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Lou's
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Sarah's
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AI Virtual Patients and Beyond: Student-Led Innovation in Inclusive Learning

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Teaching & Learning
Conference July 2025

TEF Gold Teaching Excellence Framework

Welcome

- Introductions
- Expectations
- Key terminology and principles
- Virtual patient project
- Prompt Engineering project
- Next steps

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What we are and who we are not

- We are both learner centred educational practitioners committed to seeking-out and building learning opportunities and experiences

- At the start both of us shared a crazy idea, the '**what if**' and '**could we**'?

> ***What if we*** .. use AI to create chatbots for consultation practice, **could** this be done?
>
> ***What if we…*** explore prompt engineering through co-deign, **could** this benefit learning?

- We are explorers, adventures, innovators, we don't yet know all the answers but we are here today to share our journey so far

- ***Oh and what we are not,***

- We are not technical experts in the machines LLM / machine learning , we do consider ethical themes in our practice, but today we are not exploring that field fully as we need to give it the designated time it warrants, however we will touch on key learning
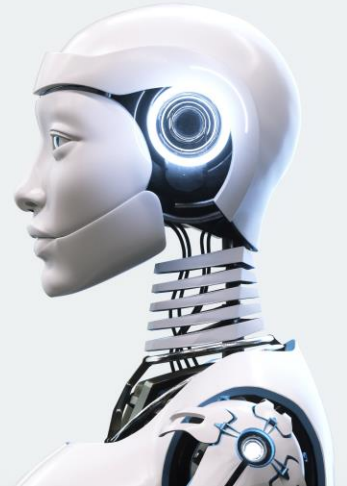
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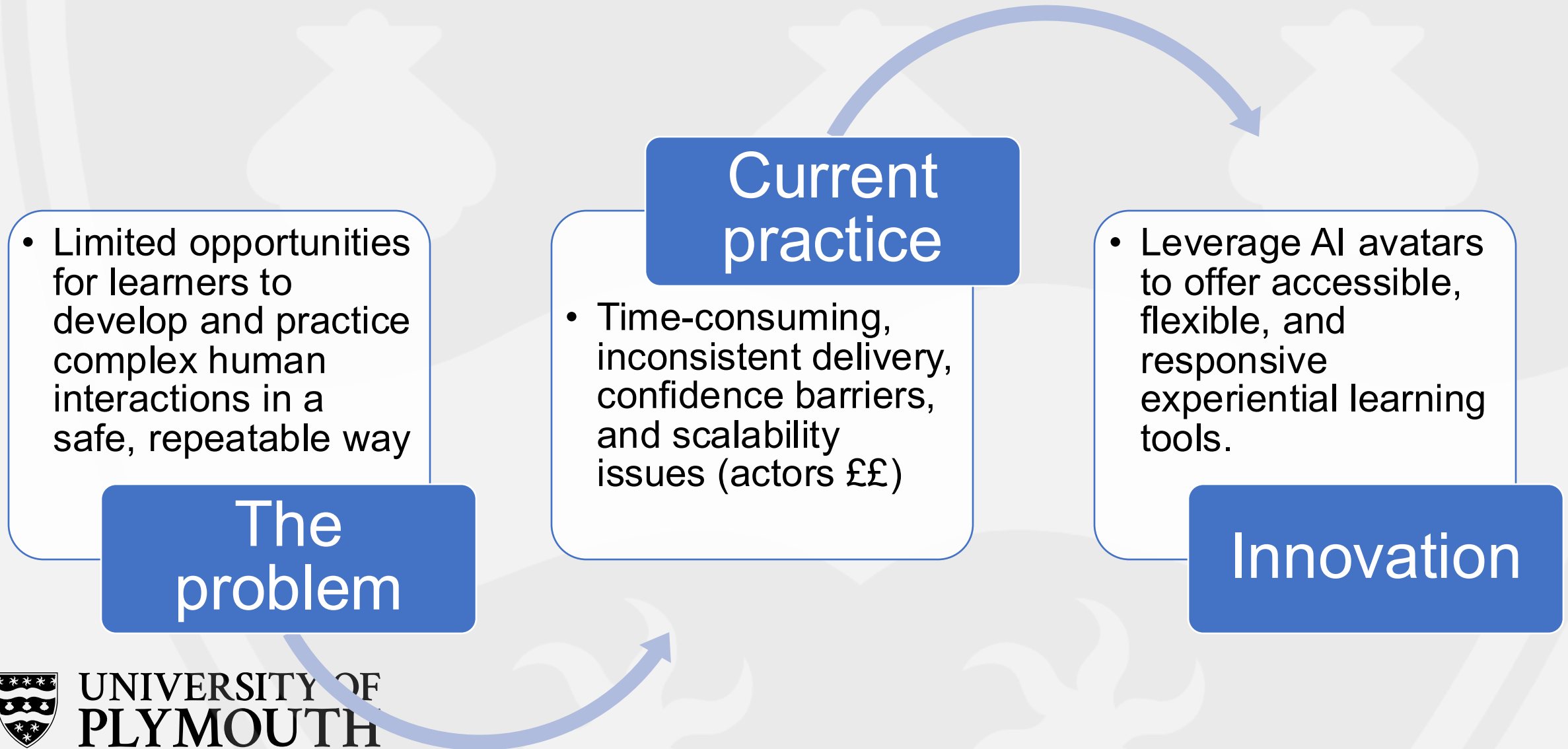
Key terminology and principles

- **AI:** Machines simulating human intelligence.

- **LLMs**: AI models trained on large text datasets.

- **Prompt Engineering:** Crafting inputs to guide AI outputs.

- **Experiential Learning:** Learning through doing and reflection.

- **Tailored Learning:** Customised experiences for specific outcomes. A shift from generic use to tailored-use experiential learning

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Dietetics – evolving consultation skills

The problem

- Limited opportunities for learners to develop and practice complex human interactions in a safe, repeatable way

Current practice

- Time-consuming, inconsistent delivery, confidence barriers, and scalability issues (actors ££)

Innovation

- Leverage AI avatars to offer accessible, flexible, and responsive experiential learning tools.

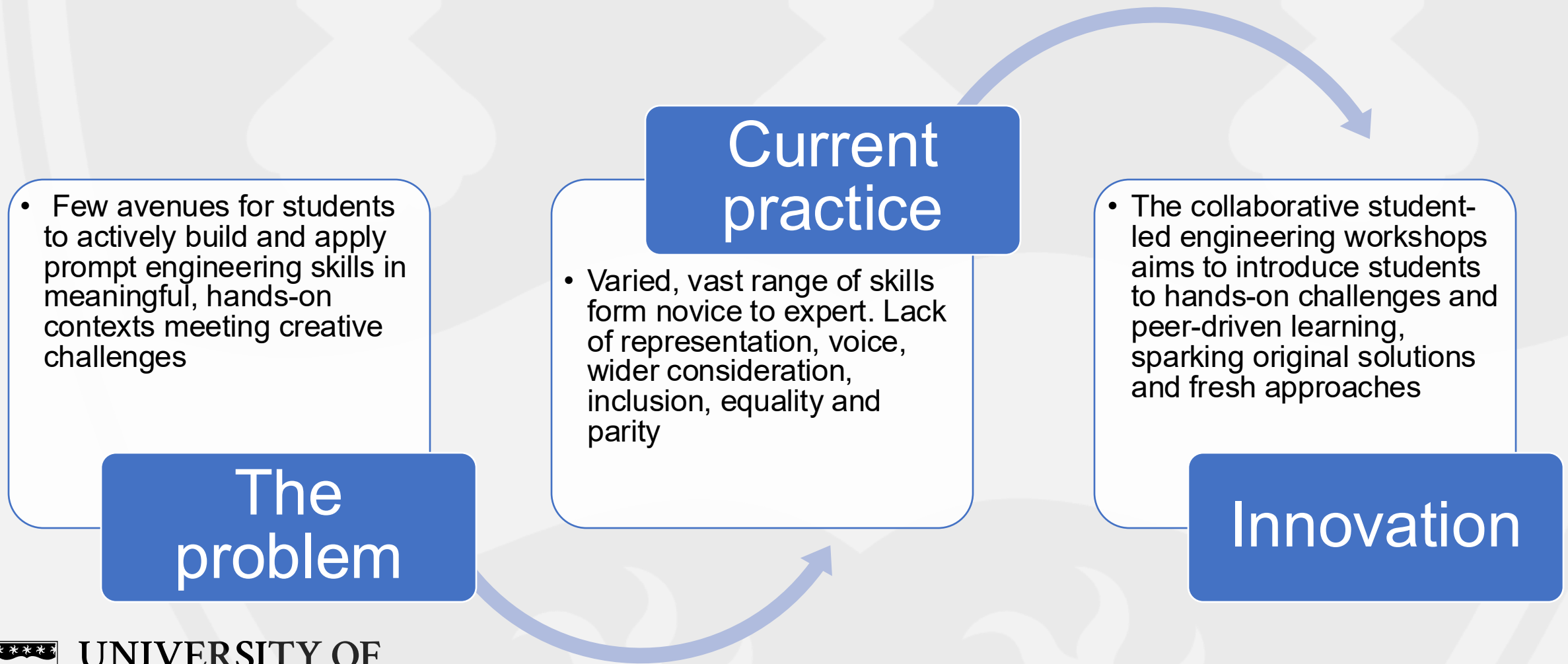UNIVERSITY OF PLYMOUTH

AI is already

Experiential learning reimagined

- Autonomous learning
- Active and reflective learning principles
- Alternatives to role play
- Safe to fail
- Future potential

Prompt Engineering as collaborative Practice

The problem
- Few avenues for students to actively build and apply prompt engineering skills in meaningful, hands-on contexts meeting creative challenges

Current practice
- Varied, vast range of skills form novice to expert. Lack of representation, voice, wider consideration, inclusion, equality and parity

Innovation
- The collaborative student-led engineering workshops aims to introduce students to hands-on challenges and peer-driven learning, sparking original solutions and fresh approaches

Framing the Inquiry

What if students co-create their own learning in prompt engineering?

By designing workshops **with** students, **not just for them**, we explore how this collaborative approach impacts their skills, confidence, and creativity in using large language models

Q1: Think back to the first time you used a tool like ChatGPT
What were your thoughts or feelings?

Q2: Now reflect, what's changed since then?

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A Catalyst for Deeper Learning

Early feedback revealed important gaps in student understanding:

"To use it better, we need to understand what it is and what it isn't." – Student participant

Students raised thoughtful, critical questions:

- What exactly *is* a large language model (LLM)?
- Why does it respond the way it does, sometimes unpredictably?
- Why do different models give different results?
- Which tools are more reliable, and why?
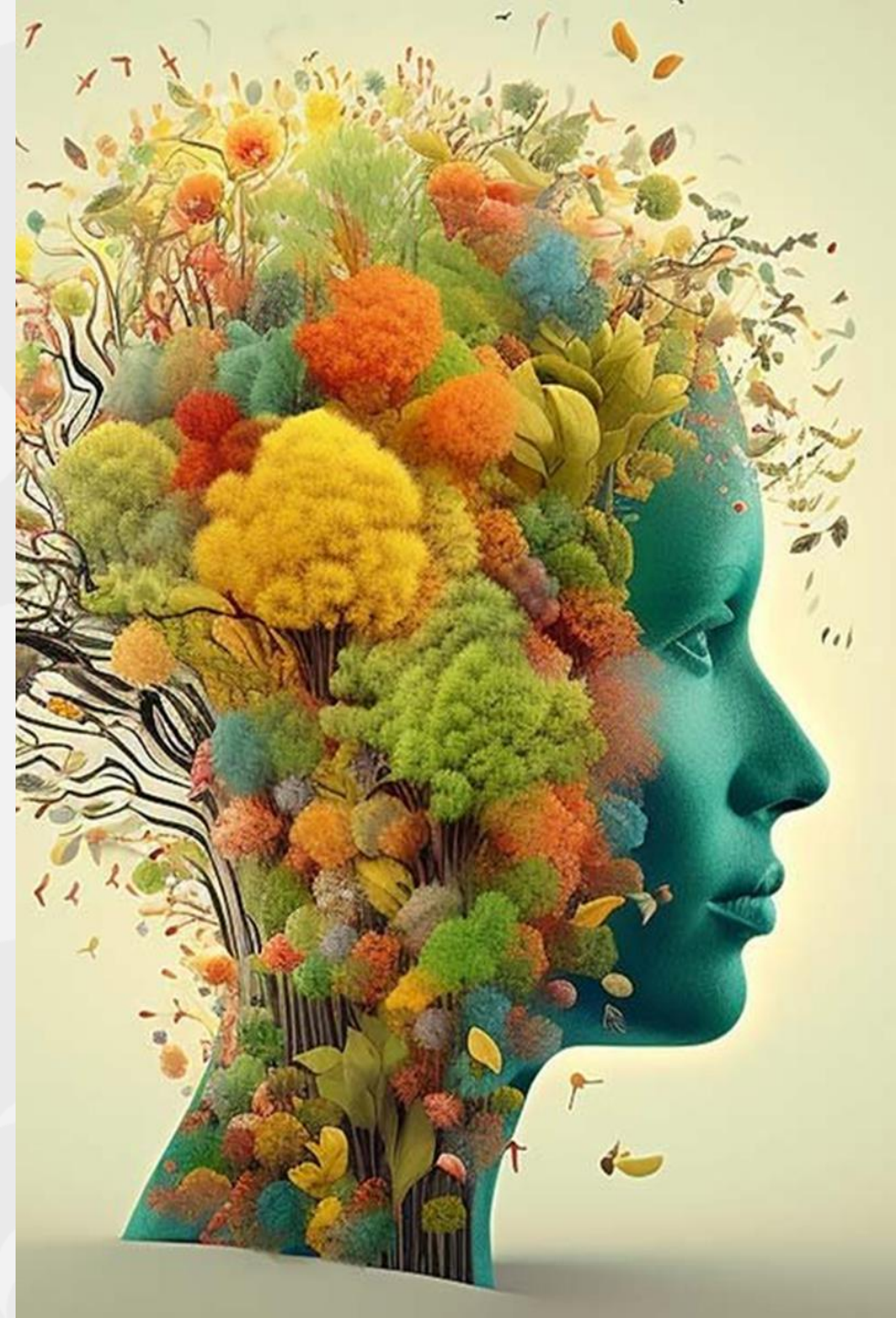
Theoretical Framework

- **Critical Realism** (Bhaskar): Empirical / Actual / Real

- **Heuristics** (Tversky & Kahneman): Cognitive shortcuts & illusions of understanding

- **Semiotics** (Barthes, Chandler): Meaning is constructed, not delivered

- **Proxemics** (Hall, McArthur): Emotional distance and spatial metaphor in AI intimacy

What do you think of?

Let's Meet Adam

Meet Adam

https://tinyurl.com/2uah7fze

You have been referred an inpatient from the Oncology team.
Adam, a 16-year-old male, has been recently diagnosed with Hodgkin's Lymphoma. The diagnosis came after weeks of symptoms such as swollen lymph nodes, fatigue, and night sweats, which led to further investigation and a biopsy confirming the cancer.

Adam has been admitted to the hospital for staging and to begin treatment, which will likely include chemotherapy and potentially radiation therapy. The medical team would like the dietitian's to assess and monitor his nutritional status closely as he starts treatment.

Currently, Adam has been offered oral nutritional supplements by the nurses on the ward (ONS) to support his nutritional intake. The ward report that he is only having small amounts of food that is offered. The medical team have raised the possibility of using an NG tube for supplemental feeding if Adam's intake does not improve, but this has not yet been implemented, and they would like the dietitian to discuss this with Adam.

The nursing team report that Adam's parents are very supportive and visit him frequently, but they are also struggling to cope with the emotional burden of his diagnosis and are worried about his declining food intake.

Please do not share any personal information with Adam, you can choose not to use your name, and if preferred can introduce yourself as a 'student dietitian'

How was your experience?

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Framing in Prompt Engineering

- Every prompt frames a worldview

- Language choices include and exclude

Q1. Consider the difference between asking,

<p style="text-align:center">**'What problem does this create?'**</p>
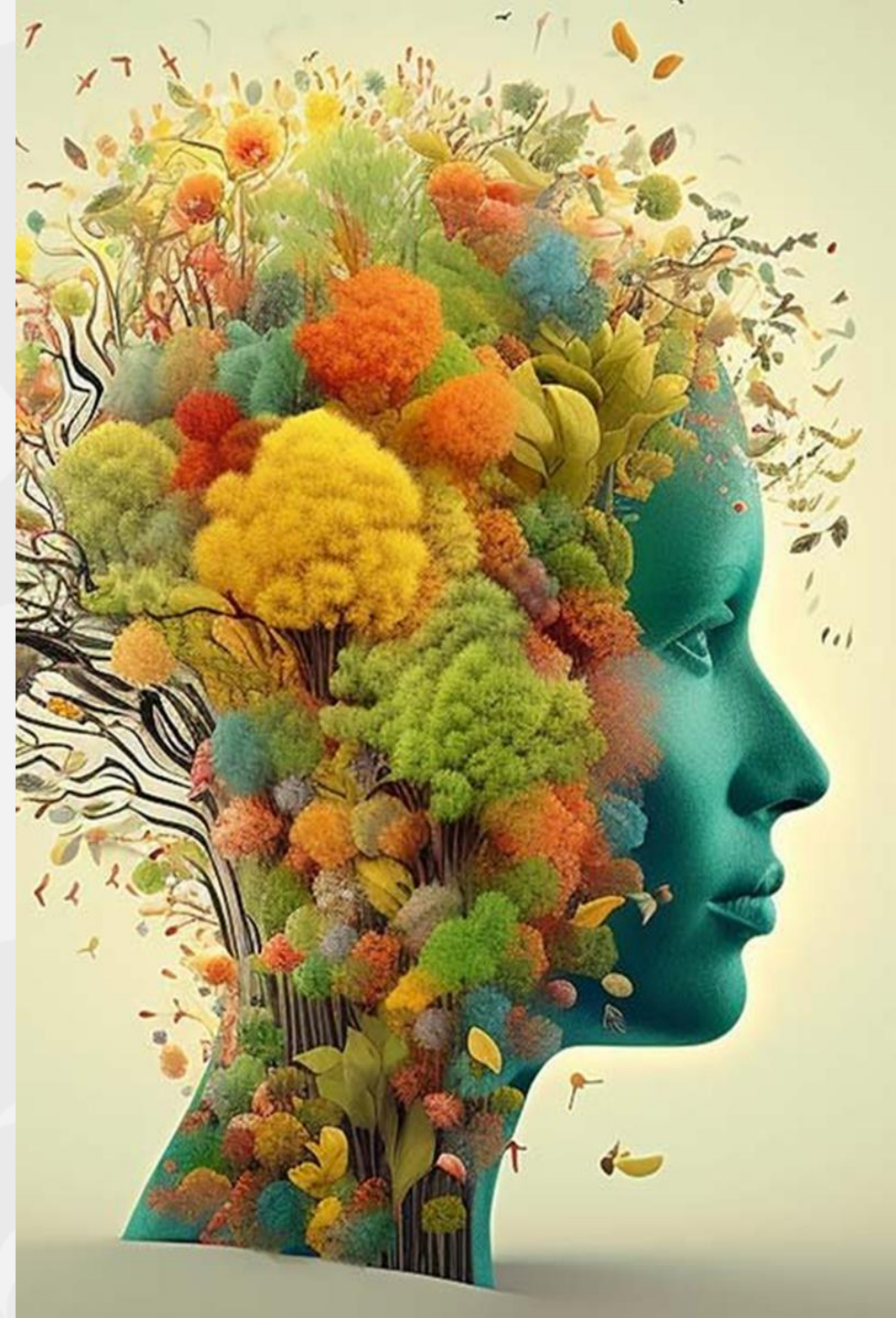
<p style="text-align:center">Versus</p>

<p style="text-align:center">**What possibilities does this open up?**</p>

The first frames the subject as a source of error or disruption, while the second invites exploration and reimagining.

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Framing in Prompt Engineering

Reframe this inquiry

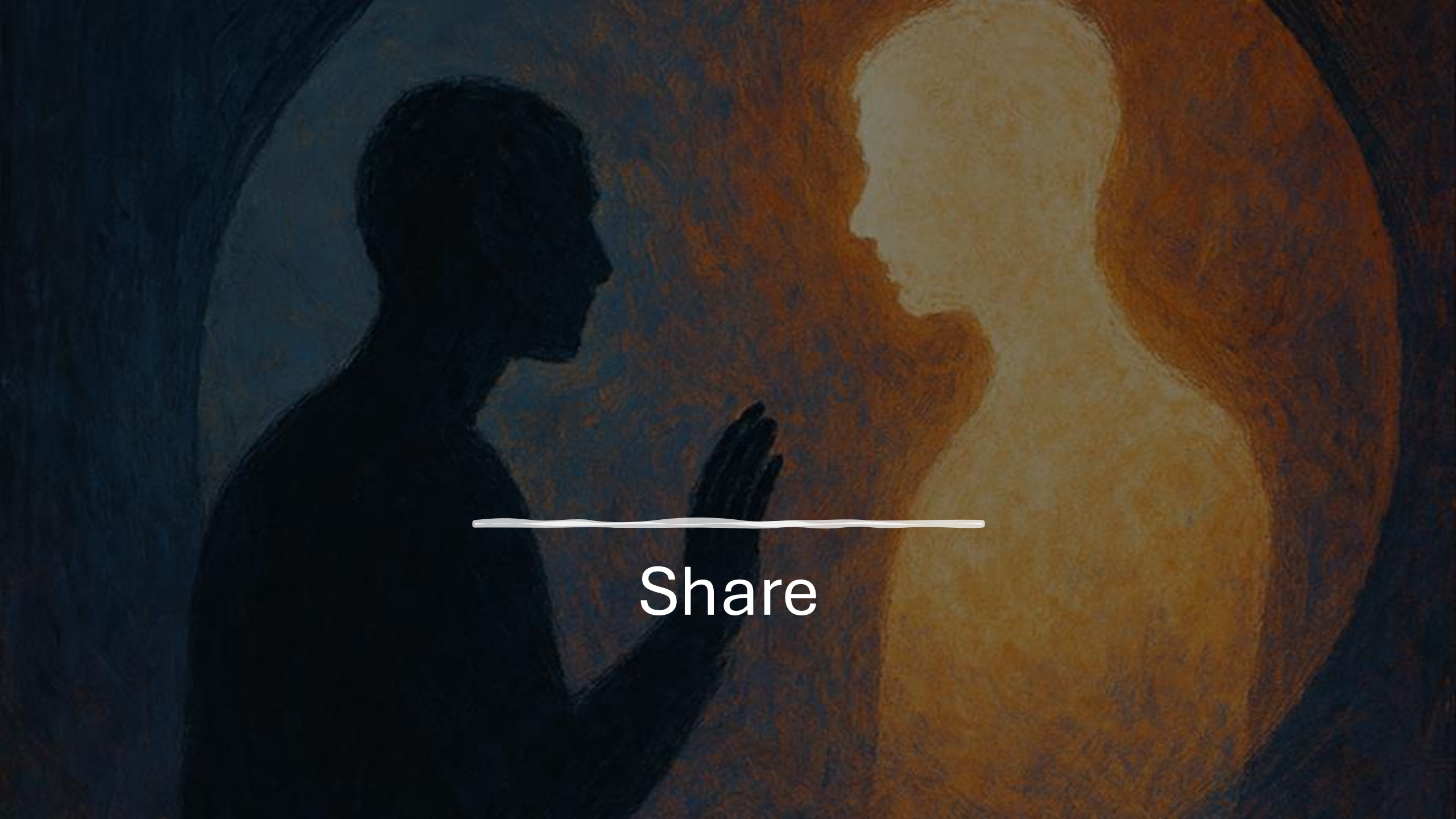**Original:** "What's wrong with digital learning models?

Your turn Your Turn:
Transform this to promote and to invite contestation.
Make space for ambiguity or positionality

5 min rewrite and share ..

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Share

Framing in Prompt Engineering

Reframe 1:

"What challenges do digital learning models pose for engagement?

Reframe 2:

"In what ways might digital learning reconfigure student agency?"

Thoughts..

Get the LLM to write the Prompt

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Reimagining Prompting as Dialogic Practice

A New Perspective:

- What if prompting were dialogic?
- Rooted in Bakhtin's ideas
- Knowledge as co-created, diverse, context-dependent

Dialogic Prompting Emphasises:

- Embracing uncertainty and complexity
- Prompting as a relational act
- Focus on how we ask, not just what we ask
- Engaging in conversation, not control

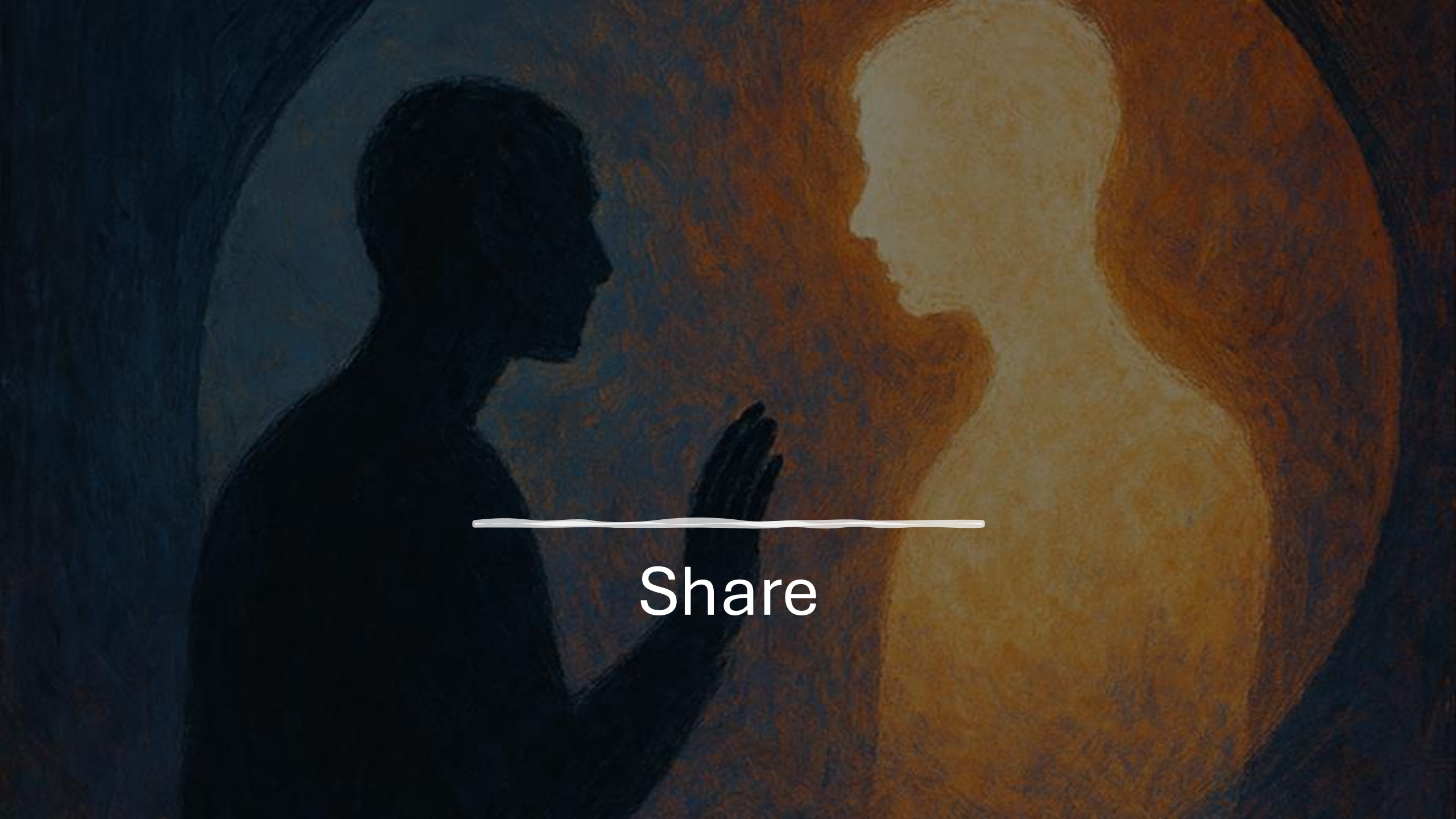**extraction** ➡ **exchange**   **answers** ➡ **understanding**

Activity - Rewrite the Prompt Below to be Dialogic

Prompt:

"Summarise the benefits of using LLMs in education"

Share

What if we reframe it to invite doubt, positionality, or cultural specificity?

Try a prompt "How might different educational communities perceive the impact of LLMs on learning practices?"

This invites multiplicity. You are not asking the AI to retrieve a truth; you are asking it to simulate a conversation.

This is a move from command to curiosity.

Call to Action

- **Design with intention**, with purpose and inclusion at is heart

- Fear of replacing experiential learning with psudo artificial learning, **it not about replication it about addition.**

- The grounding question in both projects is, how can **these 'tools be used', 'critically evaluate, function, strengths, limits etc.**

- We are working with **students to co-design,** throughout the process, critical evaluation of **'tool's** is imperative.

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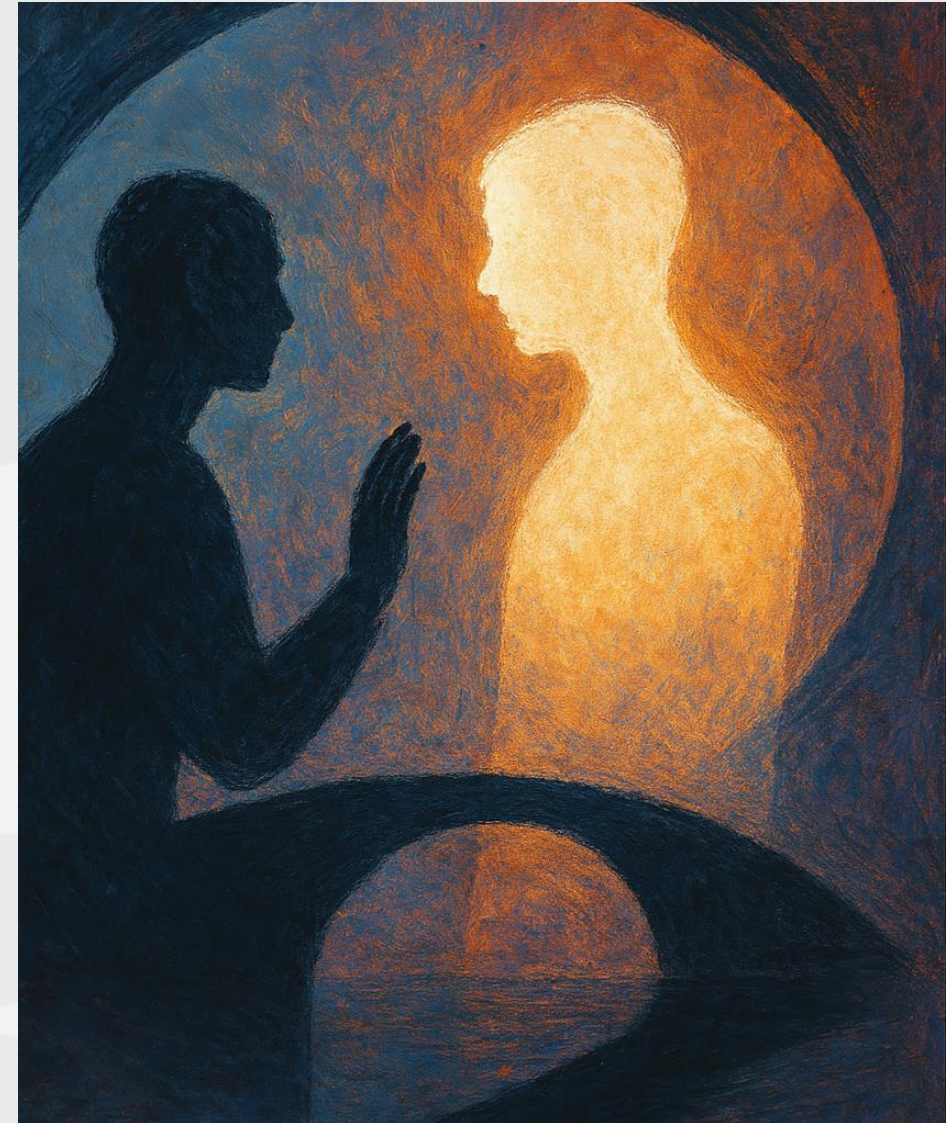
Final Provocation

- When we attend to tone, scope, cultural semiotics, and linguistic diversity, we signal that all voices matter.

- This isn't about tokenism or simplification. It's about building prompts that create space for difference and complexity.

- Inclusion is not a feature; it's a design ethic.

- The most powerful prompts do not flatten nuance; they scaffold

- AI is not just code. It is a cultural mirror. It amplifies our biases, comforts our insecurities, and shapes our cognition.

- How do we navigate the relationship shift form AI as servant or sage, to one of reflexive partnership?

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Summary

- Shared use cases in our own teaching & learning contexts
- Critical thinking is essential when using AI.
- They can support—but not replace—human connection in education (and health).
- Ethical and responsible use is key, especially with students.
- Practised prompt engineering for improved output
- Stay curious and experiment—prompt, reflect, refine.
- Engage with the University's AI community & read shared resources - https://ec.plymouth.ac.uk/ai/

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