AAC&U CLASS 2026

A Clear Path Forward to

Incorporate AI Enhanced Reflection Tools Effectively in HIPs

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Reflection · HIPs · Student Learning · Assessment Evidence

The HIPS Challenge

01

HIPs Work Best When Students Reflect:

HIPs produce the most learning when students actively process what they're experiencing. That processing rarely happens on its own.

02

The Experience Isn’t Enough

Students struggle to articulate what they learned. The experience happened; the meaning didn't land.

03

Traditional Check-ins Show Completion, Not Growth

Guided reflection reveals how the student was changed by the experience and helps make change happen.

Why Reflection?

Reveals the Thinking Behind the Work

Reflection surfaces the reasoning students actually used, the tradeoffs weighed, assumptions made, alternatives considered.

Students Explain, Analyze & Weigh

Students articulate design choices, analyze failures, and confront constraints, going beyond description to genuine analysis.

Authentic Evidence Rubrics Can't Capture

Reflection shows how thinking matured, making it uniquely valuable for students navigating high-impact experiences, especially those doing so for the first time.

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 across any HIP context.

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 Reflection

Systematic thinking, problem-solving, and analytical processing of experiences

2 Emotional & Affective Reflection

Understanding and processing emotions, feelings, and affective responses

3 Social & Interpersonal Reflection

Examining relationships, social interactions, and interpersonal dynamics

4 Personal Growth & Self-Development Reflection

Self-awareness, personal development, and individual growth processes

5 Cultural / Ethical / Contextual Reflection

Understanding cultural contexts, ethical considerations, and environmental factors

6 Life Transitions & Broader Development Reflection

Navigating major life changes, transitions, and developmental milestones

6	60+	96
Core Domains	Reflection Categories	Distinct Fields

https://tori.digication.com

The AI Tool: What It Looks Like

What the Instructor Sets Up

- Learning outcomes to address
- Guiding prompt framing (TORI-aligned)
- Reflection depth & frequency settings
- Export, archive, and portfolio options

What the Student Experiences

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

📎 *Handout available, pick one up!*

Conversational · Guided · Student experience

Traditional Reflection: A Familiar Example for PBL

Student Example

> *"I would say 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."*

- Describes events, not thinking
- No explanation of choices or tradeoffs
- Claim application, but lacks evidence

Engagement without depth describes what happened, not what was learned.

Surface-level · Descriptive · Missing the why

AI-Enhanced Reflection: The Difference

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.."

→ Shows a lack of metacognition
→ Hides struggle and vulnerabilities
→ No evidence of growth

→

AI-Enhanced

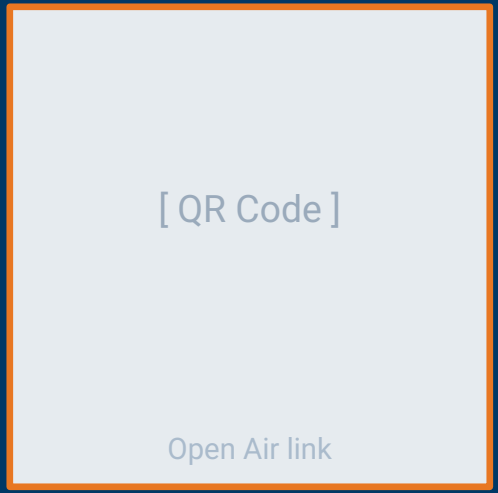
"I would ask for help sooner when we were confused on the code. We were so intent on finding the error ourselves that we spent an hour combing through it... It's helped my perspective on mistakes. It is all a learning experience and mistakes do not equal failure."

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

Depth · Specificity · Critical analysis · Growth

Your Turn

Try the AI reflection tool using a recent teaching or learning moment.



Try it · Open Air · TORI · Hands-on

What Students Tell Us

> *"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

In an informal poll, students indicated that the 10 minutes didn't feel like a long reflection time. The AI acted as a conversational partner.

Translating experience into professional skills

An unexpected benefit was the guided reflection helping translate classroom experience into skills they can include on a resume or discuss in job interviews.

Analyzing the Collection (Demo)

AI-assisted analysis across a collection of reflections surfaces what individual artifacts can't show:

Recurring Themes

Topics students return to repeatedly are signals of deep learning or persistent confusion that's worth addressing.

Gaps & Misconceptions

Patterns where students consistently misapply concepts, early warning signals for curriculum adjustments.

Growth Trajectories

Evidence of how thinking deepens from the first project to the last, the developmental arc across a program.

From individual artifact → program-level insight → ABET-ready evidence

Patterns · Program-level · Misconceptions · Evidence

The Bigger Picture

Reflection today

↓

Assessment evidence tomorrow

Every guided reflection is also an artifact of learning, authentic, timestamped, archived, and ready for accreditation.

Individual student

↓

Program-level insight

A collection of reflections is a dataset. AI can surface trends and growth patterns no single instructor could see alone.

Sustainable for learning

↓

Sustainable for HIPs

The same practice that supports students also generates evidence of what HIPs are actually producing without adding burden on faculty or coordinators.

Longitudinal · HIPs-ready · Today + Tomorrow

Discussion Questions

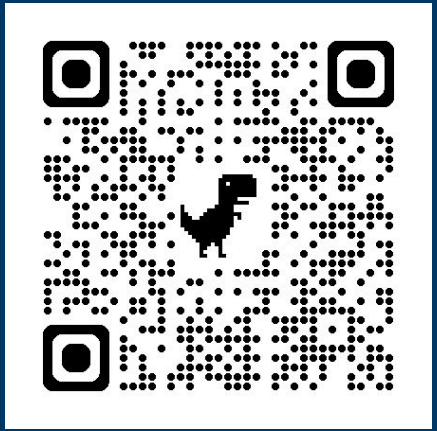
1. Can a 15-minute reflection capture where a student truly is and what does this type of evidence add that rubrics *can't* show?

2. Where does reflection currently fall through the cracks in your HIPs programming and what makes it hard to sustain?

3. Where is human mentorship irreplaceable and where can AI meaningfully extend our reach?

Supplement · Human judgment · 15 minutes · Assessment

Let’s keep the conversation going.



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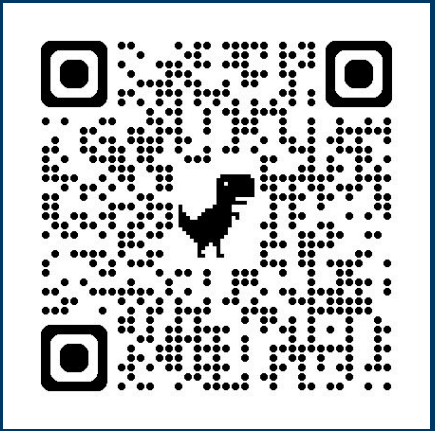

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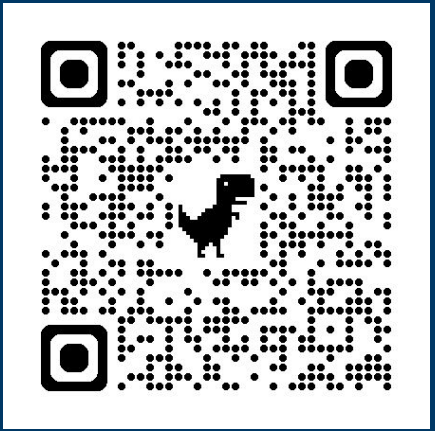

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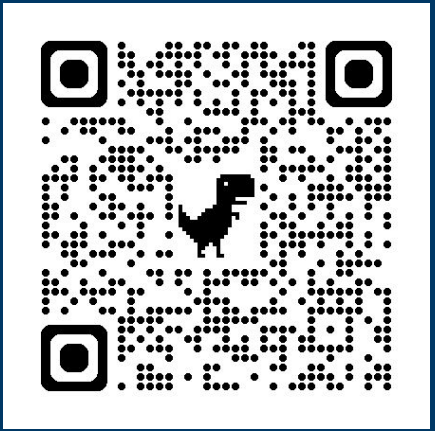

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Recommendations for Faculty

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 a 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 > 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

1

Set expectations early: this is a 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 builds 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