

AI in the Curriculum: Challenges & Opportunities

Michael Borck, Curtin University

Companion Website

<https://michael-borck.github.io/AI-in-the-Curriculum/>



AI Acknowledgment: AI tools were used in the initial drafting and development of this document. All content has been reviewed, refined, and validated through human expertise and professional judgment.

Today: 15 Minutes

We'll explore: - Four challenges we're all facing - One hidden barrier we don't discuss - Three pathways forward - Your questions and experiences

Not covering: - How AI works - Which tools to use - Detection strategies - Policy development

"Not about answers — just questions worth asking"

I'm sharing observations from my own teaching and conversations with colleagues - you'll likely recognize these patterns. * **Reality Check:** AI already in workflows; disciplines differ; no one-size-fits-all * **Today's Goal:** Share challenges & spark reflection * *"Not about answers — just questions worth asking"*

- AI is already here - students using ChatGPT for assignments, staff for admin tasks
- Engineering will use it differently than Creative Writing - acknowledge this
- We're exploring together, not prescribing solutions
- Set expectation: discussion starter, not definitive guide

Elephant in the room: We need to talk about AI shame - tease what's coming

Some of you might be thinking 'not another AI talk' - but we need to talk about what's actually happening in our classrooms

Let me share four challenges I'm seeing...

Over-Trust: The "Fountain of Knowledge" Problem

- **Challenge:** Students over-trust AI
- **Impact:** Weakens critical thinking
- **Response:** Error-spotting, critique, reward questioning

I watched a student refuse to question an obviously wrong AI answer because 'the AI said so'

- Students treat AI like authoritative source
- Hesitant to disagree even when they know better
- "But ChatGPT said..." becoming common refrain
- Give students an AI explanation with 2 deliberate errors

- Works across disciplines: wrong physics formula, incorrect historical date, buggy code, flawed diagnosis
- Students initially struggle to spot errors they'd normally catch

Response strategies: - Make error-hunting a regular exercise - Compare multiple AI responses to same prompt - Reward students who challenge AI answers - "Find three ways to improve this AI response"

Key message: Critical thinking matters MORE with AI, not less

But over-trust isn't the only problem...

Over-Use: Shortcuts vs. Scaffolds

- **Challenge:** AI as bypass, not support
- **Risks:** Shallow learning, plagiarism fears, lost skills
- **Response:** Frame AI as scaffold within pedagogy

BLOOM'S TAXONOMY

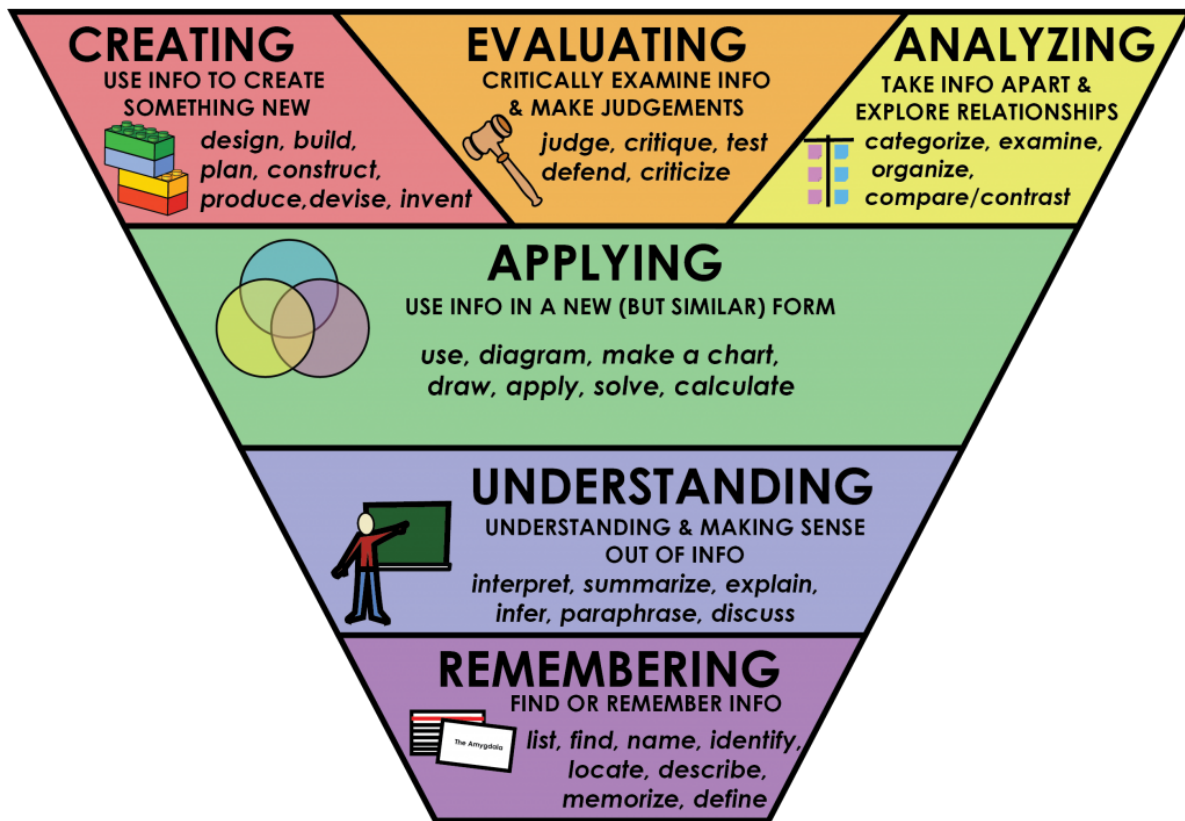


Figure 1: © Rawia Inaim. “Bloom’s Taxonomy.” Retrieved September 4, 2025, from <https://opentextbc.ca/studentsuccess/chapter/effective-questions/>. Licensed under a CC BY-SA (Attribution ShareAlike) license.

The distinction: “There’s a difference between using AI to skip learning and using it to enhance learning”

- Students jump straight to “give me the answer”
- Miss the learning that comes from struggle
- Can’t explain their “own” work
- Panic when asked to work without AI

Bloom’s Flip explanation: - Traditional: Start at Remember/Understand, work up to Create - AI Era: Start with Create/Evaluate WITH AI support - Then work backwards to build foundational understanding - Example: Create a marketing campaign (with AI) THEN learn marketing principles

Practical example: - Don't use AI to write essay from scratch - DO use AI to generate counter-arguments to strengthen your thesis - Use it as sophisticated sparring partner, not ghostwriter

"This isn't lowering standards - it's changing the journey"

"Now, some staff see this as AI breaking education..."

Misplaced Blame: It's Not the Tool

- **Challenge:** Staff blame AI for integrity issues
- **Response:** Adapt assessment, don't ban
 - Authentic, Personalised, Reflective
- *Past tools changed assessment, AI will too*

Historical context: - Calculators "ruined" mathematics → we adapted assessments - Wikipedia "destroyed" research → we taught evaluation - Google "killed" memorisation → we focused on application - Spell-check "weakened" writing → we emphasised ideas over mechanics

"AI doesn't break assessments, it reveals what was already breakable"

Assessment evolution examples: - Authentic tasks: Real-world problems with no single answer - Personalised: Connect to student's own experience/context - Reflective: "Explain your process" "What would you do differently?" - In-class components: Presentations, demonstrations, peer review

For the skeptics: - Banning won't work - they'll use it anyway - Better to teach proper use than pretend it doesn't exist - "We don't ban calculators, we teach when to use them"

But there's a hidden challenge we rarely discuss...

Fear of AI: The Root of Resistance

- **The Fear:** “AI will replace me” | “I’ll become obsolete” | “My expertise won’t matter”
- **The Reality:** Every new tool sparked fear
 - Printing press → scribes worried
 - Calculators → mathematicians concerned
 - Internet → everyone panicked
- **The Pattern:** Those who adapted thrived

Let’s name the real issue - fear. Not fear of technology, but fear of irrelevance. I feel it too. When I first saw ChatGPT write a decent lecture outline, my stomach dropped. ‘What’s my value now?’

But here’s what I learned: AI makes my expertise MORE valuable. It handles the routine so I can focus on what only humans do - connect, inspire, judge, create meaning. Students need us MORE to help them navigate this, not less.

The choice isn’t whether AI enters education - it’s already here. The choice is whether we guide its use or let students figure it out alone.

- Anchor story: “When I first saw ChatGPT write a lecture outline, my stomach dropped.”
- Reframe: “AI makes my expertise more valuable — because only I can judge, connect, inspire.”
- Takeaway: “Students don’t need us less, they need us more — to guide them through this shift.”

AI Shame: The Hidden Barrier

- **Challenge:** Students & staff feel guilt/cheating
- **Impact:** Underground use, stress, lost learning
- **Response:** Normalise, Teach process, Share examples

When I first used AI for teaching prep, I felt like I was cheating. Anyone else?

Student experiences: - “I’m not really learning if I use AI” - Hide AI use from peers - worried about judgment - Imposter syndrome intensifies - Won’t ask for help with AI - too ashamed

Staff experiences: - “Real academics don’t need AI” - Secret experimentation - won’t share successes - Fear colleagues will think less of them - Worry about being “found out”

Why this matters: - Drives use underground → can't develop best practices - Creates unnecessary stress for everyone - Prevents skill development in AI collaboration - Blocks innovation and sharing

The reframe: - Using AI well **REQUIRES** expertise - You need domain knowledge to evaluate outputs - Creativity to direct it effectively - We don't say "spell-check wrote my paper"

- Share your own AI use openly: "I used Claude to help structure this presentation"
- Teach the process: prompting, evaluating, iterating
- Make it part of academic integrity discussions, not separate

So how do we move forward constructively?

Moving Forward: AI as Learning Partner

Role	Description	Example of Implementation
Possibility engine	AI generates alternative ways of expressing an idea	Students write queries in ChatGPT and use the Regenerate response function to examine alternative responses.
Socratic opponent	AI acts as an opponent to develop and argument	Students enter prompts into ChatGPT following the structure of a conversation or debate. Teachers can ask students to use ChatGPT to prepare for discussions.
Collaboration coach	AI helps groups to research and solve problems together	Working in groups, students use ChatGPT to find out information to complete tasks and assignments.
Guide on the side	AI acts as a guide to navigate physical and conceptual spaces	Teachers use ChatGPT to generate content for classes/courses (e.g., discussion questions) and advice on how to support students in learning specific concepts.
Personal tutor	AI tutors each student and gives immediate feedback on progress	ChatGPT provides personalized feedback to students based on information provided by students or teachers (e.g., test scores).
Co-designer	AI assists throughout the design process	Teachers ask ChatGPT for ideas about designing or updating a curriculum (e.g., rubrics for assessment) and/or focus on specific goals (e.g., how to make the curriculum more accessible).

Role	Description	Example of Implementation
Exploratorium	AI provides tools to play with, explore and interpret data	Teachers provide basic information to students who write different queries in ChatGPT to find out more. ChatGPT can be used to support language learning.
Study buddy	AI helps the student reflect on learning material	Students explain their current level of understanding to ChatGPT and ask for ways to help them study the material. ChatGPT could also be used to help students prepare for other tasks (e.g., job interviews).
Motivator	AI offers games and challenges to extend learning	Teachers or students ask ChatGPT for ideas about how to extend students' learning after providing a summary of the current level of students' knowledge (e.g., quizzes, exercises).
Dynamic assessor	AI provides educators with a profile of each student's current knowledge	Students interact with ChatGPT in a tutorial-type dialogue and then ask ChatGPT to produce a summary of their current state of knowledge. Students can also ask ChatGPT for dynamic assessments.

So how do we move to productive use? UNESCO's research identifies multiple roles AI can play in education - not as replacement, but as partner."

Walk through key roles (pick 3-4 based on time):

Possibility Engine example: "Students use ChatGPT to brainstorm essay topics. One student was stuck on a history assignment until AI helped generate 10 different angles - they chose one they'd never considered."

Socratic Opponent: "In my business ethics class, students argue one position while ChatGPT argues the opposite. Forces them to strengthen their reasoning - can't just say 'because I think so.'"

Personal Tutor (relate to shame): "This addresses the shame issue directly - students can ask AI 'dumb questions' they're embarrassed to ask in class. No judgment, infinite patience."

Study Buddy: "Perfect for exam prep. Students explain concepts TO the AI - if they can't explain it clearly, they don't understand it yet."

Key message: "Notice none of these replace YOU. They augment learning. AI handles repetitive tasks so you can focus on what only humans do - inspire, connect, judge quality, provide wisdom."

Address elephant: “Some of you might be thinking ‘but students will cheat.’ Remember - it’s not about the tool, it’s about the task design. If AI can complete your assignment alone, the assignment needs redesigning.”

Practical takeaway: “Pick ONE role from this table. Try it next week. Start small.”

“Let me show you how one colleague did exactly that...”

“These aren’t replacements - they’re enhancements”

1. Learning Assistant examples: - Brainstorming: “Give me 10 unconventional approaches to this problem” - Counter-arguments: “What would critics say about my thesis?” - Debugging: “Help me understand why this code/formula/logic isn’t working” - Socratic dialogue: AI as questioning partner

2. Teaching Partner examples: - Generate practice problems based on individual student errors - Create first-draft feedback (you refine and personalise) - Build adaptive quizzes that adjust to student level - Develop case studies relevant to your cohort

3. Discipline-Specific examples: - Engineering: Design validation, optimisation scenarios, failure analysis - Business: Market analysis, strategy simulation, competitor research - Health: Diagnostic reasoning practice, patient interaction scenarios - Arts: Concept iteration, style exploration, critique generation - Law: Case analysis, argument construction, precedent research - Education: Lesson plan variations, differentiation strategies

Key message: Every discipline can benefit - question is how, not if

“Start small - pick ONE thing that takes too much time”

“Let me share a real example from last week...”

Quick Win: 30-Minute Experiment

- **What:** Worksheet → HTML in 30 min
- **Result:** Upload both versions, more engagement
- **Key Insight:** Options, not replacements

Set the scene: - “After our last session, colleague went back to office...” - Not particularly tech-savvy - Had a PDF style worksheet they’d used for years

The process: 1. Took PDF of worksheet 2. Prompted AI: “Convert this to an interactive HTML exercise with instant feedback” 3. AI generated the code 4. Tested it quickly 5. Uploaded BOTH versions to Blackboard 6. Total time: Less than a coffee break

The results: - Students choose interactive version - Some will still preferred PDF - and that's fine! - Interactive users engaged more, completed faster - PDF users had their familiar option


Breaking through AI shame: - They chose content, evaluated output, tested - AI was just the formatting tool

The lesson: - We're adding options, not replacing what works - Students appreciate choice - No risk approach - can always revert

"There are tools to help with this..."

Showcase: Curriculum Curator (FLX)

- **Tool:** Import → Restructure → Save 80% time
- **Value:** Supports staff, not replaces
- **Takeaway:** Efficiency

 Curriculum Curator

FeaturesPedagogiesAboutSign In


Create Unit Content That Teaches Your Way

AI-powered platform that aligns with your teaching philosophy. From high-level syllabi to individual worksheets, create and curate content that resonates with your pedagogical approach.

[Get Started →](#)[▶ Watch Demo](#)


Everything You Need for Pedagogically-Aware Content Creation

Our platform adapts to your teaching style, whether you're a traditionalist or an innovator.




9 Teaching Philosophies

Choose from Traditional, Inquiry-Based, Project-Based, and more. Our AI adapts to your unique teaching style.



Multi-Scale Workflows

Start from a full syllabus or focus on a single worksheet. Work at the scale that suits your needs.



AI Enhancement

Intelligent suggestions for content improvement, alignment checks, and automated quality validation.

11

Quick overview: - FLX tool specifically designed for curriculum - Import existing materials - PDFs, slides, documents - Restructure into different formats - Extend with additional examples/exercises

Specific example: - 10 hours creating new module content → 2 hours curating/refining - Import last year's content → Update with current examples - Generate practice questions from lecture notes

Address the elephant: - No shame in being efficient - Using tools for busywork = more time for students - You're still the expert - tool just handles formatting/structure

Key selling point: - It's not about replacing your expertise - It's about amplifying it - Like having a teaching assistant who never sleeps

Practical use cases: - Quick quiz generation from lecture content - Converting static content to interactive - Creating multiple versions for different cohorts - Accessibility improvements (alt formats)

"Even if you never use it for creation, it's great for reformatting"

"But the real questions are..."

Questions to Guide Your Thinking

- Where can AI save time?
- How could students practice discipline-specific skills?
- What risks/barriers must we prepare for?
- How do we move past AI shame?

"I'm not expecting answers today - just want you thinking"

Where can AI save time? - Routine tasks: Grading rubrics, email responses, meeting summaries - Content creation: Quiz questions, worked examples, case studies - Administrative: Report writing, grant applications, reviews - Ask yourself: "What do I dread doing because it's repetitive?"

Discipline-specific skills practice: - What would junior professionals in your field use AI for? - What simulations could AI enable that weren't possible before? - How could students practice client/patient interactions? - What expensive/dangerous scenarios could AI simulate?

Risks and barriers: - Over-reliance - students who can't work without it - Accuracy issues - hallucinations, outdated information - Equity - not all students have equal access - Industry expectations - what will employers expect?

Moving past AI shame: - How do we model healthy AI use? - What would transparent use look like in your course? - How do we separate tool use from academic integrity?

Future consideration - What skills become MORE important when AI handles routine tasks? - Critical thinking, creativity, ethical reasoning, human connection

Let's Discuss

- What's one small thing you could try next week?
- What concerns need addressing?
- How might your discipline benefit/challenge?
- Have you felt AI shame?
- "These are conversation starters, not required answers"
- "Who wants to share a thought, concern, or experience?"

Small experiment ideas: - Use AI to generate discussion questions for one topic - Create alternative explanations for difficult concepts - Draft marking rubric with AI, then refine - Generate practice problems for next tutorial

Common concerns: - "This enables cheating" → Redirect to assessment design discussion - "My discipline doesn't need AI" → Any repetitive tasks they hate - "This is moving too fast" → Acknowledge, suggest tiny experiments - "Students won't learn properly" → Discuss scaffolding vs replacement

"These conversations are just beginning..."

Thank You

- *"Not about answers — just questions worth asking... together, without shame"*
- **Next Step:** Try one small experiment, share results
- *"The best way to predict the future is to help create it"*

Reinforce key messages: - We're all figuring this out together - Small experiments, not wholesale change - Share successes AND failures - both valuable - No shame in using tools to work smarter

Resources available - Example prompts for worksheet conversion - Access to Curriculum Curator for interested parties - Discipline-specific AI use cases document - "Moving Past AI Shame" discussion guide

Call to action emphasis: - “One small experiment” - lower the bar - “Share results” - build community of practice - “Be open” - break the shame cycle

Final thought: - “Remember - using AI well is a skill that requires your expertise” - “You’re not being replaced - you’re being amplified”

Resources & References

- (Heaven, W. (2023, April 6). ChatGPT is going to change education, not destroy it. MIT Technology Review. Retrieved September 4 2025, from <https://www.technologyreview.com/2023/04/06/1071059/chatgpt-is-going-to-change-education-not-destroy-it>)[<https://www.technologyreview.com/2023/04/06/1071059/chatgpt-is-going-to-change-education-not-destroy-it>]
- (McNealis, R. Shame in the machine: affective accountability and the ethics of AI. AI & Soc (2025). <https://doi.org/10.1007/s00146-025-02472-x>)[<https://link.springer.com/article/10.1007/s00146-025-02472-x>]
- (Giray L. (2024). AI Shaming: The Silent Stigma among Academic Writers and Researchers. Annals of biomedical engineering, 52(9), 2319–2324. <https://doi.org/10.1007/s10439-024-03582-1>)[<https://pubmed.ncbi.nlm.nih.gov/38977530/>]
- (Sabzalieva, E., & Valentini, A. (2023). ChatGPT and artificial intelligence in higher education: Quick start guide. UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC). <https://unesdoc.unesco.org/ark:/48223/pf0000385146>)[<https://unesdoc.unesco.org/ark:/48223/pf0000385146>]
- (WalkMe. (2025, August 27). Employees left behind in workplace AI boom, new WalkMe survey finds - WalkMe - Digital adoption Platform. WalkMe - Digital Adoption Platform. <https://www.walkme.com/news-releases/employees-left-behind-in-workplace-ai-boom-new-walkme-survey-finds/?tabId=company-news>)[<https://www.walkme.com/news-releases/employees-left-behind-in-workplace-ai-boom-new-walkme-survey-finds/?tabId=company-news>]
- (Russell Group. (2023). Russell Group principles on the use of generative AI tools in education. Russell Group. Retrieved September 4 2025, from <https://www.russellgroup.ac.uk/policy/policy-briefings/principles-use-generative-ai-tools-education>)[<https://www.russellgroup.ac.uk/policy/policy-briefings/principles-use-generative-ai-tools-education>]
- (Lichtenberg, N. (2025, August 29). “AI shame” is running rampant in the corporate sector—and C-suite leaders are most worried about getting caught, survey says. Fortune. <https://fortune.com/2025/08/29/what-is-ai-shame-readiness-gap-training-artificial-intelligence/>)[<https://fortune.com/2025/08/29/what-is-ai-shame-readiness-gap-training-artificial-intelligence/>]
- Canva Workplace Study on AI Adoption (2025)
- [TEQSA on Generative AI](#)