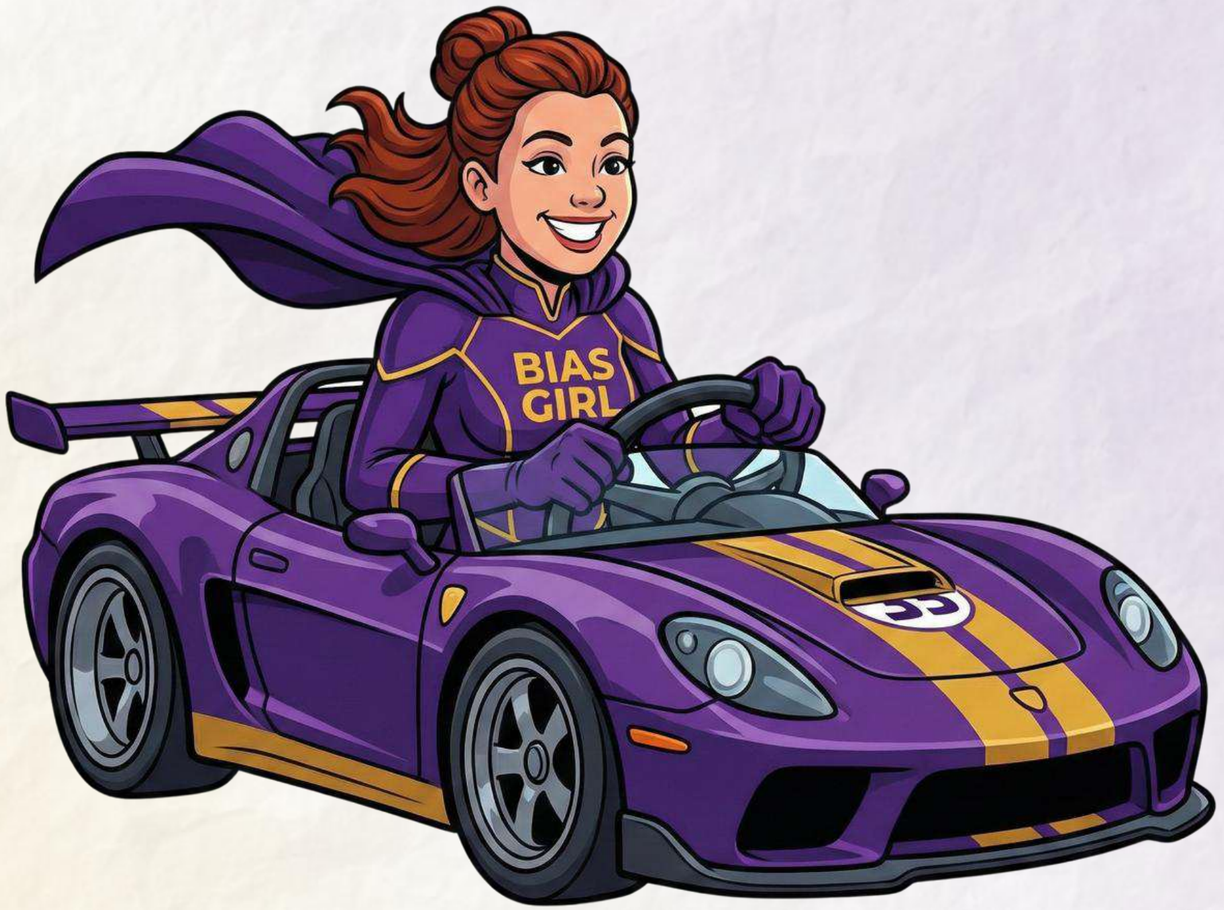
Do you use cruise control?



genedlabs.ai/nasbtt



Agents, Agency & AI

The New Era of Teacher Training & Education

Victoria
Hedlund

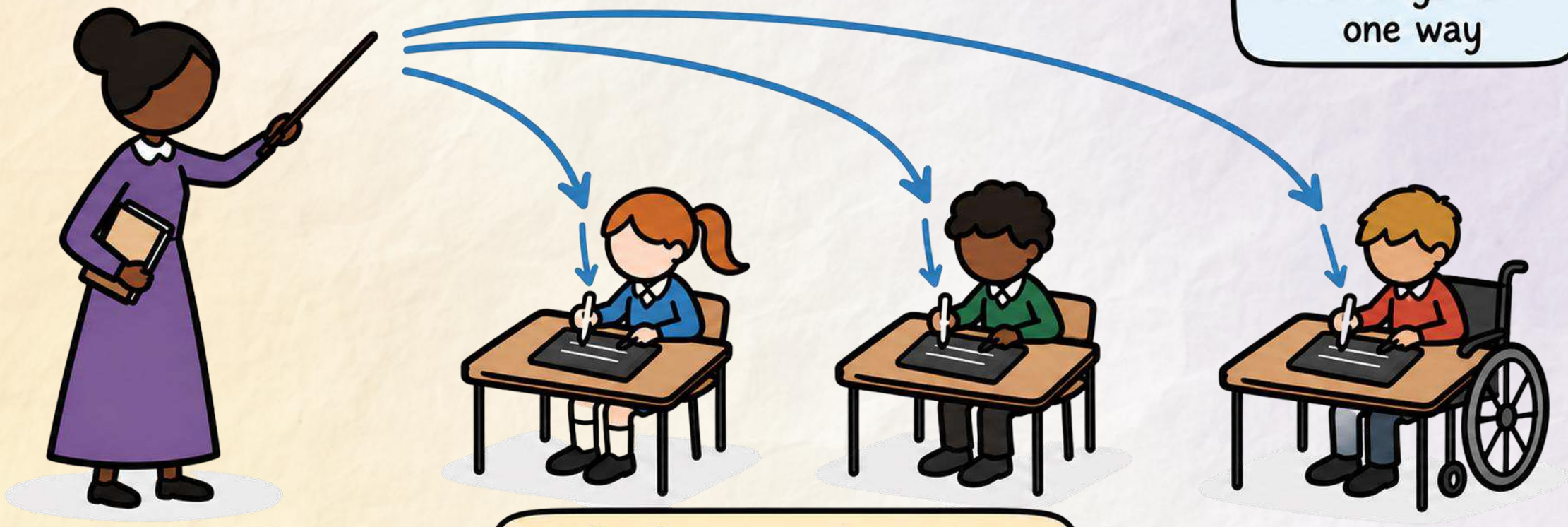
GenEd
LABS.AI

1. SLATES

1800s – early 1900s

Teacher explains and demonstrates

Knowledge flows one way



Pupils copy and practise on individual slates

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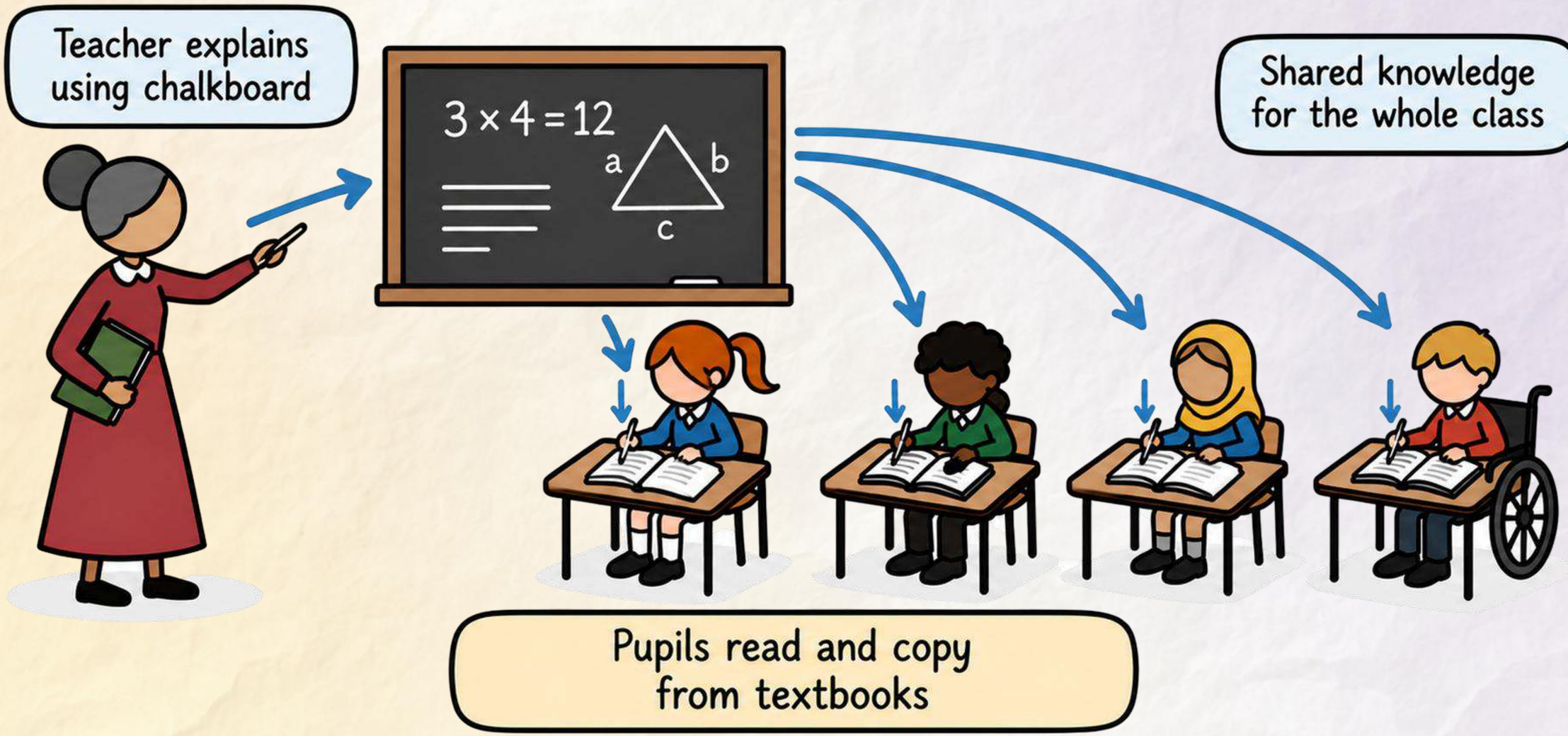
2. TEXTBOOKS & CHALKBOARD

Late 1800s – mid 1900s

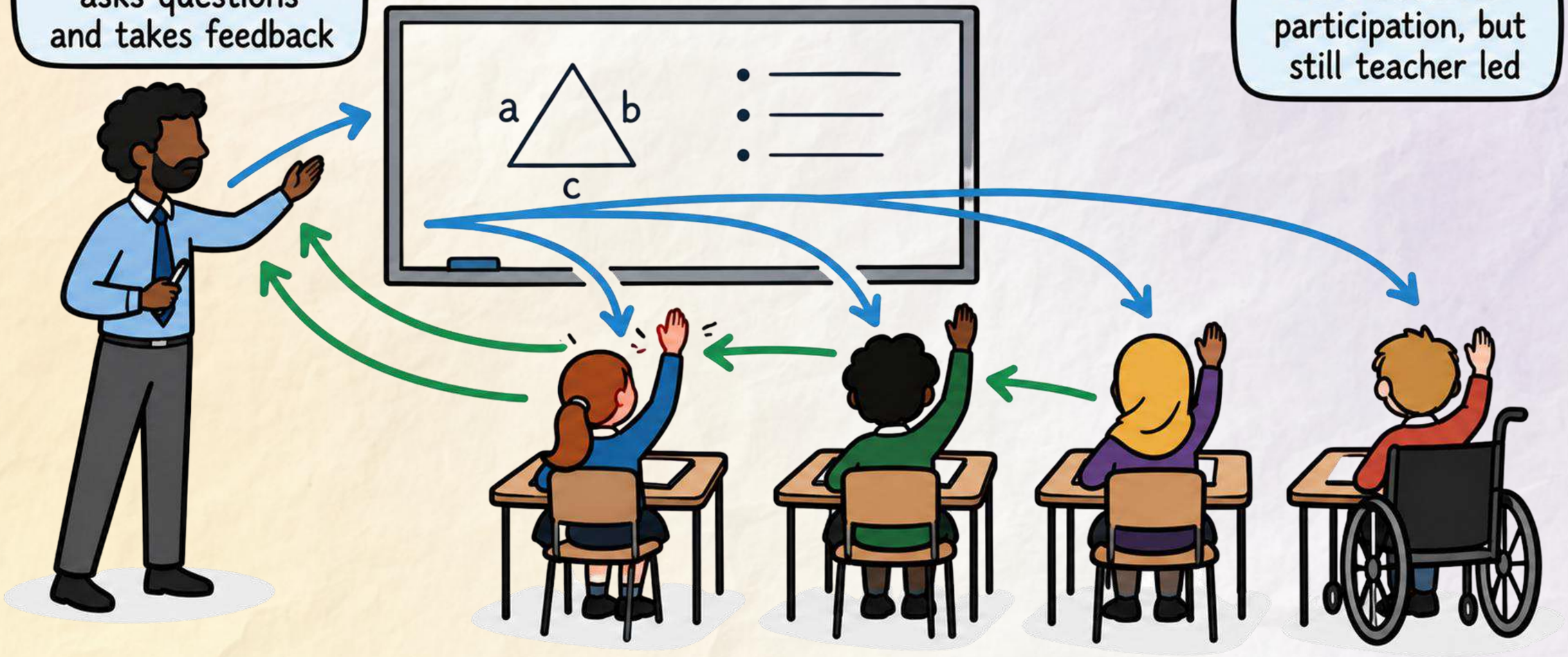


3. WHITEBOARD

Mid 1900s – late 1900s

Teacher explains, asks questions and takes feedback

More classroom participation, but still teacher led



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4. SMARTBOARD

Early 2000s – 2010s

Teacher uses interactive content to teach

Pupils engage with multimedia content, but learning is still teacher led



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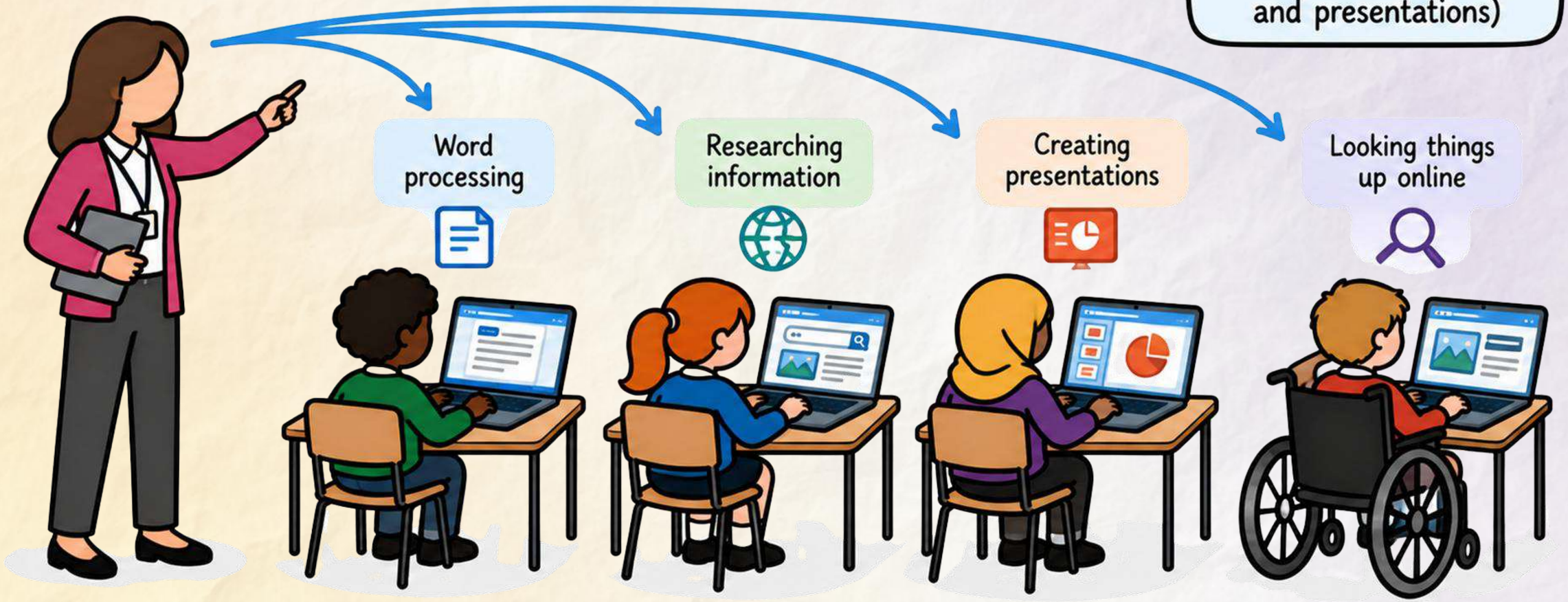
5. PERSONAL LAPTOPS

2010s – mid 2010s

Teacher sets tasks and provides guidance

Pupils use laptops for general digital work (word processing, research and presentations)



6. DIGITAL LEARNING PLATFORMS

2020 – 2022 (Covid-19)

Teacher sets work, monitors progress and gives feedback (online and in school)

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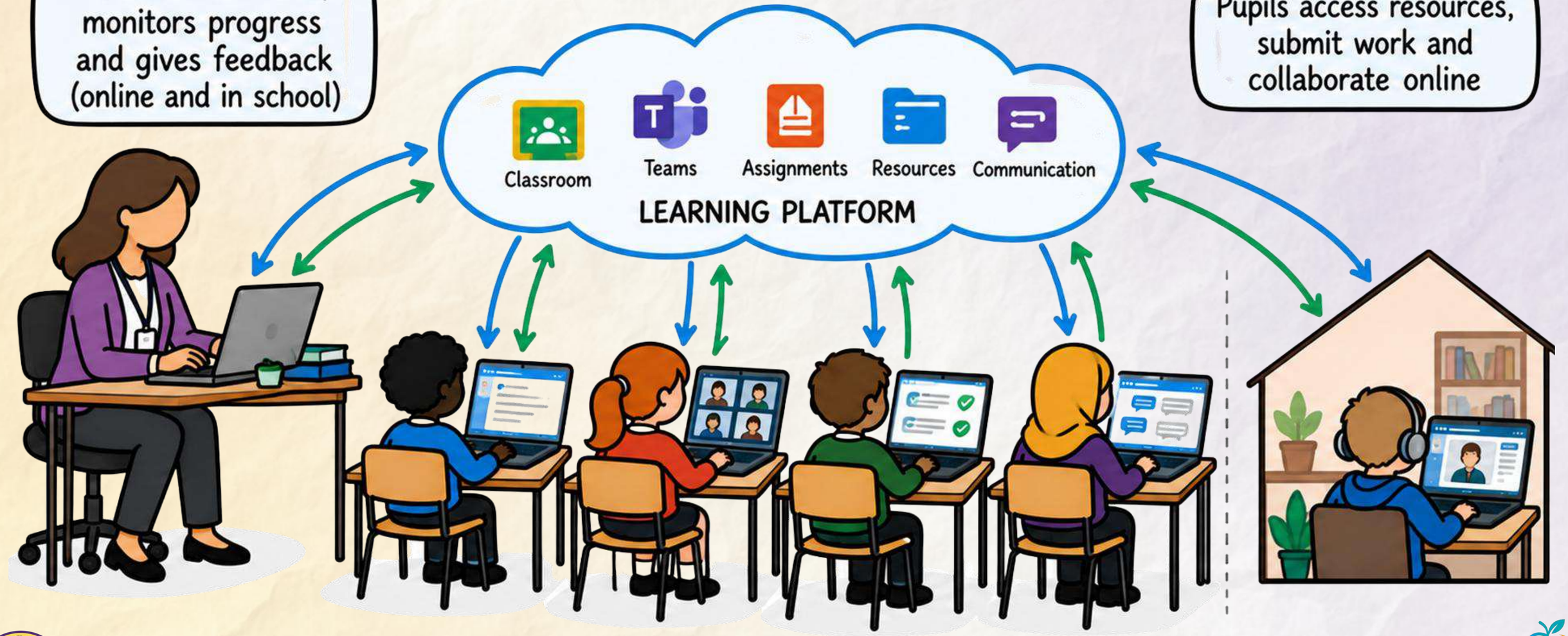

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What happens next is up to us



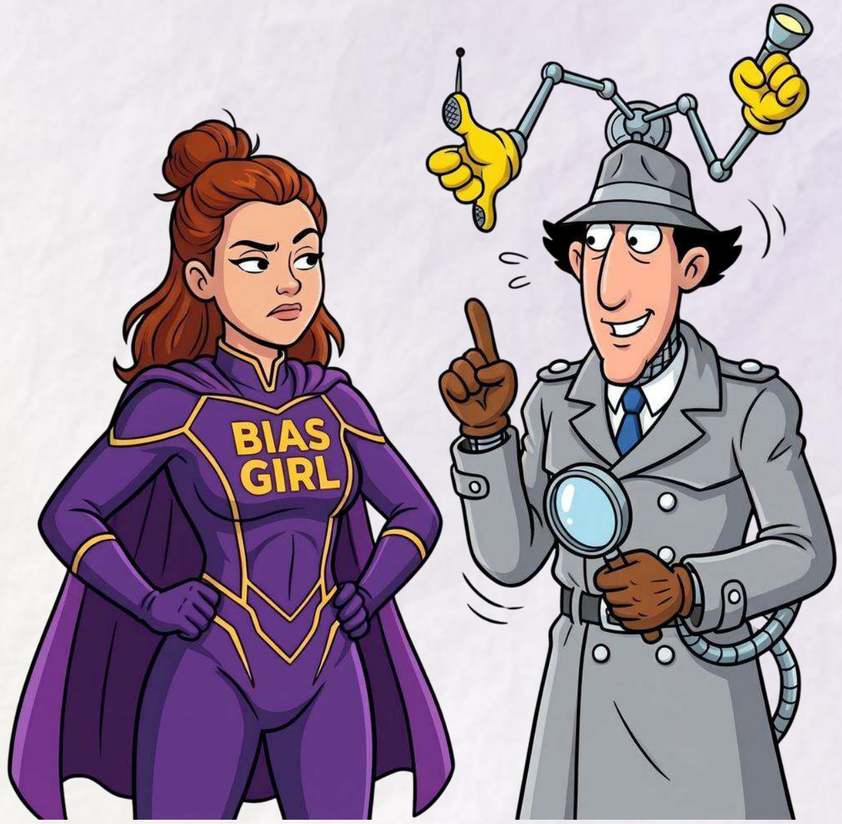
Who uses AI?



What is an Agent?

> An LLM agent runs tools in a loop to achieve a goal.

Willison, S. (2025) 'I think "agent" may finally have a widely enough agreed upon definition to be useful jargon now', Simon Willison's Weblog, 18 September. Available at: Simon Willison's (Accessed: 28 October 2026).



Learn more about agents from Anthropic here

Agent vs. Chatbot

A chatbot answers

You ask
a question



→

It answers
with words



→

You do
the work



Nothing happens until you ask.
It stays in the chat window. You act on what it gives you.



Agent vs. Chatbot

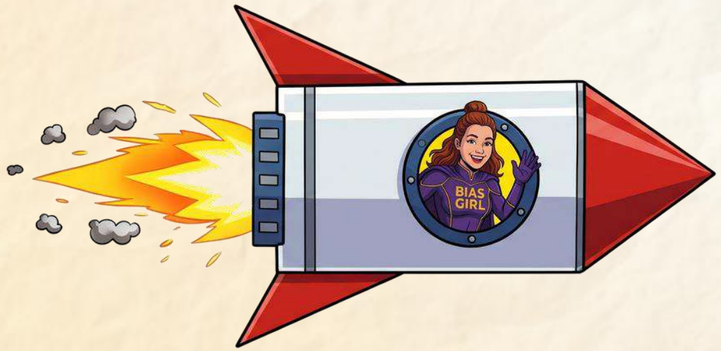
An agent acts



Did the humans exercise meaningful choice?



What has the Human Outsourced?



Creative Modelling:
Yellow circle creation
Rocketship image creation
3D Game creation
3D Image file creation
3D tangible rocketship model



Life Hacks:
Booking courts
Ordering food
Listing on Ebay



Orders Given:
Colourful
Fun
High-end
Modifying text (favourable)



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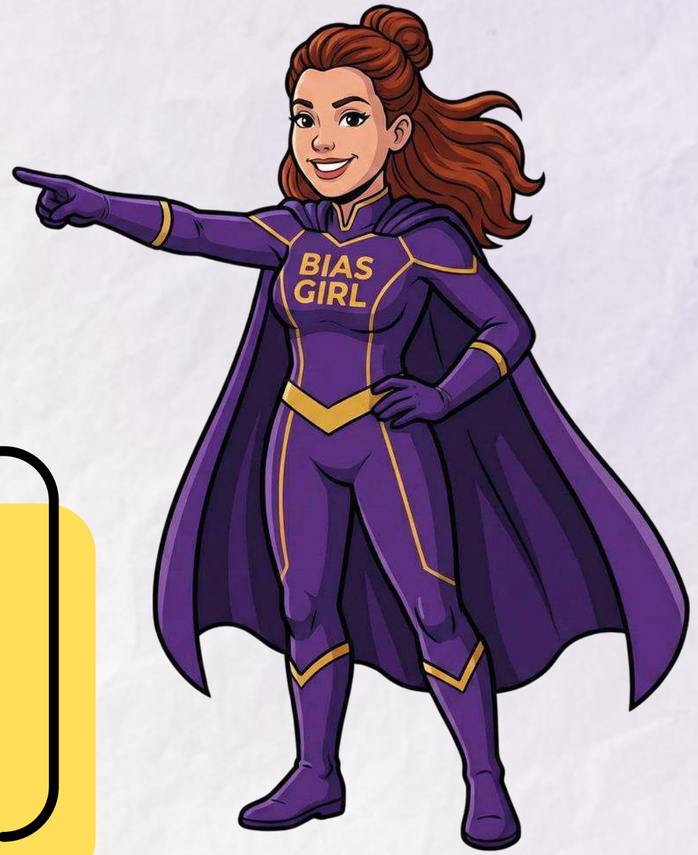
Agency is the ability to have done otherwise



> *"Agency concerns events of which an individual is the perpetrator, in the sense that the individual could, at any phase in a given sequence of conduct, have acted differently."*

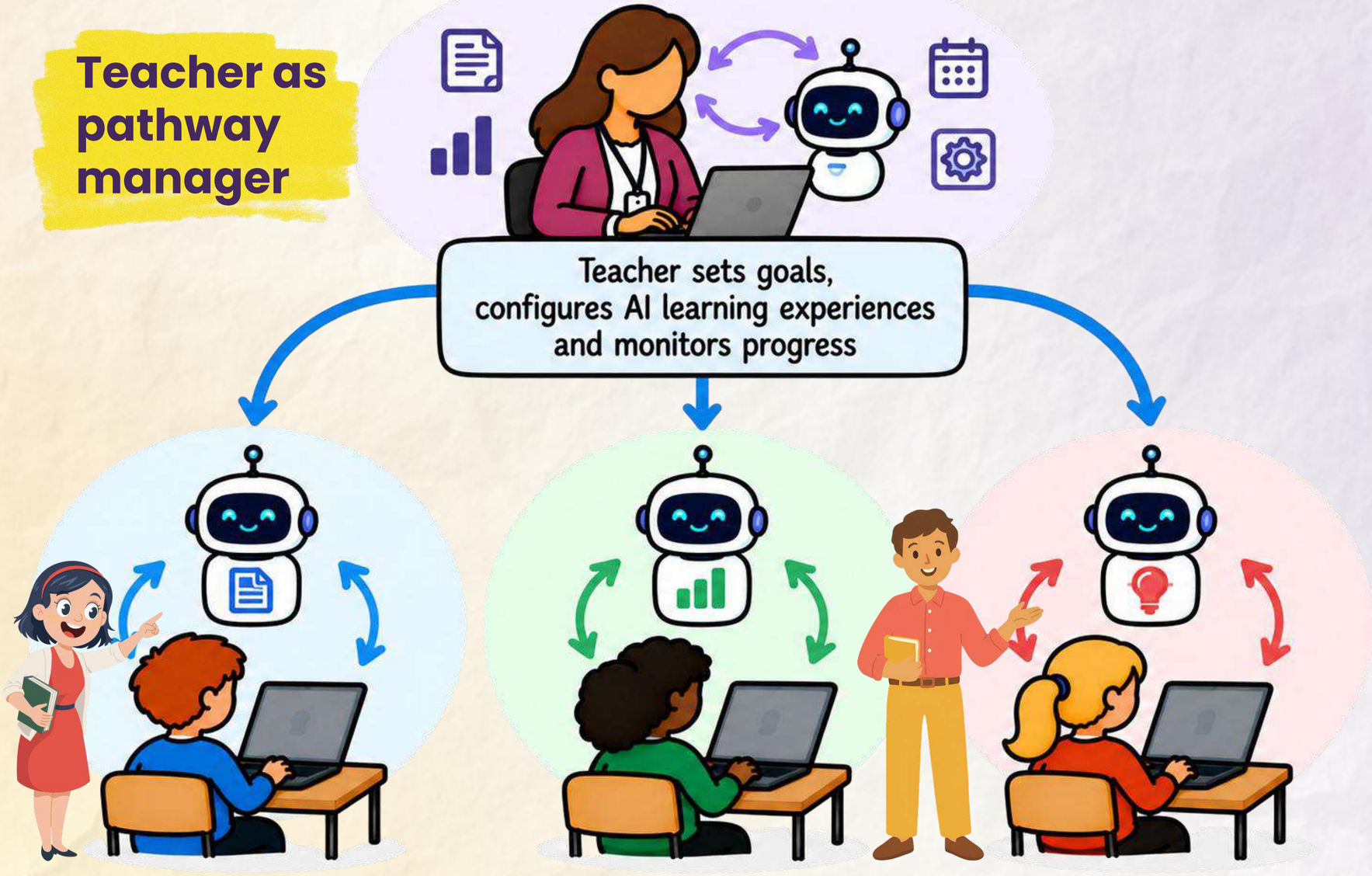
Giddens, A. (1984) The Constitution of Society. Berkeley: University of California Press, p. 9.

Possible Agentic Futures?



7. TEACHER-DIRECTED AI ECOSYSTEM: HUMAN AGENCY

Teacher as pathway manager



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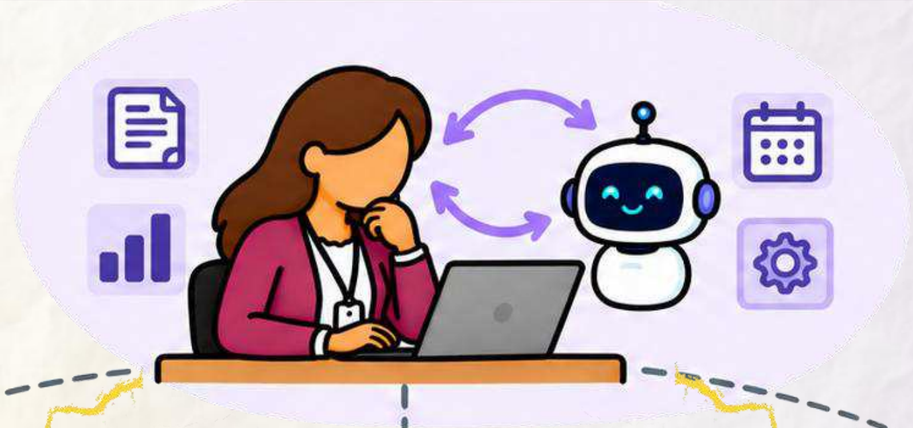
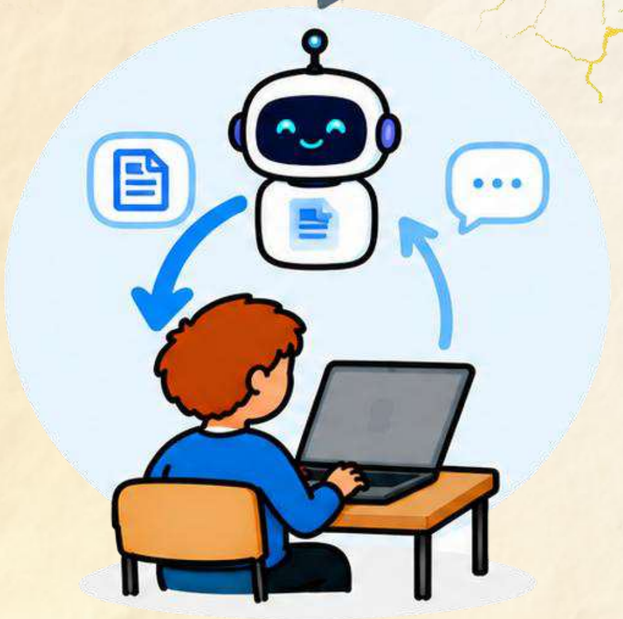
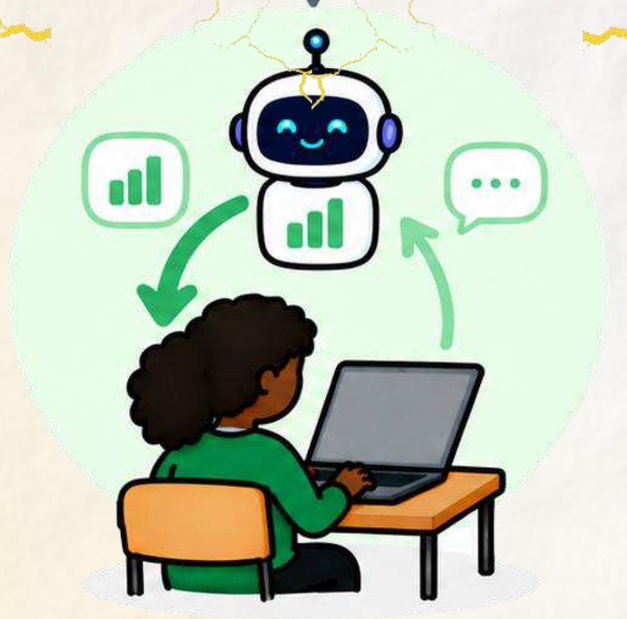
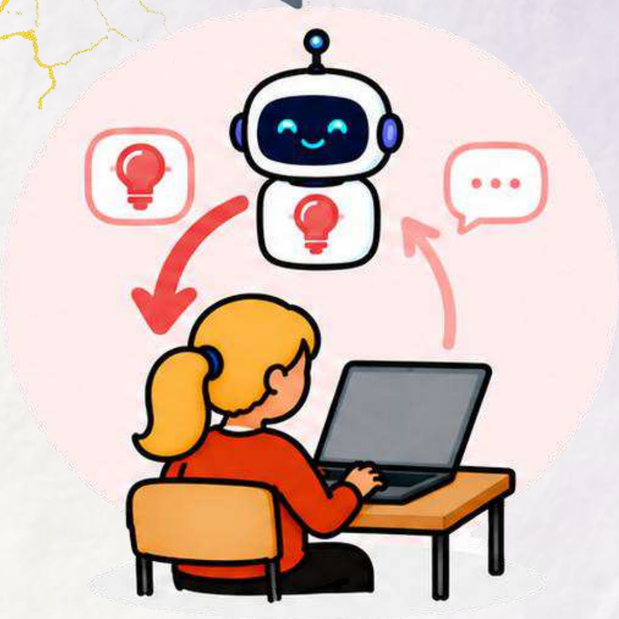
8. AI-LED LEARNING: DEPENDENCY AND REDUCED HUMAN AGENCY

Teacher mainly observes, with less direct involvement in day-to-day learning











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Star Trek: Discovery (2017a) Season 1, episode 1, 'The Vulcan Hello'. Directed by David Semel. Written by Bryan Fuller and Alex Kurtzman. Paramount+.



Agentic AI is here and we need a response



> AI can do so much for our education system. But it will never replace the human light of learning, passed down from one generation to the next.
>
> That can never be traded in for the latest tech. Nor can AI replace our wonderful workforce, who bring so much passion into the classroom.
>
> No. They are – they always will be – the beating heart of our schools and colleges, our nurseries and universities.
>
> AI will change so much, but not that.



Phillipson, B. (2026) Education Secretary speech at Bett UK Conference. Delivered at Bett UK Conference, London, 21 January. Available at: https://www.gov.uk/government/speeches/education-secretary-speech-at-bett-uk-conference (Accessed: 28 October 2026).



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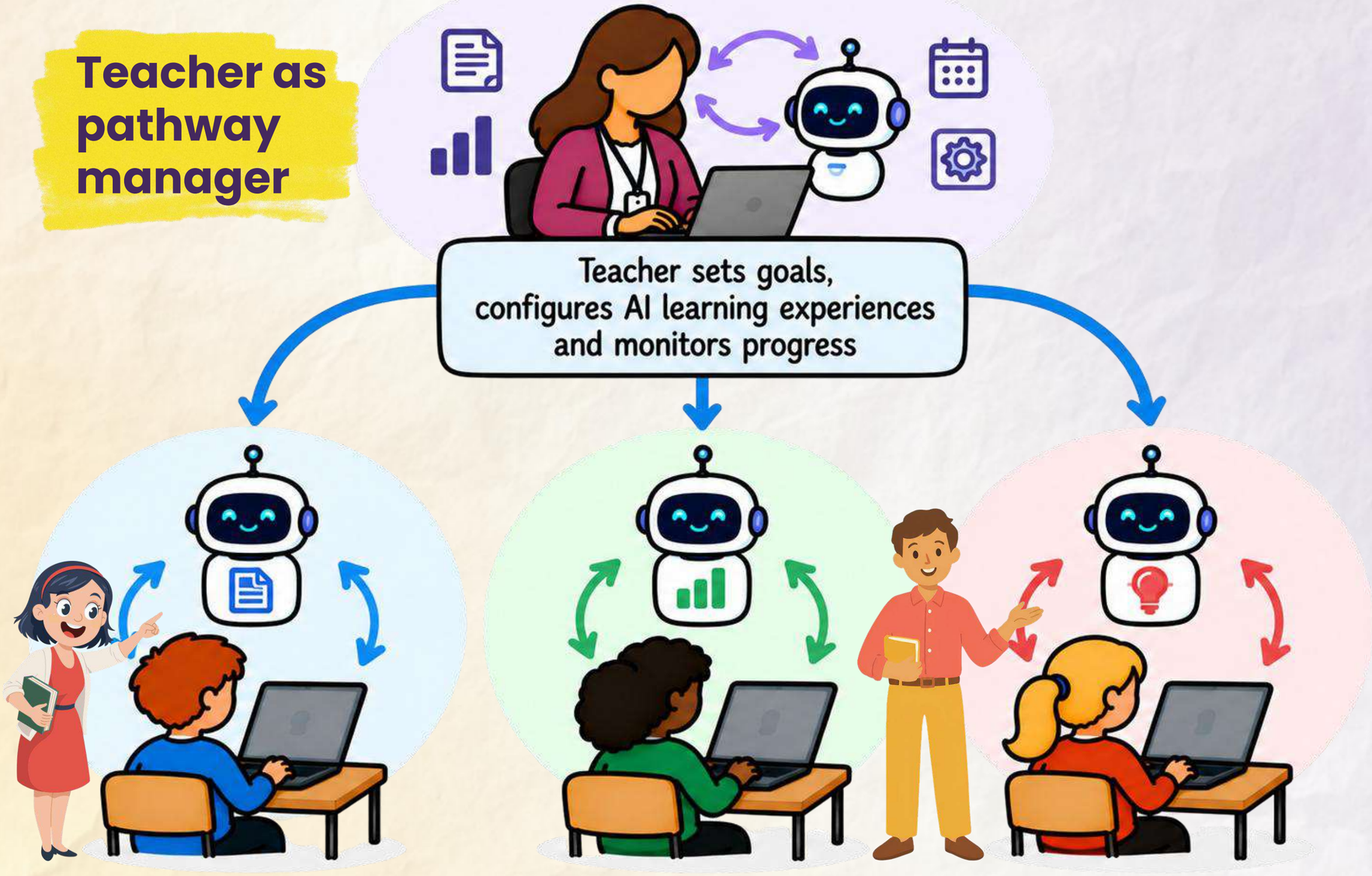
7. TEACHER-DIRECTED AI ECOSYSTEM: HUMAN AGENCY

Teacher as pathway manager



BIAS GIRL

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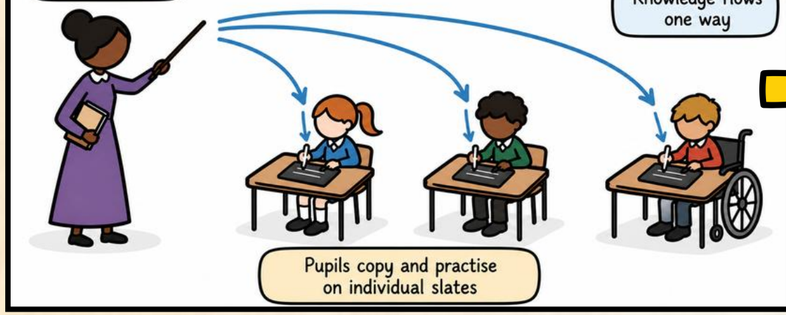

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2. TEXTBOOKS & CHALKBOARD

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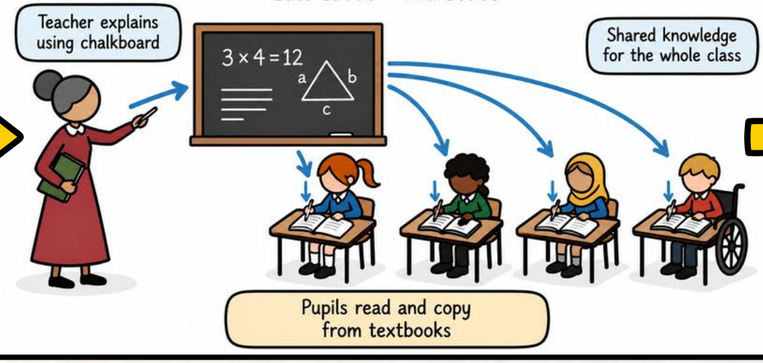
Shared knowledge for the whole class



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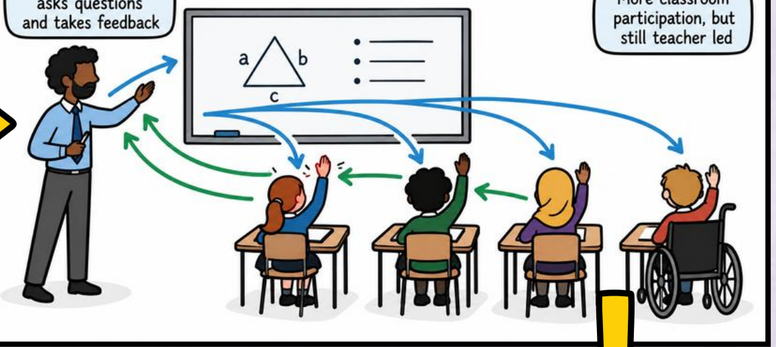

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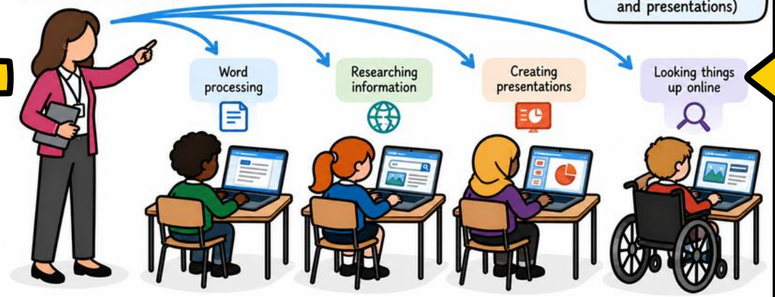

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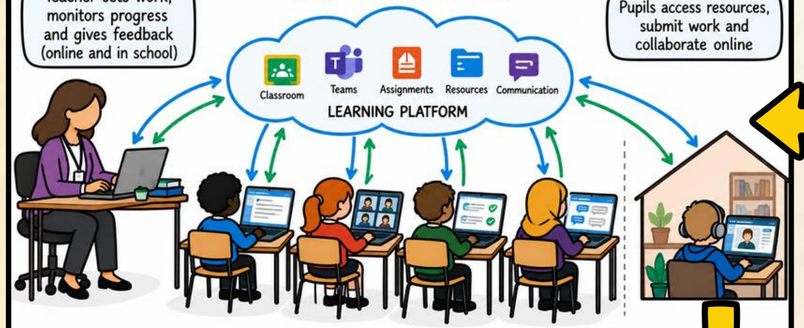

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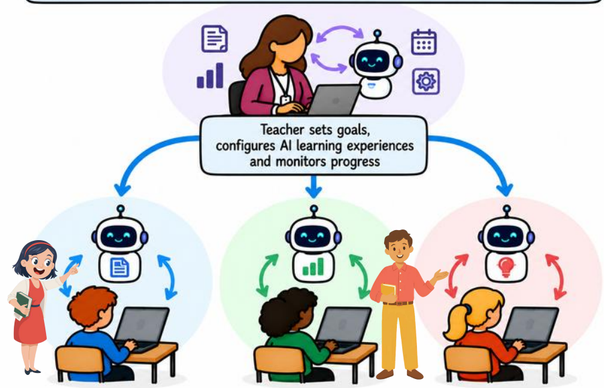



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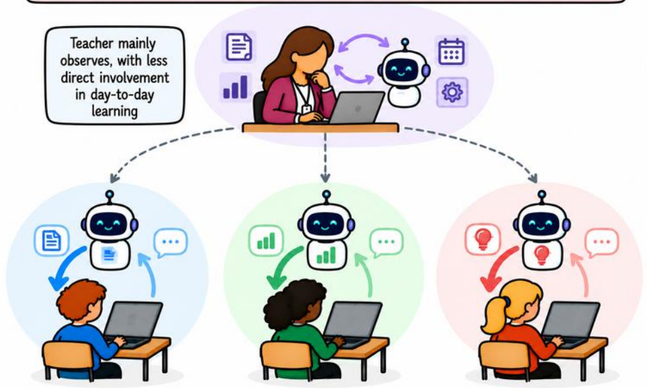

Which classroom are you happiest and confident in the technology of?

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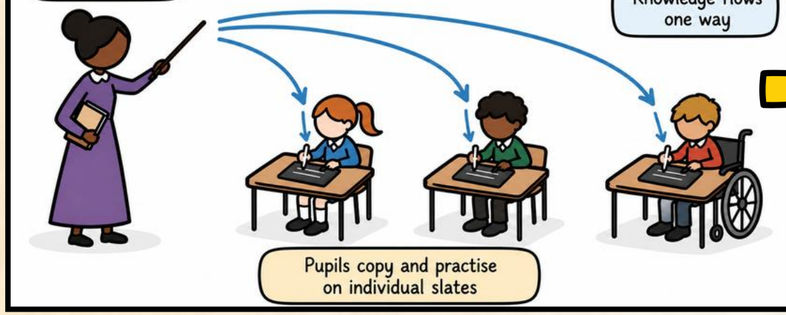

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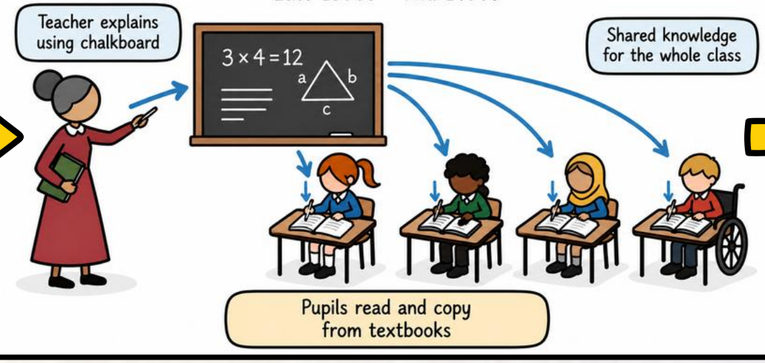

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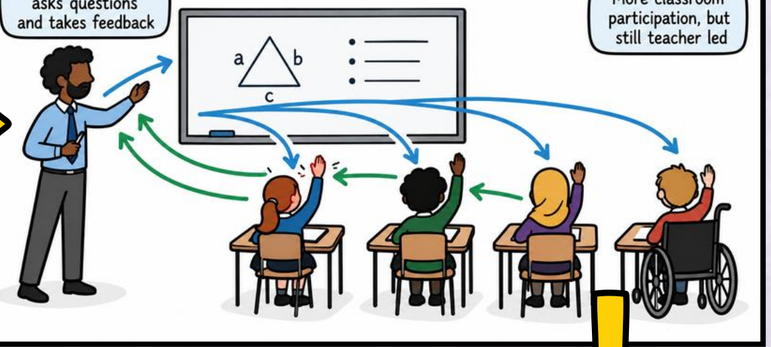

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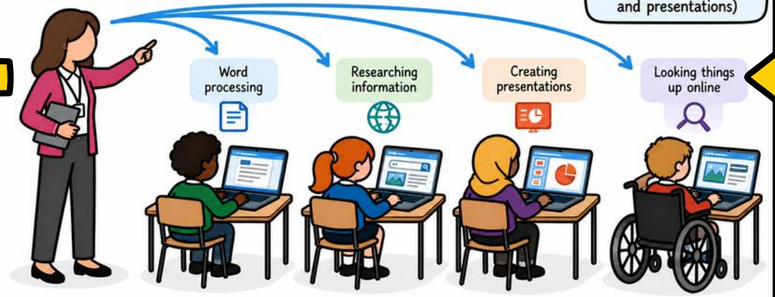

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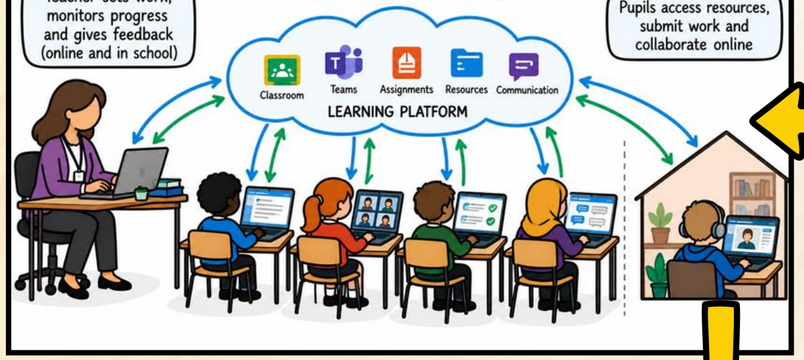

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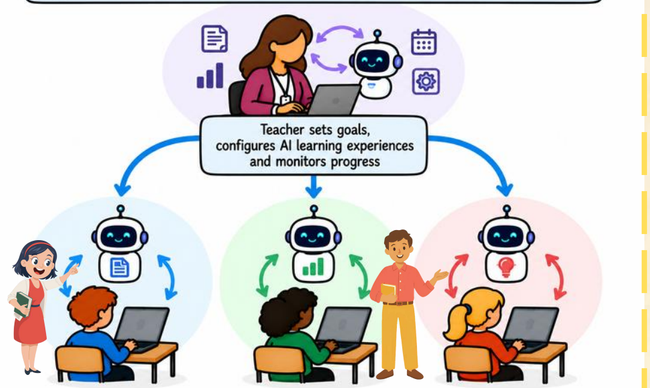



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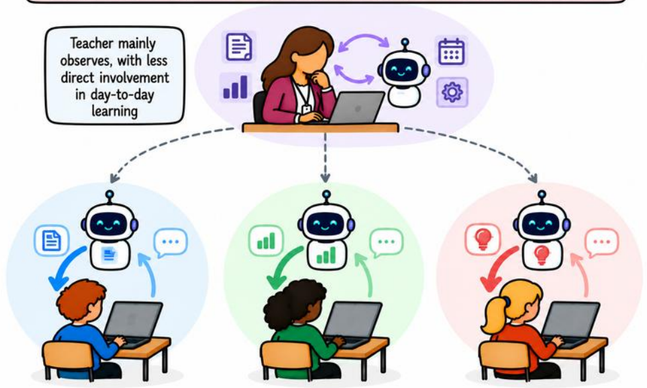

Which classroom are your pupils happiest and confident in the technology of?



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How advanced is my digital literacy (or competency)?















Who do you feel like?





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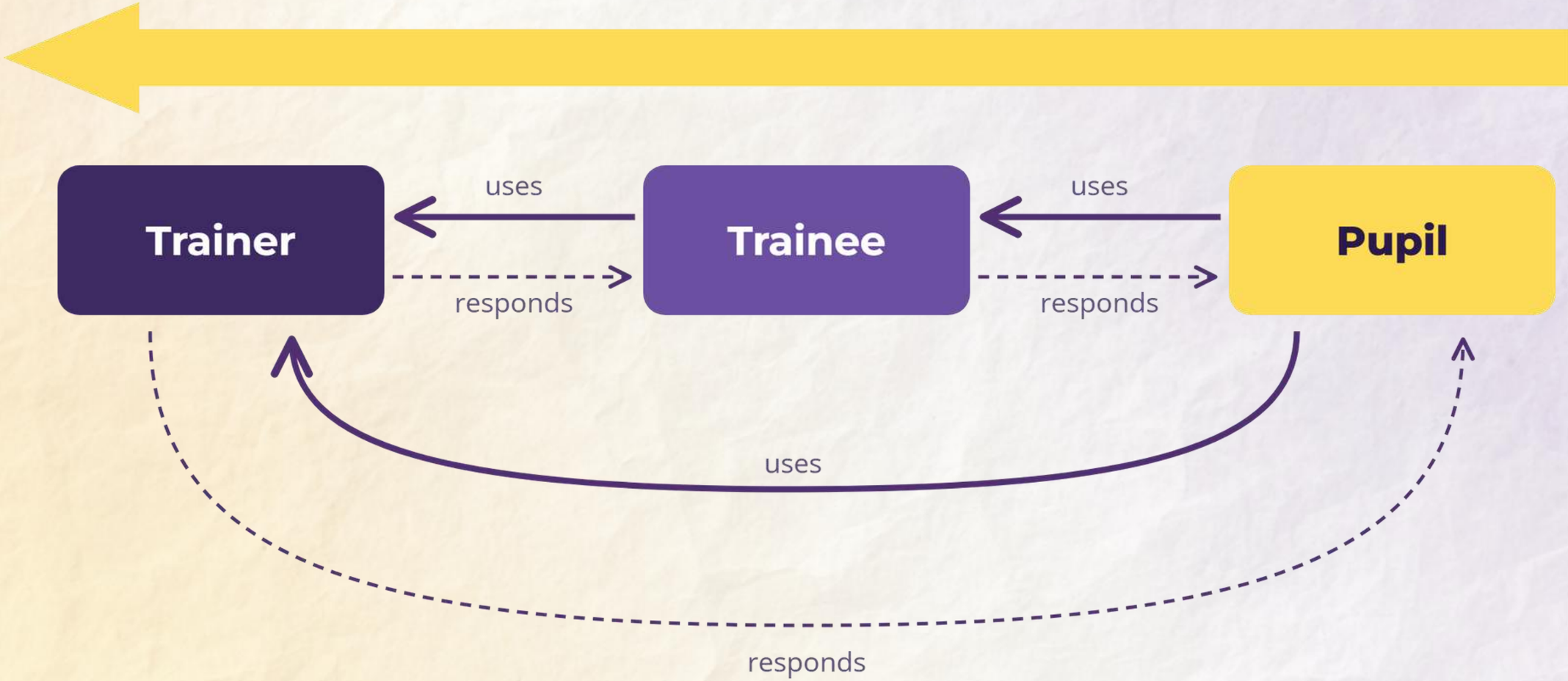
AI Digital Literacy



Digital natives have greater use and exposure.



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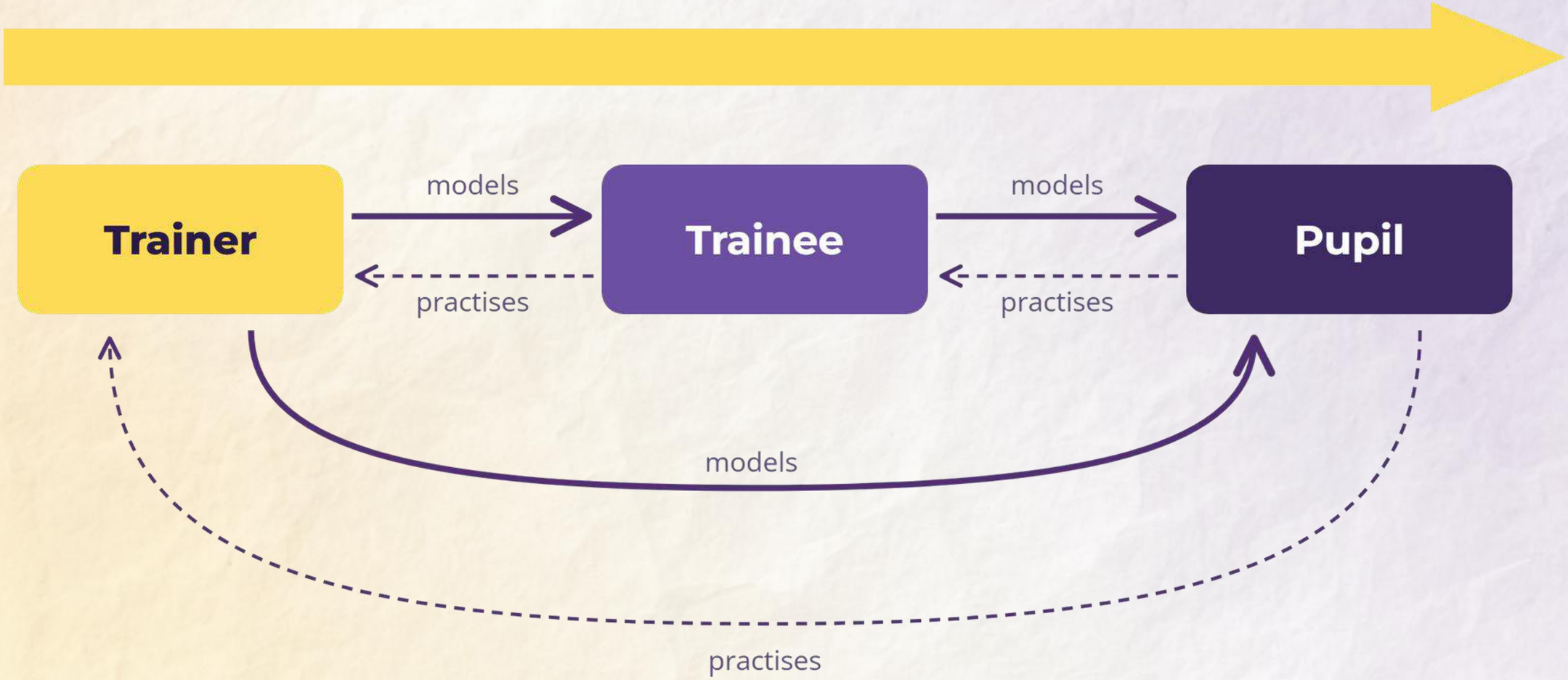
How we think it should be



Critical oversight is modelled, then practised.



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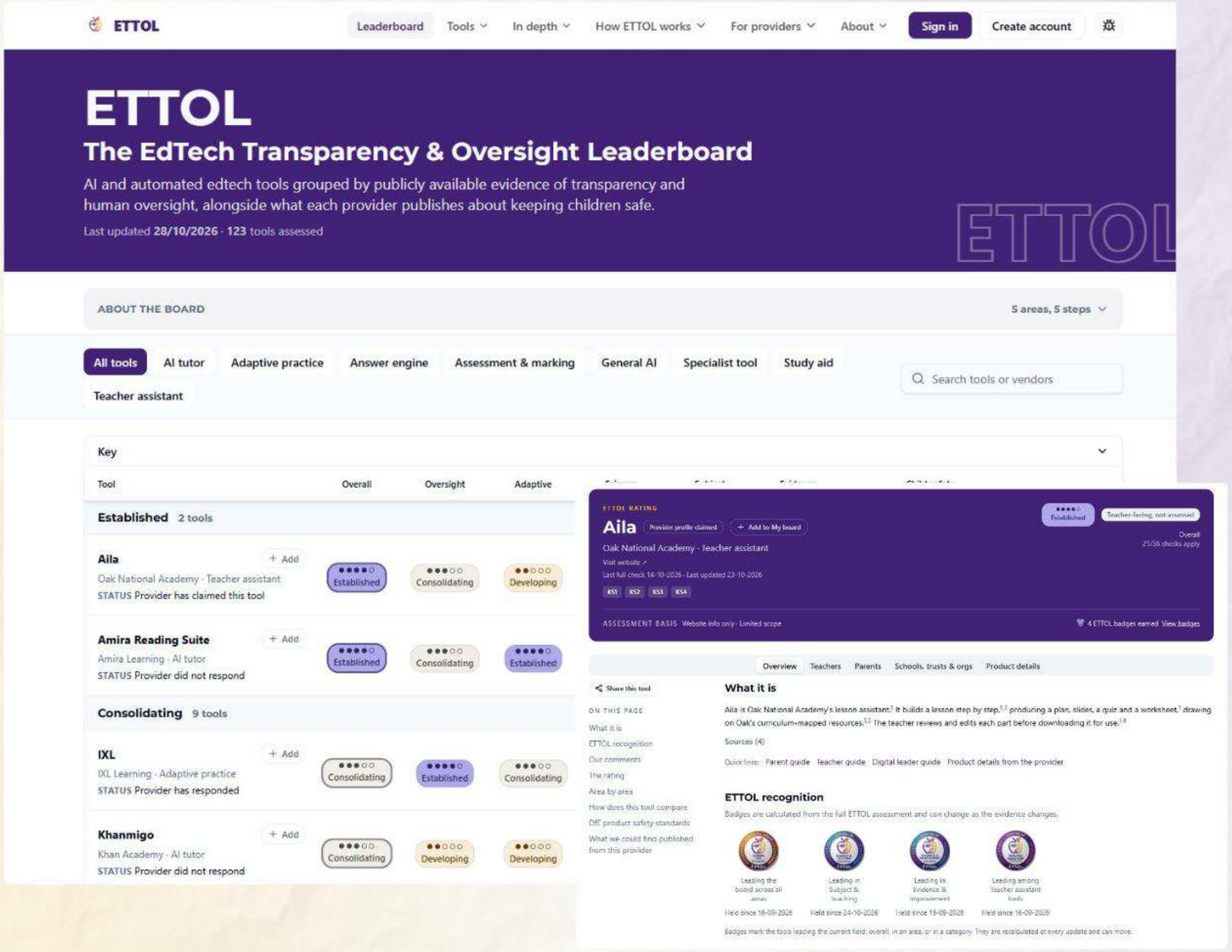
OpenAI
ANTHROPIC
Google DeepMind
Microsoft
CENTURY TECH
Sparx Maths
Meta Llama
Seneca Learning
Atom Learning
MISTRAL AI
THIRD SPACE LEARNING
Eedi
Hugging Face
TASSOMAI
LbQ Learning by Questions
Qwen
Educake
Quizlet
cohere
MEMRISE
duolingo MAX
TeachMateAI
NVIDIA
Oak National Academy | Aila
Khanmigo

How do all these tools address human agency?



ETTOL





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The ITTECF & Technology

The technology available for facilitating great teaching and supporting pupils to succeed is constantly evolving, so the framework does not refer to specific technological innovations.



Teachers, however, need to be conversant throughout their careers with technological developments that evidence suggests can improve pupil outcomes.



Providers of ITT and ECT training are encouraged to consider how their training materials can support trainees and ECTs in the judicious use of technology, informed by evidence, both in **helping pupils to progress** and **in enabling and enhancing their own working practices**.

DfE (2024) ITTECF, p. 4. Available at: gov.uk/government/publications/initial-teacher-training-and-early-career-framework



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Decide by Task



Marking assignments/portfolios
Safeguarding concerns
Judgements
Conclusions from data



Emails
Newsletter text
Updating spreadsheets
Data analysis



Making calendar entries
Policy summaries
FAQs
Simple support enquiries
Visuals from data

Teach about agency, not tools



The Human Agency Recognition Framework

1 HAVING AGENCY
What could I do otherwise?

›

2 RECOGNISING AGENCY
What else might be possible?

›

3 EXERCISING AGENCY
How will I exercise my ability to do otherwise?



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The Human Agency Recognition Framework



We need to make the possibility space of AI decisions more recognisable to humans





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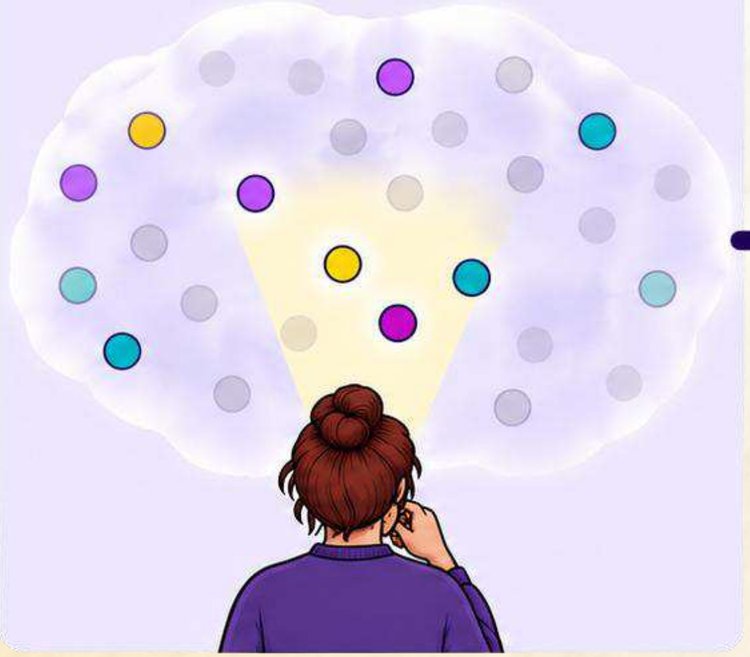
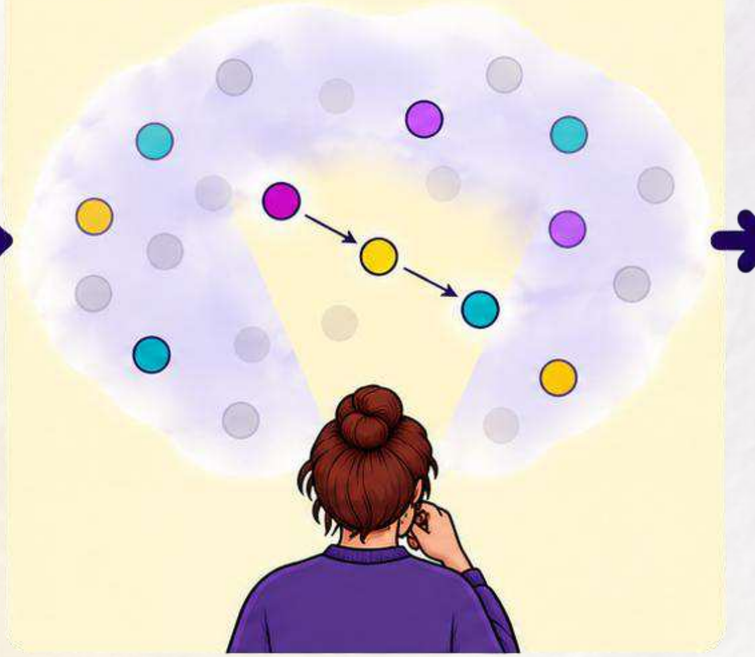
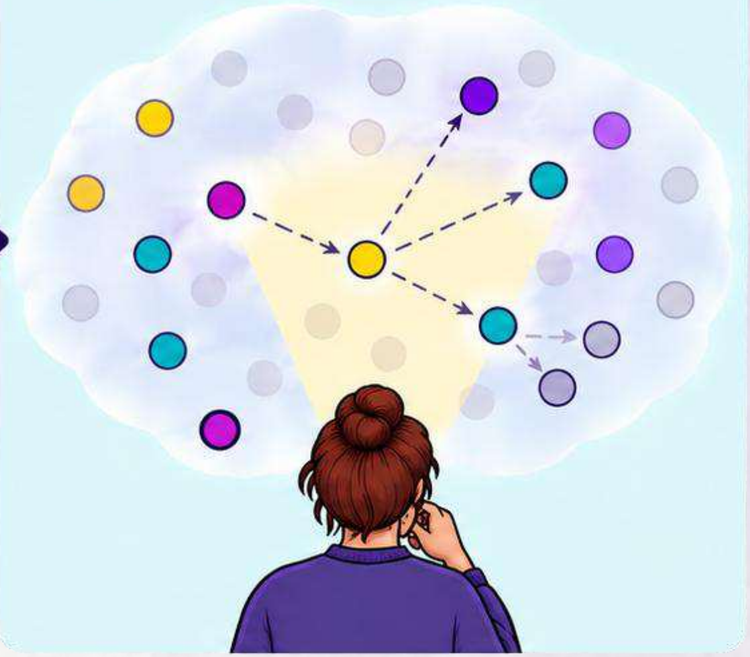
1 ANTICIPATE
What might be possible?



2 INVESTIGATE
What did it do?



3 EXPAND
What else could be possible?



Unseen possibilities
(in the possibility space)

AI's identified path
(some decisions now visible)

Other recognised possibilities
(identified by the individual)

Entire possibility space
(most remains unseen)

Individual's field of awareness
(what they can see and consider)

One person can uncover some of the possibility space, but never all of it.

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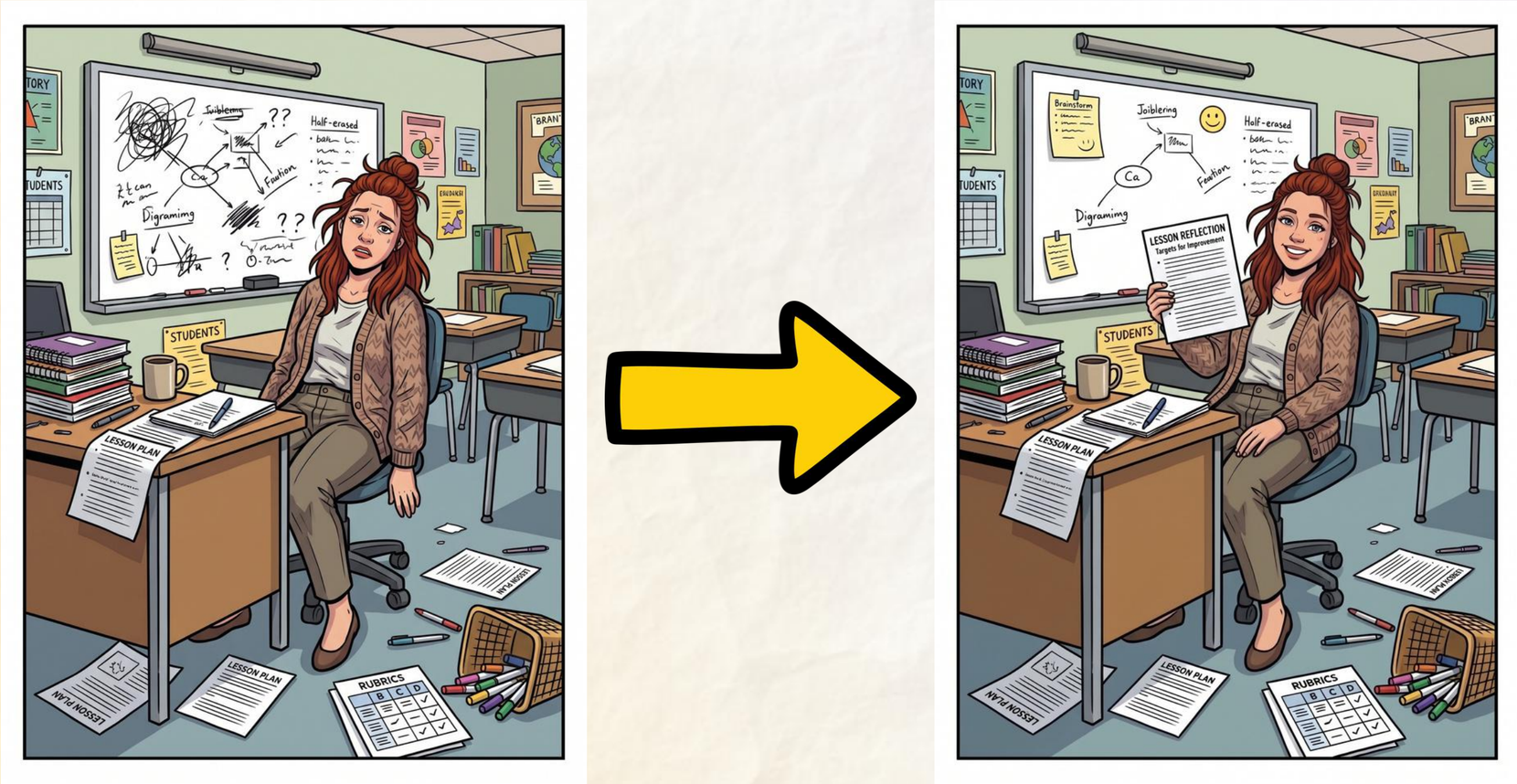
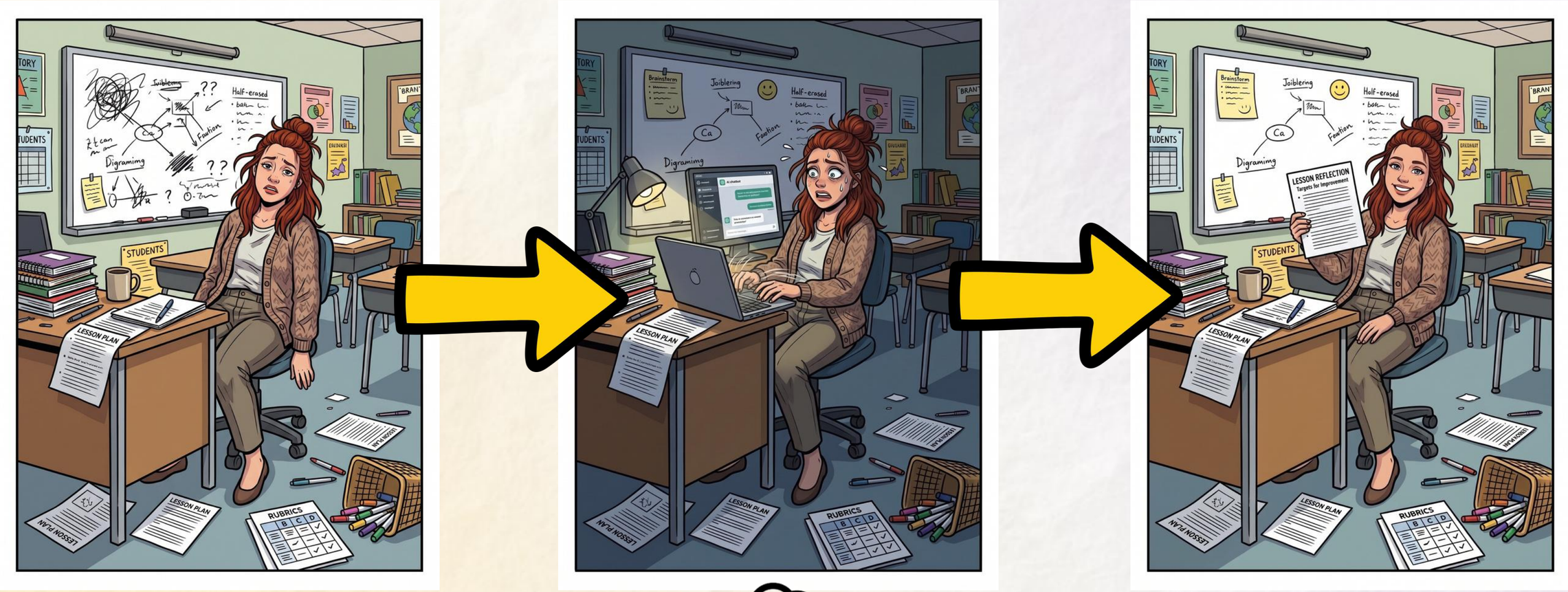
How does this look in practice?



What you see

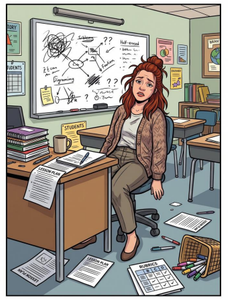

Half-erased
Digraming
STUDENTS
LESSON PLAN
LESSON PLAN
LESSON PLAN
RUBRICS
Brainstorm
Joiblering
Ca
Fration
LESSON REFLECTION
Targets for Improvement

What the trainee does



What the agentic AI does

1. Input



Trainee

"I need to complete my reflection document"

2. Access

- **Conversation** (your account)
- **Your files** (plans, work, past reflections)
- **Training record** (progress, feedback)
- **Frameworks** (Standards, ITTECF)

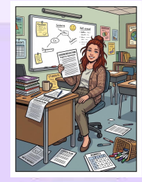
3. Analyse

- **Transcribe** (organise content)
- **Identify key events** (what happened)
- **Compare** (with Standards, ITTECF, past records)
- **Evaluate** (performance, patterns)

4. Inferences and decisions

- **Focus of lesson** (infers context)
- **Reasons for outcome** (infers causes)
- **Strengths** (infers from evidence)
- **Areas for development** (infers gaps)
- **Relevant criteria** (selects Standards / ITTECF)
- **Targets** (prioritises)
- **Next steps** (recommends actions)

5. Output



Reflection document

- Lesson narrative
- Appraisal (Standards / ITTECF)
- Strengths
- Areas for development
- Targets
- Next steps
- Trainee summary



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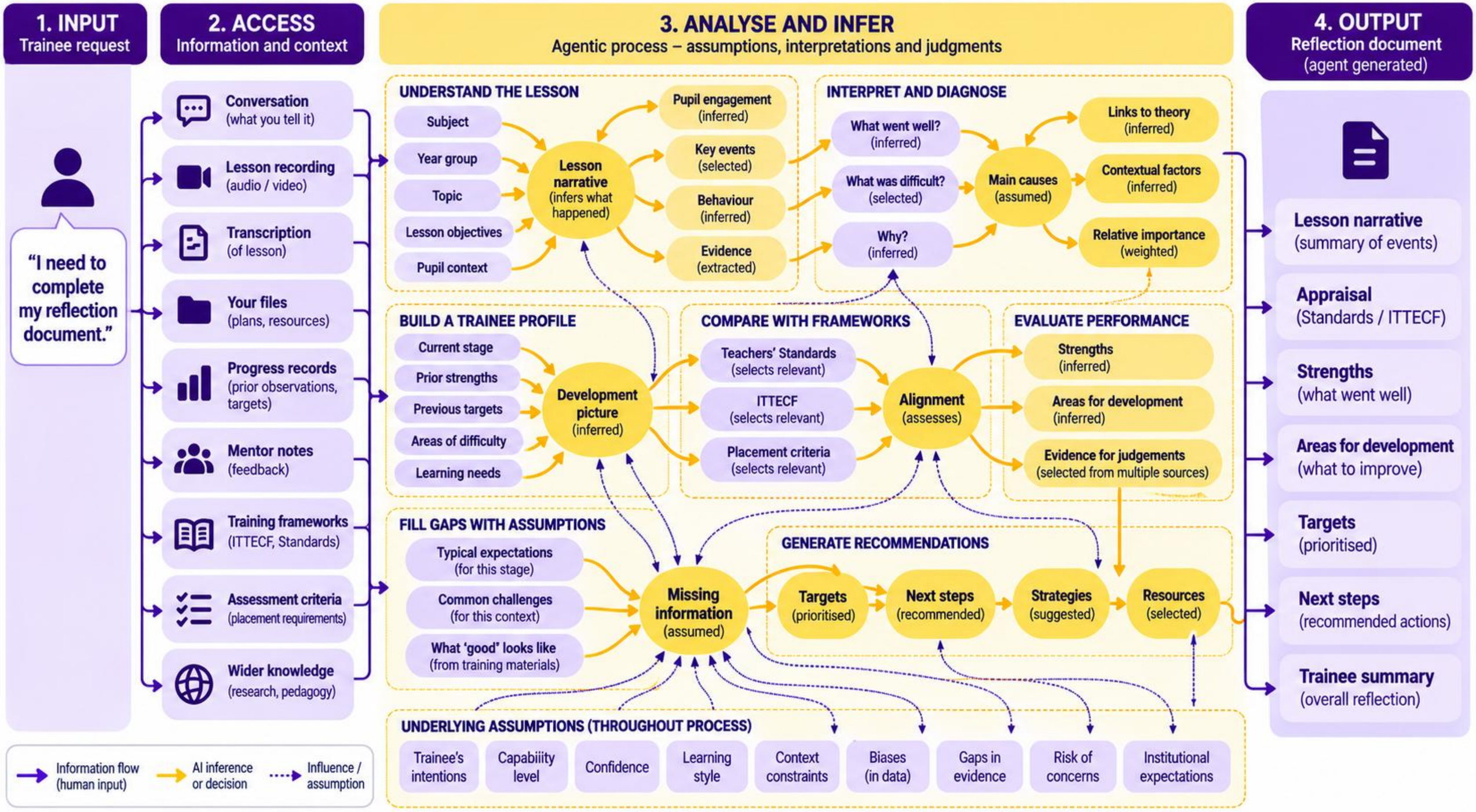
1. INPUT
Trainee request
"I need to complete my reflection document."
2. ACCESS
Information and context
Conversation (what you tell it)
Lesson recording (audio / video)
Transcription (of lesson)
Your files (plans, resources)
Progress records (prior observations, targets)
Mentor notes (feedback)
Training frameworks (ITTECF, Standards)
Assessment criteria (placement requirements)
Wider knowledge (research, pedagogy)
3. ANALYSE AND INFER
Agentic process – assumptions, interpretations and judgments
UNDERSTAND THE LESSON
Subject
Year group
Topic
Lesson objectives
Pupil context
Lesson narrative (infers what happened)
Pupil engagement (inferred)
Key events (selected)
Behaviour (inferred)
Evidence (extracted)
INTERPRET AND DIAGNOSE
What went well? (inferred)
What was difficult? (selected)
Why? (inferred)
Main causes (assumed)
Links to theory (inferred)
Contextual factors (inferred)
Relative importance (weighted)
BUILD A TRAINEE PROFILE
Current stage
Prior strengths
Previous targets
Areas of difficulty
Learning needs
Development picture (inferred)
COMPARE WITH FRAMEWORKS
Teachers' Standards (selects relevant)
ITTECF (selects relevant)
Placement criteria (selects relevant)
Alignment (assesses)
EVALUATE PERFORMANCE
Strengths (inferred)
Areas for development (inferred)
Evidence for judgements (selected from multiple sources)
FILL GAPS WITH ASSUMPTIONS
Typical expectations (for this stage)
Common challenges (for this context)
What 'good' looks like (from training materials)
Missing information (assumed)
GENERATE RECOMMENDATIONS
Targets (prioritised)
Next steps (recommended)
Strategies (suggested)
Resources (selected)
UNDERLYING ASSUMPTIONS (THROUGHOUT PROCESS)
Trainee's intentions
Capabiiity level
Confidence
Learning style
Context constraints
Biases (in data)
Gaps in evidence
Risk of concerns
Institutional expectations
4. OUTPUT
Reflection document (agent generated)
Lesson narrative (summary of events)
Appraisal (Standards / ITTECF)
Strengths (what went well)
Areas for development (what to improve)
Targets (prioritised)
Next steps (recommended actions)
Trainee summary (overall reflection)
Information flow (human input)
AI inference or decision
Influence / assumption

Agentic AI practice is becoming a second area of professional practice that mentors and providers must support.



The Human Agency Recognition Framework



New Mentoring Questions

1 ANTICIPATE

Before the trainee uses an AI agent

What might the AI decide without you?

- Could it look through your previous reflections, observation records or progress reviews?
- Could it decide which ITTECF areas your lesson relates to?
- Could it make its own judgment about your strengths and areas for development?
- Could it set your next targets based on what it knows about your training?

2 INVESTIGATE

After the trainee has used an AI agent

What decisions did it make along the way?

- Did the AI use information from elsewhere in your training records, or just what you told it?
- Who selected the ITTECF criteria in your reflection, you or the agent?
- Who determined which aspects of your teaching were strengths or weaknesses?
- Did it establish your development priorities before you had decided what they were?

3 EXPAND

Uncovering further possibilities together

What decisions might we still be missing?

- Could the agent have excluded evidence that suggested a different interpretation of the lesson?
- Could it have compared your performance against other assessment criteria without you realising?
- Could it have considered or updated other parts of your development record?
- What other decisions could it make if it had access to more of your training workspace?



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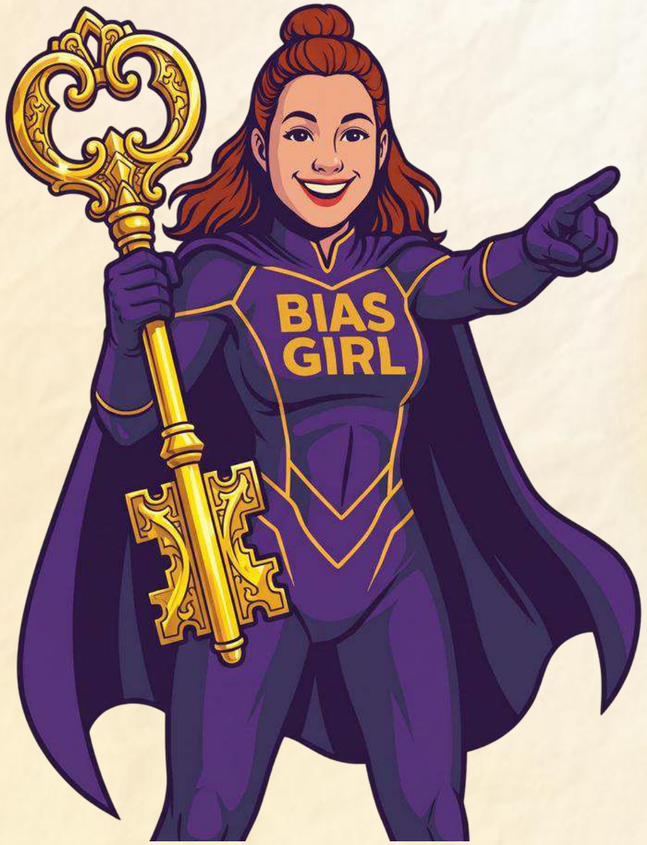
Planning & Resourcing

1. **ANTICIPATE**
   What might be possible?
2. **INVESTIGATE**
   What did it do?
3. **EXPAND**
   What else could be possible?



Hedlund, V. and Harden, H. (2026) 'Looking deeper into AI-generated visual explanations', School Science Review, 107(397), pp. 4–7.



As AI becomes more agentic, teacher education must become more intentional about human agency.

What you can do

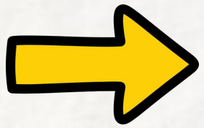


Follow-up prompt:

```
> How have you impacted
my agency here?
```



Add the human agency audit attached to your task prompt.







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BIAS AGENT
WONDERLAND MAP
BIAS GIRL
Google Maps
Don't lose yourself in the
#AIWonderland



Victoria Hedlund

The AI Bias Girl | Physicist • Educator • AI Bias Researcher

- **Founder & Innovator:** GenEd Labs • ETTOL (129 AI & EdTech tools independently evaluated) • LessonInspector.ai
- **Recognition:** TechWomen100 Award Winner 2026 • LinkedIn News Europe Top 12 AI Voices • Edufuturists AI Pioneer 2026 Shortlist • International AI for Education Awards Participant
- **Research & National Influence:** Published in School Science Review & Primary Science • DfE AI guidance contributor • Parliamentary written evidence • BCS AI training contributor.
- **Author & Editor:** AI Bias in Education • 100 Quick GenAI Prompts for Teachers & Educators • The Educator's AI Guide 2026 contributor.
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