

*“The work has stopped
proving the thinking.”*



Better Signals

A STARTER KIT FOR DESIGNING THINKING IN
THE AGE OF AI

Designing for judgment, not just performance.

NOT ALL THINKING SHOULD BE VISIBLE.
BUT THE JUDGMENT IS WHAT MATTERS.

	PRODUCT Final output	WEAK SIGNAL Can be polished. Doesn't prove thinking.
	PROCESS Steps and actions	PARTIAL SIGNAL Shows effort. Not always understanding.
	JUDGMENT Decisions and reasoning	TRUSTWORTHY SIGNAL Reveals thinking. Proves capability.



Practical
Design Moves



For Classrooms
& Online Courses



Real Examples
You Can Use



Better Signals.
Stronger Learning.

Let's design together.

Reply to any email with a
lesson you're working on—I'll
help you redesign it.



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12 Design Moves

THAT REVEAL STUDENT THINKING



These are intentional windows into judgment.
Not more work. Better signals.

<p>1 </p> <p>DECISION CHECKPOINTS</p> <ul style="list-style-type: none"> • Why did you choose this approach? • What alternatives did you consider? 	<p>2 </p> <p>COMPARISON PROMPTS</p> <ul style="list-style-type: none"> • Which solution is stronger? • What makes one argument more convincing? 	<p>3 </p> <p>REVISION REFLECTION</p> <ul style="list-style-type: none"> • What changed between draft 1 and 2? • What made you change your mind?
<p>4 </p> <p>ERROR ANALYSIS</p> <ul style="list-style-type: none"> • What went wrong? • Why did it make sense at the time? 	<p>5 </p> <p>CONFIDENCE RATINGS</p> <ul style="list-style-type: none"> • How confident are you in this answer? • What makes you uncertain? 	<p>6 </p> <p>PROCESS CAPTURE</p> <ul style="list-style-type: none"> • Annotated drafts • Version history • Thinking logs
<p>7 </p> <p>THINK-ALOUD MOMENTS</p> <ul style="list-style-type: none"> • Brief verbal explanation • “Talk me through your reasoning.” 	<p>8 </p> <p>CONSTRAINT VARIATION</p> <ul style="list-style-type: none"> • Solve the same problem under different conditions. • Observe adaptability. 	<p>9 </p> <p>ALTERNATIVE GENERATION</p> <ul style="list-style-type: none"> • Generate 2–3 possible approaches. • Evaluate each.
<p>10 </p> <p>PREDICTION → OUTCOME</p> <ul style="list-style-type: none"> • What do you expect will happen? • What actually happened? 	<p>11 </p> <p>PEER COMPARISON</p> <ul style="list-style-type: none"> • Whose reasoning is stronger? Why? 	<p>12 </p> <p>TRANSFER TASKS</p> <ul style="list-style-type: none"> • Apply learning in a new context.

“The work has stopped proving the thinking.”



STRONG SIGNALS COME FROM PATTERNS OF JUDGMENT OVER TIME. DESIGN FOR EVIDENCE THAT MATTERS.

Make Thinking Visible

(WITHOUT KILLING IT)

Better Signals

DESIGNING FOR JUDGMENT, NOT JUST PERFORMANCE.

The tension is real: If we over-design visibility, we create *performance*, not thinking.



Guiding Principle:

Not all thinking should be visible.

But what we assess must leave a trustworthy signal.

10 LOW-EFFORT MOVES



1 ADD ONE DECISION QUESTION

Add a single question that asks students to explain a choice they made.

Example: Why did you choose this approach?



6 ALLOW PARTIAL ANSWERS + EXPLANATION

Value reasoning even when the answer is incomplete.

Example: Show what you have so far and explain your next step.



2 ASK FOR ONE COMPARISON

Ask students to compare two ideas, strategies, or solutions and explain which is stronger and why.

Example: Which argument is more convincing and why?



7 BUILD IN REVISION CHECKPOINTS

Create moments for students to revise their thinking and explain why they changed.

Example: What feedback or evidence led you to revise this?



3 USE SHORT REFLECTIONS

Use brief, focused prompts that reveal thinking without too much writing.

Example: What changed in your thinking?



8 ASK FOR CONFIDENCE + JUSTIFICATION

Have students rate their confidence and explain what supports it.

Example: How confident are you in this answer? Why?



4 CAPTURE BEFORE/ AFTER THINKING

Ask students to share their initial thinking, then compare it to their final understanding.

Example: What did you think at the start—and what do you think now?



9 USE PAIRED DISCUSSION → WRITTEN REASONING

Let students talk first, then write—discussion deepens and clarifies thinking.

Example: Discuss your thinking, then summarize your reasoning.



5 USE AUDIO RESPONSES

Let students explain their reasoning in their own voice—quick and powerful.

Example: Record a 60-second explanation of your thinking.



10 FOCUS ON QUALITY, NOT QUANTITY

Less is more. One strong signal is better than many weak ones.

Example: One well-placed question can reveal more than a long rubric.

“Not all thinking should be visible. But what we assess must leave a trustworthy signal.”



THE BALANCE

Protect the space for thinking. Design the moments that make thinking visible. That's how learning deepens.

Designing for Thinking in Online Courses



THE SHIFT FROM PARTICIPATION TO THINKING

From (Weak Signals)	To (Better Signals)
Respond to the prompt. →	Compare two responses and justify which is stronger.
Submit your initial post. →	Revise your post after feedback and explain why.
Share your perspective. →	Record a 1–2 minute explanation of your reasoning.
Complete the assignment. →	Show your thinking at key decision points.

Online environments often default to: **DISCUSSION POSTS. WRITTEN SUBMISSIONS.**

These are often weak signals. They show participation, not necessarily thinking.

UPGRADE MOVES FOR STRONGER SIGNALS

1. COMPARISON OVER OPINION

Push students to analyze and evaluate—not just share.

Ask:

- Which idea is more convincing? Why?
- What are the strengths and weaknesses?

2. REVISION WITH REASON

Require students to revisit their thinking after new information or feedback.

Ask:

- What changed?
- What made you change your mind?

3. EXPLAIN THE THINKING

Add brief audio or video explanations to reveal reasoning in students' own words.

Ask:

- Talk me through your reasoning.
- Why did you choose this path?

4. DECISION CHECKPOINTS

Build in moments where students pause and explain key choices.

Ask:

- Why this approach?
- What alternatives did you consider?

5. PEER ANALYSIS

Use structured peer review to deepen thinking through comparison.

Ask:

- What feedback will strengthen this?
- What would you do differently?



STRONG SIGNALS DON'T COME FROM MORE CONTENT.
They come from intentional design.

Asynchronous Signal Builders

DESIGN TO MAKE THINKING VISIBLE—EVEN WHEN YOU'RE NOT THERE.

1. VERSIONED SUBMISSIONS

- Require drafts or iterations.
- Ask students to explain what they changed and why.

Tools:
Google Docs, LMS Version History, Track Changes

2. ANNOTATION TOOLS

- Encourage students to annotate texts, sources, or peer responses.
- Captures thinking in the moment.

Tools:
Hypothes.is, Perusall, Kami, LMS annotation features

3. REFLECTION CHECKPOINTS

- Short, targeted reflections at key moments.
- Focus on decisions, not just feelings.

Examples:
Muddiest Point, One-Minute Paper, Decision Log

4. AI TRANSPARENCY PROMPTS

- Normalize the use of AI—make thinking visible behind it.
- Build integrity and metacognition.

Prompts:
What did you use AI for? What did you change? Why did you change it?

5. THINKING LOGS

- Brief ongoing logs of decisions, doubts, connections.
- Great for complex, long-term work.

Tools:
LMS journals, Notion, Google Docs, or structured templates

6. PEER DIALOGUE WITH PURPOSE

- Structure discussions around analysis and evaluation.
- Push beyond agreement.

Prompts:
What evidence supports this? What's missing? What would strengthen this idea?



THE GOAL:
Collect patterns of thinking, not just moments of work.

STRONG ASYNCHRONOUS DESIGN HELPS STUDENTS:

OWN THEIR THINKING

SEE MULTIPLE PERSPECTIVES

MAKE BETTER DECISIONS

TRANSFER LEARNING TO NEW CONTEXTS

“ Online learning can be a powerful environment for thinking—when we design for judgment, not just participation.”





Why Your Assignments Don't Prove Learning Anymore

BECAUSE THEY WERE NEVER DESIGNED TO.



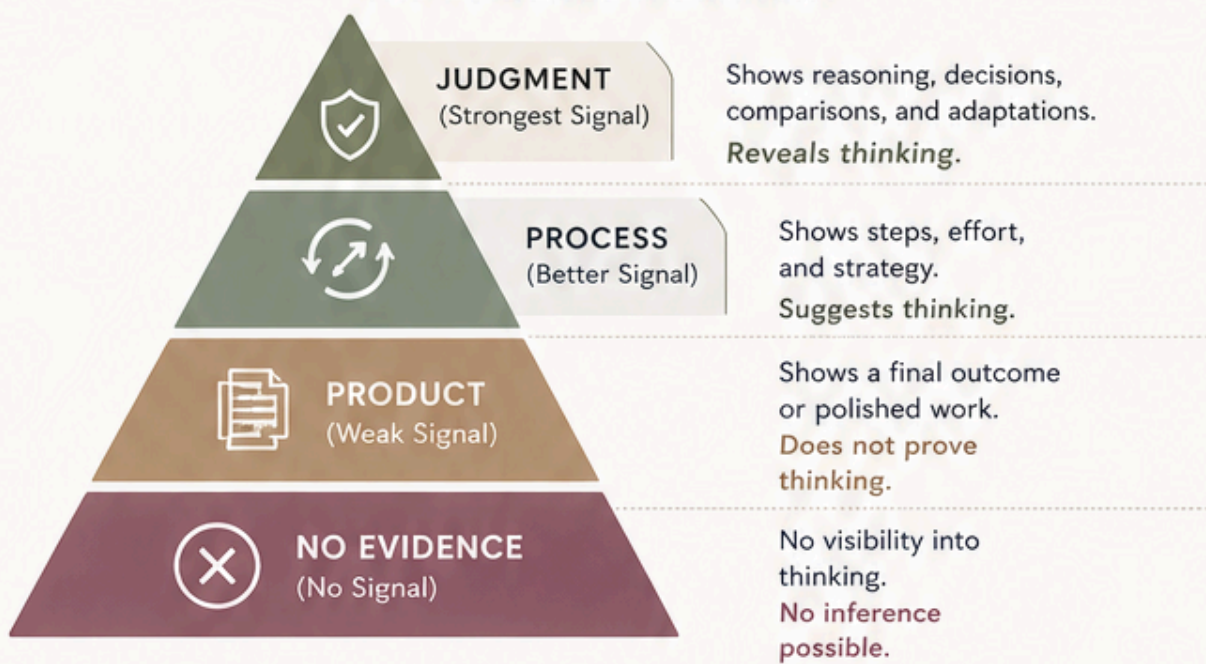
“If the product no longer proves the thinking, the design has to.”

THE NEW QUESTION



- ### STRONGER ASSESSMENT QUESTIONS
- What decision did you make?
 - What alternatives did you consider?
 - What changed in your thinking?
 - Why does this approach work better?
 - What would you do differently next time?

THE EVIDENCE HIERARCHY

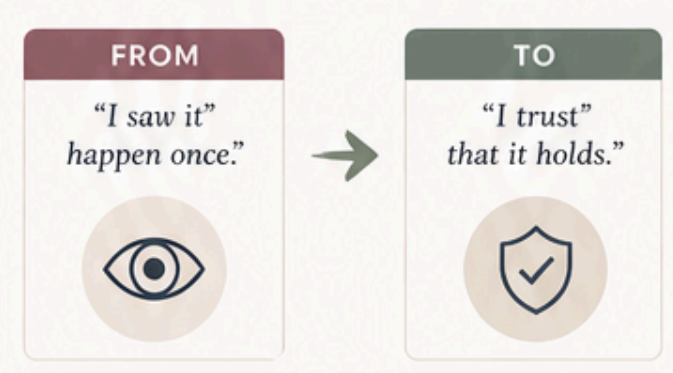


WHAT STRONG ASSESSMENT RELIES ON

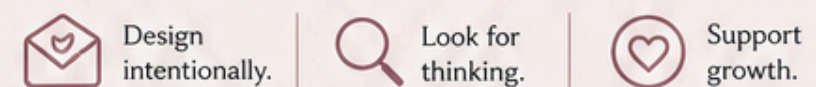


Great assessment is not about more work. It's about *better evidence of the right kind of thinking.*

THE REAL SHIFT



DESIGN FOR TRUSTWORTHY EVIDENCE



“Capability isn't proven by a product. It's inferred from patterns of judgment over time.”

Putting It All Together

STRONG ASSESSMENT IS A SYSTEM, NOT A SINGLE TASK.



It relies on patterns of judgment—collected over time—to build the confidence that learning is real, transferable, and trustworthy.

THE ASSESSMENT SYSTEM



WHAT STRONG SIGNALS LOOK LIKE

DIMENSION	WEAK SIGNALS (MOMENT-BASED)	STRONG SIGNALS (PATTERN-BASED)	WHAT IT REVEALS
PRODUCT	<ul style="list-style-type: none"> One final submission Polished, error-free Looks complete 	<ul style="list-style-type: none"> Multiple versions Iterations and refinements Evidence of improvement 	Shows ability to apply knowledge with care and skill.
PROCESS	<ul style="list-style-type: none"> Completion of steps Participation Following directions 	<ul style="list-style-type: none"> Choices made and why Strategies tried Adaptation to feedback 	Shows how students approach and persist through challenges.
JUDGMENT	<ul style="list-style-type: none"> Right/wrong answers Surface explanations No comparison 	<ul style="list-style-type: none"> Comparison of options Justification of decisions Revision of thinking 	Shows reasoning, evaluation, and the ability to think critically.
TRANSFER	<ul style="list-style-type: none"> Task-specific success Rote application Limited context 	<ul style="list-style-type: none"> New contexts Flexible application Connecting ideas 	Shows capability to use learning in new and meaningful ways.

EXAMPLE IN PRACTICE

GOAL: Students will be able to construct and defend a claim using evidence.



When these signals align over time, we can trust our inference that students are not just completing tasks—they are learning.

CONVERGING SIGNALS = STRONGER INFERENCE

The more ways we see the same thinking, the more confident we can be in our assessment.



When these three signals converge over time, we can confidently say: *This student can think.*

KEY REMINDERS

- ✓ Design small, intentional moves.
- ✓ Look for patterns, not perfection.
- ✓ Value thinking over performance.
- ✓ Use evidence to build trust.
- ✓ Keep students at the center.



“ We don’t assess learning to prove it happened once. We assess to build confidence that it holds. ”

- 💡 Better design.
- 🔍 Better signals.
- 🛡️ Stronger learning.

THAT’S THE SHIFT. ❤️

Why Better Signals Matter


BETTER SIGNALS

DESIGN FOR JUDGMENT, NOT JUST PERFORMANCE.

THE RESEARCH BEHIND DESIGNING FOR THINKING


Assessment is not about checking what students can do once. It's about building confidence in what they know, understand, and can apply over time.

Here's what the research tells us.

- 


1 Assessment is an inference problem.
We don't see learning directly. We infer it from evidence.

Assessment is the process of reasoning from evidence. The quality of our inferences depends on the quality of our evidence.

National Research Council (2001) Knowing What Students Know
- 


2 Single artifacts are weak evidence.
Performance can be context-dependent and misleading.

Students can succeed on a task without having transferable understanding. One moment does not prove capability.

Shavelson (2010); Messick (1994) On Validity of Assessment
- 


3 Learning is revealed through patterns, not moments.
Understanding emerges through change over time.

Revision, comparison, and adaptation show deeper cogitation than final products.

Black & William (1998); Pellegrino, Chudowsky & Glas, (2001)
- 

4 Metacognition and self-regulation matter.
Students who can explain and adjust their thinking learn more deeply and transfer better.

Judgment requires awareness of thinking, evaluation of options, and decisions about what to do next.

Zimmerman (2002); Butler & Winne (1995) Self-Regulated Learning
- 

5 Transfer is the real test of capability.
Can students apply learning in new and unfamiliar contexts?

True understanding shows up when conditions change. Transfer requires flexible, connected thinking.

Bransford, Brown & Coking (2000) How People Learn



AI made the weakness of single artifacts impossible to ignore. Our designs must evolve to capture better evidence of thinking.

Better signals. Stronger inferences. Greater trust in learning.

ABOUT THE AUTHOR



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Instructional designer, online learning strategist, and founder of The Engaging Teacher.

I help educators design meaningful learning experiences that reveal what matters most: students.

I believe that when I design for judgment, we build trust—and when we build trust, students rise.

Explore more resources, practical tools, and design inspiration at theengagingteacher.com

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When we design for better signals, we create the conditions for deeper thinking—and stronger learning that lasts.

THANK YOU FOR BEING PART OF THE SHIFT. LET'S KEEP DESIGNING FOR WHAT MATTERS MOST.