

Call to Action

Large Language Models



Generative Al June 2022 June 2023





Al– it's not just chatGPT. We all know that chatGPT isn't the most reliable when it comes to citations and the literature, but other Al's are.

There are now several AI platforms that are trained on the literature and are quite good at summarising the literature VERY quickly. The question for us now is how do we get students to engage with the literature at the beginning of a project when AI can generate a short lit review or an annotated bibliography very quickly?

That's our assignment for this week.

As pre-work for our meeting next Tuesday, 1) take a look at this <u>lib guide of Al resources for literature review</u>, 2) choose 1 or 2 to do a quick lit review for a topic that you're pretty familiar with the literature already, 3) how did it do? Did it give you back the usual articles? Did it show you some new stuff? What kinds of summaries does it provide?

When we meet up on Tuesday 9/19 we'll discuss what we got and how we can incorporate these resources and their outputs into student assignments that will help them leverage these AI tools while also (hopefully) achieving our course and learning objectives.

DURING OUR MEETING ON TUESDAY:

Learning Objectives for Lit Review/ Annotated Bibliography Assignments:

I'm starting to find more and more that AI and incorporating AI into my assignments is making me go back to my learning and course objectives. Here are some learning objectives from literature review assignments (the first two sets are mine from two courses I've taught, the rest are from chatGPT):

Intro Bio

Critical thinking/Problem Solving – through weekly application of knowledge and analyzing papers, students will think critically about potential solutions to scientific questions. **Written Communication** – through the final project, and in class assignments, students will develop the ability to write scientifically.

Behavioral Ecology

- Be able to search the academic literature to find appropriate publications, particularly primary sources, in animal behavior
- Be able to critique and evaluate hypotheses in animal behavior
- Recognize current problems and questions in animal behavior
- Utilize multiple primary literature sources to produce a synthetic discussion of a current problem in animal behavior
- Write creatively and compellingly about scientific theories and findings

Here's a <u>rubric</u> from that assignment

ChatGPT: Upon completing this literature review assignment, students should be able to:

Retrieve Information: Demonstrate the ability to effectively search and retrieve relevant scientific literature using online databases, library resources, and search engines.

Critically Analyze Literature: Critically evaluate the quality, credibility, and relevance of selected research articles, considering study design, methodology, and source reliability.

Synthesize Information: Synthesize information from multiple sources to identify trends, gaps, or controversies in a specific area of biology.

Understand Biological Concepts: Gain a deeper understanding of biological concepts and principles relevant to the chosen topic by reviewing and summarizing key findings from the literature.

Communicate Scientifically: Communicate scientific ideas effectively through writing, including clear organization, proper citation, and adherence to a specific citation style (e.g., APA, MLA, or Chicago).

Apply Critical Thinking: Apply critical thinking skills to analyze research questions or problems in the literature and propose potential solutions or further research directions.

Integrate Interdisciplinary Knowledge: Connect biological concepts to broader interdisciplinary perspectives, such as ethics, social implications, or historical context.

Evaluate Evidence: Use evidence from the literature to support arguments and distinguish between strong and weak evidence.

Participate in Peer Review: Engage in the peer review process by providing constructive feedback on peers' literature reviews, fostering collaboration and improvement.

Present Findings: Communicate findings effectively, either orally or in writing, to the class or instructor, honing presentation and communication skills.

Understand Ethical Considerations: Discuss the ethical aspects of conducting research in biology and demonstrate an understanding of ethical conduct in science.

Manage Time Effectively: Develop time management skills to plan, research, and complete the literature review within a specified timeframe.

Foster Creativity and Innovation: Encourage creative thinking and propose innovative ideas or approaches based on the reviewed literature.

Explore Global Context: Investigate how research in the chosen topic relates to global issues, fostering an understanding of the global context of biology.

Reflect on Learning: Reflect on their own learning process, including challenges encountered and strategies for improvement, promoting metacognition and self-assessment.

I know for me, usually my assumption was that by searching the literature using something like Google Scholar or Web of Science, identifying 5-10 articles of interest in that search, and writing short summaries of those articles, students would begin to form a clearer assessment of the literature on their topic of interest and begin to synthesize the literature in a way that would allow them to ask interesting, if not novel, questions.

But, Al can do the searching and summarizing pretty fast now. <u>Here's a brief tour</u> of my search using a few of the research tools.

Now that we've seen a bit of what AI tools can do, how can we incorporate them into our literature assignments while still addressing our learning objectives?

In literature reviews & literature summaries:

Have students write about how the literature connects to what we've done and discussed in class. How are these papers tied to specific lectures or examples given in class?

Have students discuss their own journeys in writing their research questions. What question did they start with? How has that question changed? How has their literature search changed that question? Why?

Have students reflect on scientists themselves. How do scientists tend to approach this topic or idea? What methods do they tend to use? Why are scholars interested in this topic? Is this issue largely considered resolved or not? Why?

Annotated Bibliography:

In addition to the source summary, make sure students are including how the source was useful to them (introduced them to a particular concept or other sources) and how they plan on incorporating it into their final paper (methods, background). Additionally, students should attempt to provide some evaluation of the limitations or flaws of the source.

Here is an <u>example of an English lit review prompt/ assignment</u> that has been Al-proofed, that I think provides some interesting aspects and reflections to include in lit review assignments. This comes from this <u>larger collection of Al-proofed assignment</u> prompts from a variety of disciplines.

Some questions to think about:

-Are there other ways to show synthesis that AI can't do quickly?

By focusing on meta-cogniton rather than on the subject matter itself. Things like these, which I borrowed from here:

• A week or more before a formal writing assignment is due, ask students to write a paragraph or two summarizing their topic and articulating why they chose it (ideally, in the context of the ideas above, explaining how their assignment will respond to ideas that they have encountered in class). Then,

- ask them to assess the work they'll need to do to complete the assignment—what sources will they engage and how, what questions will they have to address, what conclusions do they still need to form, etc.?
- The weekend before the assignment is due, ask students to write a concrete plan for their entire writing process. How long do they think it will take to create an outline, write a draft, revise it, and proofread it? When and where will they do this work? What additional help, if any, will they seek out, from whom, and when?
- As they turn in the assignment, have students compose a short note to you about their writing process and how it worked out for them. How did their ideas change between conception and completion? What steps were easy or difficult? Did any of that surprise them? Overall, how happy are they with the final product as they submit it to you? Comment on this note as part of your feedback to the student—based on the final product, what aspects of the student's writing process served them well, and what practices might they want to change or adopt for the next assignment?
- As they begin work on the next assignment, ask students to consider what they learned writing the last one. What ideas from that project will inform this one? What lessons about their own writing process did they learn, and how will they inform the way they write this assignment?
- -Are there ways to combine the outputs of different AI platforms that would require more hands-on work with the literature?
- -Do we need to re-think our learning objectives?

 I know I do. I think a refocus on the process and reflection on the process through a metacognition lens will help both AI-proof these kinds of assignments as well help students better learn how they learn.

Al Tools for Teaching

Enthusiasts for the use of AI by instructors tout a multitude of pros that include reduced instructor burnout (assuming it is our workload that is gridding us down), the ability to tailor materials to specific student needs, and the opportunity to create more interactive content.

Pre-Meeting Suggested Activities

- Use two or more of the AI tools listed below, or other tools that you know about, to do a
 task like writing learning objectives for an assignment, lesson plan, quiz questions, or
 crafting a writing prompt or email.
- 2) Evaluate the quality of the output and determine how you would modify the output before you would use it. How much time/work will be required to modify or fact check the work of the tool?
- 3) Compare the output from the different tools. Can you determine whether one would work better for the task than the other(s)?

Al Tools for Teachers/Instructors

Lesson Planning Tools

Most of the education specific AI tools listed below are targeted toward K-12, but they are also relevant for post-secondary education. Please, add any resources that you know about that are not included here. Some of these require a subscription, but they all have free trial periods.

- MagicSchool.ai has many tools that help teachers, including a joke generator! I asked it to make a joke about food webs, and it produced "Why was the mushroom popular in the food web? Because he was a fun guy to be around." What more can we ask? This was my fav tool so far.
- Education Co-pilot is very template-driven, and I did not find it very flexible.
- <u>Canva Magic Write</u> This can be used to create text and then generate a
 presentation from that text. It can also be used to make videos and other
 visual tools.
- Fetchy is another all purpose planning and assignment development tool.
- Bard by Google.
- Bing Chat. I found Bing chat to be a good starting point for my assignment.
- DuckAssist. I haven't tried this one yet.
- Cognii: An Al tool that uses natural language processing to provide automated assessments and feedback to students² Cognii website.

Grading and Feedback Tools

List compiled by BingAl

- **Gradescope**: An Al tool that enables students to assess each other's work and provide feedback, which can be time-consuming tasks without Al technology².
- Knowji: An Al-powered vocabulary app that uses adaptive learning techniques to help students expand their vocabulary². Knowjii website.
- Plaito: An Al tool that offers automated essay grading and feedback, helping instructors save time and provide timely feedback to students². Plaito website
- Queirum: An Al tool that uses machine learning algorithms to analyze student performance data and provide insights to instructors². Queirum website.

Quiz and Study Tools for Students

Background Resources:

These are some resources that I came across in my wanderings that I thought were worth sharing.

Al LibGuides Compiled by Librarians

<u>Al LibGuide</u> built by a librarian at Florida International University includes a listing of guides compiled by other librarians at institutions across the globe. It also has links to great resources for integrating Al into the writing process and other classroom resources. It could take weeks to work through all of the resources that are linked here. My reference librarian found this one for me! Thanks <u>William Schaeffer</u>.

Articles about Al use by Teachers

Johnson, Kahari.15 Sept. 2023. <u>Teachers are Going All in on Generative Al</u>. WIRED.

Langreo, L., McFarlane, L., and Meisner, C. 10 Aug. 2023. <u>Can Al Improve Instruction?</u> <u>3 Teachers Share How They Use it.</u> Education Week.

Langreo, L. 15 Aug. 2023. <u>Beyond ChatGPT: The Other AI Tools Teachers Are Using</u>. Education Week.

Sources for Learning about AI use in Classrooms

Al 101 for Teachers. Code.org has produced an online learning series for teachers.

<u>Al Teaching Project</u>. <u>www.aiedu.org</u> This non-profit organization not only seeks to educate educators about Al use, but also provides resources for working with students to develop Al literacy. They also have <u>ToolKits</u> for developing Al Literacy for parents, educators, and other community members.

<u>Al Tools For Teaching and Learning.</u> Teaching Commons. Center for Teaching and Learning. Stanford University.

<u>Al Content Generation Tools in Teaching, Learning, and Research</u>. Center for Faculty Development, Old Dominion University. www.odu.edu

Environmental Impacts of Al

Some things that need to be considered, planned for and probably regulated are energy, water, and land use of AI tech.

DeGeurin, Mack. 10 May 2023. <u>'Thirsty' Al: Training ChatGPT Required Enough Water to Fill a Nuclear Reactor's Cooling Tower, Study Finds</u>. Gizmodo. Accessed 03 October 2023.

Starting Questions:

Because we are exploring the use of AI Tools for teaching, I turned to my "AI-powered research co-pilot" for some answers to my questions. The questions that I asked are listed below with links to Bing Chat AI responses.

- 1. What are the benefits of using Al for developing course materials? Response: https://sl.bing.net/b7UpF0KcYnl
- 2. What are some potential pitfalls associated with using Al tools to develop course materials?

Response: https://sl.bing.net/eqH6XflmbFA

- 3. What are best practices for using AI to develop course materials?

 Response: When it comes to instructors using AI to develop course materials, there is no one-size-fits-all best practice. However, there are some guidelines that can be helpful. Here are a few resources that provide guidance for instructors who use AI in course development:
 - 1. **UCLA Center for the Advancement of Teaching**: They have developed a comprehensive guide that offers strategies for adopting AI technologies in a

- responsible and ethical manner. The guide emphasizes the importance of exploring and communicating the opportunities and limitations of using these tools¹.
- 2. **Stanford Teaching Commons**: They suggest several key teaching practices to help faculty navigate emerging technologies and integrate them into their pedagogic strategies, course designs, and curricula².
- 3. <u>USC's Center for Excellence in Teaching</u>: They have published a guide titled "Using AI text, image, and music-generating tools in your courses" that includes helpful ideas for incorporating generative AI tools³.
- 4. Columbia University: They provide resources on inclusive teaching and learning online, which can be valuable for instructors using Al in course development⁴.

Ethics and Al: Concerns and Benefits for Students & Professors

By: Dr. Rhonda Hughes-Seefeldt, BS, DC

12 December 2023

Artificial Intelligence (AI) has revolutionized the way we live and work. It has made its way into the education sector, with AI being used to grade assignments, personalize learning, and even design curriculum. While AI has its benefits, it also raises ethical concerns for students and professors.

A dedication to employing AI in an educational setting with responsibility and ethical considerations is essential. Exploring the subsequent concerns and advantages can offer insight into this commitment.

Student Concerns	Student Benefits
Privacy Risks associated w/personal data and information security	Personalized Education Tailored learning experiences to individual needs and preferences
Bias/Fairness Potential for discrimination or unequal treatment	Adaptive "Smart Books" Online learning activities that adjust to individual learning paces & styles
 Loss of Human Connection or Depersonalization of Education Impact on interpersonal relationships in learning The potential for education to become impersonal or detached Students may feel isolated or disengaged if interaction becomes solely with a machine rather than human instructors or peers 	Learning at Own Pace: Opportunities for self-paced learning
Critical Thinking Concerns about the impact on students' analytical and critical thinking skills	Accessibility and Inclusion Increased access for students with diverse needs
Misinformation Risks of spreading and perpetuating false information	Efficiency and Productivity Streamlined learning process for better time management
Plagiarism Challenges related to misuse of Al tools for academic dishonesty	Data-Driven Insights Informed decision-making based on analytics
 Negatively Affect Student Motivation Overemphasis on Performance Metrics Standardization of Learning Technology Barriers 	Global Learning Opportunities Access to diverse educational resources and perspectives

Professor Benefits	
Efficiency and Time Management Enhanced productivity and time utilization	
 Personalized Teaching Support Tools to assist in catering to individual student needs 	
 Enhanced Research and Professional Development Opportunities for academic growth 	
○ Value of Teaching Portfolios - Improvement of documentation for professional evaluation	
Accessibility and Inclusivity Tools to make education more accessible	
 Making Assignments More Accessible Adapting course work for better student engagement 	
Diversity and Global Collaboration Facilitation of diverse perspectives and collaborative opportunities	

To address these concerns, it's crucial to strike a balance between leveraging AI for its benefits and maintaining the essential human elements in education. Educators should be mindful of designing AI applications that complement, rather than replace, human interaction and support. Additionally, clear communication about the role of AI, incorporating student feedback, and providing alternatives for students who may struggle with AI-driven approaches can help mitigate the potential negative impact on student motivation.

The further readings provided offer in-depth insights into the ethical considerations of AI in education, discussing the delicate balance between innovation and privacy. These readings explore issues such as the impact on diversity, the environmental consequences of AI infrastructure, and the overall equity concerns associated with the use of artificial intelligence in educational settings.

References/Resources:

Capitol Technology University (5/30/23) *The Ethical Considerations of Artificial Intelligence*. Retrieved: 10/15/23 from https://www.captechu.edu/blog/ethical-considerations-of-artificial-intelligence

Susan Fourtane (Dec 15, 2022). Artificial intelligence in Higher Education: Benefits and Ethics. Retrieved 10/14/23 from https://www.fierceeducation.com/technology/artificial-intelligence-higher-education-benefits-and-ethics

Mini Review Article Front. Public Health, (11 January 2023) Sec. Digital Public Health, Volume 10 – 2022, https://doi.org/10.3389/fpubh.2022.1118116

Innovation, C. U.-C. (n.d.). *Ethical AI for Teaching and Learning*. Retrieved October 16, 2023, from: https://teaching.cornell.edu/generative-artificial-intelligence/ethical-ai-teaching-and-learning

TechTarget. (n.d.) AI ethics (AI code of ethics). Retrieved 10/16/23 from https://www.techtarget.com/whatis/definition/AI-code-of-ethics

Al search engines:

- Microsoft Bing
- Google Bard
- ChatGPT
- Perplexity Al
- Phind

Research questions asked in Google:

What are the ethics of AI in education

Response: https://www.linkedin.com/pulse/ethics-ai-education-balancing-innovation-privacy-guru-subramaniam

What are the top 10 ethical Al practices in teaching?

Response: https://www.carnegielearning.com/blog/ethical-ai-chatgpt-students/

Ethical considerations of AI

• Response: https://www.captechu.edu/blog/ethical-considerations-of-artificial-intelligence

Further Reading:

- Ethics of AI in Education: Balancing Innovation, Privacy
- Ethical AI: Balancing Innovation and Privacy in Education
- Ethical Considerations of Artificial Intelligence
- Ethical Artificial Intelligence
- Ethical Al for Teaching and Learning | Center for Teaching Innovation
- Exploring the ethics of artificial intelligence in K-12 education
- Questions Around the Ethical Use of AI in the Classroom
- The Ethics of Generative AI in the Classroom Facing History and Ourselves
- Artificial intelligence in education: Addressing ethical challenges in K-12 settings

November 2023

Al Tools Working Group



Syllabus statements regarding the use of artificial intelligence

Overview

The rise of artificial intelligence (AI) may bring a mixture of hope and fear to instructors and students alike, so it is essential for class expectations to be clear. The syllabus is a critical document that can be used by the instructor to clarify if and how students will use AI. Institutions, departments, and individual instructors may all have a say in the degree of AI use in the class, with policies ranging from zero tolerance to unfettered access.

What follows are examples of different syllabus statements from different universities regarding AI use, as compiled by Brandeis University. The full collection of examples can be viewed here: https://www.brandeis.edu/teaching/resources/syllabus/ai-statements.html

Categories

Syllabus statements can be roughly grouped into three categories, representing where they fall on a strict-lenient gradient regarding the use of AI in the course. Examples from each category appear below, along with comments from the working group.

Restrictive

Harvard University

"We expect that all work students submit for this course will be their own. In instances when collaborative work is assigned, we expect for the assignment to list all team members who participated. We specifically forbid the use of ChatGPT or any other generative artificial intelligence (AI) tools at all stages of the work process, including preliminary ones. Violations of this policy will be considered academic misconduct. We draw your attention to the fact that different classes at Harvard could implement different AI policies, and it is the student's responsibility to conform to expectations for each course."

Working group comments

- Generative AI is not defined, so there is an assumption students know what it is. This creates the
 potential for inequity, as students come from different backgrounds, with varied levels of experience
 with AI.
- Prohibiting the use of AI for preliminary work (e.g., brainstorming) is likely unenforceable and overly harsh.
- Language regarding how misconduct will be documented and adjudicating is missing, creating the potential for bias in how student work is handled.
- Reminding students that each class may have a different policy is valuable, though it may be difficult for students to keep all these policies straight in their minds.

University of Delaware

"Students are not allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Dall-E 2) on assignments in this course. Each student is expected to complete each assignment without substantive assistance from others, including automated tools."

Working group comments

• The policy relies on the interpretation of "substantive," which is not clearly defined. This leaves room for interpretation, which could differ greatly between student and instructor.

Salem State University

"Since writing, analytical, and critical thinking skills are part of the learning outcomes of this course, all writing assignments should be prepared by the student.

Developing strong competencies in this area will prepare you for a competitive workplace. Therefore, Algenerated submissions are not permitted and will be treated as plagiarism.

Ethics still matter and plagiarism is a serious Salem State University offense."

Working group comments

- Connecting the restrictive policy to course learning outcomes is commendable, as it justifies the
 policy in a less punitive way.
- Could be interpreted as only prohibiting submitting something created entirely by AI (as opposed to with AI assistance), which is likely not the intent.

Permissive

University of Delaware

"Students are allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Dall-E 2) on assignments in this course; no special documentation or citation is required."

Working group comments

- Unless proper introductions to these AI tools are included as part of the course, this policy will likely run into equity issues. Not all students will be comparably prepared for using AI.
- A completely permissive policy feels like giving up. What student skills will actually be measured? How will student knowledge and skills be distinguished from their skill in using AI?

Harvard University

"This course encourages students to explore the use of generative artificial intelligence (GAI) tools such as ChatGPT for all assignments and assessments. Any such use must be appropriately acknowledged and cited. It is each student's responsibility to assess the validity and applicability of any GAI output that is submitted; you bear the final responsibility. Violations of this policy will be considered academic misconduct. We draw your attention to the fact that different classes at Harvard could implement different AI policies, and it is the student's responsibility to conform to expectations for each course."

Working group comments

- The clear emphasis on student responsibility is commendable, especially since proper citation is required.
- It is not clear what would be assessed in a course with this policy: student skill/knowledge or Al skill/knowledge.

University of Pennsylvania

"Within this class, you are welcome to use foundation models (ChatGPT, GPT, DALL-E, Stable Diffusion, Midjourney, GitHub Copilot, and anything after) in a totally unrestricted fashion, for any purpose, at no penalty. However, you should note that all large language models still have a tendency to make up incorrect facts and fake citations, code generation models have a tendency to produce inaccurate outputs, and image generation models can occasionally come up with highly offensive products. You will be responsible for any inaccurate, biased, offensive, or otherwise unethical content you submit regardless of whether it originally comes from you or a foundation model. If you use a foundation model, its contribution must be acknowledged; you will be penalized for using a foundation model without acknowledgement. Having said all these disclaimers, the use of foundation models is encouraged, as it may make it possible for you to submit assignments with higher quality, in less time.

The university's policy on plagiarism still applies to any uncited or improperly cited use of work by other human beings, or submission of work by other human beings as your own."

Working group comments

- Warning students of potential biases with the use of AI is important, as many students will not be aware of that issue.
- Requiring proper documentation of AI use is good, but the burden of documentation may actually drive students away from using AI if citations are perceived as being more work.
- Instructors potentially create more work for themselves by having to check proper citations of AI as well as being vigilant for the lack of citations.

Clemson University

"Artificial Intelligence Policy: Are all of our classes now Al classes?

A. I expect you to use AI (e.g., ChatGPT, Dall-e-2) in this class. In fact, some assignments will require it. Learning to use AI is an emerging skill, and I will provide basic tutorials about how to leverage it for our work. However, be aware of the limits of these software systems.

- B. All is vulnerable to discrimination because it can inadvertently (or intentionally) perpetuate existing biases present in the data it is trained on. For example, if an All system is trained on data that contains a bias against a certain group of people, the system may make decisions that are unfair or discriminatory towards that group.
- C. There are several reasons why AI systems can perpetuate discrimination:
- (i) Bias in the training data: If the training data contains biases, the AI system may learn and replicate those biases in its decision-making.
- (ii) Lack of diversity in the training data: If the training data does not include a diverse range of examples, the Al system may not perform well on diverse inputs, which may lead to discrimination.
- (iii) Lack of transparency: Some AI systems can be difficult to understand and interpret, making it challenging to detect and correct for biases
- (iv) Lack of accountability: Without proper oversight and accountability, it can be difficult to identify and address

discrimination in AI systems.

- (v) It is important to keep in mind that these biases can be unconscious, unintended and hard to detect, but they can have serious consequences if they are not addressed.
- D. All can be a valuable tool for augmenting human decision-making and critical thinking, but it is not a replacement.
- E. Al is a tool, just like a pencil or a computer. However, unlike most tools you need to acknowledge using it. Pay close attention to whatever information you use in your own work that is produced from AI, and explain how/what you used at the end of assignments. My recommendation is to screen shot and save everything (i.e., what prompts you used, what answers were produced, where, why, and how). This is new territory, but basic attribution rules still apply. Cite everything, otherwise you are likely violating academic integrity policies.
- F. If you provide minimum effort prompts, you will get low quality results. You will need to refine your prompts to get better outcomes. This will take time and practice.
- G. Don't trust anything the systems says. Assume it is wrong, unless you already know the answer and can verify with trusted sources. It works best for topics you deeply understand.
- H. Use your best judgement to determine if/where/when to use these tools. They don't always make products easier and/or better.
- I. Large language models and chatbots are "look back" machines. They don't advance knowledge (yet). ChatGPT-3 uses data from 2021 and earlier (a lot has changed since 2021).

 Note...some of this was written with Ai; OpenAI. (2021). GPT-3 API. Retrieved from

https://beta.openai.com/docs/api-reference/introduction"

Wharton School of the University of Pennsylvania

"I expect you to use AI (ChatGPT and image generation tools, at a minimum), in this class. In fact, some assignments will require it. Learning to use AI is an emerging skill, and I provide tutorials in Canvas about how to use them. I am happy to meet and help with these tools during office hours or after class.

Be aware of the limits of ChatGPT:

If you provide minimum effort prompts, you will get low quality results. You will need to refine your prompts in order to get good outcomes. This will take work.

Don't trust anything it says. If it gives you a number or fact, assume it is wrong unless you either know the answer or can check in with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.

Al is a tool, but one that you need to acknowledge using. Please include a paragraph at the end of any assignment that uses Al explaining what you used the Al for and what prompts you used to get the results. Failure to do so is in violation of the academic honesty policies.

Be thoughtful about when this tool is useful. Don't use it if it isn't appropriate for the case or circumstance."

Working group comments on previous two examples

- Though the syllabus will be greatly lengthened, both of these statements do an excellent job of addressing potential biases in AI.
- Including an explicit section on assignments to have students explain how AI was used is a great idea.
- Including the actual prompts used is helpful, though the randomness of Al responses will prevent instructors from replicating student experiences.
- Again, allowing AI use puts more work on instructors to check that it is being used properly and documented accordingly.

Mixed

Harvard University

"Certain assignments in this course will permit or even encourage the use of generative artificial intelligence (GAI) tools such as ChatGPT. The default is that such use is disallowed unless otherwise stated. Any such use must be appropriately acknowledged and cited. It is each student's responsibility to assess the validity and applicability of any GAI output that is submitted; you bear the final responsibility. Violations of this policy will be considered academic misconduct. We draw your attention to the fact that different classes at Harvard could implement different AI policies, and it is the student's responsibility to conform to expectations for each course."

Working group comments

• Changing "will" to "may" in the first sentence would create a universal policy statement that covers restrictive, permissive, and mixed categories.

University of Pennsylvania

"You may use AI programs e.g. ChatGPT to help generate ideas and brainstorm. However, you should note that the material generated by these programs may be inaccurate, incomplete, or otherwise problematic. Beware that use may also stifle your own independent thinking and creativity.

You may not submit any work generated by an Al program as your own. If you include material generated by an Al program, it should be cited like any other reference material (with due consideration for the quality of the reference, which may be poor).

Any plagiarism or other form of cheating will be dealt with severely under relevant Penn policies."

Working group comments

 Allowing students to use AI while still maintaining standards of academic honesty for intellectual contributions is a realistic intermediate between restrictive and permissive extremes.

Bentley University

"A Few Words about Generative AI (e.g. ChatGPT)

Writing is integral to thinking. It is also hard. Natural language processing (NLP) applications like ChatGPT or Sudowrite are useful tools for helping us improve our writing and stimulate our thinking. However, they should never serve as a substitute for either. And, in this course, they cannot.

Think of the help you get from NLP apps as a much less sophisticated version of the assistance you can receive (for free!) from a Bentley Writing Center tutor. That person might legitimately ask you a question to jump-start your imagination, steer you away from the passive voice, or identify a poorly organized paragraph, but should never do the writing for you. A major difference here, of course, is that an NLP app is not a person. It's a machine which is adept at recognizing patterns and reflecting those patterns back at us. It cannot think for itself. And it cannot think for you.

With that analogy in mind, you will need to adhere to the following guidelines in our class.

Appropriate use of AI when writing essays or discussion board entries:

- You are free to use spell check, grammar check, and synonym identification tools (e.g., Grammarly, and MS Word).
- You are free to use app recommendations when it comes to rephrasing sentences or reorganizing paragraphs you have drafted yourself.
- You are free to use app recommendations when it comes to tweaking outlines you have drafted yourself.

Inappropriate use of AI when writing essays or discussion board entries:

- You may not use entire sentences or paragraphs suggested by an app without providing quotation marks and a citation, just as you would to any other source. Citations should take this form: OpenAI, chatGPT.
 Response to prompt: "Explain what is meant by the term 'Triple Bottom Line'" (February 15, 2023, https://chat.openai.com/).
- You may not have an app write a draft (either rough or final) of an assignment for you.

Evidence of inappropriate AI use will be grounds for submission of an Academic Integrity report. Sanctions will

range from a zero for the assignment to an F for the course.

I'm assuming we won't have a problem in this regard but want to make sure that the expectations are clear so that we can spend the semester learning things together—and not worrying about the origins of your work.

Be aware that other classes may have different policies and that some may forbid Al use altogether."

Georgia Institute of Technology

"We treat AI-based assistance, such as ChatGPT and Github Copilot, the same way we treat collaboration with other people: you are welcome to talk about your ideas and work with other people, both inside and outside the class, as well as with AI-based assistants. However, all work you submit must be your own. You should never include in your assignment anything that was not written directly by you without proper citation (including quotation marks and in-line citation for direct quotes). Including anything you did not write in your assignment without proper citation will be treated as an academic misconduct case.

If you are unsure where the line is between collaborating with AI and copying from AI, we recommend the following heuristics:

- Never hit "Copy" within your conversation with an AI assistant. You can copy your own work into your
 conversation, but do not copy anything from the conversation back into your assignment. Instead, use your
 interaction with the AI assistant as a learning experience, then let your assignment reflect your improved
 understanding.
- Do not have your assignment and the AI agent itself open on your device at the same time. Similar to above, use your conversation with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge. This heuristic includes avoiding using AI assistants that are directly integrated into your composition environment: just as you should not let a classmate write content or code directly into your submission, so also you should avoid using tools that directly add content to your submission.

Deviating from these heuristics does not automatically qualify as academic misconduct; however, following these heuristics essentially guarantees your collaboration will not cross the line into misconduct."

Working group comments on previous two examples

Providing examples of what is and is not allowed in the course is a great idea.

Reflection

• Completely restrictive policies remove opportunities for students to use modern tools, develop new skillsets, and streamline their work. Enforcing restrictive policies may create more work for

instructors than the other approaches.

- Completely permissive policies should at least provide guidance to ensure students have comparable resources. Care should be taken to avoid abandoning all academic standards by allowing students to turn in wholly Al-generated work.
- If using a mixed policy, consider integrating AI use into assignment rubrics. A category capturing
 the degree to which AI was relied upon for the assignment will allow students to earn credit for their
 work without dodging actual learning outcomes.

Guiding principles (distilled from conversation and https://inclusioncloud.com/insights/blog/ethical-artificial-intelligence/)

• Clarify your values by highlighting the connection between learning outcomes and Al use policies.



Rubrics

Derek Sollberger

ChatGPT

Certainly! Here's a formatted grading rubric for a slideshow presentation about artificial intelligence in pedagogy:

Criteria	Points
Content Knowledge	40
- Accuracy	10
- Depth of Information	15
- Relevance	15
Organization and Structure	20
- Introduction	5
- Flow and Transition	7
- Conclusion	8
Visual Design and Presentation	20
- Clarity and Readability	8
- Visual Elements	7
- Consistency	5
Delivery and Communication	20
- Engagement	8
- Speaking Skills	7
- Knowledge Demonstration	5
Creativity and Innovation	10
- Uniqueness	5
- Creativity in Delivery	5
Bonus/Extra Credit	5
- Additional Effort	5
Total	115

Adjust the points or criteria as needed based on the specific requirements and expectations for the presentation evaluation.