

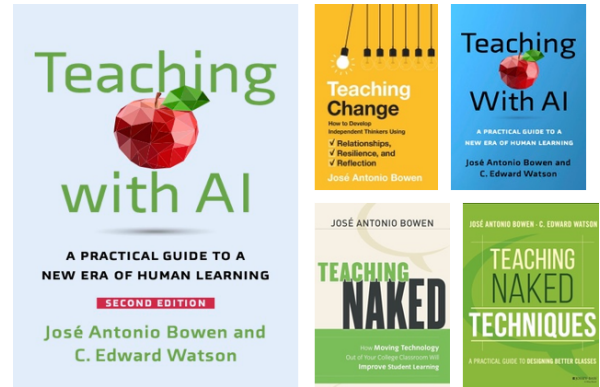
AI WORKSHOP B

SLIDES & CITATIONS

José Antonio Bowen

Get the [2nd Edition of Teaching with AI](#).
Discount code HTAI25 = 30% off at JHUP.
WebSite: <https://WeTeachWithAI.com/>

► [Workshop Prompts & Materials](#)



Curious
AND
Skeptical

BASIC PROMPTING

WORKING & THINKING

AI as the new AVERAGE

COMMUNICATION & RELATIONSHIPS

CREATIVITY

AI as LABOR

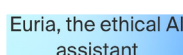
NEW CAPABILITIES

Searching for Ideas

Expanding Perspective

Persuasion & Emotion

Customization



Different AI models excel at different things. To learn more, open a fresh browser window and go to the models page; each tool opens in a new tab so you can compare. Talkie is included as a reminder that language models go back to 1930.

► [A range of AI models — WeTeachWithAI.com/models](#)

WeTeachWithAI.com/models

WORKSHOP Basic Prompting WeTeachWithAI.com/workshop



- Provide 10 innovative ideas for how to introduce college students in year C to topic D in class E using examples or analogies they will find relevant.
- Ask me a series of 3 questions to then make recommendations about 10 obscure composers/experiments/research ideas I should know about.

WORKSHOP: Basic Prompting (slide 4)

Try a more complicated and customized prompt in more than one model. You can copy and paste all of these prompts (and many more that are NOT listed here) from the prompting page:

- ▶ [Basic Prompting — copy and paste prompts](#)
- ▶ [Workshop Prompts & Materials](#)

More prompts to try

What might be unclear about these instructions to a college [year] at a [type] of university?

How could I make this syllabus/assignment more inclusive?

Suggest a better title for this class/book/event that will attract [specific] students/audience.

Can you put this into simpler terms for beginning students?

Create a list of resources for a student at the University of X who is experiencing problem Y. Provide a verified link to each resource and three suggestions for how the student might use this resource.

What are 10 innovative ways other faculty have taught this subject/class?

ITERATION: Improve the Response (slide 5)

Write 150 words about... [CHOOSE A SUBJECT YOU KNOW!] Now make the response better:

Cite the evidence for & against. Investigate and apply a variety of frameworks. Search in language X and locally to Y. How do a variety of experts disagree about this?

Slow down and reason step-by-step. Read the prompt more carefully. Be more persuasive but witty. Create two different versions. Try a different approach. Create a smarter better answer. Read the question again. What did you miss? Follow all of these steps, even if you do not think you need to.

Ask for the model's best work:

Write a paragraph about X that will demonstrate to a college professor your most formidable capabilities using high quality verifiable sources. Explain your research and deep thinking.

Meincke, L., Mollick, E., Mollick, L., & Shapiro, D. (2025). Prompting science reports 1–3. Wharton Generative AI Labs. [controlled prompt experiments: politeness and threats rarely help; small wording changes can] <https://ssrn.com/abstract=5165270>

PROMPTING IS WRITING PRECISE & CLEAR LANGUAGE

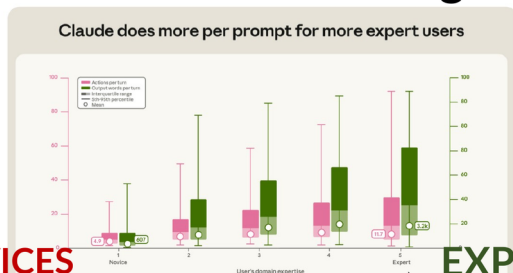
- Iterate
- Start with what you know
- Small changes make a difference



SEARCHING FOR IDEAS

Google (used to) want to send you elsewhere, but AI wants to create content. Using AI to find information is often not the best use of AI, but

AI is the new Average



NOVICES

Ask what to do

EXPERTS

Improve results



Searching for IDEAS

- Find anything like this..
- Has anything similar ever happened to a previous patient?
- Search for patents related to Y?
- What might be missing from this?
- Read our book and identify all of the places where we repeated an idea.

most of the foundational models now let you ask for a web search as part of your answer — which, paired with reasoning, can be very useful.

Search for everything I need to know to prepare for an excellent job interview for position A at B and prepare a briefing document with talking points.

Massive-Scale Contextual Web Searching

Is there anything that Jose Bowen has posted in the last 10 years that is overly political and might have a negative impact if we hired him at X?

Searching for Jose Bowen +

- Biden
- Trump
- Gaza
- Israel
- Controversy
- Protest
- Politics
- Political Views
- Opinions
- Election...

Also searching for

- JB social media sites and activities
- Could JB past writing or speeches be considered a hiring risk?
- Would JB political activities pose any risks?
- JB coverage in media, blogs and websites

Web Search across the entire Internet

Academic Search academic papers

Social Discussions and opinions

Massive-Scale Contextual Web Searching

Search for everything I need to know to prepare for an excellent job interview for position A at B and prepare a briefing document with talking points.

- Current university/business strategy
- Recent financial performance & news
- Major initiatives
- Institutional values
- Market challenges and position
- Industry trends
- Primary competition
- Typical responsibilities
- Required technical skills
- Common interview questions & scenarios

Web Search across the entire Internet

Academic Search academic papers

Social Discussions and opinions

Example: AI Literacy Programs

- SEARCH for all AI Literacy/Fluency programs, certificates, micro-credentials or badges at higher ed institutions
- ANALYZE their features
- CATEGORIZE them into types
- CREATE a Google Sheet I can share
- DOUBLE CHECK your work for accuracy



Example: AI Literacy Programs (slide 12)

Complete Prompt:

I want to make a comprehensive list of AI literacy programs, microcredentials, certificates and badges offered at universities anywhere in the world. Here are some examples... Think about the categories — name of the program, name of institution, format (online, self-paced, credit), length, required or optional (and if so, required of what group and when), does it come with a

digital badge or certificate? First do the comprehensive survey and collect the information and then create a spreadsheet.

► [The result — shared Google Sheet](#)

YOU TRY: Searching for Ideas (slide 13)

What are the latest trends in...

Find me real examples of...

Has anything similar to X happened at Y...

► [Workshop Prompts & Materials](#)



Search for candidates for our position X. Check CVs to make sure... Make a list with emails. Create a personalized email invitation to apply. Look especially for...

REASONING + SEARCH (was “Deep Research”)

Reasoning + Search (was “Deep Research”)

- YOU are a new customer/student
- GO to our web pages
- TEST them like a naive user hoping to...
- REPEAT for our competitors’ sites
- ANALYZE your findings in a brief report
- HIGHLIGHT the difficulties
- HOW might we make our website better?



Example (a version for admissions): You are a high school senior hoping to apply to college. Go to the University of X web page and test it like a naive user hoping to find out about majors and how to apply. Then go to ten other competitor universities and do the same thing. Collect your findings in a brief report that highlights the difficulties and how we might make the University of X website better for new students.

YOU are a new customer/student. GO to our web pages. TEST them like a naive user hoping to... REPEAT for our competitors’ sites.

ANALYZE your findings in a brief report. HIGHLIGHT the difficulties. HOW might we make our website better?

Devil’s Advocate

- Reads citations and searches for newer or better papers to cite.
- Scans for 150 forbidden DEI words (like “orientation”) and other red flags.
- Improves alignment with grant.
- Searches for little things so you can focus on the big things.



► [Devil’s Advocate — Duke OIT](#)



Shopping is the 27th most popular use of AI in 2026. It’s customized:

...Compare the costs of buying new attachments against the saving of buying a more expensive Dyson. Create a comparison table of the best options... The recommended vacuum needs to be available this month and in stock!

Zao-Sanders, M. (2026, June 1). How people are really using AI in 2026. Harvard Business Review.

<https://hbr.org/2026/06/how-people-are-really-using-ai-in-2026> <https://hbr.org/2026/06/how-people-are-really-using-ai-in-2026>

AI Shopping is Here



Skyword. (2026, June). AI-driven buyer insights. [vendor survey; n=1,000 U.S. adults, fielded by Dynata, April 2026]
<https://info.skyword.com/ai-buyer-research>

- ✓ **46%** already made a major purchase or important decision based primarily on AI-generated information.
- ✓ **12%** trust the AI answer outright
- ✓ **55%** say top concern about AI-provided brand information is that it may be incorrect
- ✓ **17%** have switched brands because of AI-generated info



SYSTEM PROMPTS

- Be aggressive in surfacing my assumptions
- Think globally: be vigilant about Western, gender, racial and other bias.
- Focus on accuracy. Check all of your sources and show citations, links and references. Always search in a variety of languages.
- Evaluate all information. Provide a probability score for facts and data that let me know your confidence level in the accuracy of the information. Doublecheck everything.
- Help me find unique insights and create new ideas. Provide alternative explanations and push me to think differently.



SYSTEM PROMPTS (slide 19)

A system (or general) prompt is a set of instructions for how you ALWAYS want your bot to respond. There are more templates on the website.

► [System prompt templates](#)

Complete Prompt:

Explain concepts to me at the level of a college professor and always answer as an expert in the subject. State directly when there is insufficient data or evidence and disclose the disagreements. Highlight uncertainty and distinguish verifiable evidence from opinion.

Be direct, concise and honest and tell me when you think I am wrong. Be aggressive in surfacing my assumptions and be especially vigilant about Western, gender, racial and other bias. Always think of our work in a global context.

I am very concerned with accuracy. Check all of your sources and show scholarly citations, links and references. Always search for information in a variety of languages. Doublecheck everything. Provide a reliability or probability score so I know your confidence level. If you are guessing, say you are guessing.

Help me find unique insights and create new ideas. Provide alternative explanations and push me to think differently. Say things like “the risk in your approach is...” and then provide specific problems. If I push back, do not fold if there is good evidence.

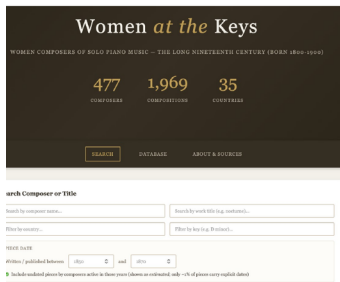
Start with the most useful thing you can say. No warm-ups. Delete empty sycophantic phrases. Do not flatter me.

If useful, begin by asking me three clarifying questions, each with numbered options so I can reply with numbers only.

Vibe Coding + Agent



Prompt



STEP 1

Do an exhaustive search of academic resources about 19th century women composers of solo piano music.

STEP 2

Create a searchable global data base...

STEP 3

Create a [website](#)



STEP 4

Find sheet music not on my computer...

STEP 5

Order missing works from ILL... Cecilia Arizti (1856-1930)

Five steps, one project: an exhaustive search of academic resources on 19th-century women composers of solo piano music, a searchable global database, a public website, sheet music found beyond my own computer, and missing works ordered from ILL.

► [The full prompt, workflow and the versions produced by different AI models](#)

► [The result — Women at the Keys](#)

AI CAN DO (SOME) THINGS HUMANS CAN'T

REDMOD detects 'invisible' pancreatic cancer 475 days before clinical diagnosis with standard CT scan

"AI can now identify the signature of cancer from a normal-appearing pancreas."
Dr. Ajit Goenka



3x as accurate as human radiologists (68% vs 23%)
2 years before clinical diagnosis.



Mukherjee, S., Antony, A., Patnam, N. G., et al. (2026, April 28). Next-generation AI for visually occult pancreatic cancer detection in a low-prevalence setting with longitudinal stability and multi-institutional generalisability. *Gut*. [published online first] <https://doi.org/10.1136/gutjnl-2025-337266> <https://doi.org/10.1136/gutjnl-2025-337266>

Personalized mRNA Cancer Vaccine Individualized neoantigen therapy for metastatic melanoma



AI finds the unique mutational 'fingerprint' of an individual tumor
No two vaccines are alike



Prof Georgina Long

Co-medical Director Melanoma Institute of Australia, Chair of Melanoma Medical Oncology and Translational Research at the University of Sydney

Weber, J. S., Carlino, M. S., Khattak, A., et al. (2024). Individualised neoantigen therapy mRNA-4157 (V940) plus pembrolizumab versus pembrolizumab monotherapy in resected melanoma (KEYNOTE-942): A randomised, phase 2b study. *The Lancet*, 403(10427), 632–644. [randomised phase 2b; Georgina Long is a senior author] [https://doi.org/10.1016/S0140-6736\(23\)02268-7](https://doi.org/10.1016/S0140-6736(23)02268-7)
Merck & Moderna. Phase 3 INTERpath-001 trial of intismeran autogene plus Keytruda met endpoints of recurrence-free survival and distant metastasis-free survival. [company press release] <https://www.merck.com/news/merck-and-moderna-announce-phase-3-interpath-001-trial-of-intismeran-autogene-plus-keytruda-met-endpoints-of-recurrence-free-survival-rfs-and-distant-metastasis-free-survival-dmfs-in-patient/>

AI TOOLS



- ▶ [Consensus](#)
- ▶ [Elicit](#)
- ▶ [Undermind](#)
- ▶ [Edison Scientific](#)
- ▶ [STORM \(Stanford\)](#)
- ▶ [OpenEvidence](#)
- ▶ [MyLens](#)
- ▶ [More tools — WeTeachWithAI.com/tools](#)

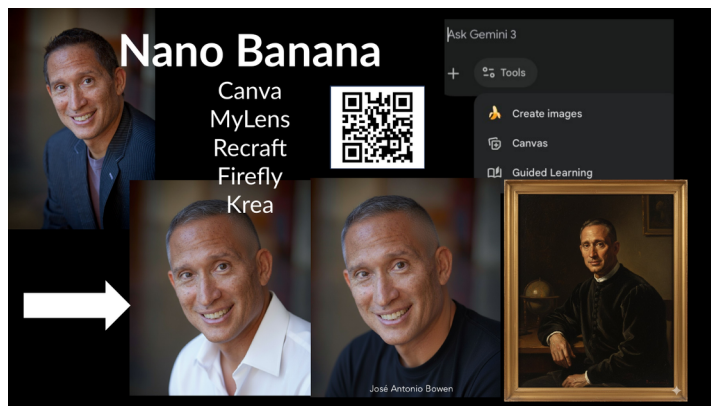


Image and design tools:

- ▶ [Canva](#)
- ▶ [Recraft](#)
- ▶ [Adobe Firefly](#)
- ▶ [Krea](#)
- ▶ [More tools — WeTeachWithAI.com/tools](#)

Gemini Notebook

- **ASSIGNMENTS**
 - Help me customize this assignment to my interests.
 - Spell out not just what I need to do, but why.
 - Surface hidden expectations of college writing.
- **INTERVIEW TRANSCRIPTS**
 - Remind me which candidates said X
- **CAR or HOUSE FOLDER**
 - When did I last Y?
 - How do I Z?

- ▶ [NotebookLM \(Gemini Notebook\)](#)

AI Tools for Enhanced Data Analysis



- ▶ [Napkin](#)
- ▶ [Atlas \(Nomic\)](#)
- ▶ [Julius](#)
- ▶ [Ailyze](#)



goblin.tools

- FREE

Designed to help neurodivergent people with tasks they find overwhelming

To Do: Break down this assignment into parts.

Task Estimator: How long will each part take?

Formalizer: Change the tone of this writing.

Judge: Am I misreading the tone of this?

Professor: Explain and provide an example.

Designed to help neurodivergent people with tasks they find overwhelming — and free.

► goblin.tools

COMMUNICATION & RELATIONSHIPS

AI is Changing COMMUNICATION & RELATIONSHIPS



“Like Grammarly for Empathy”

13 studies find higher empathy ratings for AI over human healthcare providers.

Howcroft, A., Bennett-Weston, A., Khan, A., et al. (2025). AI chatbots versus human healthcare professionals: a systematic review and meta-analysis of empathy in patient care. *British Medical Bulletin*, 156(1). [13 studies]
<https://doi.org/10.1093/bmb/ldaf017>
<https://doi.org/10.1093/bmb/ldaf017>

AI is More Persuasive

- 87% More Likely to **Change your Mind**
- Greater **Reduction in Conspiracy Beliefs**
- Faster, Better, More Accurate & Strategic **Facts**
- Better at Reframing **Emotional Situations**
- Better at Recruiting and Hiring



Salvi, F., et al. (2024). On the conversational persuasiveness of large language models. *arXiv [preprint; 87% more likely to change your mind]*. <https://arxiv.org/abs/2403.14380>
<https://arxiv.org/abs/2403.14380>

Costello, T. H., Pennycook, G., & Rand, D. G. (2024). Durably reducing conspiracy beliefs through dialogues with AI. <https://www.debunkbot.com> <https://www.debunkbot.com>

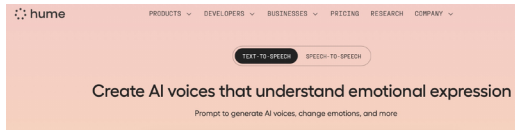
Hackenburg, K., et al. (2025). Scaling language model size yields diminishing returns for single-message political persuasion. *arXiv [preprint]*. <https://arxiv.org/abs/2507.13919>
<https://arxiv.org/abs/2507.13919>

Hackenburg, K., et al. (2026). AI systems out-persuade incentivized expert humans. *arXiv [preprint]*.

<https://arxiv.org/abs/2606.16475>
<https://arxiv.org/abs/2606.16475>

Li, J. Z., Herderich, A., & Goldenberg, A. (2024). Skill but not effort drive GPT overperformance over humans in cognitive reframing of negative scenarios. [preprint] <https://doi.org/10.31234/osf.io/fzvd8> <https://doi.org/10.31234/osf.io/fzvd8>

Jabarian, B., & Henkel, L. (2025). [recruiting and hiring field experiment: 70,000 applicants; 12% more offers, 17% higher retention, less gender discrimination] SSRN. <https://ssrn.com/abstract=5395709> <https://ssrn.com/abstract=5395709>



Emotionally intelligent, expressive voices:

- ▶ [Hume](#)
- ▶ [Sesame](#)
- ▶ [ElevenLabs \(Expressive Mode\)](#)



ElevenLabs Expressive Mode



Sesame.com



IIElevenLabs

- **Dr. Maya Angelou™**
Acclaimed poet, author, and Presidential Medal of Freedom recipient, honored for her profound...
- **John Wayne™**
Iconic American film actor and symbol of rugged masculinity, famed for his roles as Western h...
- **Judy Garland™**
Beloved American actress and singer, immortalized as Dorothy in The Wizard of Oz and a major...
- **Michael Caine™**
The British acting legend who has appeared in over 100 films, Academy Award winner, celebrat...
- **Richard Feynman™**
Notable Princeton physicist, celebrated for his pioneering work in quantum...
- **Sir Laurence Olivier™**
Knighted British actor and director, multiple Academy Award and Emmy winner, revered as one...
- **Alan Turing™**
Visionary mathematician and codebreaker, awarded the Order of the British Empire and...
- **Amelia Earhart™**
Aviation pioneer and recipient of the Distinguished Flying Cross, honored for breaking gender...
- **Art Garfunkel™**
Renowned American vocalist, poet, and actor, best known for his ethereal voice and contributi...



**Customize or Create
Voices in any language**



Grok Voice Think Fast

Customize or create voices in any language:

- ▶ [ElevenLabs Iconic Marketplace](#)
- ▶ [Grok Voice Agents](#)

IIElevenLabs

Reception.ai answers phone calls 24/7

- Pulls your services, hours, and intake process
- Schedule appointments
- Answer customer questions
- Route issues to the right person
- 70+ languages
- SOC2 certified and GDPR compliant



Free Trial

\$29/month = 75 minutes/month

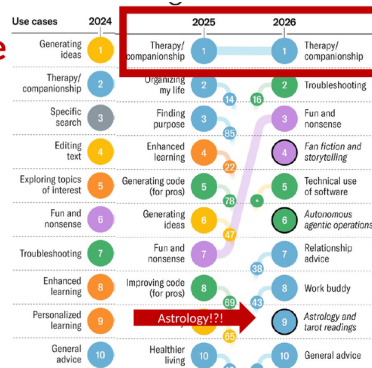
\$199/month = 1000 minutes+10 calls at once

- ▶ [Reception.ai](#)

From Technical Use to Emotional Use



- 19 Creative Writing
- 26 Reconciling Disputes
- 28 Homework
- 32 Safe Space to Ask
- 57 Seeing Blind Spots
- 61 Deep Conversations
- 86 Talking to the Dead**



Zao-Sanders, M. (2025, April 9; 2026, June 1). How people are really using AI. Harvard Business Review.

<https://hbr.org/2026/06/how-people-are-really-using-ai-in-2026> <https://hbr.org/2026/06/how-people-are-really-using-ai-in-2026>

*Did not make list of top 100 in 2024. *Did not make list of top 100 in 2025.

HBR

WORKSHOP: Voice (slide 33)

Try an expressive voice (try a student role-play). Try voice mode in any AI.

- ▶ [Workshop Prompts & Materials](#)



José Antonio Bowen AI avatar, produced with HeyGen (version 1).

- ▶ [HeyGen](#)

Interactive Face Engines (Avatars)

HeyGen, Tavus, Synthesia

- + Knowledge Base (Retrieve)
- + Agentic (Write)

1. Campus Engagement (inside ERP or CRM)

Mainstay, Gravyty, Element451/Bolt.

Example: **UCF's Knightbot** (Mainstay)

487 messages/day
85% resolved without a human
7 seconds on average
14-40% increase in registrations
=6 FT staff a year
1.6% opt out.

List of AI Tools



List of AI Integrators



I'm here to help with general questions about UCF!



Knightbot is UCF's own brand for a Mainstay deployment, so students never see the vendor and faculty rarely learn who signed the contract. The figures come from UCF's newsroom rather than from Mainstay: roughly 12,000 staff hours since January 2023 is what the six full-time equivalents represents, and the knowledge base grew from six campus units to more than fifty.

- ▶ [List of AI Tools](#)
- ▶ [List of AI Integrators](#)
- ▶ [UCF Knightbot](#)

- ▶ [Mainstay](#)
- ▶ [Gravyty \(Ivy & Ocelot\)](#)
- ▶ [Element451 / Bolt](#)

UCF News. Enhancing student support: How UCF's Knightbot transforms the college experience. [practitioner case study, not an evaluation] <https://www.ucf.edu/news/enhancing-student-support-how-ucfs-knightbot-transforms-the-college-experience/>

Gravyty. (2025, March 11). Gravyty, Ivy.ai, and Ocelot unite to transform student and alumni engagement. [company announcement; note that Ocelot and Ivy.ai are now one company under the Gravyty brand] <https://gravyty.com/gravyty-ocelot-ivy-join-forces/>

HBS Foundry = \$699

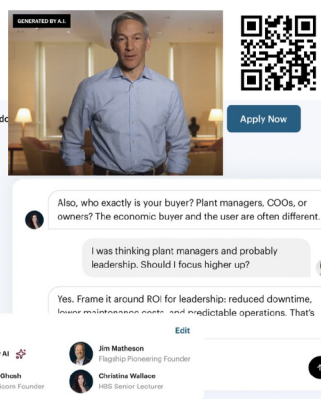


Programs AI Experiences Security Mission Podcasts

One Conversation, Multiple Harvard Experts

Build your personal AI-powered advisory board of Harvard Business School experts. Get multiple expert perspectives in a single conversation, so you can make better decisions, faster.

- Develop your idea with advisors
- Discuss and debate solutions
- Adjust advisors as you see fit



- ▶ [HBS Foundry](#)

Interactive Face Engines (Avatars)

HeyGen, Tavus, Synthesia

+ Knowledge Base (Retrieve)

+ Agentic (Write)

2. Course Assistants (inside LMS)

Jill Watson, PraxisAI, Nectir, LearnWise, Cogniti (University of Sydney)



Example: **Chauncey** (PraxisAI) Carolyn Brown, Champlain College

- **Reads** each student's submission
- **Scores** it against the rubric
- **Updates** the LMS gradebook
- **Writes** in the advisor's own voice

The four verbs are an escalation, not a list. Reading and scoring keep it a tool; writing to the gradebook and answering in a named human's voice make it a delegation. Cogniti is the outlier worth knowing: built at the University of Sydney by Danny Liu and used by more than 800 of its own educators rather than sold to them. Chauncey was built on Praxis at Champlain by Carolyn Brown and has no published description, so the four capabilities here are as reported by its designer.

- ▶ [Cogniti \(University of Sydney\)](#)
- ▶ [Jill Watson — Georgia Tech Design &](#)

Intelligence Laboratory

- ▶ [Praxis AI](#)
- ▶ [Nectir](#)
- ▶ [LearnWise](#)

Taneja, K., Maiti, P., Kakar, S., Guruprasad, P., Rao, S., & Goel, A. K. (2024, May 17). Jill Watson: A virtual teaching assistant powered by ChatGPT. [preprint] arXiv:2405.11070 <https://arxiv.org/abs/2405.11070>

University of Sydney. (2025, June 3). Cogniti, an 'AI stunt double' for teachers, wins AFR AI Award. [university announcement] <https://www.sydney.edu.au/news-opinion/news/2025/06/03/cogniti-an-ai-stunt-double-for-teachers-wins-afr-ai-award.html>

Nectir. (2026, March 10). As AI reshapes higher education, Nectir raises \$12.5M to scale its purpose-built AI infrastructure for schools. [company announcement; the 7.5% GPA figure it cites is vendor-reported] <https://www.prnewswire.com/news-releases/as-ai-reshapes-higher-education-nectir-raises-12-5m-to-scale-its-purpose-built-ai-infrastructure-for-schools-302709783.html>



Interactive Demo Talk to Charlie on Tavus



LMS Agents in Your LMS with



Create a Digital Twin on HeyGen

Setting Up a Twin with LMS integration on Praxis



1. Using Trusted Sources

- Faculty control what resources link cards for answering questions
- Access to Canvas LMS content and additional files (syllabus, videos, etc.)
- Option to outsource to Google Scholar or PubMed
- All resources are protected within your IP vault in AWS

2. Instructor Personalization

- Praxis AI research has shown that personalizing the digital twin increases student output from 10% to about 60%
- Personalization involves:
 - Personality and Behavioral Assessment: Myers-Briggs personality test to create a psychological avatar

3. LMS Integration

- Integrated with Canvas for a native student experience
- Student access to the digital twin is automatic, with your chosen avatar appearing in the bottom right corner of every page
- Posting your tweet to 40 results on the integration side of things, Praxis takes most of it taken care of

Three things to try, in rising order of commitment. Charlie is Tavus's public demo and needs no account. HeyGen will build a twin from one photo in about ten minutes. The blue panel is Praxis's own faculty onboarding page, and it repays reading: the teaching persona is generated from a Myers-Briggs assessment, an instrument most psychology departments abandoned decades ago, and the faculty dashboard logs every student conversation and is marketed partly as a way to monitor plagiarism. Its engagement figures (18% to 68%) do not match the ones Praxis gave the

trade press (14% to 75%), so repeat neither.

- ▶ [Talk to Charlie on Tavus](#)
- ▶ [Create a Digital Twin on HeyGen](#)
- ▶ [Praxis AI — faculty onboarding walkthrough](#)

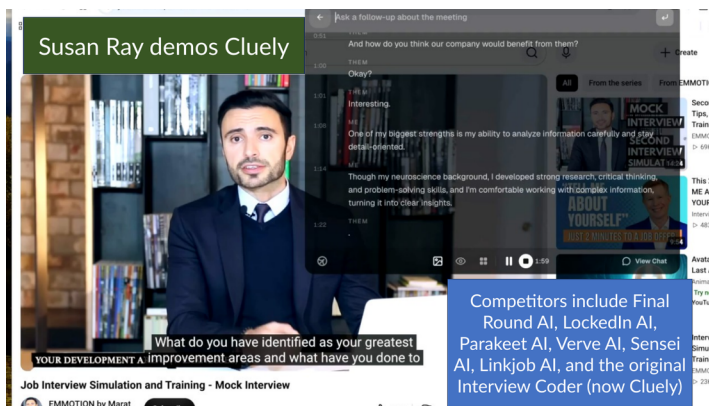
Wood, C. (2025, March 6). Professors' AI twins loosen schedules, boost grades. EdScoop. [trade press; outcome claims are vendor-reported, no control group] <https://edscoop.com/digital-twin-ai-university-praxis-anthropic/>

HS students submitting research as part of their application must also complete an AI oral verification from Viva Exam.



Voice mode and oral exams are returning — see also Panos Ipeirotis (NYU) on scalable AI oral exams.

- [Caltech — research papers and publications](#)
- [Viva Exam](#)

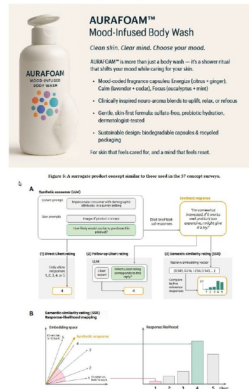


- [Cluely](#)
- [Final Round AI](#)

90% accuracy in predicting purchase interest

- Off-the-shelf LLM
- No fine-tuning
- Respond as a customer type X
- Only product image
- **Potential Students?!?**

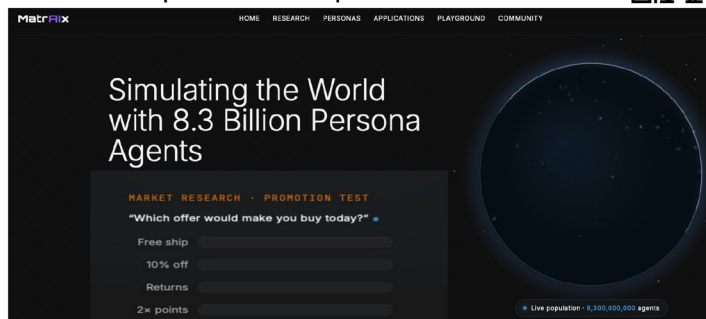
Maier, B. F., Aslak, U., Fiaschi, L., et al (2025, Oct 9) LLMs Reproduce Human Purchase Intent via Semantic Similarity Elicitation of Likert Ratings. [arXiv:2510.08338](https://arxiv.org/abs/2510.08338)



Maier, B. F., Aslak, U., Fiaschi, L., et al. (2025, Oct 9). LLMs reproduce human purchase intent via semantic similarity elicitation of Likert ratings. [arXiv \[preprint\].](https://arxiv.org/abs/2510.08338)

<https://arxiv.org/abs/2510.08338>
<https://arxiv.org/abs/2510.08338>

MatrAlx: Harvard and MIT researchers used real human profiles from public records.



- [MatrAlx](#)

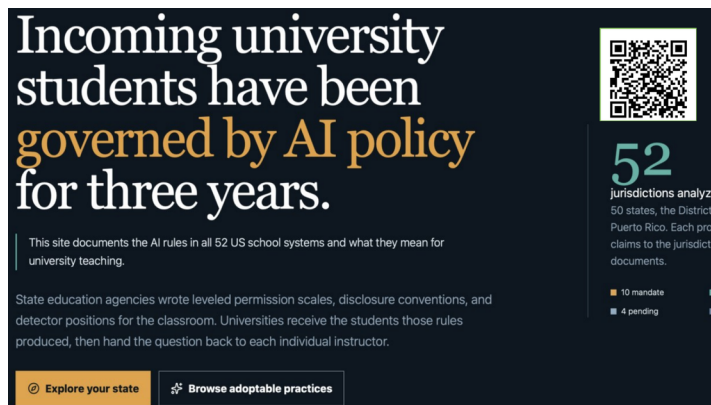
Li, X., Hao, Y., Hou, J., et al. (2026, August 4). MatrAlx: Simulating the world with 8.3 billion persona agents. [arXiv \[preprint\].](https://arxiv.org/abs/2608.04205) <https://arxiv.org/abs/2608.04205>

WORKSHOP PROMPTS: Relationships & Communication (slide 42)

Try a focus group (one you know) — or: Tell me how this academic policy might be confusing or unclear to first gen students and how I could make it clearer, better and more inclusive.

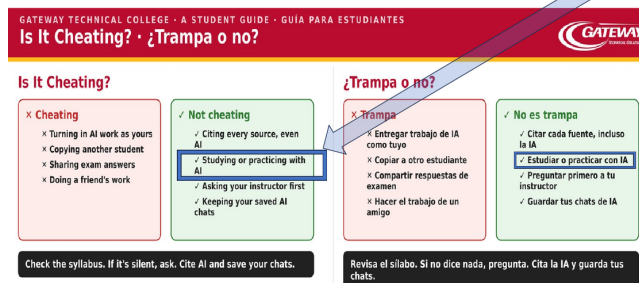
Read my syllabus and course materials from a variety of student perspectives (first-gen, smart and cynical, non-major etc.). Tell me directly and honestly from a student perspective what looks like busy work? Do I come across as caring or a hypocrite? What policies are unclear and what will you ignore? What turns you off or just puts you to sleep?

► [Workshop Prompts & Materials](#)



► [State AI Policy Field Guide for Higher Education](#)

Student Guide To Cheating or Not



PROMPTING STRATEGY: Panel of Students (slide 45)

Read my syllabus/course materials from a variety of student perspectives (first-gen, smart and cynical, non-major etc.). Tell me directly and honestly from a student perspective what looks like busy work? Do I come across as caring or a hypocrite? What policies are unclear and what will you ignore? What turns you off or just puts you to sleep?

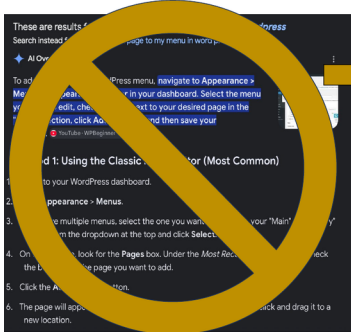
PROMPTING STRATEGY: Panel of Experts (slide 46)

Do multiple individual analyses of this course/assignment by a variety of scholars with different views of learning, pedagogy and behavioral science. Help me transform and reimagine using Piaget, Vygotsky, UDL, standards-based grading, TILT etc. Note where these agree or conflict...

► [Workshop Prompts & Materials](#)

AGENTS & THE AI RESEARCH WORKFLOW

ChatBot



Desktop Agent

Add AI Research Workflow to the prompting menu on my website after Vibe Coding.

Confirmed live. AI Research Workflow is now in Menu 1. Inside the Prompting submenu, positioned directly after Vibe Coding, linking to <https://we.teachwithai.com/ai-research-workflow/>.

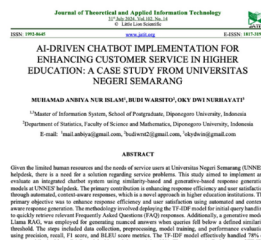
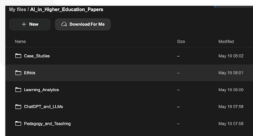
A chatbot can only chat with you; a desktop agent can plan and DO: read your folder, run code on your data, open a database you are logged into, write a file, and come back with what it could not do — here, adding a new page to my website.

► [AI Research Workflow — all of these prompts](#)

AGENTS & BROWERS

Research and find all of the academic papers on AI in Education in the last year and then find pdfs of every paper you can and download them into organized files.

- Massive Multi-Contextual Search
- Find pdf
- Download pdfs
- Organize
- Create a link to the files



Research and find all of the academic papers on AI in Education in the last year and then find pdfs of every paper you can and download them into organized files. Create a link to the files.

Syllabus Skill

Update my syllabus for next semester

- **REVISE** the dates
- **CHECK/ADD** required university policies & statements (religious observance, accommodations, grade dispute etc.)
- **IDENTIFY** conflicting policies or ambiguous directions
- **LIST** anything confusing or unclear (first-gen students)
- **SUGGEST** improvements to improve motivation
- **OFFER** alternative grading or proven assignment ideas.
- **CREATE** an **EXTENSION POLICY** to reduce cheating

an **EXTENSION POLICY** to reduce cheating.

► [Skills, templates and examples](#)



Syllabus Skill (slide 49)

Complete Prompt:

Update my syllabus for next semester. REVISE the dates. CHECK/ADD required university policies & statements (religious observance, accommodations, grade dispute etc.). IDENTIFY conflicting policies or ambiguous directions. LIST anything confusing or unclear (first-gen students). SUGGEST improvements to improve motivation. OFFER alternative grading or proven assignment ideas. CREATE

VIBE CODING

Create and deploy an interactive superhero-themed game to teach the Bingham plastic model through visual simulation to college students in both English and Arabic.

Got it — I'll deliver the game in **Arabic + English**, packaged as a **standalone web app** you can open in your browser or run locally without installing anything complicated.



Vibe Code a Syllabus Bot



BUILD a website with a bot to answer student questions
ANTICIPATE questions & check answers with me
CREATE a **SYSTEM** to manage auto extensions (4x8h)
PASS if you do not have certainty from the syllabus
NEVER do homework or assignments
ASSESS GRADE APPEALS using the University policy
REFER students to me if they have a valid grade appeal
DEPLOY to GitHub

► [Vibe coding examples and instructions](#)

Vibe Code a Syllabus Bot (slide 53)

Complete Prompt:

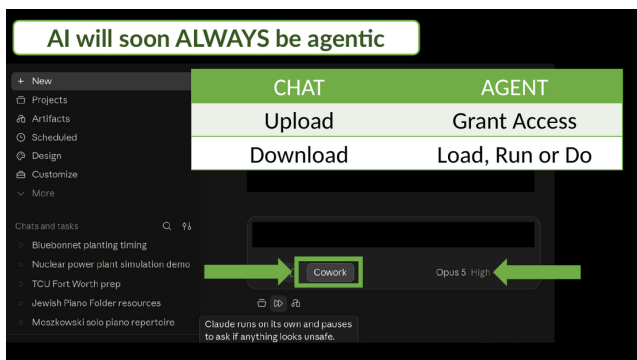
BUILD a website with a bot to answer student questions. **ANTICIPATE** questions & check answers with me. **CREATE** a **SYSTEM** to manage auto extensions (4x8h). **PASS** if you do not have certainty from the syllabus. **NEVER** do homework or assignments. **ASSESS GRADE APPEALS** using the University policy. **REFER** students to me if they have a valid grade appeal. **DEPLOY** to GitHub.

VIBE CODING

I need a tool that could streamline the process of student grade appeals for the Chemistry department at Alcorn State University.



► [Grade Appeal Assistant — Alcorn State demo](#)



AI RESEARCH WORKFLOW



Six stages. Stage 1 is a one-time, ten-minute set-up; the rest are prompts you reuse.

► [Copy, paste and modify all of these prompts](#)

Example: Book Project

Your goal is to set me up to revise X for Y.

You will not be writing any text.

- 1) Read A, B & C [abstract, proposal, first version, ToC, notes etc.].
- 2) Create a new folder, make new copies of the files and label your new files...
- 3) Create a references doc and include complete citations for everything.
- 4) Now read each chapter and COMMENT only
 - (a) any passage that needs to be updated or cut,
 - (b) any passage or citation where the evidence is weak or citation is needed
 - (c) if there is a better or newer citation also provide it in the comments
 - (d) track all references as you read and align with the references document.
- 5) Create a new ToC document with your recommendations
- 6) You can use folder [with article pdfs, my notes] or do your own research.
- 7) Create a new folder on Google docs and upload copies

Example: Book Project — (More) Complete Prompt (slide 57)

Your goal is to set me up to revise X for Y. Act like a senior editor with deep experience in Z. You will not be writing any text. We have a word limit of # including citations. Here is the publisher style guide; keep that in mind as you consider cuts and updates.

1. Read A, B & C [abstract, proposal, first version, ToC, notes etc.].

2. Create a new folder D and make new copies (new doc files) of the files in E. Label your new files Book F ch# etc. Keep the same formatting from the style sheet. Make new versions of references, introduction etc. as well.

3. Add a new file for G based on the ToC; use the other chapters for style but use the contents H.

4. Create a complete references doc and include complete citations for everything cited in the book in format I.

5. Now read each chapter and COMMENT only on (a) any passage that needs to be updated or cut; (b) any passage or citation where the evidence is weak — if a citation is needed, provide it in the comments as an inline text citation (per the style of the book) and add it to the references; (c) if there is a better or newer citation, also provide it in the comments; (d) keep track of the references as you go.

6. When you are done, create a new ToC document with your annotations and recommendations for additional updates, chapters or sections.

7. Use folder J [with article PDFs, notes and your research] as needed, or do your own research. I am especially interested in K. My audience is L. Consider all of this as you think about where new chapters or sections might go, and put it into the ToC document v4_annotations.

8. Create a new folder on Google Docs and upload all of this inside that folder with comments tracked.

[illegible]

Piano Repertoire Explorer — over 250,000 published piano works. Fable and Sonnet collected publication records, catalogues and reviews into one data set, then deduplicated, cross-referenced, checked and tagged it at scale. AI can scale things far beyond what one researcher could do by hand.

- ▶ Piano Repertoire Explorer (v1)

STAGE 1

MOVE TO THE DESKTOP

Ten minutes. Once.

Install a desktop agent

Create a Project

Connect a folder

Connect a browser
Login to Databases

Claude Cowork

ChatGPT App

365 Copilot App

Gemini Spark



Chat+Work+Codex+Atlas+Cloud

Toggle to Cowork

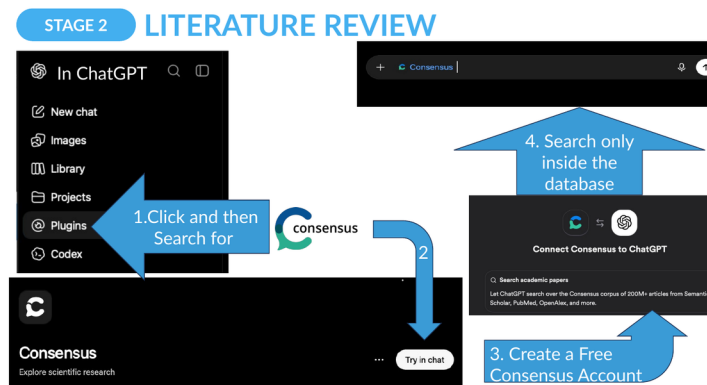
► Gemini Spark

1. Install a desktop agent.
2. Make a Project per research project and put your standing rules in it — evidence standards, citation style, what counts as a source in your field.
3. Connect a folder (keep raw data in one subfolder; let the agent write only to another).
4. Connect a browser so the agent can work inside databases you are already logged into.

- ▶ [Claude Cowork — get started](#)
- ▶ [ChatGPT Codex](#)
- ▶ [Microsoft 365 Copilot app \(then toggle to Cowork\)](#)

The screenshot shows the ChatGPT App interface. At the top, there's a header with the 'Install Desktop Agent' button on the left and the 'Chat or Work' toggle on the right. Below the header, the main content area is divided into two sections: 'ChatGPT Or Codex' and 'Schedule'. The 'ChatGPT Or Codex' section has a blue arrow pointing to the 'Install Desktop Agent' button. The 'Schedule' section has a blue arrow pointing to the 'Access & Project' section. The 'Access & Project' section has a blue arrow pointing to the 'What should we work on?' dialog box. The 'What should we work on?' dialog box has a blue arrow pointing to the 'Model Effort & Where to Work' section. The 'Model Effort & Where to Work' section has a blue arrow pointing to the 'Access & Project' section.

- ▶ ChatGPT desktop app



Or search only inside a curated database: add the Consensus plugin to ChatGPT and create a free Consensus account.

► [Consensus](#)

Building a Skill



1. Try this.
2. Here are my corrections.
3. Try again.
4. Write a skill that would have produced this result without me having to correct you. Include the specific mistakes you made along the way and what fixed them..

4. Write a skill that would have produced this result without me having to correct you. Include the specific mistakes you made along the way and what fixed them.

This document is the output of exactly that loop.

► [Skills, templates and examples](#)

Building a Skill (slide 50)

You do not write a Skill from scratch. You do the task once with the AI, correct its output by hand, and then ask it to write down what it should have known. The correction is the training data.

Complete Prompt:

1. Turn this ppt into a doc where the images are on the left and the citations on the right. Here is an example.

2. I revised your output. Review it and learn.

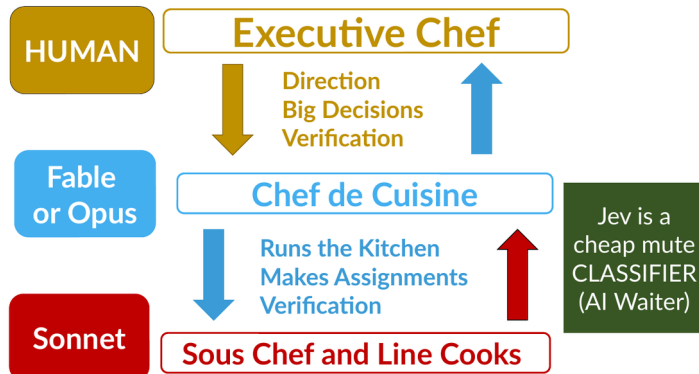
3. Try again with this new ppt.

"AI has eliminated the doing and left the thinking"

Dustin Bruzenak, CEO, Modern Logic



- Update all links on my website (Mondays)
- Check for newer or contradictory research
- Turn ppt into pdf and add citations
- Email students who have unfinished work
- Collect all records into a database



EVERYONE
IS NOW AN
AI Manager



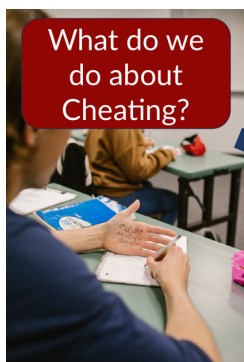
Delegation requires judgement

Which tasks should you delegate?

WORKFLOW: What combinations of models should be assigned?

Direction, feedback & correction

RE-DESIGNING LEARNING



What do we do about Cheating?



What do we do about LEARNING

A BETTER AI CONVERSATION

NOTICE

"I notice lots of information, but no analysis or weighing of evidence. This happens with AI; the tool likes to take both sides."

THINKING QUESTION

"What arguments did you think were most important, and why?"

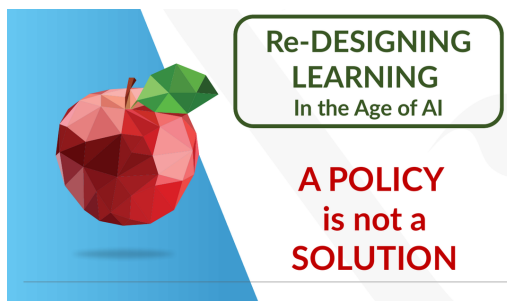
NEXT STEPS

"If you can identify the conclusion best supported by the evidence, and explain why, you should resubmit."



Cheryl Strauss Einhorn (2026, July 8). Inspiring Minds, Harvard Business Impact.

Einhorn, C. S. (2026, July 8). What to say when you suspect students are misusing AI. Inspiring Minds, Harvard Business Impact Education. <https://hbsp.harvard.edu/inspiring-minds/suspected-student-ai-misuse>



The Design is the Intervention, not the Tool

(slide 54)

The research behind each claim on this slide:

Anthropic. (2025, April 8). Anthropic education report: How university students use Claude. [vendor telemetry — explaining and summarizing is the top use] <https://www.anthropic.com/news/anthropic-education-report-how-university-students-use-claude> <https://www.anthropic.com/news/anthropic-education-report-how-university-students-use-claude>

Freeman, J. (2025). Student generative AI survey 2025 (HEPI Policy Note 61).

Higher Education Policy Institute. [66% → 92% in one year] <https://www.hepi.ac.uk/reports/student-generative-ai-survey-2025/> <https://www.hepi.ac.uk/reports/student-generative-ai-survey-2025/>

Stephenson, R., & Armstrong, C. (2026). Student generative AI survey 2026 (HEPI Report 199). Higher Education Policy Institute. <https://www.hepi.ac.uk/reports/student-generative-ai-survey-2026/> [1,054 UK undergraduates; 12% put AI-generated text directly into assessed work, up from 8% in 2025 and 3% in 2024]

Chirikov, I., Smirnov, I., & Kizilcec, R. F. (2026). Generative AI use and misuse call for assessment reform in higher education. *Science*, 392(6800), 818–820.

<https://doi.org/10.1126/science.aec5115> [95,513 students at 20 US public research universities; substantial heterogeneity

in GenAI use and misuse across disciplines and student groups; misuse estimated by indirect questioning, not self-report]

Angehr, E., Bloem, M., Howell, J., & Radford, A. W. (2026, February). College faculty perceptions of generative artificial intelligence in higher education. College Board. <https://research.collegeboard.org/media/pdf/ai-research-brief-3-vf.pdf> [3,000+ US faculty, fielded June–August 2025; 74% say students use AI to write essays, 77% use AI themselves, 45% negative sentiment — faculty perceptions, not measured student behaviour]

Stadler, M., Bannert, M., & Sailer, M. (2024). Cognitive ease at a cost: LLMs reduce mental effort but compromise depth in student scientific inquiry. *Computers in Human Behavior*, 160, 108386. <https://doi.org/10.1016/j.chb.2024.108386>

Melumad, S., & Yun, J. H. (2025). Experimental evidence of the effects of large language models versus web search on depth of learning. *PNAS Nexus*, 4(10), pgaf316. <https://doi.org/10.1093/pnasnexus/pgaf316> <https://doi.org/10.1093/pnasnexus/pgaf316>

Strömberg, D., Lei, V., & Wu, Y. (2026). The generative AI learning penalty: Evidence from Chinese secondary education (CEPR Discussion Paper No. 21577). [working paper; 26,811 students: homework grades up 18%, exam scores down 20%] <https://cepr.org/publications/dp21577> <https://cepr.org/publications/dp21577>

Fernandes, D., et al. (2026). AI makes you smarter but none the wiser: The disconnect between performance and metacognition. *Computers in Human Behavior*, 175, 108779. [N = 246; replication N = 452] <https://doi.org/10.1016/j.chb.2025.108779>

Lodge, J. M., & Loble, L. (2026). Artificial intelligence, cognitive offloading and implications for education. University of Technology Sydney. [the “performance paradox”] <https://doi.org/10.71741/4pyxmbnjq.31302475.v2>

Kestin, G., Miller, K., Klaes, A., Milbourne, T., & Ponti, G. (2025). AI tutoring outperforms in-class active learning. *Scientific Reports*, 15, 17458. [Harvard RCT, N = 194] <https://doi.org/10.1038/s41598-025-97652-6> <https://doi.org/10.1038/s41598-025-97652-6>

Bastani, H., Bastani, O., Sungu, A., Ge, H., Kabakçı, Ö., & Mariman, R. (2025). Generative AI without guardrails can harm learning: Evidence from high school mathematics. *PNAS*, 122, e2422633122. [RCT, n ≈ 1,000] <https://doi.org/10.1073/pnas.2422633122>

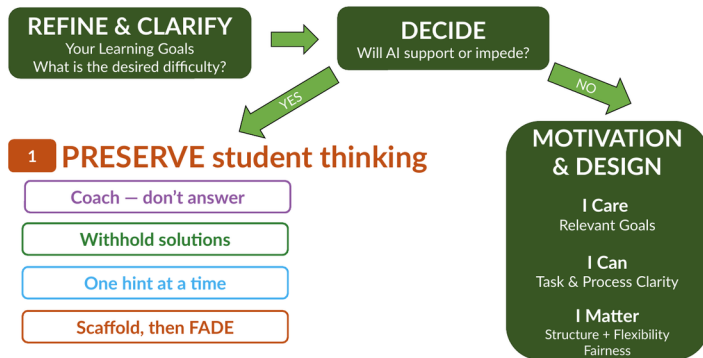
Chung, A. T.-H., Zhang, B., Kung, L.-C., Bastani, H., & Bastani, O. (2026). Effective personalized AI tutors via LLM-guided reinforcement learning. SSRN [working paper; +0.15 SD unassisted exam gain] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6423358

Sweller, J., van Merriënboer, J. J. G., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, 31(2), 261–292. <https://doi.org/10.1007/s10648-019-09465-5>

LIMITS. The strongest evidence of harm comes from secondary students outside the United States; the strongest evidence of benefit comes from elite, high-structure settings such as Harvard. The typical university classroom sits in the understudied middle. Most of these studies measure exam scores; we still lack long-term evidence about durable, transferable learning.

► [Full principles, templates and examples](#)

DESIGN PRINCIPLES



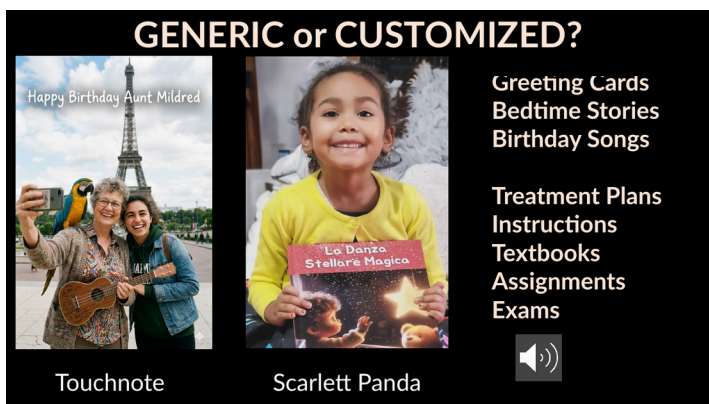
Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row.

Bjork, E. L., & Bjork, R. A. (2011). Making things hard on yourself, but in a good way: Creating desirable difficulties to enhance learning. In *Psychology and the Real World* (2nd ed., pp. 59–68). Worth.

de Bruin, A. B. H., et al. (2023). Worth the effort: The Start and Stick to Desirable Difficulties (S2D2) framework. *Educational Psychology Review*, 35(2), 41.
<https://doi.org/10.1007/s10648-023-09766-w>
<https://doi.org/10.1007/s10648-023-09766-w>

Kapur, M. (2008). Productive failure. *Cognition and Instruction*, 26(3), 379–424. <https://doi.org/10.1080/07370000802212669>
<https://doi.org/10.1080/07370000802212669>



- [Touchnote](#)
- [Scarlett Panda](#)

Increase Relevance & Customization



Sweller, J. (1988); Clark, R., Nguyen, F., & Sweller, J. (2006); Paas, F., Renkl, A., & Sweller, J. (2003)

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257–285. https://doi.org/10.1207/s15516709cog1202_4 https://doi.org/10.1207/s15516709cog1202_4

Clark, R., Nguyen, F., & Sweller, J. (2006). Efficiency in learning: Evidence-based guidelines to manage cognitive load. *Pfeiffer*.

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist*, 38(1), 1–4.

https://doi.org/10.1207/S15326985EP3801_1 https://doi.org/10.1207/S15326985EP3801_1

CUSTOMIZED ASSIGNMENTS

Create 10 innovative ways to customize this assignment for every student to increase student motivation and relevance while also increasing the right kind of friction to make thinking and process visible.

ASSIGNMENT REBUILDER:



YOU TRY: Customized Assignment Prompt (slide 60)

Complete Prompt:

Create 10 innovative ways to customize this assignment for every student to increase student motivation and relevance while also increasing the right kind of friction to make thinking and process visible.

► [Assignment Rebuilder \(Susan Ray\) — ChatGPT version](#)

► [Assignment Rebuilder \(Susan Ray\) — BoodleBox version](#)

VIDEO: Writing with Agatha Christie (slide 81)

Agatha Christie now teaches an online writing course — reconstructed from her archive with AI.

- [Writing with Agatha Christie \(BBC Maestro\)](#)
- [Video embedded in this slide \(YouTube\)](#)



Meyer, J., Jansen, T., Schiller, R., Liebenow, L., Steinbach, M., Horbach, A., & Fleckenstein, J. (2023). Using LLMs to bring evidence-based feedback into the classroom: AI-generated feedback increases secondary students' text revision, motivation, and positive emotions. *Computers and Education: Artificial Intelligence*.

<https://doi.org/10.1016/j.caeai.2023.100199> <https://doi.org/10.1016/j.caeai.2023.100199>

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <https://doi.org/10.3102/003465430298487> <https://doi.org/10.3102/003465430298487>

Urban, M., Děchtěrenko, F., Lukavský, J., Hein, V., Švácha, F., Brom, C., & Urban, K. (2023). ChatGPT improves creative problem-solving performance in university students: An

experimental study. [preprint] <https://doi.org/10.31234/osf.io/9z2tc> <https://doi.org/10.31234/osf.io/9z2tc>

AI as Idea Generator



Spicy Mango Jerky
Matcha Green Tea Popcorn
Gluten-Free Brazilian Cheese Bread Mix
Hibiscus Ginger Lemonade
Rose Petal Jam

- Iterate & Improve
- Cost & Price
- Packaging & Size
- Market Test
- Supply Chain & Margin
- Propose the Best 10



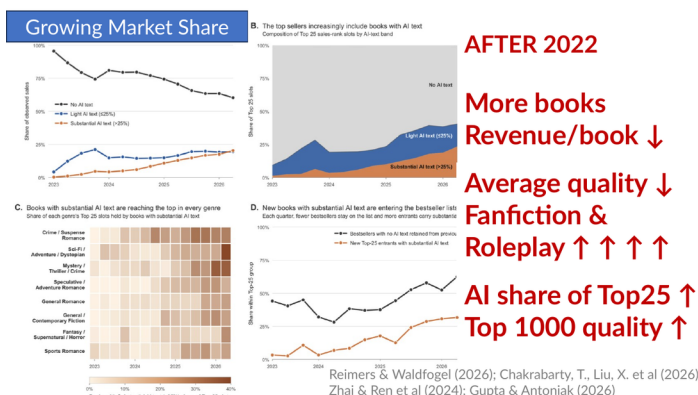
<https://doi.org/10.1126/sciadv.adn5290>

Quantity of ideas is the greatest predictor of innovative success. “In order to have good ideas, you need a lot of ideas.” — Linus Pauling

Girotra, K., Meincke, L., Terwiesch, C., & Ulrich, K. T. (2023). Ideas are dimes a dozen: LLMs for idea generation in innovation. SSRN. <https://ssrn.com/abstract=4526071>

De Freitas, J., Nave, G., & Puntoni, S. (2025, December 17). When used correctly, LLMs can unlock more creative ideas. Harvard Business Review.

Doshi, A. R., & Hauser, O. P. (2024). Generative AI enhances individual creativity but reduces the collective diversity of novel content. Science Advances, 10. <https://doi.org/10.1126/sciadv.adn5290>



The fanfiction and roleplay line comes from the WildChat corpus: in more than 500,000 consented, English-language ChatGPT conversations, over a third involve generating fiction, especially fanfiction and erotica which generate what the authors call a “solipsistic reader-writer,” “who both generates and consumes fiction within a closed conversational loop.”

Reimers, I., & Waldfogel, J. (2026). AI and the quantity and quality of creative products: Have LLMs boosted creation of valuable books? NBER Working Paper 34777. [working paper] <https://doi.org/10.3386/w34777>

Chakrabarty, T., Liu, X., et al. (2026, July). Generative AI floods and dilutes the market for books. arXiv [preprint].

<https://arxiv.org/pdf/2607.20349> <https://arxiv.org/pdf/2607.20349>

Gupta, N., Antoniak, M., & Walsh, M. (2026, June 23). AI fiction in the wild. arXiv [preprint; provisionally forthcoming in MFS: Modern Fiction Studies]. <https://arxiv.org/abs/2606.22748> <https://arxiv.org/abs/2606.22748>

Zhao, W., Ren, X., Hessel, J., Cardie, C., Choi, Y., & Deng, Y. (2024). WildChat: 1M ChatGPT interaction logs in the wild. ICLR 2024. [consented corpus of 1M conversations; the dataset behind Gupta et al.] <https://arxiv.org/abs/2405.01470>

<https://arxiv.org/abs/2405.01470>



Singh, A., Guan, Z., & Rieh, S. Y. (2025). Enhancing critical thinking in generative AI search with metacognitive prompts. Proceedings of ASIS&T, 62(1), 672–684.

<https://doi.org/10.1002/prs2.1287>

<https://doi.org/10.1002/prs2.1287>

Xu, X., Qiao, L., Cheng, N., Liu, H., & Zhao, W. (2025). Enhancing self-regulated learning and learning experience in generative AI environments: The critical role of metacognitive support. British Journal of Educational Technology, 56(5), 1842–1863. <https://doi.org/10.1111/bjet.13599>

<https://doi.org/10.1111/bjet.13599>

Suriano, R., Plebe, A., Acciai, A., & Fabio, R. A. (2025). Student interaction with ChatGPT can promote complex critical thinking skills. Learning and Instruction, 95, 102011. <https://doi.org/10.1016/j.learninstruc.2024.102011>

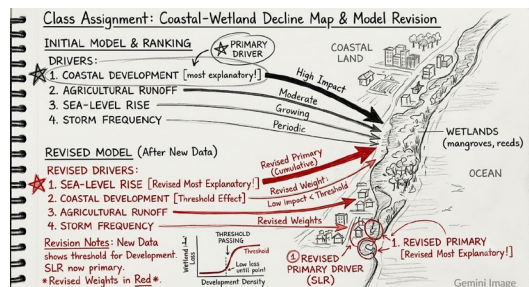
<https://doi.org/10.1016/j.learninstruc.2024.102011>

Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning. *Psychological Science*, 17(3), 249–255. <https://doi.org/10.1111/j.1467-9280.2006.01693.x>

Tomisu, H., Ueda, J., & Yamanaka, T. (2025). The cognitive mirror: A framework for AI-powered metacognition and self-regulated learning. *Frontiers in Education*, 10, 1697554. [framework paper, not empirical] <https://doi.org/10.3389/feduc.2025.1697554>

Make Thinking Visible

Pre-Game	[	PRIORITIZE – ANALYZE – RANK DECIDE – CHOOSE
Draft	[	WRITE – DEFEND
Feedback	[	NEW Something
After Party	[	REVISE – RESPOND – REFLECT --In the original document



Daniel R. Sanford, Director, CTL, Boise State University
Artificial Intelligence, Authentic Voices: AI & Assignment Design for Critical Thinking in Higher Education (2027) Bloomsbury

► [Daniel R. Sanford — Artificial Intelligence, Authentic Voices](#)

This Coastal Wetlands example is from a new book that heavily influenced this framework: Sanford, D. R. (2027, forthcoming). *Artificial intelligence, authentic voices: AI & assignment design for critical thinking in higher education*. Bloomsbury. Dan is the Director of the CTL at Boise State University.

BUILD a map with causal arrows explaining coastal-wetland decline
RANK all four drivers by how much explanatory work each does
MARK the driver you judge most explanatory.
CONSIDER (one week later) more data on the same region.
ADD new drivers and revise the weights on your original map. Use a new color.

Teach Students How to Use the Bot!

45% understanding fundamental concepts and jargon

42% practice questions

“I’m terrible at prompting,
so I don’t think I’m getting much out of it”

HALF never logged on

Sax, M (2025) Harvard Business School Course Tutor Bot 930 First-year accounting students
Robinson et al. (2026) Annenberg/Stanford : 2 RCTs, 355 elementary students

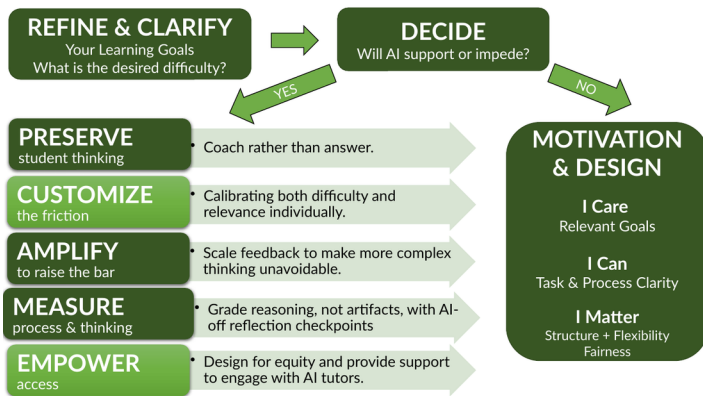
Sax, M. (2025, June 23). Custom AI tutor bots are transforming learning at HBS. *Harvard Business Impact*. [930 first-year accounting students; only 12% became power users] <https://hbsp.harvard.edu/inspiring-minds/ai-tutor-bots-harvard-business-school>

Robinson, C. D., Gormley, D., Ribeiro, A. T., & Loeb, S. (2026). Access is not enough: Human support improves engagement with AI tutoring (EdWorkingPaper No. 26-1451). Annenberg Institute, Brown University. [working paper; 2 RCTs, 355 elementary students; engagement rose 71–80% but reading achievement did not] <https://doi.org/10.26300/pz7p-p388>

Henderson, M., et al. (2025). Comparing generative AI and teacher feedback: Student perceptions of usefulness and

trustworthiness. *Assessment & Evaluation in Higher Education*. [8,642 open-ended responses: teachers more trusted] <https://doi.org/10.1080/02602938.2025.2502582>

Er, E., et al. (2025). Assessing student perceptions and use of instructor versus AI-generated feedback. *British Journal of Educational Technology*, 56(3), 1074–1091. <https://doi.org/10.1111/bjet.13558>



► [Full principles, templates and examples](#)

Wang, R. E., Ribeiro, A. T., Robinson, C. D., Loeb, S., & Demszky, D. (2024). Tutor CoPilot: A human-AI approach for scaling real-time expertise. arXiv [preregistered RCT: 900 tutors, 1,800 K-12 students; +4 points mastery, +9 for the lowest-rated tutors, ~\$20/tutor/year].

<https://arxiv.org/abs/2410.03017>

<https://arxiv.org/abs/2410.03017>

Martin, A. J., et al. (2025). Integrating generative AI and load reduction instruction. Learning and Individual Differences, 121, 102723. <https://doi.org/10.1016/j.lindif.2025.102723>

<https://doi.org/10.1016/j.lindif.2025.102723>

Dunn, T. L., & Risko, E. F. (2016). Toward a metacognitive

account of cognitive offloading. Cognitive Science, 40(5), 1080–1127. <https://doi.org/10.1111/cogs.12273>

<https://doi.org/10.1111/cogs.12273>

Ruth, M., Jansen, M., & Kaspar, K. (2024). Cheating behaviour in online exams: On the role of needs, conceptions and reasons of university students. Journal of Computer Assisted Learning, 40(5), 1987-2008. [n=339 German students, self-report survey; less cheating when the professional relevance of the content was explained, tasks were authentic, and detailed feedback was expected]

<https://doi.org/10.1111/jcal.12994>

Ali, R., & Maroulis, J. (2026). Assessment validity in the age of generative artificial intelligence: A critical review. Assessment & Evaluation in Higher Education. [discourse analysis of 10 journals, 2023-June 2025; three discourses: risk, rules/detection, and design-focused redesign] <https://doi.org/10.1080/02602938.2026.2683046>

Droulers, M., Krautloher, A., & Shaeri, S. (2026). Interactive oral assessment: Co-existence of formative and summative purposes. Teaching in Higher Education, 31(1), 67-85. [n=290 students, 25 subjects, one Australian institution, survey data only; correction published Sept 2025] <https://doi.org/10.1080/13562517.2025.2549945>

RECONNECTING WRITING & THINKING

AI Is Separating
WRITING from **THINKING**



**How might we
reconnect them?**

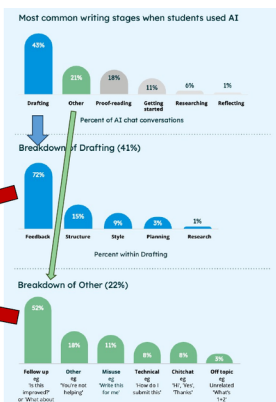
Turnitin. (2026). Q2 2026 learning integrity insights report. [vendor detection data; most common student requests measured in Turnitin Clarity AI chat] <https://www.turnitin.com/press/us-higher-education-students-outsourcing-writing-to-ai-at-twice-the-rate-of-uk->

80% AI-generated text =
19.4% in US
 9.8% in UK

Most common student requests:

"Is my paper good?"
 "Am I aligned with the rubric?"
 "How can I improve?"

Turnitin Q2 2026 Learning Integrity Insights Reports



australian-peers <https://www.turnitin.com/press/us-higher-education-students-outsourcing-writing-to-ai-at-twice-the-rate-of-uk-australian-peers>

Make Thinking Visible

Process Assignments

Pre-Game	PRIORITIZE - ANALYZE - RANK - CLARIFY DECIDE - CHOOSE
Draft	WRITE - DEFEND - JUSTIFY - RECOMMEND - EXPLAIN -- AI or no AI
Feedback	READ - DEBATE - DISCUSS - ENCOUNTER - COMPARE --New evidence, conditions, cases, priorities, perspectives (from AI?)
After Party	REVISE - RESPOND - REFLECT --COMMENT in your original doc (!) what you now --STRENGTHEN, REMOVE, CHANGE, REFRAME, RESHAPE

Revising After New Conditions

PRIORITIZE the competing aims/positions/conditions/trade-offs
 CHOOSE an action/interpretation/priority/policy goal/design approach
 DRAFT a recommendation (with or without AI) to
 DEFEND your approach
 IDENTIFY a feature that reflects your priority
 NAME the limitations resulting from your choice, and
 ANTICIPATE and ANSWER an objection
 DESCRIBE a condition where your prioritization would change
 ENCOUNTER new circumstances/evidence/conditions/case
 COMMENT (in doc) where you now hesitate, change or reassess
 CONNECT each to a Z principle with one sentence explanation

Weighting Constraints in a Case Study

Daniel R. Sanford, Director, CTL, Boise State University
Artificial Intelligence, Authentic Voices: AI & Assignment Design for Critical Thinking in Higher Education (2027) Bloomsbury

ANALYZE this plan for a pedestrian bridge.
 CLARIFY the tensions with budget, required load, extreme weather...
 STATE the most significant priority and why (in one sentence).
 CONNECT this priority to one condition that reflects that priority.
 DRAFT a recommendation (with or without AI) to
 DEFEND the feature that reflects your priority
 NAME the limitations resulting from your choice, and
 ANTICIPATE and ANSWER an objection from a council member
 DESCRIBE one realistic condition where your prioritization would change and how that would change the design.



► [Daniel R. Sanford — Artificial Intelligence, Authentic Voices](#)

The worked examples on these slides (a pedestrian bridge, team decisions, accounting materiality) are from: Sanford, D. R. (2027, forthcoming). *Artificial intelligence, authentic voices: AI & assignment design for critical thinking in higher education*. Bloomsbury.

ANALYZE this problem/plan/design
 IDENTIFY the specific trade-offs or tensions
 AGREE on a standard for team decisions
 APPLY the standard to determine an action
 DRAFT a recommendation
 IDENTIFY a feature that reflects your priority
 NAME the limitations resulting from the choice
 ANTICIPATE and ANSWER an objection
 DESCRIBE what would change your priority
 CONSIDER new evidence/conditions/case
 REVISE your decision and explain how the team considered the new evidence against the priority.

Team Decisions



Writing Assignments

D Define the stages of the project

E Evaluate which AI for each stage
Ex. Elicit for research; Copilot for editing

E Explore how the AI might help or hurt
Get feedback on your outline.

R Reflect if AI helped/hurt writing AND learning



Cummings, R. E., Monroe, S. M., & Watkins, M. (2024). Generative AI in first-year writing: An early analysis of affordances, limitations, and a framework for the future. *Computers and Composition*, 71, Article 102827. <https://doi.org/10.1016/j.compcom.2024.102827>

Sourati, Z., Karimi-Malekabadi, F., Ozcan, M., McDaniel, C., Ziabari, A., Trager, J., Tak, A. N., Chen, M., Morstatter, F., & Dehghani, M. (2026). The shrinking landscape of linguistic diversity in the age of large language models. *Nature Human Behaviour*. [880,000+ texts, 7 datasets; LLM polishing cut writing-complexity variance 21-50% while keeping content, and amplified dominant patterns] <https://doi.org/10.1038/s41562-026-02550-0>

Curation Thinking & Meaning

Ivy Linton Stabell: **The Influence Project** in First-Year English

- Pick any work of art you love.
- Look expansively for artistic ancestors.
- PROMPT: a RANGE of influences for X
- Learn about parent and grandparent works.
- Find three historical context subjects for each.
- Journal about the influences and differences.
- Lots of conferences with the professor.
- Write about this journey.

The Influence Project, Ivy Linton Stabell (Iona University), First-Year English.

► [Ivy Linton Stabell](#)

Define, Evaluate, Explore, Reflect

PROJECT STAGES	AI supports learning	AI interferes with learning	AI has no impact on learning
Brainstorm interests and topics			
Identify key ideas			
Literature review			
Retrieve articles			
Read and interpret articles			
Identify trends, discrepancies, and gaps			
Create outline			
Write a first draft			

Reverse Outlining

- Read this and create an outline summarizing the main point of each paragraph with one sentence.
- How might I more persuasively organize or focus this to say X.

Build & Defend a Rubric

Doan Winkel, John Carroll University

- Use AI to draft a rubric for what excellent would look like in this assignment.
- Challenge its assumptions, cut criteria that feel like busywork and add what really matters.
- Defend your rubric out loud to your group.
- Revise.
- This is how I will grade your work.

Editing to Your Voice

1. What makes your writing sound like your writing?
2. What does AI writing get wrong about you?
3. Prompt AI to write like you.
4. Edit what it provides and iterate.
5. Does this make the next time easier?
6. What happens when writing becomes directing?



Wikipedia Assignment

- Faculty guide students to research course-related topics and verify sources, then fill in missing information and add high-quality citations to Wikipedia articles.
- If permitted by the instructor's course policies, students can learn to use AI as a research tool to identify content gaps and references, not a text generator.
- WikiEdu offers trainings, tools to track student work, and staff support.

► [Teach with Wikipedia \(WikiEdu\)](#)

Journaling with a Bot

You are a kind and insightful assistant who guides students to reflect deeply and discover their own insights and passions from writing about their learning experiences.

1. Ask students to reflect on something they learned in the last day and how it might have changed their thinking or perspective.
2. Consider the student's response and then ask a series of supportive and insightful follow-up questions that will stimulate reflection and self-discovery.
3. Ask the student to respond again and repeat the process.

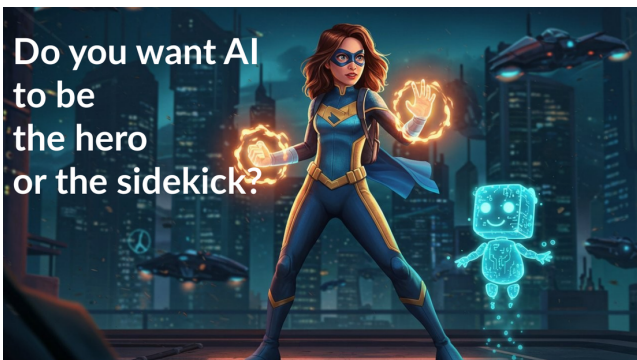
Make Thinking Visible

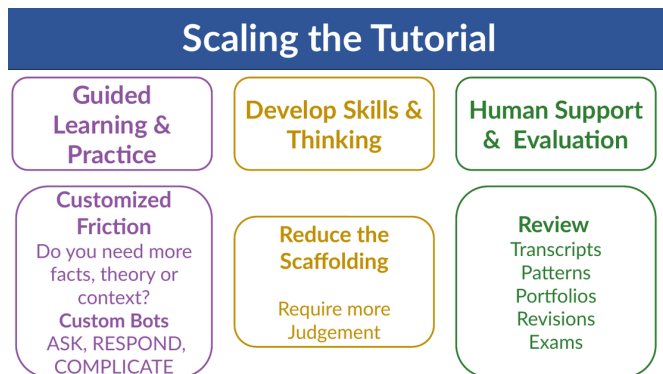
Process & New Writing Assignments



Pre-Game	[	PRIORITIZE - ANALYZE - RANK DECIDE - CHOOSE
Draft	[	WRITE - DEFEND
Feedback	[	NEW Something
After Party	[	REVISE - RESPOND - REFLECT --In the original document

Do you want AI
to be
the hero
or the sidekick?





The tutorial was BOTH learning and assessment, but it could not be scaled. Bloom's tutorial advantage was never mostly about content delivery: it was guided practice, immediate correction and a human who noticed. AI scales the first two cheaply; on the current evidence the third still has to be human, and the gains show up only when the tool withholds answers and someone reviews the process.

Bloom, B. S. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring.

Educational Researcher, 13(6), 4–16. <https://doi.org/10.3102/0013189X013006004> <https://doi.org/10.3102/0013189X013006004>

Kulik, J. A., & Fletcher, J. D. (2016). Effectiveness of intelligent tutoring systems: A meta-analytic review. Review of Educational Research, 86(1), 42–78. [the 2-sigma claim does not replicate at scale; ITS effects cluster near 0.4–0.6 SD]

<https://doi.org/10.3102/0034654315581420> <https://doi.org/10.3102/0034654315581420>

VanLehn, K. (2011). The relative effectiveness of human tutoring, intelligent tutoring systems, and other tutoring systems. Educational Psychologist, 46(4), 197–221. <https://doi.org/10.1080/00461520.2011.611369> <https://doi.org/10.1080/00461520.2011.611369>

Oreopoulos, P., & Low, N. (2026). One click away: AI tutoring with Khanmigo in a two-year school experiment (NBER Working Paper No. 35620). National Bureau of Economic Research. [COUNTER-EVIDENCE. Cluster RCT, 18 Tennessee middle schools, 53 grade clusters, two years; not yet peer-reviewed. Khanmigo was configured to coach rather than give answers and still produced only 0.04 SD pooled (0.02 year 1, 0.08 year 2) — no better than Khan Academy practice without AI. 96% tried it, but the median student messaged it on a third of practice days and in 17% of sessions where they made a mistake. Withholding answers is not enough; engagement is the binding constraint.] <https://www.nber.org/papers/w35620>

Jin, Y., Martinez-Maldonado, R., Gašević, D., Han, X., & Yan, L. (2026). Emergent learner agency in implicit human–AI collaboration: How supportive and contrarian AI personas reshape interaction. Journal of Computer Assisted Learning, 42(5), e70310. [COUNTER-EVIDENCE. RCT, 224 students randomised into 97 online triads; 10-minute creative task; the AI teammate was undisclosed. A contrarian AI produced the Idea→Challenge→Integration pattern in 38.2% of groups against 13.3% (control) and 12.1% (supportive), but lowered teamwork satisfaction and psychological safety ($H(2)=12.14$, $p=.002$) with no gain in cognitive load or creative performance. Designed friction is not the same as learning. Not pre-registered; five motifs tested and two p-values sit just under .05.] <https://doi.org/10.1002/jcal.70310>

WORKSHOP: Copy & Paste (slide 82)

Critical Thinking Support Prompt — or — Feynman Learning Tutor Prompt.

► [Workshop Prompts & Materials](#)

Custom Bots (Prompts) for Writing



Custom bots (prompts) for writing: Thesis Nuance Navigator; Deep Reading a Meaningful Quote. Eric Lars Martinsen, Ventura County Community College.

► [Playing seriously: four AI apps \(Eric Lars Martinsen, Substack\)](#)

Thesis Nuance Navigator

Deep Reading a Meaningful Quote

Eric Lars Martinsen
Ventura County Community College

► [Complete assignment](#)

► [Deep Background GPT \(Mike Caulfield — fact checks and context\)](#)

► [Complete SIFT prompt](#)

Fact-Checking Prompt Contest



1. Contribute one claim to our shared document.
2. Write a prompt that verifies facts and sources.
3. Test it. Improve it. Explain why (comments).
4. Test prompts in pairs.
5. Compare to Mike Caulfield's Deep Background prompt/GPT.
6. Write a critical thinking process for yourself that uses AI.
7. Reflect (bot?): why is critical "doing" also important?



Multiple Perspectives Prompt

Respond as a panel of radically different types of thinkers

- with a variety of historical, cultural & political perspectives
- who ask thought-provoking questions and
- deepen my insight
- by providing simultaneous and contrasting opinions
- and feedback about this work/idea/goal/challenge.

READING: FOUR CORNERS

1. Come up with four different points of view that relate to our reading.
2. Ask an AI to provide summaries of the reading from each POV.
3. Read the summaries and read the article.
4. Create a new set of questions.
5. Write your summary.
6. Reflect and write about why your summary was different?

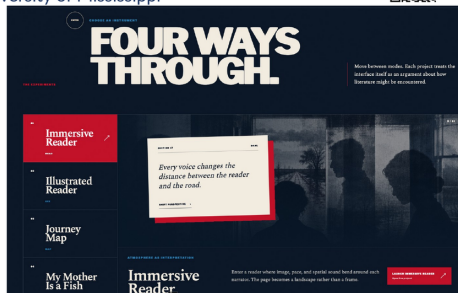
Reading Faulkner's As I Lay Dying

Marc Watkins, University of Mississippi



No embedded chatbots, Faulkner personas, automatic summaries, or buttons that tidy away the novel.

Each project is an encapsulated module designed to help students slow down, explore, annotate, and make an interpretive choice.

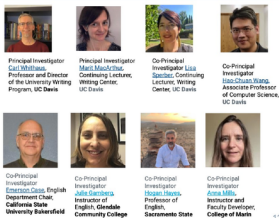


Reading Faulkner's As I Lay Dying (slide 87)

Marc Watkins, University of Mississippi.

- [As I Lay Dying gallery](#)
- [Marc Watkins Substack](#)

Peer & AI Review + Reflection (PAIRR)



Try the PAIRR Bot



Feedback Sample



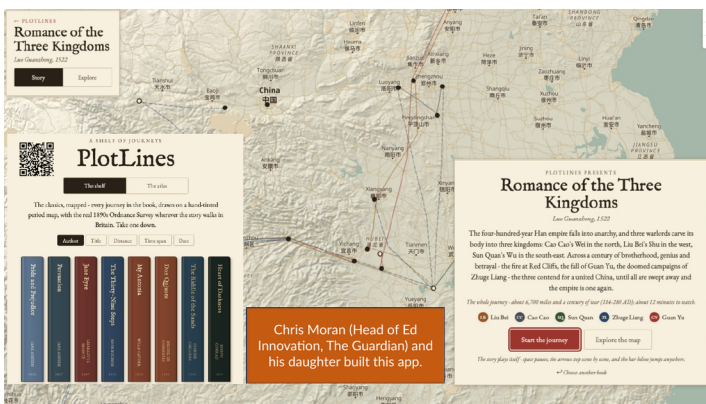
Generate a sample essay



- [PAIRR Bot \(Playlab\)](#)
- [Generate a sample essay \(Playlab\)](#)
- [Feedback sample \(Google Doc\)](#)

Sperber, L., MacArthur, M., Minnillo, S., Stillman, N., & Whitthaus, C. (2025). Peer and AI Review + Reflection (PAIRR): A human-centered approach to formative assessment. Computers and Composition, 76, 102921.

<https://doi.org/10.1016/j.compcom.2025.102921>



PlotLines

Prompt to Support Reading

- [Workshop Prompts & Materials](#)

CREATIVE NEW ASSIGNMENTS

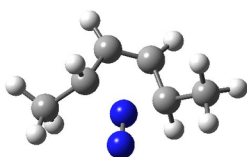


Turn an explosion into art using AI. Ira Greenberg, Director of the Center of Creative Computation and Professor at SMU. (The slides spell it “Greenburg”; the correct spelling is Greenberg.)



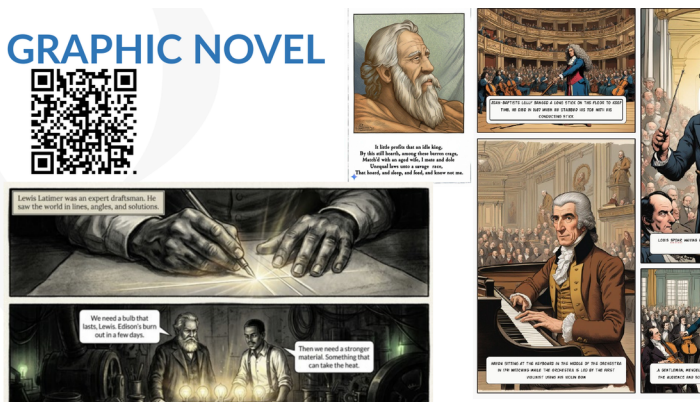
VIDEO

Transform the equation and molecular structures provided into a video that demonstrates the reaction and how bonds are broken and formed.



Sora (Open AI)
Veo (Google)
pika.art (free)
heygen.com
invideo.io
synthesia.io
kapwing.com
colossyan.com

- ▶ [pika.art \(free\)](https://pika.art)
- ▶ [HeyGen](https://heygen.com)
- ▶ [invideo](https://invideo.io)
- ▶ [Synthesia](https://synthesia.io)
- ▶ [Kapwing](https://kapwing.com)
- ▶ [Colossyan](https://colossyan.com)



- ## Hall of Ordinary Revolutionists

Research records, diary entries, letters and ancestral photographs to bring the story of and underrepresented character to life in an authentic historical 3D scene. For example, Hannah Till, the pastry chef of George Washington during the encampment of Valley Forge.

- 

- ▶ Video of the 3D scene (YouTube) — go to 2:30

AI Inputs



Convene a Meeting
Moderate a Debate
Choose a Path
Prioritize a Value
Hold a Symposium
Decide a Strategy



Human Outputs



Invert the usual order. Let AI produce the raw material — the brief, the data, the opposing positions — and make the human work the part that cannot be delegated: convening, weighing, choosing and defending. The gradable artifact is the judgment, not the prose.

- ▶ Assignment examples



Images generated with Perchance.

- ▶ Perchance

VIDEO: Puppramin Ad (slide 102)

AI-generated advertising parody — what persuasion looks like when video is cheap.

- ▶ Video embedded in this slide (YouTube)

Testing Ideas What if...

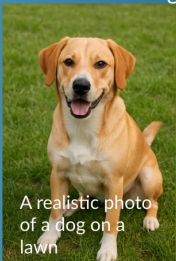


► [Perchance](#)

Using AI to Think Visually

Aashish Kumar Film and Media @ Hofstra University

- Practice making your visual intentions clear



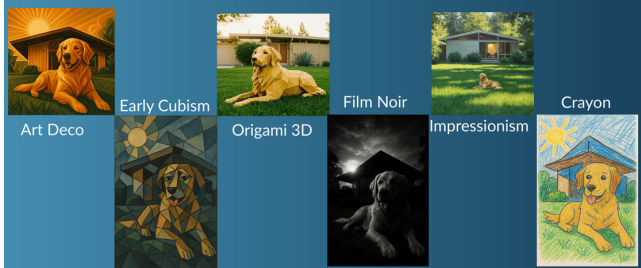
A realistic photo
of a dog on a
lawn



...in front of a mid-century modern house,
low-angled, wide-angle lens, late afternoon
sunlight behind the house.

Style TERMS are Critical

Assignment from Aashish Kumar Film and Media @ Hofstra University

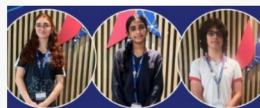


STUDENT ASSIGNMENTS

AI can do (some) things humans can't

PathoScan Screens for Colorectal Cancer

- Trained on US public gut microbiome data to find anomalies.
- Looks for bacterial imbalances and biomarkers associated with early-stage colon cancer.



Dubai American Academy ISTE
AI Challenge Winners

► [ISTE AI Innovator Challenge winners](#)

WORKSHOP: Redesign an Assignment or Course (slide 102)

You are an experienced expert in the science of learning. Analyze this assignment and help me transform it using one or more of these pedagogical practices or thinkers...

Re-imagine my course/assignment with standards-based grading/TILT etc.

► [Workshop Prompts & Materials](#)

SIMULATIONS, GAMES & ROLE-PLAYING

Stress Test A Plan

Help me stress test the attached business plan by simulating how our business might evolve over the next 2 years. I will play the CEO. You will simulate and describe economic, market and political challenges that might interfere with our plan. Every quarter you will update me and ask me to respond to new events and circumstances. You will then assess my actions and describe how the plan must change as a result.



Stress Test a Plan (slide 104)

Complete Prompt:

Help me stress test the attached business plan by simulating how our business might evolve over the next 2 years. I will play the CEO. You will simulate and describe economic, market and political challenges that might interfere with our plan. Every quarter you will update me and ask me to respond to new events and circumstances. You will then assess my actions and describe how the plan must change as a

result.

- ▶ [Examples, templates and instructions for building simulations and custom bots](#)



- ▶ [Interactive fiction and game design with Claude artifacts \(TCEA\)](#)

The NotebookLM Literary Game



DEMO GAME
"The Tell-Tale Heart"
Edgar Allan Poe
Secure a confession before you
run out of heartbeats!



Michelle Kassorla
Georgia State University,
Perimeter College

Turn a work of literature
into a playable game.

Michelle Kassorla, Georgia State University,
Perimeter College: turn a work of literature into a
playable game.

- ▶ [The NotebookLM literary game — demo](#)
- ▶ [Assignment instructions \(Google Doc\)](#)

ASSIGNMENT INSTRUCTIONS



U.S. Immigration Visa Preference System
An interactive teaching tool to understand how the family and employment-based preference system works, who gets in line, and how long the wait can be — for immigrants from countries around the world.

Overview Wait times My situation Key terms Ask a question

The U.S. grants a limited number of immigrant visas each year through a **preference system**. Click any category below to learn more about it.

Immediate relatives (no annual cap)

IR
Immediate relatives of U.S. citizens
Spouses, unmarried children under 21, and parents of U.S. citizens. No annual cap — visas are always available.
No wait (usually)

Family-based preference categories (~226,000 visas/year)

F1
Unmarried adult children of U.S. citizens
Sons and daughters age 21+. About 23,400 visas per year.
Family-based

F2A
Spouses & minor children of LPRs
Spouses and children under 21 of lawful permanent residents. ~114,200 visas/yr.
Family-based

What is the estimated process and wait time for legal immigration in the following situations?



► [Immigration wait-time artifact](#)

TRY A SIMULATION EXAMPLE

- English/Middlemarch Town Hall
- Computer Science
- Music Theory/Roman Numeral Analysis
- Telecom KPI Simulation
- Physics/Newton's Laws Graded Exam
- Anthropology/Multi-Informant Fieldwork
- Nursing/AACN Standard 2.5 Plan of Care
- History/Thomas Cromwell
- POTUS and the Economy



► [Middlemarch Tribunal simulation](#)
► [Workshop Prompts & Materials](#)

CUSTOM BOTS

Hidden Prompt
+
Knowledge Base




A custom bot is just two things: a hidden system prompt that fixes the behavior (coach, don't answer; one hint at a time; never give the solution) and a knowledge base that fixes the content. All of the custom tools and simulations in this session were stress-tested on the best models but set to run with free models.

► [Examples, templates and instructions](#)

Macro Buddy

Saharnaz Babaei Balderlou
University of Wisconsin–La Crosse

Macro Buddy
By Saharnaz Babaei Balderlou A.
Encourages critical thinking before answering macroeconomics questions.

Hey buddy! Can you help me break down a problem?

What are good ways to organize our study group...

Could you summarize the lecture on March...

Can you quiz me on exchange rate concepts?



► [Macro Buddy \(GPT\)](#)

Babaei Balderlou, S., & Shakya, S. (2025, July 25). The invisible hand of Gen-AI: Can AI-enhanced study groups improve learning outcomes? SSRN. [working paper]
<https://doi.org/10.2139/ssrn.5696622>

Babaei Balderlou, Saharnaz and Shakya, Shishir, The Invisible Hand of Gen-AI: Can AI-Enhanced Study Groups Improve Learning Outcomes? (July 25, 2025).

Jack: “He’s like you, but in the screen.”
 Sarah Wymer, Auckland University of Technology

A team marketing expert for every student



87%
 Jack helped refine my idea.

Jack, a custom AI agent modeled on Auckland FC’s real marketing manager — a team marketing expert for every student. Sarah Wymer, Auckland University of Technology. 87% agreed Jack helped them develop their idea further; 83% said he helped them think more critically.

► [What Jack the AI agent taught my class \(Sarah Wymer\)](#)

VIBE CODING ASSIGNMENTS & TOOLS

Bot Assignments & Simulations

- Run a nuclear power plant
- Teach a class
- Run an experiment
- Secure capital
- Plan an exhibition
- Manage a lab
- Buy a car
- Moderate a disagreement
- Climb a mountain
- Improve a service
- Diagnose a problem
- Verify a story



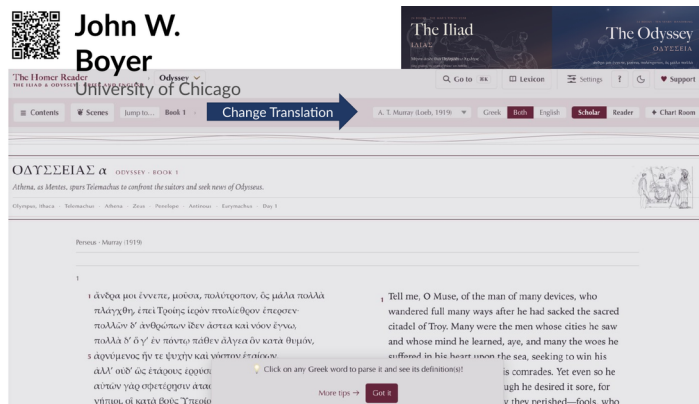
VIBE CODING

Create and deploy an interactive superhero-themed game to teach the Bingham plastic model through visual simulation to college students in both English and Arabic.

Got it — I’ll deliver the game in **Arabic + English**, packaged as a **standalone web app** you can open in your browser or run locally without installing anything complicated.



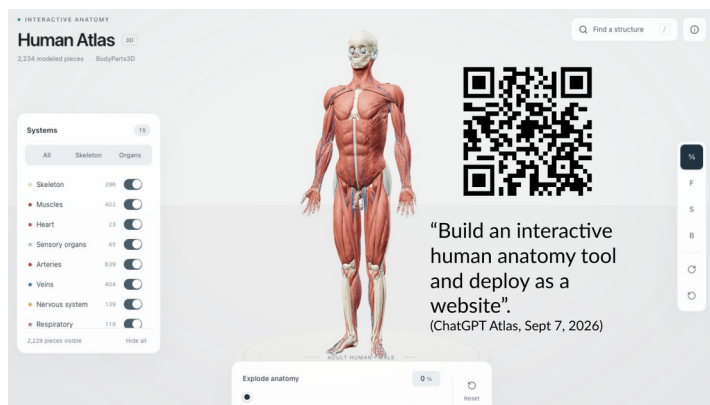
- [Play the Claude version](#)
- [Play the ChatGPT version](#)



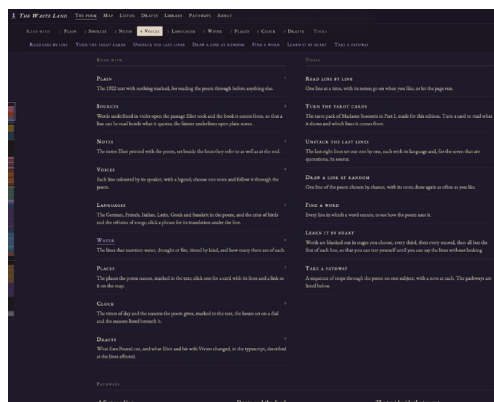
► [The Homer Reader — Odyssey, Book 1](#)



► [Anatomy Studio — compare the AI model with real anatomy](#)



► [Human Atlas](#)



“Create an annotated guide to “The Waste Land,” with multiple pathways through the poem, recordings, scholarship, etc.”
Ethan Mollick



<https://the-waste-land.netlify.app>

► [The Waste Land — annotated guide \(Ethan Mollick\)](#)

David Salas-de la Cruz
Director of Chemistry and Molecular Technology
Rutgers University-Camden

Follow the chemistry.
Make every unit count.

Mass to mass

EXAMPLE 1: STEP 1 OF 3

What mass of NaOH do we need?
Make 25.0 g of $\text{Mg}(\text{OH})_2$ with enough MgCl_2 available.

$\text{MgCl}_2 + 2 \text{NaOH} \rightarrow \text{Mg}(\text{OH})_2 + 2 \text{NaCl}$

MgCl_2 : 58.32 g/mol NaOH : 40.00 g/mol

Assume pure reactants and complete reaction.

Step 1 of 14: What mass of NaOH do we need?

Play lesson

https://stoichiometry-classroom.dsals2k.chatgpt.site

QR code

► [Stoichiometry Classroom \(David Salas-de la Cruz\)](https://stoichiometry-classroom.dsals2k.chatgpt.site)

When and Where Game

Assyrian siege of Jerusalem (c. 701 BC)

When?

Where?

Settings

QR code

► [WenWare — the When and Where game](#)

Broad Street, 1854

You are Dr John Snow. Find the killer.



On a laptop
josebowen.github.io/
BroadStreet1854/

Three Mile Island, 1979

You can stop the meltdown.



On a laptop
josebowen.github.io/
TMI1979

► [Broad Street, 1854](#)
► [Three Mile Island, 1979](#)

Vibe Code a Simulation, Tool or Game

Build me X, that...
teaches A, demonstrates B...
do/don't include a tutorial/instructions

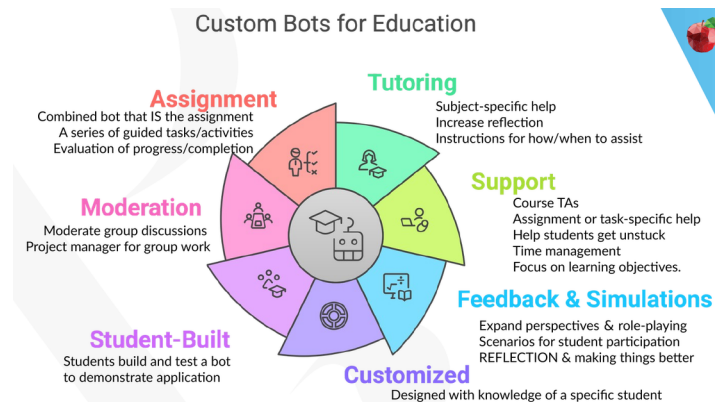
Deploy

Make a slide with a QR code



Complete Prompt:

Build me X, that... teaches A, demonstrates B...
do/don't include a tutorial/instructions.
Deploy. Make a slide with a QR code.



Custom bots give you more control and security than sending students a prompt: you send a link to a tool you set up, and you can see everything students do (warn them!). In its simplest form a custom bot is just a prompt you have saved; add a knowledge base, learning outcomes and standards for more control. Platforms: BoodleBox (higher ed, AI-agnostic, free models available), SchoolAI (free, with a back-end showing engagement), GPTs (OpenAI), Assistants (HuggingFace), Bots (Poe).

► [Custom bot examples & Bowen's bot-building bot \(BoodleBox showcase\)](#)

WORKSHOP: The President and the Economy Simulation Game (slide 116)

Create a presidential simulation game about the relationship between the economy and actions of the US President. You will guide me (the student responding as if I were the US president) through a multi-year simulation where I will create policies and you will simulate their effect on the US economy. Use the actual political situation of each time period. Start by asking me to pick a year (1800–present); reply with a summary of the US economic and political situation in January of that year using actual data and prompt me to take executive action. Do not allow actions that are not constitutionally possible for the President; point out if my actions exceed Presidential power and cite the sources for these limitations. Assess my strategy, describe how the economy would change over the next three months, update me, and repeat — advancing three months at a time for up to four years. When I am done, summarize my performance, compare it to what actually happened, tell me who the actual president was, and suggest ways I might have had greater impact within the limits of the US Constitution.

► [Workshop Prompts & Materials](#)

WORKSHOP: Meta-Prompting for Custom Assignments and Assessments (slide 122–123)

PROMPT 1: Provide me with 5 innovative ideas for how I could teach/assess student learning with a set of AI-led interactive exercises or an AI custom bot interactive simulation or game, where students have to demonstrate learning by interacting with a chatbot. + Learning Goals, Rubric or Professional Standard. + Context, Knowledge Base or Existing Assignment.

PROMPT 2 (iterate or pick your favorite idea): Now write an excellent prompt that will provide the instructions needed for an AI chatbot to create simulation #. The prompt should include instructions for customizing the experience for each student so that it is maximally motivating to individual student interests and will intellectually stretch the student. The assignment should be done in X number of parts...

► [Example conversation \(Claude\)](#)

► [Workshop Prompts & Materials](#)

COURSE PROFILE

KEY CONTEXT about your class

Demographics, Accommodations, Learning Goals, Syllabus...

- How could I make my assignments more motivating and compelling?
- Suggest readings or assignments that might better align with my goals and motivate these specific students?



► [Teaching Assistant Blueprint Maker \(GPT\)](#)

Mollick, E., & Mollick, L. (2024, October 30). Stop writing all your AI prompts from scratch. Inspiring Minds, Harvard Business Publishing Education.

<https://hbsp.harvard.edu/inspiring-minds/an-ai-prompting-template-for-teaching-tasks>

WORKSHOP PROMPTS: More Focused Feedback (slide 125)

Use this assignment and rubric and keep the feedback kind, direct and supportive, but provide specific but brief guidance tied to the student draft and the assignment criteria. I am especially concerned with X. Show me a list of all the things the student should improve, but then also pick the one most important priority that should be the take-away for the student.

- [Workshop Prompts & Materials](#)

WORKSHOP PROMPTS: Multiple Perspectives on My Teaching (slide 126)

Analyze this to help me improve it. First, do multiple individual analyses by a wide group of scholars with different views of learning, pedagogy and behavioral science. Start with Jean Piaget, Lev Vygotsky, UDL Framework...

- [Workshop Prompts & Materials](#)

AI Grading ?

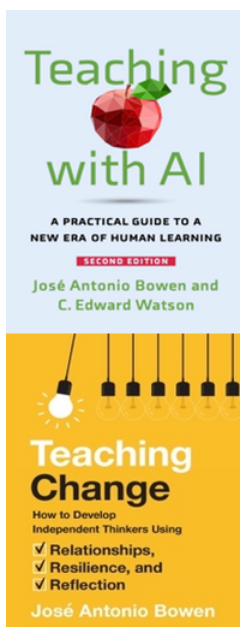
- Transparent
- Increase Feedback & Learning
- Low Stakes and Clear Rubric
 - Thesis?
 - Discussion Posts
 - Sources Quantity and Quality
 - Reflection Included?
- Creates a BETTER assessment?





Kranzberg, M. (1986). Technology and history: "Kranzberg's laws." *Technology and Culture*, 27(3), 544–560.

CITATIONS & RESOURCES



- ▶ [WeTeachWithAI.com](https://www.weteachwithai.com) contains many many more resources, prompts, assignments and links. It is updated weekly if not daily.
- ▶ **Buy the book at 30% off!**
- ▶ [Teaching with AI at Johns Hopkins University Press — code HTAI25 for 30% off](#)
- ▶ [Teaching with AI on Amazon](#)
- ▶ If you don't want to use AI, but want students to want to do things the hard way, then read **Teaching Change: How to Develop Independent Thinkers Using Relationships, Resilience and Reflection**.
- ▶ [Teaching Change at Johns Hopkins University Press — code HTWN for 30% off](#)
- ▶ [Teaching Change on Amazon \(often 25% off\)](#)