

Capability by Design

A framework for deciding how generative AI should participate in learning.



Core premise: AI-supported performance is not the same as underlying capability.

A learner may produce stronger work with AI while developing less of the reasoning, judgment, or domain knowledge needed when that support is reduced, removed, or wrong.

1



What capability must remain with the learner?

Identify the knowledge, reasoning, judgment, or professional practice the learning experience is meant to develop.



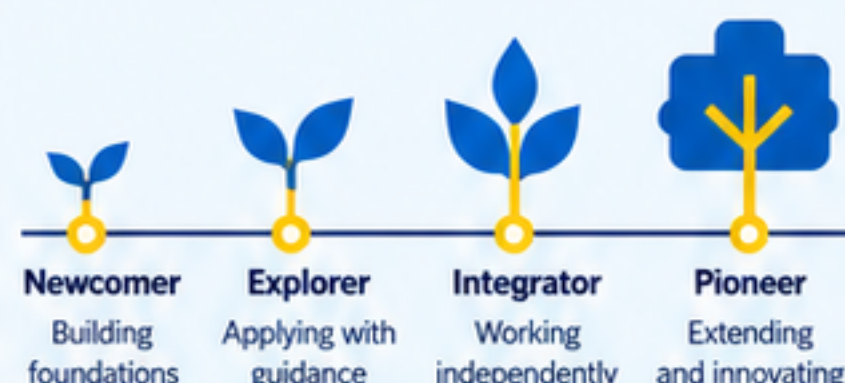
Knowledge
Reasoning
Judgment
Professional practice

2



What can the learner already do independently?

Calibrate support to current competence. Consider the developmental progression: Newcomer, Explorer, Integrator, Pioneer.



3



What productive friction should be retained?

Keep effort that contributes to learning, such as retrieval, critique, comparison, revision, and error correction.



Retrieval
Critique
Comparison
Revision
Error correction

4



What role should AI play at this stage?

Three Modes



Build

AI scaffolds learning through questioning, hints, feedback, comparison, or simulation without taking over the core reasoning.



Demonstrate

AI support is reduced or removed so the learner can show the capability directly.



Delegate

AI performs work peripheral to the target capability, or work the learner can already supervise and evaluate.

5



What evidence will demonstrate capability and transfer?

Distinguish AI-assisted performance from transferable competence. Decide what must still be shown independently.



Independent demonstration
Transfer to new contexts
Application in authentic tasks
Quality of reasoning and judgment
Robustness when AI is unavailable, reduced, or wrong



DESIGN SHIFT

Move from regulating AI use to designing for capability.

Learning experiences that build enduring capability — with AI as a thoughtful partner.



KEY TAKEAWAY

Use the framework to make AI-supported learning decisions explicit, deliberate, and competency-calibrated.