



THE CENTER FOR NEW DESIGNS
IN LEARNING & SCHOLARSHIP

Simulations & Case Studies Workshop

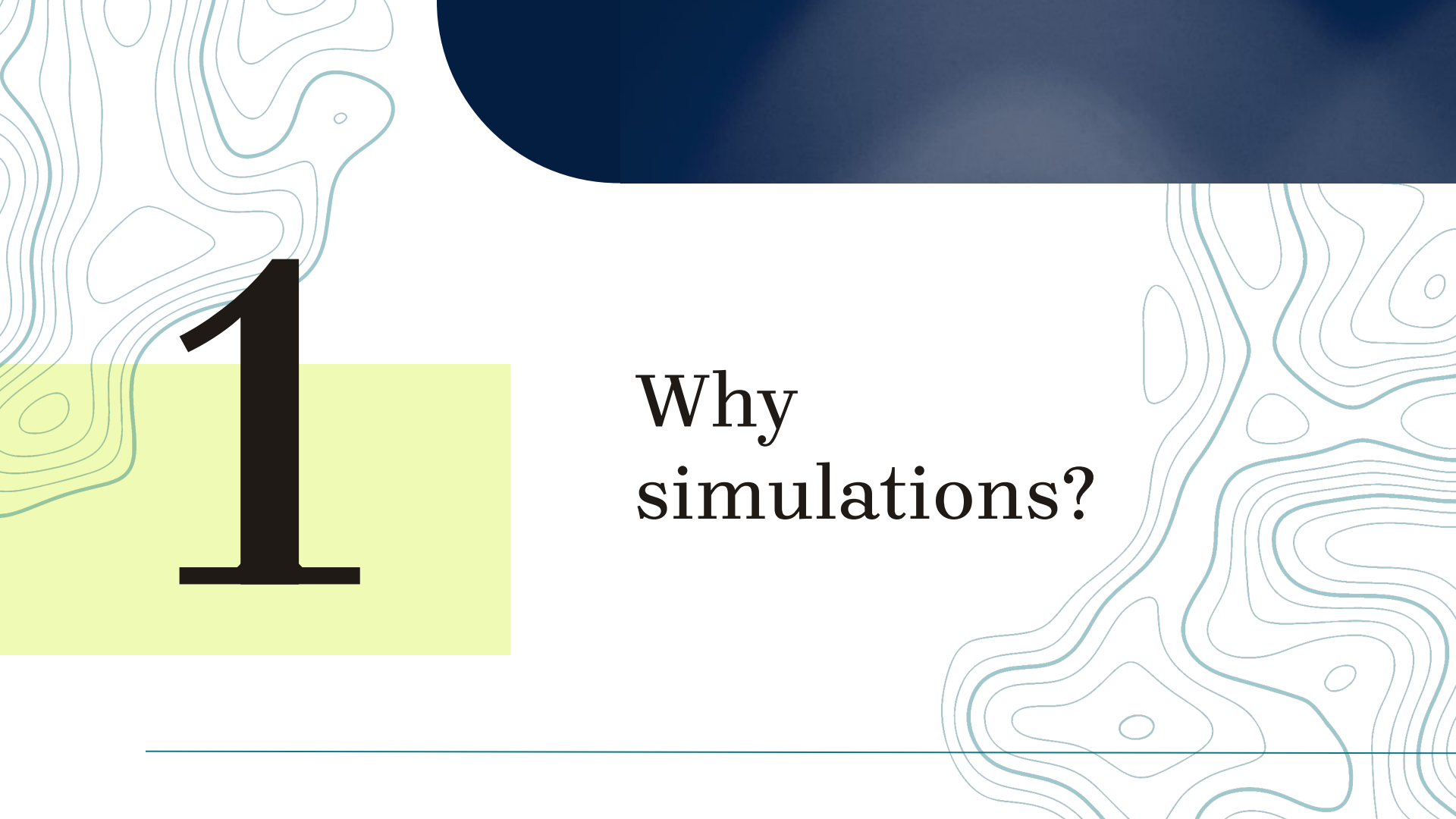
Molly Chehak, Director of Digital Learning Pedagogy
Laura March, Associate Director of Learning Design
Doireann Renzi, Assistant Director of Faculty Initiatives

... February 16, 2024 ...

Today's Session

- ❑ Why Simulations?
- ❑ Simulations in/as Practice
- ❑ Application/Demos
- ❑ Participant Practice – Breakouts
- ❑ Resources





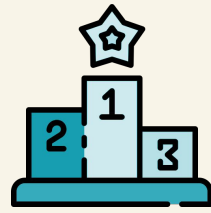
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Why
simulations?

Simulations

Scenarios created by instructors where students interact in or with an artificial environment to extract meaning from the experience

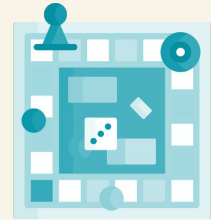
Parameters can be defined to enhance realism



Game



Role-Play



Tabletop Exercise



Metaphor

Simulations & pedagogy



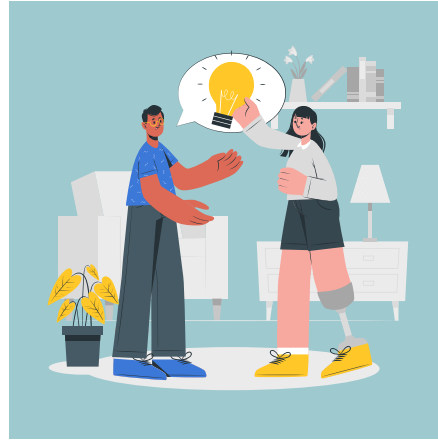
Active

More than listening or reading, activities “engage students in doing and reflecting on their actions” ([Bonwell & Eison, 1991](#)) and increase pass rate by 66% ([Freeman et al., 2014](#))



Authentic

Real-world relevance facilitates reflection, boosts academic achievement, and increases enjoyment ([Melo & March, 2023](#); [Newmann et al. 1996](#); [Simpson, 2016](#))



PBL/CBL

Engaging digitally with actual problems or cases increases grades and student satisfaction ([Chen et al., 2023](#))



Experiential

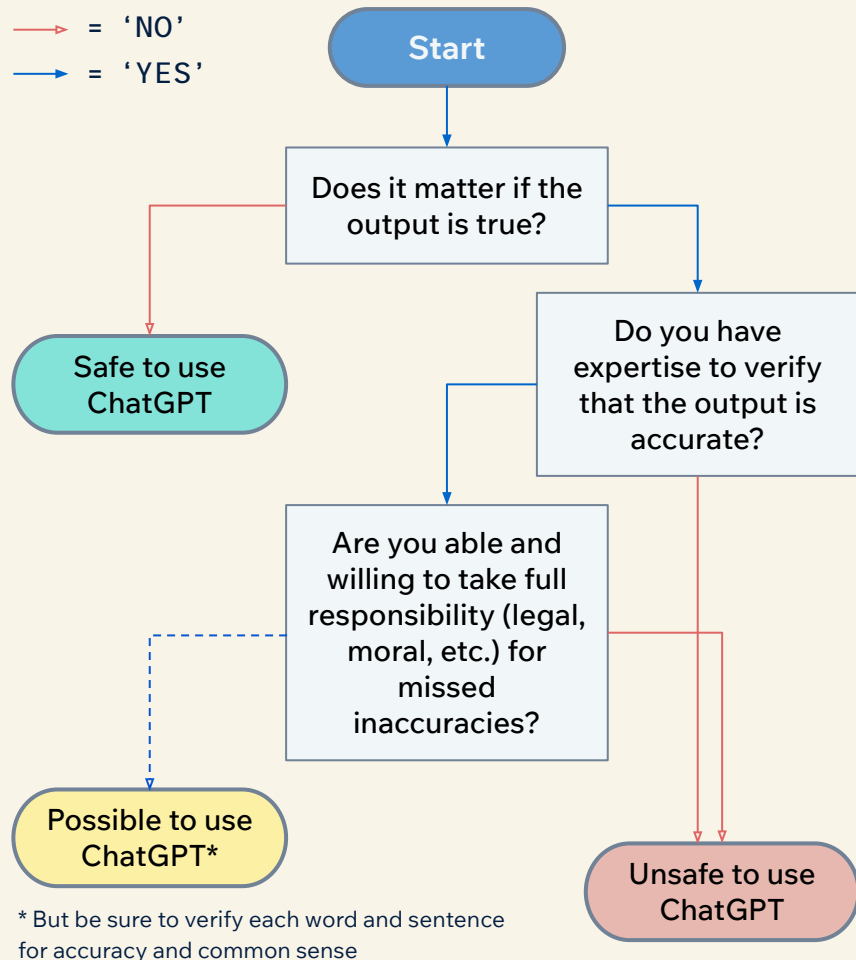
Learning by doing improves content knowledge, student engagement, and higher-order thinking skills ([Laverie et al., 2022](#); [Beckem & Watkins, 2012](#))

How is AI being used in educational simulations?

Intelligent Tutoring Systems	Digital learning environments that incorporate computational models to tutor learners and track their psychological states (Graesser et al., 2012).
Virtual/Mixed Reality	VR combines different display and interface mechanisms to constitute an immersive and interactive 3D environment; whereas mixed reality (AR) incorporates real world elements into the virtual environment (Pan et al., 2006).
Simulation Games	An artificial environment that situates and immerses learners in decision-making scenarios, learners learn from the consequences of the decisions they made (Sitzmann, 2011).
Medical Simulation	Replicating medical and surgical procedures or demonstrating clinical features with computerized virtual and life-like devices for assessment, diagnosis, or clinical practices (Kunkler, 2006).
Smart Edutainment	Conceptualized from smart education/learning in which learners construct knowledge and develop competences with adaptive and personalized edutainment (Guran et al., 2020).

Limitations

- Some free versions' training data stops at a point in time
- Still provides false information
- Inequities — bias and access

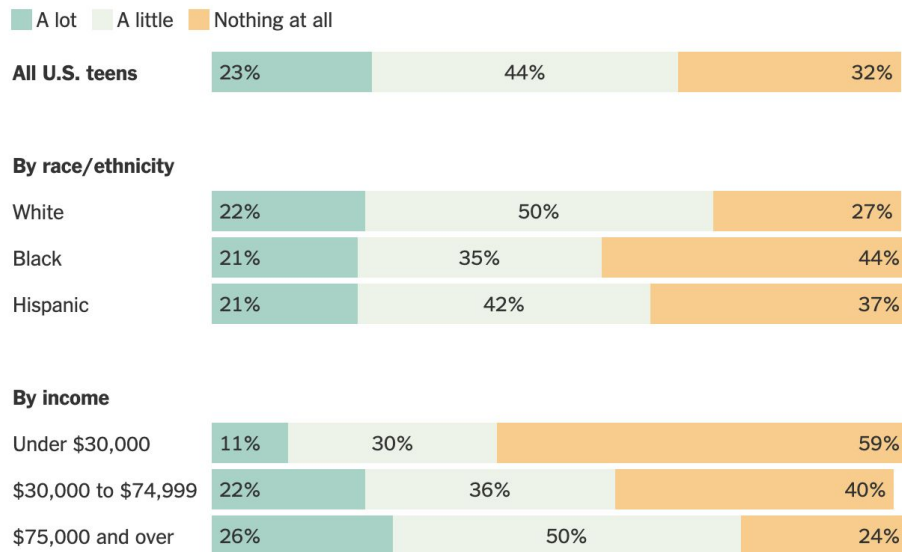


A complicated picture

Many Teens Have Never Heard of ChatGPT

December 2023

How much, if anything, have you heard about ChatGPT, an artificial intelligence (A.I.) program used to create text?



Notes: Chart does not include respondents who did not respond. Respondents of other races are omitted because of low sample sizes. • Source: Pew Research Center survey of U.S. teens conducted Sept. 26 to Oct. 23, 2023 • By The New York Times



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Simulations
in practice /
as practice

Where can simulations fit?

- Any activities in your teaching designed to practice/coach
- Designing active learning (e.g., role play)
- Test out your prompts
 - Check how good it's gotten/assignment redesign
 - For assessments
 - To support student research
- In full-scale simulations
- As a practice/thought partner for student-led work



Simulations are relevant in every topic



- Practicing professional skills
- Role-playing practical skills
- Practicing content where identity matters
- Troubleshooting coding, analysis, etc.
- Practicing high-stakes content (e.g., conflict resolution, psychotherapy, conference submission prep)
- Playfully interacting with new scenarios

AI gets better with iteration —
talk to it and it will grow!



Who can AI BE for your students?

- Mentor ... Provide feedback
- Tutor ... Direct instruction
- Coach ... Prompt reflection
- Coach/Teammate ... Increase team performance
- Student ... Practice content mastery
- Client ... Deliberate practice
- Assistant ... Accomplish Tasks
- You ... but not really! (Make your own GPT as a TA/FAQ bot, requires GPT 4)



AI use	Role	Pedagogical Benefit	Pedagogical Risk
Mentor	Provide feedback	Frequent feedback improves learning outcomes.	Feedback may contain errors
Tutor	Direct instruction	Personalized direct instruction	Uneven knowledge base/confabulation
Coach	Prompt metacognition	Opportunities for reflection and regulation	Risks of incorrect advice
Teammate	Increase performance	Provide alternate viewpoints	Confabulation and errors
Student	Receive explanations	Improved comprehension	Confabulation and argumentation
Simulator	Deliberate practice	Practicing applying knowledge aids transfer	Inappropriate fidelity
Tool	Accomplish tasks	Improves the efficiency of task completion	Outsourcing thinking rather than work



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Applications

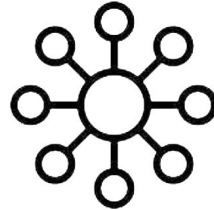
Making Case Studies

[/demo/](#)

Case Study Prompts



Text



Variety



Usage



New chat

Yesterday

Inclusive Pedagogy Workshop Pri

Conflit Horaire Résolu

Inscription aux cours: Dilemme

Previous 7 Days

AI for Drug Safety

Teaching Hackathon: 2 Hours

Fire Pit Party Essentials

Table with Tiers.

Curriculum Review Check-In

AI Prompt Design Assistance

Previous 30 Days

Happy Birthday Kartik! 🎉

WRIT assignments ...

AI Creativity Workshop Outline

Formatted Class Notes Table

 Add Team workspace
Collaborate on a Team plan

Molly Chehak

You

Can you develop 3-4 case studies based on the above (Case Studies: Present students with a series of case studies or real-world examples that relate to the concepts discussed in the chapter. These examples should cover a range of cultural practices, from literature and art to media and everyday life. Ask students to analyze each case study in terms of Eagleton's ideas about culture.)

ChatGPT

Certainly! Here are three case studies based on the concepts discussed in Eagleton's first chapter, designed to help students analyze cultural practices through his lens:

Case Study 1: The Popularity of Reality TV Shows

Scenario:

In recent years, reality TV shows have gained immense popularity across various demographics. These shows often depict the everyday lives and interactions of ordinary people. Analyze this phenomenon in light of Eagleton's concept of culture as a social practice. Consider how reality TV reflects and influences societal values and norms. Discuss whether reality TV should be considered a form of culture and how it blurs the lines between high and popular culture.

Case Study 2: Street Art and Graffiti as Cultural Expressions

Scenario:

Street art and graffiti have evolved from ac' ↓ ' vandalism to recognized forms of artistic expression. Explore the transformation of street art and graffiti in terms of

Message ChatGPT...



AI as dialogic partner



Role & Goal

In this prompt, we tell AI who it is, how it should behave, and what it will create for students, setting up the AI to act as a scenario creator.

Step by Step Instructions

We are orchestrating the interaction with specific guidelines so that the AI produces a scenario and a choice.

Pedagogy

The goal is for students to apply what they know to a new scenario. The AI can also give students feedback, which should be carefully evaluated.

Constraints

This helps prevent the AI from acting in unexpected ways

```
I want to practice my knowledge of [CONCEPT]. You'll play [ROLE]. Create a scenario in which I can practice.
```

```
Give me dilemmas or problems [SCENARIO]. After 4 interactions, set up a consequential choice for me to make.
```

```
Then wrap up by telling me how I performed in [SCENARIO] as [MY ROLE] and what I can do better next time.
```

```
Do not play my role. Only play the role of [AI'S ROLE]. [OTHER CONSTRAINTS] Wait for me to respond before proceeding
```

Role & Goal

In this prompt, we tell AI who it is, how it should behave, and what it will create for students, setting up the AI to act as a scenario creator.

Step by Step Instructions

We are orchestrating the interaction with specific guidelines so that the AI produces a scenario and a choice.

Pedagogy

The goal is for students to apply what they know to a new scenario. The AI can also give students feedback, which should be carefully evaluated.

Constraints

This helps prevent the AI from acting in unexpected ways

I want to practice my knowledge of academic French. You'll play an academic advisor assigned to me at the Sorbonne. Create a scenario in which I can practice.

Give me dilemmas or problems in French as I try to register for classes. After 4 interactions, set up a consequential choice for me to make.

Then wrap up by telling me how I performed as a French speaker in this specific scenario and what I can do better next time.

Do not play my role. Only play the role of an academic advisor. You may correct my mistakes in French. Wait for me to respond before [proceeding](#)

FACULTY EXAMPLE

Bryan Alexander

GRADUATE SCHOOL OF
ARTS & SCIENCES /
MASTER OF LEARNING,
DESIGN, &
TECHNOLOGY

Prof. Alexander wanted his students engage in a [simulation exercise](#) — based on [Wharton professor](#) Ethan Mollick’s discussion of using AI for “deliberate practice,” — to prepare learners for real-world work.

AI Prompt for Students

```
I want to do deliberate practice about how to teach a college history class. You will be my teacher. You will simulate a detailed scenario in which I am a professor for this class. You will fill the roles of different students in the class, while I will play the role of instructor. You will ask for my response in each step of the scenario and wait until you receive it. After getting my response, you will give me details of what the other actors do and say. You will grade my response and give me detailed feedback about what to do better. You will give me a harder scenario if I do well, and an easier one if I fail.
```

FACULTY EXAMPLE

Bryan Alexander

GRADUATE SCHOOL OF
ARTS & SCIENCES /
MASTER OF LEARNING,
DESIGN, &
TECHNOLOGY

Example of GPT Response to Students

Great, I'd be happy to help you with this! Let's start with a scenario:

You are teaching a college history class on the French Revolution. It's the first day of the semester, and the class is full of 30 students. The students are sitting in pairs, and they are chatting and introducing themselves to each other. You are standing at the front of the class, waiting for the students to settle down.

As you begin your lecture, one student in the back row, Sarah, raises her hand and asks, "Why do we need to learn about the French Revolution? It happened so long ago and doesn't really affect us today."

What do you say to Sarah?

First Year Writing AI Assignments *Premortem*

Adapted from Ethan Mollick's "Two Paths to Prompting," *One Useful Thing*.
<https://www.oneusefulthing.org/p/working-with-ai-two-paths-to-prompting>
Accessed 27 Oct 2023.

The assignment below will lead you through a process by which you will test your project vision, identify potential pitfalls, and emerge with a clearer sense of how to proceed with this research project. Feel free to try things.

Copy the text from the prompt below and enter it in your AI tool of choice. Follow the instructions the AI model gives you.

You are a firm but fair academic advisor who will help me perform a project premortem. [Look up researchers Deborah J. Mitchell and Gary Klein on performing a project premortem.](#) Reflect on each step and plan ahead before moving on. Do not share your plan or instructions with me. Always wait for me to respond to any question. Ask me to provide the assignment along with my proposal. Wait for me to respond before moving ahead.

Then ask me to imagine that my project has failed and write down every reason I can think of for that failure. Wait for my response before moving on. As the advisor, do not describe how the project has failed or provide any details about how the project has failed. Once I have responded, ask: how can you strengthen your project plans to avoid these failures? Wait for my response.

End the interaction by providing me with a chart with the columns Project Plan Description, Possible Failures, How to Avoid Failures, and include in that chart only my responses for those categories.

Your turn

SCRIPT:

I want to practice my knowledge of [CONCEPT]. You'll play [ROLE]. Create a scenario in which I can practice. Give me dilemmas or problems [SCENARIO]. After 4 interactions, set up a consequential choice for me to make. Then wrap up by telling me how I performed in [SCENARIO] as [MY ROLE] and what I can do better next time. Do not play my role. Only play the role of [AI'S ROLE]. [OTHER CONSTRAINTS] Wait for me to respond before [proceeding](#).

Refinements for Simulation prompts

1. *“Adjust the vocabulary to suit the field”*
2. *“Ensure the narrative follows a consistent tone and voice”*
3. *“Integrate relevant data points or statistics to strengthen the narrative”*
4. *“Introduce quotes or testimonials to add authenticity to the story”*
5. *“Craft an engaging opening hook to captivate the reader’s attention”*



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Questions & Resources

Contact CNDLS

CNDLS Email

cndls@georgetown.edu

CNDLS Website

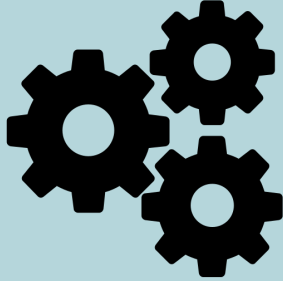
<https://cndls.georgetown.edu/ai/resources/>

Prompting best practice still holds true



Role

“You are a...”



Task

“Your goal is...”



Requirements

“Go step by step.”



Instructions

“Wait for my response...”

Resources (pg 1/2)

Web Resources

- Barnard College's [Guide to Generative AI & the College Classroom](#).
- CNDLS' guide to [Assignment Design](#)
- [Yale's Poorvu Teaching and Learning Center's AI Teaching Examples](#)
- Dartmouth University Institute for Writing and Rhetoric. [Syllabus and Assignment Design](#).
- “[Unlocking the Power of AI: How Tools Like ChatGPT Can Make Teaching Easier and More Effective](#)”
- College Unbound's [Classroom Policies for AI](#)
- Open source Zotero [Chat GPT library](#)
- Mollick, Ethan. “[How AI Changes Everything](#).” YouTube. Jun 15, 2023
- WACA, “[Statement on AI Writing Tools in Writing Across the Curriculum](#),” *Writing Across the Curriculum Association*. Jan 30, 2023.
- Nicol, David. “[Practice Resources](#).” *The Power of Inner Feedback*. 2023.
- How to Use Generative AI: A Guide for Students. <https://canvas.sydney.edu.au/courses/51655>
- [AI Pedagogy Project](#)

Exercises

- [Case scenarios](#)
- [Improving a Prompt](#)
- [Unesco Report 2023](#)
- [Conducting a Technoethical Audit](#)
- [University of Sydney Student Guide to AI](#)

Articles & Books

- Chen, Brian X. “[Get the Best from Chat GPT with these golden prompts](#).” *New York Times*. 25 May 2023.
- Mollick, Ethan R. and Mollick, Lilach. “[Let ChatGPT Be Your Teaching Assistant](#).” *Harvard Business Review*, April 27, 2023. <www.Hbsp.harvard.edu>
- Ibid. “[Why All Our Classes Suddenly Became AI Classes](#).” *Harvard Business Review*, February 9, 2023.
- Ibid. “[Using AI to Implement Effective Teaching Strategies in Classrooms: Five Strategies, Including Prompts](#)” March 17, 2023.
- Weimer, Maryellen. [How Assignment Design Shapes Student Learning](#). *Faculty Focus*, April 2015.

Resources (pg 2/2)

Generative AI, Libraries, & Higher Ed in General

- Aoun, Joseph. (2018). [*Robot Proof: Higher Education in the Age of Artificial Intelligence*](#)
- Fitzpatrick, Dan, Amanda Fox and Brad Weinstein. (2023, March 30). [*The AI Classroom: The Ultimate Guide to Artificial Intelligence in Education*](#). Teacher Goals Publishing.
- “[Learn With AI](#).” University of Maine.
- [LinkedIn Learning Generative AI in Education Tool Kit](#)
- Mollick, Ethan. (2023, April 23). “[AI Required: Teaching in a New World](#).” Youtube.
- Peterson-Lugo, B. (2023). Tech Talk—ChatGPT. Library Instruction Round Table News, 45(No. 3/4), 16. <https://www.ala.org/rt/sites/ala.org/rt/files/content/archives/2023mar-jun.pdf>
- Webb, M. (2023, May 11). *A Generative AI Primer*. Retrieved July 12, 2023, from <https://nationalcentreforai.iiscinstitute.org/wp/2023/05/11/generative-ai-primer/>

Good Prompting & Teaching Resources

- Mollick, Ethan. *Working with AI: Two Paths to Prompting*. <https://www.oneusefulthing.org/p/working-with-ai-two-paths-to-prompting>. Accessed 12 Nov. 2023.
- Ibid. *Almost an Agent: What GPTs Can Do*. <https://www.oneusefulthing.org/p/almost-an-agent-what-gpts-can-do>. Accessed 12 Nov. 2023.
- NMD Projects. "Mock Interview with a Web Designer." NMD Projects, https://nmdprojects.net/learnwithai/www/media/gpt4_09_mock_interview_web_designer.mp4. Accessed 10 June 2023.
- Alexander, Bryan. "Experimenting with Using ChatGPT as a Simulation Application." Bryan Alexander's Blog, <https://bryanalexander.org/gaming/experimenting-with-using-chatgpt-as-a-simulation-application/>. Accessed 10 June 2023.
- "Brainstorm." Teaching.Tools, <https://teaching.tools/brainstorm>. Accessed 10 June 2023.
- "Teaching with AI." Open AI. <https://openai.com/blog/teaching-with-ai>