

Who Is Doing the Thinking?

Teaching service in the age of AI

AI for Educators Seminar Series

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Who Am I?



ABOUT ME

Lorena Blasco-Arcas

Faculty in Marketing · ESCP Business School

- I lead the TRACIS AI Experimentation Lab.
- My research is on agentic AI in marketing, including the construct I call agency migration.
- I work on responsible AI governance: a skeptical-by-design approach.
- I teach on MSc and Digital Marketing programmes, the Marketing Data & AI Certificate and executive education, and supervise master's, DBA and doctoral researchers.

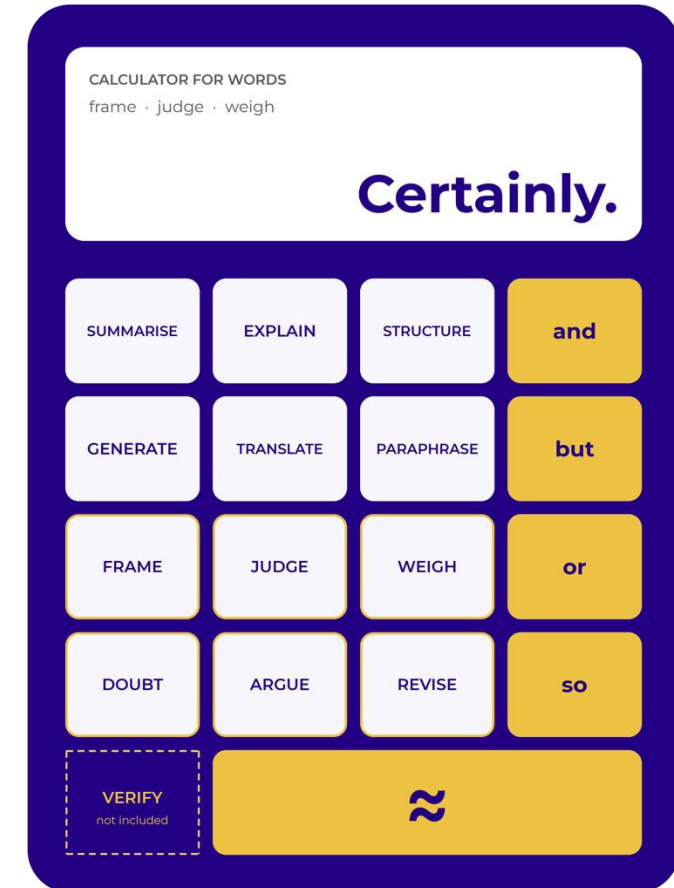
Why this talk: I study how agency moves between people and machines; this session asks where it should stay with the student.

AI Models as “calculators of words”?

Most conversations about AI in teaching start with tools.

Computation vs framing and judgement

Deterministic vs. Probabilistic

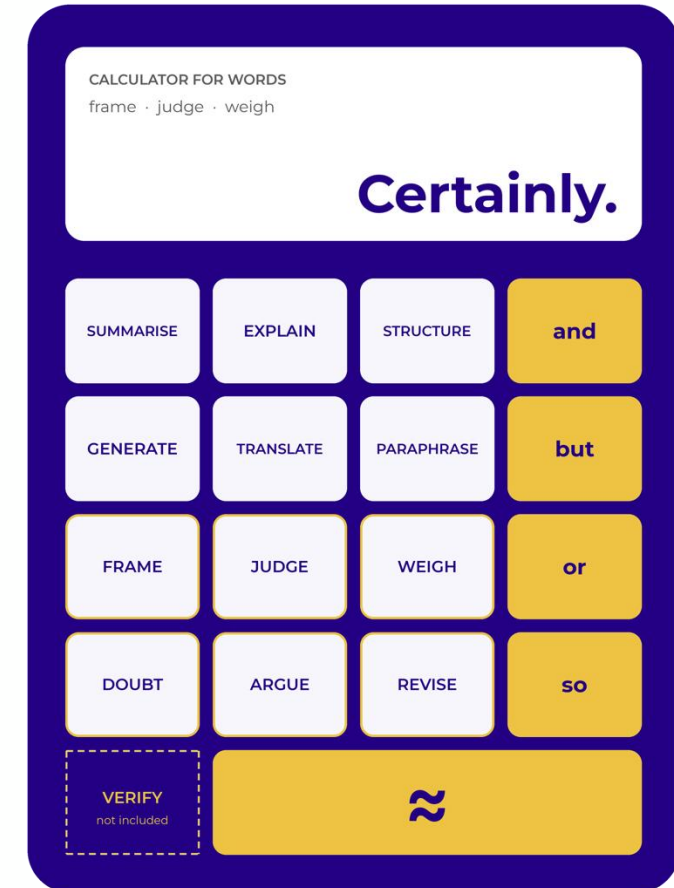


AI Models as “calculators of words”?

Most conversations about AI in teaching start with tools.

This one starts with what we want students to struggle with.

So the question is not which tool to allow. It is where the thinking should stay with the student.



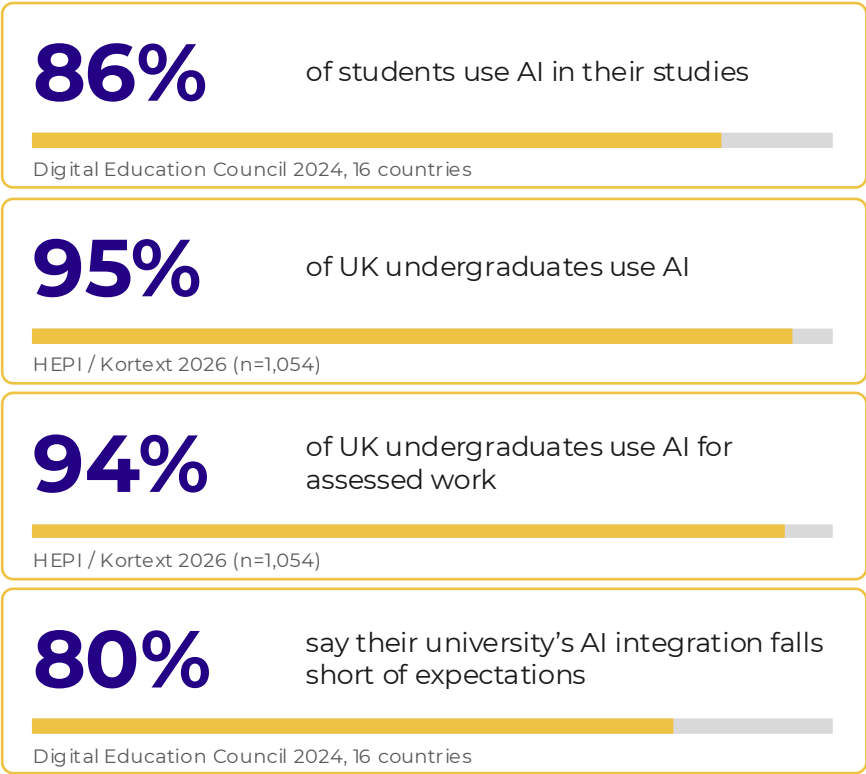
Who is doing the thinking in your course today?

the student · the model · shared · I can't tell

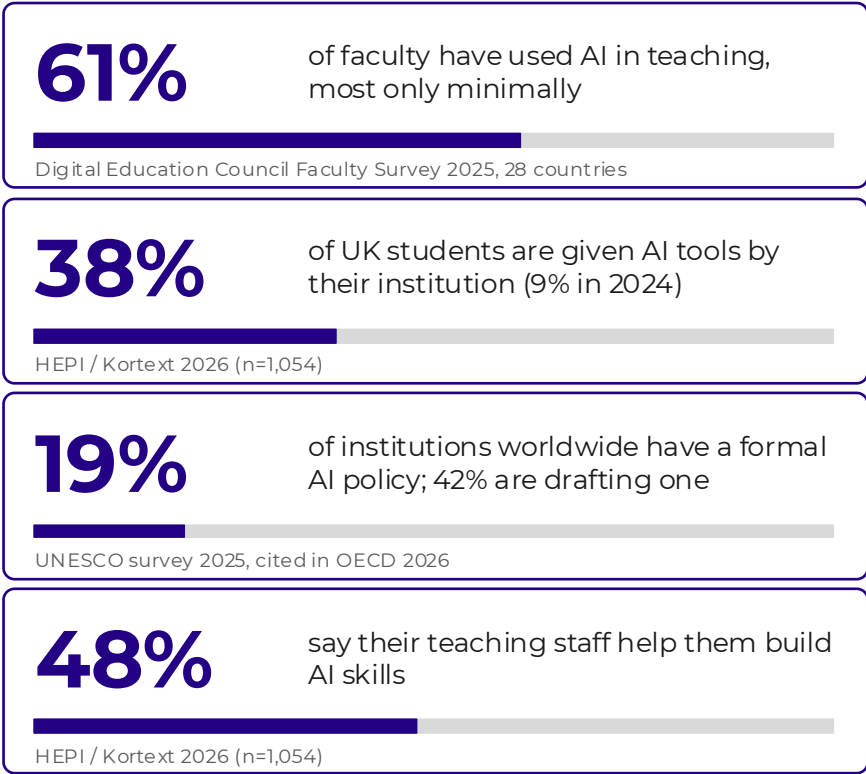


Students have moved. Have universities?

STUDENTS what they do and ask for



INSTITUTIONS what they provide



Use is near-universal, governance is arriving, provision and pedagogy lag.

Three tensions

Access & equity · Capability & offloading · Integrity & the credential

Tension 1 • Access & equity

38%

of UK students say their institution provides genAI tools (9% in 2024)

HEPI / Kortext 2026 (n=1,054)

58%

of students worldwide feel they lack sufficient AI knowledge and skills

Digital Education Council, 16 countries (n=3,839)

83%

of US higher-ed technology leaders fear a widening digital divide

Educause AI Landscape Study, 2025

Access is not just infrastructure; it is literacy, and literacy compounds advantage.



Who is doing the thinking?

Whoever was handed the tools and the fluency first.

Tension 2 · Capability & offloading

-17%

on the no-AI exam after practising
with an unguarded GPT-4 chat

Bastani et al., PNAS 2025 (pre-registered RCT, n≈1,000)

5 of 6

thinking activities where knowledge
workers report less effort with AI

Lee et al., Microsoft/CMU, CHI 2025 (n=319)

Lowest

neural connectivity in the AI-writing
group (EEG)

Kosmyna et al., MIT Media Lab, 2025 (n=54)

The thinking leaves; the sense of having thought remains



Who is doing the thinking?

Increasingly, the model.

Tension 3 • Integrity & the credential

19%

of higher education institutions worldwide have a formal AI policy

UNESCO survey 2025, cited in OECD 2026

22%

of US faculty think their institution's AI policy works

Tyton Partners, Time for Class 2026

73%

of employers still say a degree is worth the investment

AAC&U employer survey, 2025

Not a collapse in the degree's value; its signal is under pressure from both sides.



Who is doing the thinking?

The credential can no longer say.

Who is doing the thinking?

TENSION 1 · ACCESS & EQUITY

Whoever was handed the tools and the fluency first.



TENSION 2 · CAPABILITY & OFFLOADING

Increasingly, the model.



TENSION 3 · INTEGRITY & THE CREDENTIAL

Nobody can tell.



The frictionless default.

Seamless by design lets agency migrate, erases the trace behind the credential, and favours whoever is already ahead.

One remedy: decide where the friction goes back in.

“

*A gem cannot be polished without friction, nor
a human perfected without trials.*

Proverb

What we can do as educators

Three institutional responses

BAN • PERMIT • DESIGN

Where the field is: ban and permit answer whether students use AI; only design answers where the thinking should stay with the student.

Ban

Keep the tool out

- A return to handwritten exams and oral tests
- Protects the signal; teaches nothing about judging the tool
- Friction everywhere, including where delegation is benign

Permit

Give everyone the tool

- Harvard Business School: ChatGPT EDU + CLAUDE accounts for all MBA students, plus a course on using AI tools
- Solves access; leaves offloading to each student's judgment
- Friction nowhere

Design

Decide where the friction lives

- Rollins College: AI assists the code; students own settings, story logic and design decisions, and report doing more work
- Carlson School (Minnesota): pilots across courses, some permitting, some restricting; "transparency is key"
- Friction where agency migrates. US faculty who build AI into assignments report lower workload and better engagement than those who ban it (Tyton, Time for Class 2026)

Where should the friction live?

The diagnostic question for any assignment: where does cognitive offloading happen?

THE DESIGN PRINCIPLE INVERTS

Seamless (the default: fluid, frictionless) → false confidence

Productive friction (deliberate design: doubt as structure, not virtue)

THE DIAGNOSTIC AXIS

Benign delegation

retrieving settled facts, formatting, a first case summary → delegate freely

Corrosive migration

framing the problem, weighing trade-offs, judging → install friction here

THREE QUESTIONS TO ASK OF ANY ASSIGNMENT

- 1 · What does this task ask the student to retrieve, and what does it ask them to judge?
- 2 · Which part would the model do fluently, and where would it be confidently wrong?
- 3 · Where is the one place the student must think unaided, and will I see that they did?

Three frictions that put doubt back

Productive friction: difficulty placed where agency migrates, scaffolded so that it builds judgment

THE DESIGN PRINCIPLE INVERTS

Seamless (the default: fluid, frictionless) → false confidence

Productive friction (deliberate design: doubt as structure, not virtue)

1 • WHERE DOES AGENCY MIGRATE?

Benign delegation

retrieving settled facts, formatting, a first case summary → delegate freely

Corrosive migration

framing the problem, weighing trade-offs, judging → install friction here

2 • THREE FRICTIONS THAT PUT DOUBT BACK

Epistemic

Verify before use.

The student locates and checks the model's sources; the interface surfaces confidence gaps, not polished prose.

Procedural

Assess the process, not the product.

Shift evaluation from the output (AI-generated) to the reasoning trace, which reveals judgment.

Dialogic

Defend, dissent, revise.

A human or a prompt makes the learner argue: doubt as interaction, not a solitary virtue.

What you can do next term

ONE PRACTICE PER FRICTION IS ENOUGH TO START

Rule of thumb: each practice makes the thinking visible; none of them depends on detecting AI.

Epistemic

Verify before use

PRACTICES

- Students submit the prompts they used and the sources they checked, with the final work.
- An AI appendix: what the tool gave, what the student changed, and why.
- In class: verify the sources behind a model's answer to a service question.

Procedural

Assess the process, not the product

PRACTICES

- Grade outlines, drafts and revision history, not only the final piece.
- A short oral defence (viva) on a sample of submissions.
- A reflective memo on how AI was used at each step.

Dialogic

Defend, dissent, revise

PRACTICES

- Peer critique: students challenge each other's AI-assisted work.
- Devil's advocate: students rebut the model's output.
- Debate a case where the model is confidently wrong.

Friction is not neutral → Friction is DESIGNED

Its cost falls unequally, so it has to be scaffolded: not imposed, and not left to choice.

Students who chose for themselves when to ask the AI for help learned less (Bastani et al. 2025).

Structure beats willpower.

What stays with the educator

Four stages of a friction-led assignment

THE MODEL The supplier of the conditions

Options, drafts, first answers

A client, a critic, an opponent

Its gaps and confident errors

A fresh case to test on

1 Frame

BRIEF

2 Withhold

STRUGGLE

3 Critique

CONSOLIDATE

4 Judge

TRANSFER

THE EDUCATOR The experience and judgement facilitator

The brief and the criteria

Submission before instruction

The expert read

The verdict and the credential

The model creates the conditions. The educator leads the educational experience.

Closing

Fluency feels like learning. Friction produces it.

The question was never which tool. It is where the thinking stays with the student.



Who is doing the thinking? Whoever we design for.

Over to you

- 1 Which of your assessments would survive a confidently wrong AI?
- 2 What would you refuse to automate in your own teaching, and why?
- 3 Where does friction fall unequally in your classroom, and who pays for it?

Thanks
for your
Attention!



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