AAC&U

WEBINAR

The Missing Layer:
How Conversational AI Turns Student Reflection into Institutional Intelligence

May 6 | 2:00 p.m.

Held in partnership with Digication

Our Moderator

Jessica Chittum

Assistant Vice President for Curricular and Pedagogical Innovation and Director of VALUE Operations
AAC&U

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- Use Q&A to **submit questions** for the speaker
- Use Chat for **technology support** and to **engage with other attendees**

Another Way to Join the Conversation!

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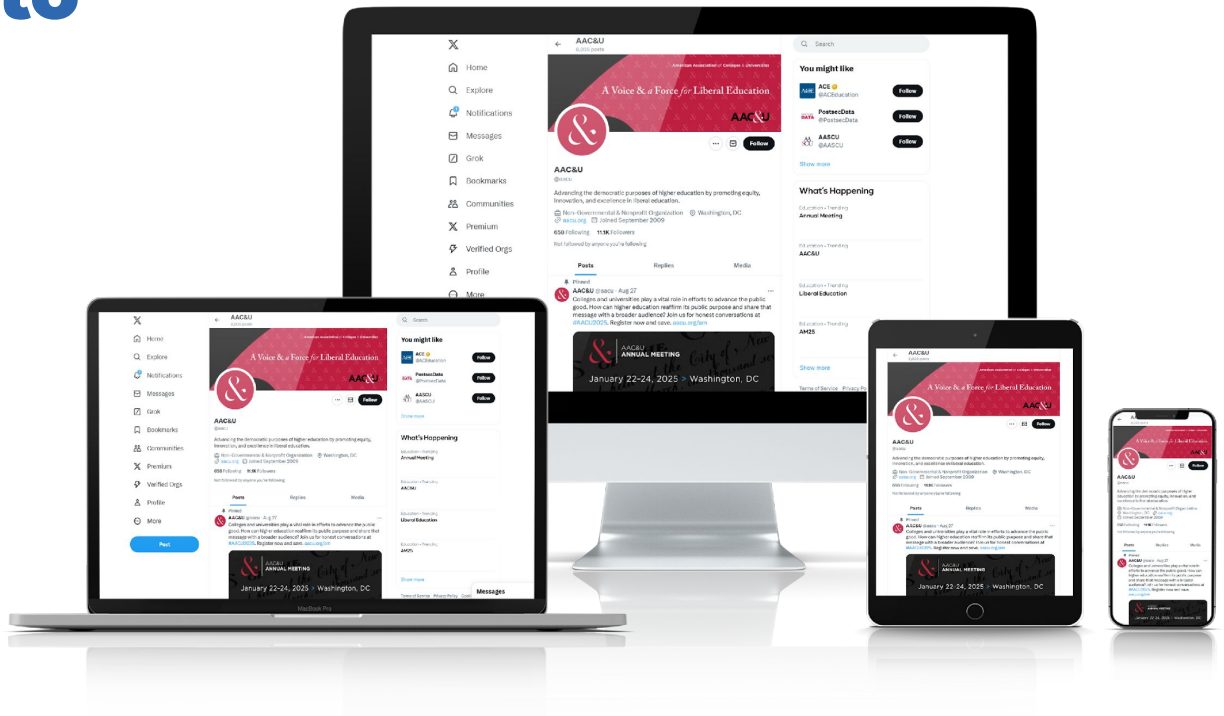

Our Speakers

Rebecca Thomas

Pathways ePortfolio Director and
Associate Teaching Professor of
Electrical & Computer Engineering
Bucknell University

Jeff Yan

Cofounder and CEO
Digication

The Assessment Challenge

Authentic learning is happening, but the evidence has been hard to capture at scale.

1

Outcomes Are Hard to See

Critical thinking, ethical reasoning, integrative learning, and identity development are notoriously difficult to assess directly. The thinking happens, but it rarely surfaces.

2

Rubrics Measure Products, Not Process

Direct assessment captures what students produced not the choices, tradeoffs, or revisions that produced it. Process evidence requires a different kind of artifact.

3

Manual Sampling Doesn't Scale

Reading and coding student reflections across a program is labor-intensive. By the time analysis is complete, the cohort has moved on.

Why Reflection?

Reflection is one of the few artifacts that surfaces process evidence directly.

Reveals the Thinking Behind the Work

Reflection surfaces the reasoning students used, the tradeoffs weighed, assumptions made, and alternatives considered before settling on a final approach.

Students Explain, Analyze & Weigh

Students articulate design choices, analyze failures, and confront constraints, moving past description into genuine analysis.

Authentic Evidence Rubrics Can't Capture

Reflection shows how thinking matured over time. Rubrics describe products; reflection makes the development of mind visible.

HABITS OF MIND · ARTICULATION · WINDOW INTO THINKING

Bucknell's Context

This session draws on practice from one course as a concrete example, but the approach scales.

An engineering course that already integrates reflection, students are accustomed to documenting their learning through ePortfolio.

Reflection is already part of the culture, AI-enhanced tools are the natural next step, not a disruption.

About the Course

ECEG 205, Electrical & Computer Engineering Fundamentals

Taken by 3rd-year Mechanical Engineering majors

Class Size: *N* = 37 (5-year avg. 43)

14-week Fall Semester

ePortfolio work book-ends the semester with reflection integrated into most weekly labs

Introducing TORI

Taxonomy of Reflective Inquiry, a structured scaffold for deeper learning.

1. **Cognitive & Analytical**
   Systematic thinking, problem-solving, analytical processing of experiences

2. **Emotional & Affective**
   Understanding and processing emotions, feelings, affective responses

3. **Social & Interpersonal**
   Examining relationships, social interactions, interpersonal dynamics

4. **Personal Growth & Self-Development**
   Self-awareness, individual development, personal growth processes

5. **Cultural / Ethical / Contextual**
   Cultural contexts, ethical considerations, environmental factors

6. **Life Transitions & Broader Development**
   Major life changes, transitions, developmental milestones

6
CORE DOMAINS

60+
REFLECTION CATEGORIES

96
DISTINCT FIELDS

tori.digication.com

The AI Tool: What It Looks Like

A conversational reflection partner configured by the instructor, experienced by the student.

WHAT THE INSTRUCTOR SETS UP

- Learning outcomes the reflection should address
- Guiding prompt framing (TORI-aligned domains)
- Reflection depth and frequency settings
- Export, archive, and ePortfolio destinations

WHAT THE STUDENT EXPERIENCES

- A conversational dialogue, not a form
- Follow-up questions that push thinking deeper
- Prompts tied to their actual project work
- A reflection they genuinely own at the end

CONVERSATIONAL · GUIDED · STUDENT-OWNED

Traditional Reflection: A Familiar Example

This will look familiar to anyone who has assigned an end-of-course reflection.

STUDENT EXAMPLE · UNGUIDED REFLECTION

"The main thing that stood out to me during this course was the line-following robot project. It helped me think about topics learned in class and apply them to real scenarios. I also happened to enjoy the project a lot as I believe it was structured nicely and did not require a lot of work outside of lab time."

WHY IT FALLS SHORT

Engagement without depth; describes what happened, not what was learned. We lack the why behind any choice.

Describes Events, Not Thinking

We see what happened, not how the student decided.

No Choices or Tradeoffs

The reasoning behind any design decision is invisible.

Claims Without Evidence

"Applied to real scenarios" but no specific example.

SURFACE-LEVEL · DESCRIPTIVE · MISSING THE WHY

AI-Enhanced Reflection: The Difference

Same student population, same course but very different reflective experience.

TRADITIONAL

"The class itself was also pretty straight forward. I do not feel like there was ever really trick questions or in any case did I feel like I was in a position where I was at a loss."

- Lacks metacognition
- Hides struggle and vulnerability
- No evidence of growth

AI-ENHANCED

"I would ask for help sooner when we were confused on the code. We were so intent on finding the error ourselves that we spent an hour combing through it… It's helped my perspective on mistakes. Mistakes do not equal failure."

- Analyzes a specific failure
- Embraces vulnerability
- Articulates a shift in perspective

DEPTH · SPECIFICITY · CRITICAL ANALYSIS · GROWTH

What Students Tell Us

In an informal poll, ten minutes of guided reflection didn't feel long. The AI acted as a conversational partner.

> *"AI is helpful in getting you to go deeper in the reflection."*

> *"It was nice to get prompts when you start running out of ideas of things to say."*

Moving Past a Blank Page

Instead of staring at an empty box and giving up, the AI keeps students engaged with prompts that encourage thoroughness and depth. The conversation creates momentum.

Translating Experience to Skills

An unexpected benefit: guided reflection helped students translate classroom experience into language they could put on a resume or use in a job interview.

ENGAGEMENT · DEPTH · PROFESSIONAL TRANSLATION

LIVE DEMO

- *See how an instructor creates an AI reflection tool*
- *See how conversational reflection aligns to outcomes*
- *See AI-assisted analysis across the collection*

TORI Taxonomy of Reflective Inquiry

tori.digication.com

CUSTOMIZE · REFLECT · ANALYZE

AI-Assisted Analysis Across a Collection

From a folder of individual reflections to program-level insight, in minutes, not months.

Recurring Themes

Topics students return to repeatedly are signals of deep learning or persistent confusion that's worth addressing in the next iteration of the course.

Gaps & Misconceptions

Patterns where students consistently misapply concepts. Early-warning signals for curriculum adjustments before the next cohort encounters the same wall.

Growth Trajectories

How thinking deepens from the first project to the last is the developmental arc across a program, including for students whose growth is otherwise hard to see.

Individual reflection → Collection analysis → Program-level insight → **Accreditation-ready evidence**

PATTERNS · PROGRAM-LEVEL · EVIDENCE-READY

How AI Analytics Fits Existing Assessment Practice

Not a replacement for what you already do but a parallel lens that strengthens it.

1

Parallel to Outcomes & Rubrics

AI-surfaced patterns sit alongside your existing rubric-scored evidence not in place of it. Two views of the same learning, triangulated.

2

Human Judgment Remains Essential

AI surfaces themes; faculty interpret them, weigh context, and decide what action to take. The model proposes; humans dispose.

3

Sampling for Quality Assurance

Same approach gen-ed assessment already uses; review a sample of AI-coded reflections by hand to validate. Trust, but verify.

PARALLEL · JUDGMENT · SAMPLING

The Bigger Picture

The same practice that deepens student learning also produces the evidence institutions need.

Today's reflection artifact → **Tomorrow's assessment evidence**

Every guided reflection is authentic, timestamped, archived and ready for institutional reporting and accreditation cycles without re-collecting data.

Individual student → **Program-level insight**

A collection of reflections is a dataset. AI surfaces trends, persistent gaps, and growth patterns no single instructor could see alone.

Sustainable for learning → **Sustainable for institutions**

The same practice that supports students also generates evidence of what your programs are actually producing without adding burden on faculty or assessment staff.

LONGITUDINAL · INSTITUTIONAL · TODAY + TOMORROW

Discussion & Q&A

Drop your thoughts in the chat! We'll surface them in the discussion block.

1. What does a guided reflection capture that your current direct-assessment instruments don't and what would it mean for your program's evidence portfolio?

2. Where in your institution does authentic-evidence collection currently fall through the cracks, and what makes it hard to sustain at scale?

3. Where is human judgment irreplaceable in your assessment work, and where could AI meaningfully extend the reach of faculty and assessment staff?

EVIDENCE · SCALE · HUMAN JUDGMENT

Let's keep the conversation going.

Try the tools, share examples, and tell us what you're seeing on your campus.

FREE RESOURCE: OPEN AIR PLAYGROUND

oair.org

Try the AI reflection tool yourself. No setup, no signup.

FREE RESOURCE: TORI FRAMEWORK

tori.digication.com

The Taxonomy of Reflective Inquiry

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THANK YOU!

Recommendations for Faculty

Three things to try in your next term.

1

Begin with one open question, not four

"What was the hardest design decision you made this week, and why?" is more generative than a multi-part form. Start focused, then expand.

2

Model what reflective conversation looks like

Share your own thinking with students. Your decisions, your uncertainties. Show them what thinking out loud looks like in practice.

3

Reflection done often beats reflection done once

Brief, frequent reflections build the habit and produce a richer longitudinal record than a single end-of-semester essay ever could.

START SIMPLE · ONE QUESTION · MODEL IT · FREQUENCY

Recommendations for Students

How to set students up to use these tools well.

1

Set expectations early. This is dialogue, not a checklist

Tell students on day one that reflection means thinking out loud, not filling a box. That framing changes how they engage from the start.

2

Show them what “good” looks like

Share anonymized examples of strong reflections. Students don't know what depth looks like until they see it — make it visible and concrete.

3

The archive becomes the portfolio over time

Each reflection adds to a longitudinal record. By the end of a program, students hold a rich, searchable archive of their own intellectual growth.

CONVERSATIONAL · NOT A FORM · LEAD BY EXAMPLE

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