



# Teaching with AI Workshop

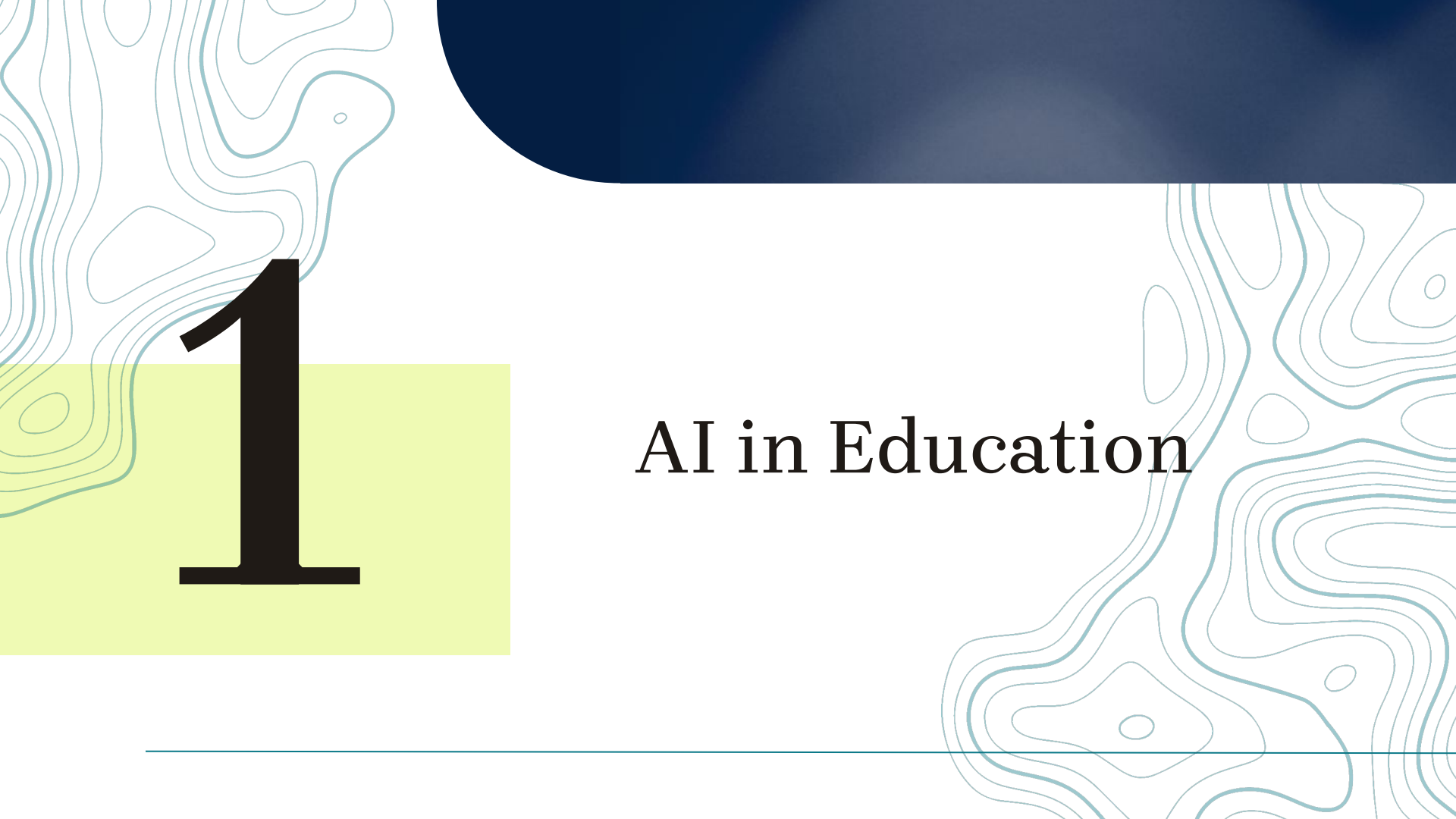
Molly Chehak, Director of Digital Learning Pedagogy  
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February 29, 2024

# Today's Session

- 1) Framework and Usage in Education
- 2) An AI Assistant
- 3) Your Course Design Companion
- 4) Ethical Considerations
- 5) Resources





1

# AI in Education

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# AI Response Framework

## PHASE 1: REACTIVE

## PHASE 2: STRATEGIC

## PHASE 3: PARADIGMATIC

### Ban

Limit or restrict use of AI through **policies**

### Adapt

Adjust **assessments** to downplay use of AI

### Integrate

**Incorporate AI** into goals, **pedagogy**, and content

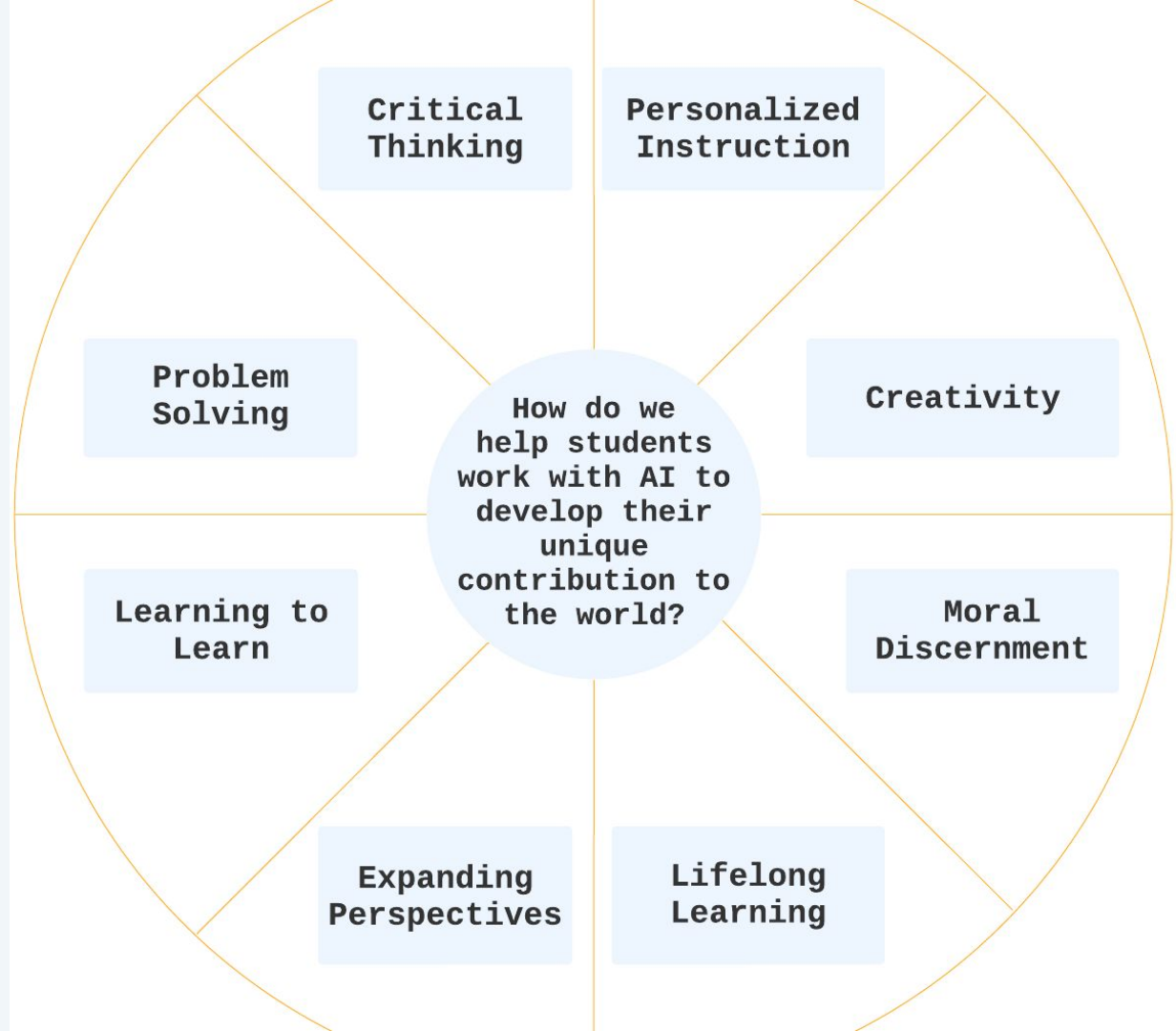
- **Responsibly:** Make students aware of appropriate uses
- **Creatively:** New assignments meet existing learning goals, content, and pedagogy
- **Innovatively:** Rethink learning goals, pedagogy, and content

### Reimagine

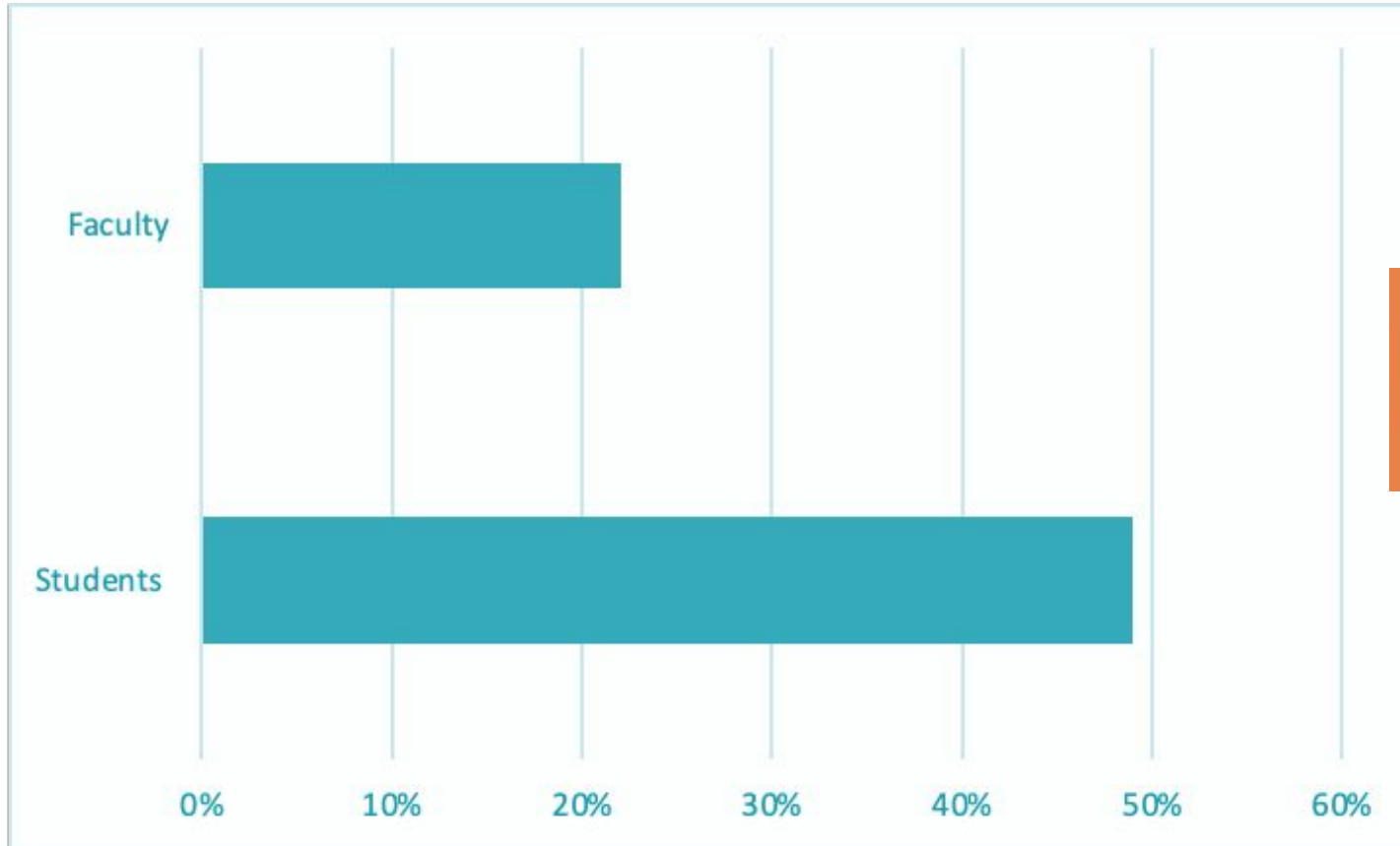
Create **new learning** goals, pedagogies, curricula, and disciplines

- **Policies**
- **Assessments**
- **Pedagogy**
- **Learning**

# AI and Educating the Whole Student



# Student usage and faculty usage



**INSIDE**  
HIGHER ED

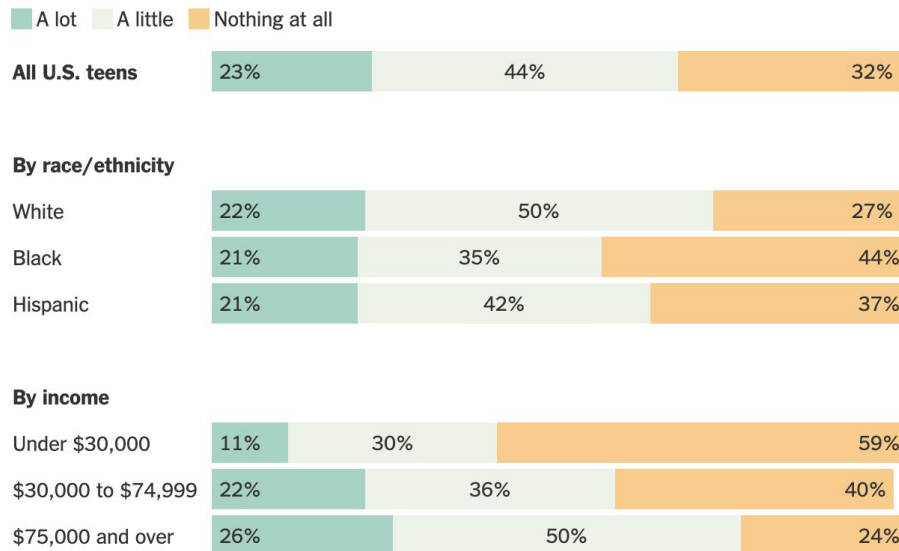
*October 2023*

# A complicated picture

December 2023

## Many Teens Have Never Heard of ChatGPT

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

# Students can use AI for...

## Knowledge generation

- Generate ideas
- Seek out models or comparisons
- Understand difficult concepts (including summaries)

## Reflection on existing knowledge

- Tutor or coach
- Dialogue & simulations

Role <sup>6</sup>	Description
<b>Possibility engine</b>	AI generates alternative ways of expressing an idea
<b>Socratic opponent</b>	AI acts as an opponent to develop and argument
<b>Collaboration coach</b>	AI helps groups to research and solve problems together
<b>Guide on the side</b>	AI acts as a guide to navigate physical and conceptual spaces
<b>Personal tutor</b>	AI tutors each student and gives immediate feedback on progress
<b>Co-designer</b>	AI assists throughout the design process
<b>Exploratorium</b>	AI provides tools to play with, explore and interpret data
<b>Study buddy</b>	AI helps the student reflect on learning material
<b>Motivator</b>	AI offers games and challenges to extend learning
<b>Dynamic assessor</b>	AI provides educators with a profile of each student's current knowledge



**AI has increased the value and importance  
of in-class time... so make it your ally!**

# You can use AI for....

- Teaching tasks
- Developing and refining assignments
- Visual acquisition
  - Creating, editing, curating
- Providing feedback
- Designing activities & experiential learning
- Managing and sorting information
- First draft development
  - Emails, rec letters, etc





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An AI Assistant

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# Task Minimizing / Demo Prompts

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Provide me with a listing of all the Tuesdays between August 21 and December 18. Please list them in the following format: Tuesday, September [Date]. If any US holidays happen between each Tuesday listed, please include the holiday and its date. Additionally, please include any religious holidays or special days for Christianity, Judaism, Islam, Hinduism, or other major religions

Please **combine these documents** [csv] into a master file. There should be categories. One category should be accredited organizations. (Claude, Gemini, Perplexity)


Please **write an email** that begins “Dear students of UNXD Learning to Learn with AI, We are writing to inform you” and ends with a request for their consent to participate in the instructors' research study on the use of AI as a self-directed learning tool. Students will consent by signing an attached form. Keep the email between 200-300 words.

**Can you please provide a 200-300 word summary of how FERPA protects student privacy? (Claude or Gemini or GPT 4). Please also provide the same information in a table.**


Please **organize these meeting notes** into an outline. Be sure to identify actions steps at the end.

# 1st Pass Drafts / Demo Prompts


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You are a longtime writing instructor (named Molly Chehak) who is a caring, engaged teacher. You pride yourself on knowing the whole student, highlighting unseen strengths, and articulating how students will contribute to the organizational community where they go next. Write a 500-600 word **letter of recommendation** for a student named STUDENT who took your course, Writing and Culture. [The Student] excels at analytical writing and class discussion. She is applying to a PhD program at Princeton. The tone is academic and professional.



Design a quiz with multiple question types for college sophomores in a class called Cultures of Artificial Intelligence on the history of the internet.



[Design a multifaceted grant program for our Center for Teaching and Learning...](#)

# Practice

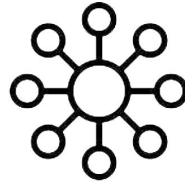
Try one of these “seed” prompts or make your own. Let’s compare notes!

# Case Study Creation Case Study

## Making Case Studies



**Text**



**Variety**



**Usage**

# Data Analysis Prompts

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[Conduct a thorough review and analytical comparison](#) of this Center for Teaching and Learning [website](#) against general standards and features observed in other centers for teaching and learning websites, such as [cndls.georgetown.edu](https://cndls.georgetown.edu), <https://crlt.umich.edu/>, and [cft.vanderbilt.edu](https://cft.vanderbilt.edu).

Address the specific details and aspects about the website in the following areas in your analysis:

- Content Quality: Evaluate the relevance, comprehensiveness, and currency of the information provided.
- Usability and Design: Assess the website's ease of navigation, aesthetic appeal, and user experience.
- Resources and Services Offered: Compare the range and quality of teaching and learning resources available, including any innovative tools or services unique to this site.
- Engagement and Interaction: Analyze how the website facilitates interaction with and between faculty, including forums, feedback mechanisms, and community-building features.
- Accessibility: Review the site's compliance with accessibility standards and its inclusivity towards diverse users.

✿ Summarize metrics

✿ Data visualization

✿ Comparing data

*\* March 14 : Using AI for Research and Data Analysis.  
Summarizing metrics, data vis, comparing data*





# 3

## Your Course Design Companion

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***If Chat GPT,  
Claude, or any  
AI can provide  
the answer,  
then it may be  
time to change  
the question.***



**It's the time of How and Why**

# Bloom's Taxonomy Revisited

Use this table as a reference for evaluating and making changes to aligned course activities and assessments (or, where possible, learning outcomes) that account for generative Artificial Intelligence (AI) tool capabilities and distinctive human skills.

All course activities and assessments will benefit from **review** given the capabilities of AI tools; those at the **Remember** and **Analyze** levels may be more likely to need **amendment**.



	RECOMMENDATION	AI CAPABILITIES	DISTINCTIVE HUMAN SKILLS
<b>CREATE</b>	Review	Suggest a range of alternatives, enumerate potential drawbacks and advantages, describe successful real-world cases	Formulate original solutions incorporating human judgement, collaborate spontaneously
<b>EVALUATE</b>	Review	Identify pros and cons of various courses of action, develop rubrics	Engage in metacognitive reflection, holistically appraise ethical consequences of alternative courses of action
<b>ANALYZE</b>	Amend	Compare and contrast data, infer trends and themes, compute, predict	Critically think and reason within the cognitive and affective domains, interpret and relate to authentic problems, decisions, & choices
<b>APPLY</b>	Review	Make use of a process, model, or method to illustrate how to solve a quantitative inquiry	Operate, implement, conduct, execute, experiment, and test in the real world; apply creativity and imagination to idea & solution development
<b>UNDERSTAND</b>	Review	Describe a concept in different words, recognize a related example, translate	Contextualize answers within emotional, moral, or ethical considerations
<b>REMEMBER</b>	Amend	Recall factual information, list possible answers, define a term, construct a basic chronology	Recall information in situations where technology is not readily accessible

# Generative AI Assignments

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- For a Research Project:
  - What did you type in? **Why/How** did you pick them?
  - What came up? **How** did you discern the results?
  - What did you type in the second time? **Why/How** did you refine it?
  - **How** did you confirm the results.
- Instead of “What are the key tenets of that theory?”, Try “How would you advise X client with Y problem with this theory in mind?”

**Time to update**  
**your**  
**assignments**

Design your assignments with these skills in mind!

- Creativity
- Alternative perspective taking
- Critical thinking
- Interrogation
- Collaboration



Poe



New chat

CollegeRubricCreator



Bot details



Explore



Create bot



CollegeRubricCreator

15:19 >

Surveying Themes

Thank you for providing the addition...



CollegeRubricCreator

15:15 >

Surveying Themes

Thank you for providing the details ...



SLObot10

12:28 >

Effective Writing

Great! Let's take these learning out...



Claude-2-100k

Jul 3 >

New chat

I'm afraid I cannot actually break up ...



Assistant

Jul 3 >

New chat

Oui, je parle français. Comment puis...



All chats



Your bots



CollegeRubricCreator

Operated by @brandyjenner

1 monthly user · 1 follower

Hello, I am the CollegeRubricCreator. I help college instructors create rubrics based on specifications given. I will ask you a series of questions to help generate a usable rubric for your assignment.

Surveying Themes

Continue your last chat with this bot



CollegeRubricCreator Poe

Hello, I am the CollegeRubricCreator. I help college instructors create rubrics based on specifications given. I will ask you a series of questions to help generate a usable rubric for your assignment.



CollegeRubricCreator

Operated by

@brandyjenner

1 monthly user · 1 follower

+ New chat



Hello, I am the CollegeRubricCreator. I help college instructors create rubrics based on specifications given. I will ask you a series of.. more

This bot uses ChatGPT, a model that is powered by OpenAI. [Learn more](#)

See all chats with this bot

# Activities and Assessments

- Give **yourself permission** to experiment and be curious
- Start with existing work and ask for improvement
  - Make this more engaging
  - Adjust this advanced assignment for novice learners
- Remember your role as a content and education expert

[Go to Chat](#)

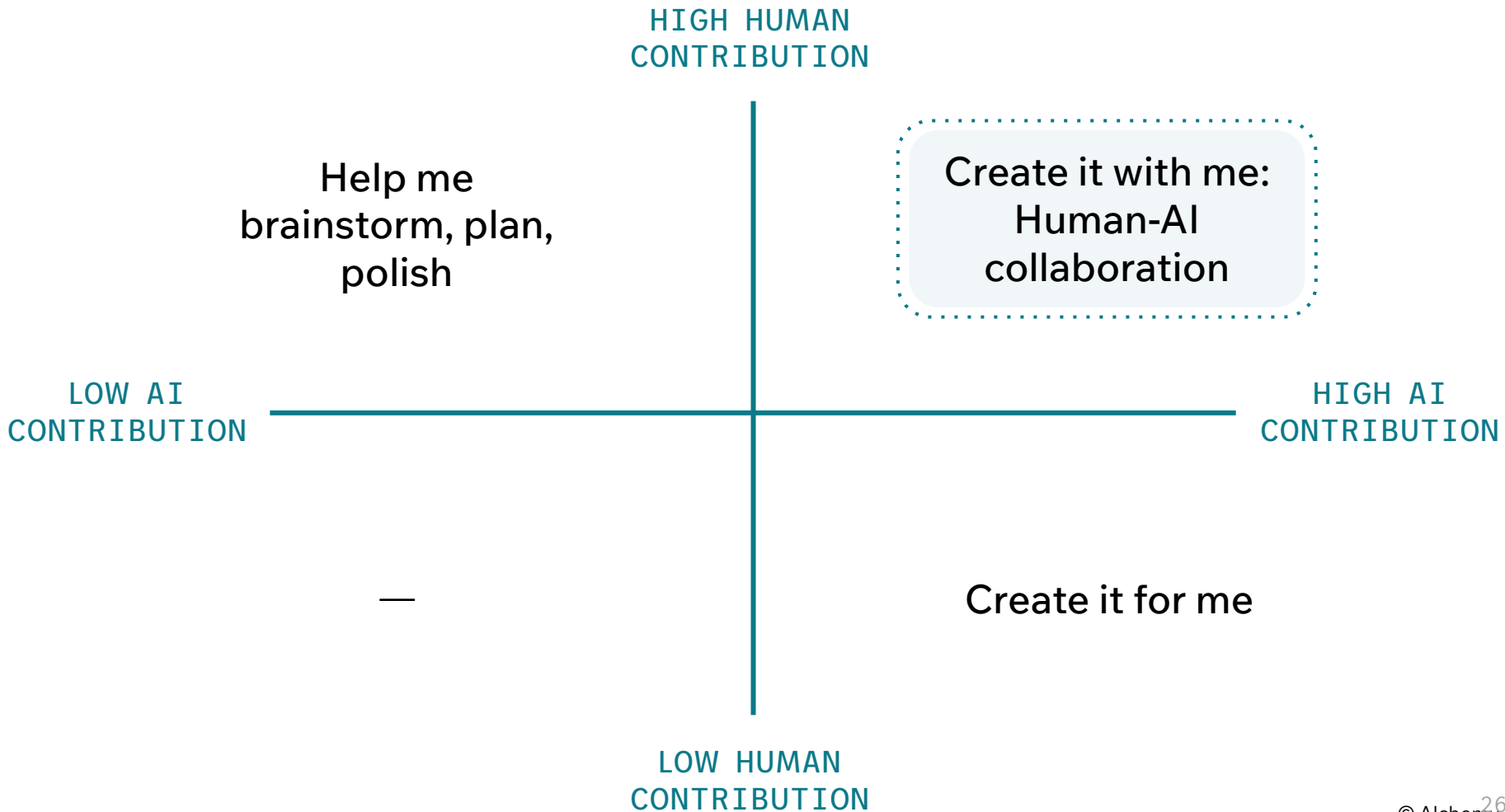




# 4

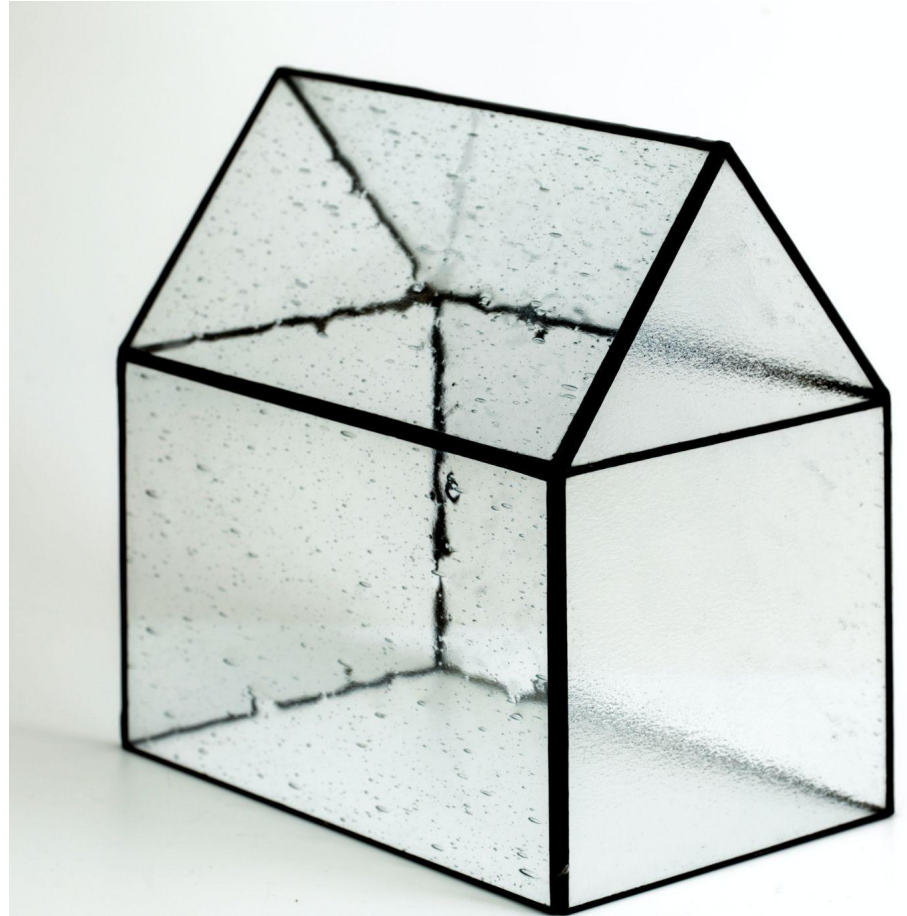
## Ethical Considerations

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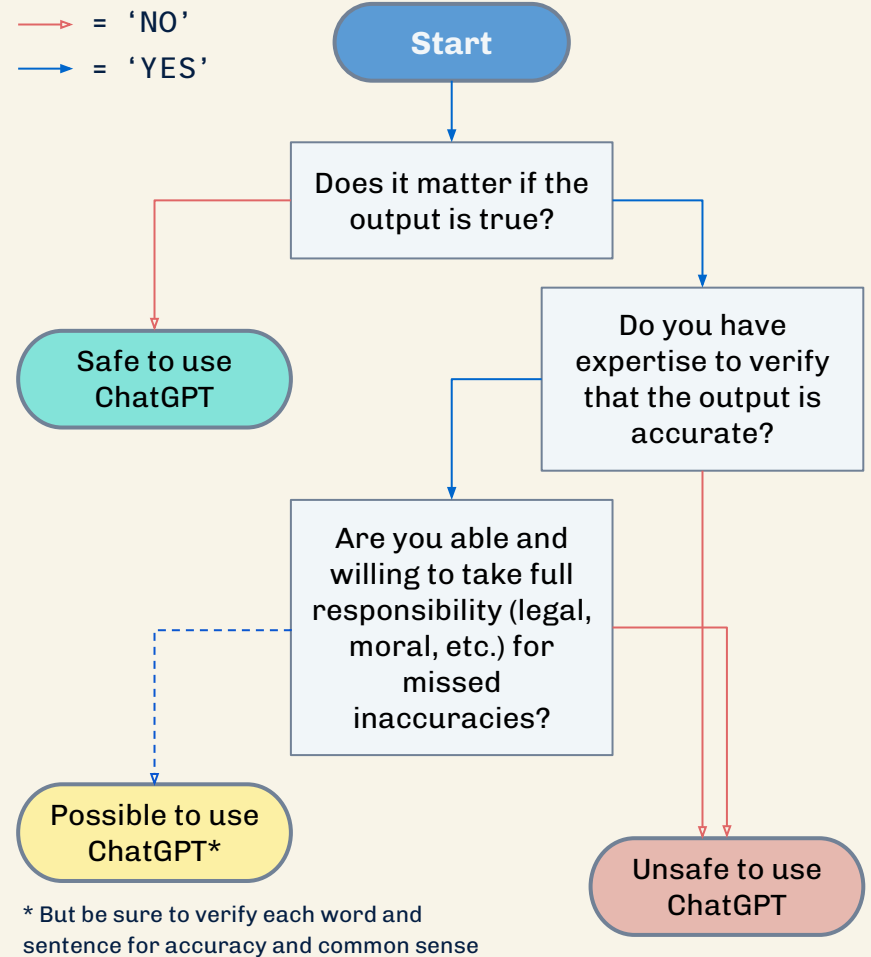
# Communication is Key

- Transparency
- Always obtain permission before uploading the work of others
- Understanding of ethical considerations
- Balance automation and authenticity
- Understand balance between customized comms and privacy



# Limitations

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



# Reproducing and Perpetuating Bias

AI-GENERATED IMAGES



Prompt: "Toys in Iraq"



"Playing soccer"



"Cleaning"

one in every four children attending  
in population will more than double  
in U.S. schools! Hence, the question  
of population growth in the United States of  
of those who professionally work in

*This is not your world*

## Mitigating Bias

Black and Asian/Asian American students reported being accused of plagiarism more (12%) than any other group (6% of all students).



5

Questions  
&  
Resources

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# Select AI Tools

ACTIVITY TYPE	TOOL EXAMPLES
Idea Generation	<a href="#">ChatGPT</a> , <a href="#">Gemini</a> , <a href="#">Bing</a> , <a href="#">Claude</a>
Literature Review	<a href="#">typeset.io</a> , <a href="#">Rayyan</a> , <a href="#">Explainpaper</a> , <a href="#">Connectedpapers</a>
Summarizing	<a href="#">Glasg</a> , <a href="#">ChatGPT</a> , <a href="#">Gemini</a> , <a href="#">Bing</a> , <a href="#">Claude</a>
Outlining & Drafting	<a href="#">ChatGPT</a> , <a href="#">Gemini</a> , <a href="#">Bing</a> , <a href="#">Claude</a> , <a href="#">Kickresume</a> , <a href="#">textblaze.me</a>
Revising	<a href="#">copygenius.io</a> , <a href="#">QuillBot</a> , <a href="#">Grammarly</a> , <a href="#">wordvice.ai</a>
Study Aides	<a href="#">Snapchat</a> , <a href="#">ChatGPT</a> , <a href="#">Gemini</a> , <a href="#">Bing</a> , <a href="#">Claude</a>
Time/Project Management	<a href="#">krisp.ai/ai-meeting-assistant</a> , <a href="#">Goblin Tools</a>
Coding Help	<a href="#">hashnode.com/ai</a> , <a href="#">Fronty</a> , <a href="#">Tabnine</a> , <a href="#">debugcode.ai</a>
Data Analysis	<a href="#">GPT4</a> , <a href="#">Tableau AI</a> , <a href="#">Excel</a> , <a href="#">Google Workspace</a> (non-GU), <a href="#">Power.bi</a>
Presentation Tools	<a href="#">Gamma</a> , <a href="#">SlidesGPT</a> , <a href="#">slidesgo</a> , <a href="#">Canva</a>



# AI Exercises

Feed one or more of your assignment prompts into Chat GPT 3.5. What do you notice about the output? Strengths and weaknesses?

## Consider:

- What do students need to know in order to achieve a good product (with AI and without)?
- What might you need to teach them or guide them towards in order to achieve that product?
- What process could you suggest they use and why?

1. **Lean into follow-ups**, like “rewrite with a personal tone” or “add examples from the text.”

2. **Explanation.**

*“Explain the key tenets of utilitarianism in simple terms.”*

3. **Simulation formulation.**

*“Pretend you are a professor and I’m a student. Summarize the key points I need to succeed in your course on “\_\_\_\_\_.”*

OR

*“You are a writing tutor. Ask me questions about this essay that can help me strengthen the argument.”*

# Task Types

## **Deeper Learning of a Topic or Skill**

“I am a novice at [desired topic or skill]. Create a four-week development plan that will help beginners like me learn and improve at [topic or skill].”

## **Create a Case Study Assignment as a Means of Authentic Assessment**

“Create a case study assignment for a college-level nursing course.”

## **Glossary of Terms and Definitions Relevant to a Unit of Study**

“Create a glossary of terms and corresponding definitions for [unit or concept being taught].”

## **Stories and Metaphors to Enable Retention**

“I am learning about [topic]. Convert key elements of this topic into engaging stories and metaphors to aid my learning and retention.”

## **Options for Alternative Assessment Methods**

“Provide a list of 5 alternative assessment methods that could be used to assess student understanding of [concept being taught].”

## **Frequent, Low-Stakes, Formative Assessments to Gauge Student Progress**

“Create a quiz with [3-5] multiple choice questions that assesses students’ understanding of [concept being taught]. Provide the answer key.”

## **Generate New Ideas or Scaffold Writing**

“I am writing a [post, blog, article, etc] about [topic]. Give me an outline of [#] bullet points to use as a framework for my writing. Also give me 3 options for an engaging title.”

## **Strategies to Support a Range of Learner Variability**

“For a lesson on [concept being taught] create a list of 5 teaching strategies that could be used to engage and challenge students of various abilities and learning preferences.”

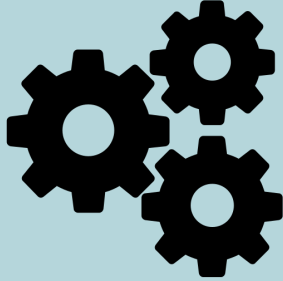
## **Open-Ended Questions Aligned with Modular Objectives**

# Prompting Framework



## Role

*Act as...*



## Task

*What the AI needs to do*



## Requirements

*What the product should include, contain, be, etc.*



## Instructions

*What the AI should do as it acts on the prompt*

# Resources (pg 1/2)

## Web Resources

- The [Brainstorming Tool](#) uses a simple interface and a GPT3.5-level model to help instructors generate effective discussion questions, case studies, learning objectives, and lecture topics. It can be a fun way to introduce instructors to some simple use cases without getting deep into prompt engineering.
- [Teaching Packs](#) is a more advanced tool using the latest GPT4-Turbo models that turns an instructor's existing syllabus into highly tailored teaching activities for every class session or module. It's a pretty cool tool that works differently than most of the others you may be familiar with, since all instructors have to do to use it is upload their syllabus. The results then get emailed to them asynchronously in the form of a Google Doc. Here's a [sample pack](#) for a Genomics class to get an idea of what the output looks like.
- [Poe College Rubric Creator](#)
- [The AI Pedagogy Project](#)
- [Education Copilot AI](#)
- [Lessonplans.ai](#)
- [PlanifAI](#)
- [Knewton's Alta](#)
- [Curipod](#)
- [GenerationGenius](#)

# Resources (pg 2/2)

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

## Articles & Books

- Siemens, G., Marmolejo-Ramos, F., Gabriel, F., Medeiros, K., Marrone, R., Joksimovic, S., & de Laat, M. (2023). "[Human and artificial cognition](#)." *Computers and Education: Artificial Intelligence* 3.
- [Transforming Education With Generative AI: Prompt Engineering and Synthetic Content Creation](#)
- 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.

# Contact CNDLS

CNDLS Email  
CNDLS Website

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[cndls.georgetown.edu/ai/resources](https://cndls.georgetown.edu/ai/resources)

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