to use it. We just have to put the guardrails on the use. I am trying to get students to reflect on how they're using it and whether the output is correct and useful.

Participant Example 4

What they did

I made several changes. 1) I gave an assignment where students evaluated the speed with which they could accomplish a range of fairly simple tasks a) using AI to do the tasks, b) using AI to produce code to do the task, c) using standard apps to do the task by hand, d) writing code themselves to do the task. 2) I altered tests to include code that students handed in on assignments and explicitly told students that I was doing this in the hope that if they used AI to do their assignments, they would at least read what they handed in so that they would be able to answer the questions on the test.

Why they did it

1) Understanding when AI is useful and when it isn't useful. 2) Understanding skills that are fundamental to understanding computing.

18 min Breakout Discussion

1. How does the integration of GenAI challenge assumptions about what we teach and assess?
2. How have your assignments changed, and why?
3. What are you not changing? Why?

8 min Big Group Discussion

4. What do you wish you knew? Where are you still uncertain? What questions are you sitting with that you haven't been able to answer on your own?

Big Group Discussion Notes