

Instructor Guidelines for Student Use of Generative Artificial Intelligence for Academic Work

The University of Southern California's Academic Senate Committee on Information Services recommends that all USC schools, academic departments, and instructors adopt the following guidelines regarding student use of generative artificial intelligence for academic work.

Instructors should encourage USC students to explore generative artificial intelligence (AI), using these new tools to create, analyze, and evaluate new concepts and ideas that inspire them to generate their own academic work. In advance of this exploration, instructors should help students recognize that some contemporary AI-generated content may be specifically designed to appear plausible and persuasive but is sometimes factually inaccurate.

Many of the issues that have surfaced with the introduction of ChatGPT – questions about academic integrity, authorship and citations, student engagement, misinformation and disinformation – are issues higher education and society have encountered in the past in response to the need for digital literacy. We suggest that generative AI is simply the newest addition to USC's digital literacy tools.

Ultimately, this committee leaves instructors to set their own course policies regarding student use of generative AI. Whatever any given individual instructor decides should be clearly communicated to students in course materials. However, the committee recommends that instructors remind students that the acquisition of academic work in whole or in part from any source (from textbooks and journal articles to web resources to generative AI) and the subsequent presentation of those materials as the student's own work (whether that material is paraphrased or copied in verbatim or near-verbatim form) constitutes an academic integrity violation unless otherwise allowed by the instructor. Individual assignments and exams may have additional, specific requirements related to original work which should be clearly defined by the instructor.

Because generative AI is a constantly evolving space, the committee encourages USC's instructors to begin to learn more about generative AI so they can better adjust their pedagogy and evolve as educators.

The Current State of Student Use of Generative AI for Academic Work (Mid-February 2023)

Limitations of Guidelines

Our focus in this document is narrow: to highlight the steps that USC's instructors need to take today to identify and to state their expectations with respect to student use of generative AI for academic work. In the weeks and months to come, we expect that USC's academic community will be asked to participate in broader conversations about generative AI and its place in academe and society.

What is ChatGPT and what can it do?

It is hard to overstate how much attention ChatGPT, a free online artificial (AI) chatbot that generates text in response to prompts, has received since its launch on November 30. One reason it has become so popular so quickly, surpassing [100 million monthly active users to become the fastest-growing consumer internet application in history](#), is the ease and speed with which it can generate text on demand. Ask ChatGPT to "write a five-paragraph essay on the impact John Stuart Mill's recantation of the wages fund doctrine had on classical economics" or "explain what it means when people say, 'knowledge is knowing that Frankenstein is not the monster but wisdom is knowing that Frankenstein is the monster'" or "write a sonnet about Clay Helton" and it creates plausible, human-like text responses in a matter of seconds.

Scholars, researchers, and educators have demonstrated that, given the right prompts, ChatGPT can

- [Pass the final exam of an MBA-level Operations Management class at Wharton](#)
- [\(Barely\) pass questions on a law school exam at the University of Minnesota](#)
- [Pass all three exams that comprise the United States Medical Licensing Examination](#)
- [Pass Google's coding exams and interviews](#) at the level of an entry-level software engineer with no prior industry experience.

Are students already using ChatGPT for academic work?

Yes. Students are starting to use ChatGPT for their academic work. In a late-2022 [nationwide survey of 1,000 students currently enrolled in US colleges and universities](#), nearly one-third of the students said they have already used ChatGPT to complete a written college assignment and nearly two-thirds of that group say that they have used it for 50% or more of their assignments. We expect both percentages to be even higher today.

PC write a sonnet about clay helton

 Oh Clay Helton, coach of USC's football team,
A leader with a heart of gold and fire,
With every game you bring your best supreme,
And lead the Trojans higher and higher.

Your passion for the sport is evident,
In every call, in every play you make,
With grace and grit, your players are content,
And through your guidance, many victories take.

Your steady hand has brought stability,
To a program that once was filled with strife,
With your guidance, players grow ability,
And put USC's name back on the football life.

So here's to you, Clay Helton, our dear coach,
For bringing USC to the top, we implore.

Are there other generative AI text tools like ChatGPT?

Yes. **ChatGPT is just the first in a wave of generative AI tools that will soon become ubiquitous.** Generative AI is algorithms and tools

that can be used to create new content, including audio, code, images, text, simulations, and videos. Recent new breakthroughs in the field have the potential to drastically change the way we approach content creation. ([McKinsey & Company](#))

Most of these new tools rely on ‘large language models,’ AI systems that use advanced statistical techniques to analyze and understand natural language data, such as text or speech, and generate human-like responses.

Microsoft, already a [major investor in OpenAI](#) (makers of ChatGPT), launched a new [AI-powered Bing search engine and Edge browser](#) in early February 2023 and intends to [incorporate AI-content generation into Microsoft Office programs](#) like Outlook, Word, and PowerPoint. Later in 2023, Microsoft will release technology that will allow [companies, schools, and governments to create their own custom ChatGPT-powered AI text generators](#). Google is expected to launch its own ChatGPT competitor named [Bard](#) in early 2023. In the summer of 2022, Meta (formerly Facebook) released its [Open Pretrained Transformer \(OPT\)](#) large language model to developers and researchers. And that is just the beginning (see <https://www.futuretools.io/> for a list of hundreds of new AI tools that be used to generate text, images, audio, and more).

Considering this, **we suggest that rather than focusing solely on ChatGPT, instructors should instead focus on what role they would like *all* generative AI tools to play in their classes and in their students' work going forward.**

How might instructors approach student use of generative AI?

We suggest that there are two ways instructors can approach student use of generative AI:

1. Embrace and Enhance
2. Discourage and Detect

Embrace and Enhance

The good news is that many of the proven teaching and assessment techniques that worked in a pre-generative AI world still work in a world where any student with a cell phone and a generative AI account can create walls of academic(-sounding) text.

USC's Center for Excellence in Teaching (CET) recently published a guide titled "[Using AI text, image, and music-generating tools in your courses](#)" that includes helpful ideas for incorporating AI-generators and AI-generated content in your course, including evaluating and critiquing AI-generated content (including interrogating the content for biases) and asking students to create rebuttals. Like our recommendation that students should use generative AI to create, analyze, and evaluate new concepts and ideas that inspire them to generate their own academic work, CET

recommends having your students use AI generators to brainstorm ideas, formulate and iterate question prompts, and refine responses, adding that you should

Frame using AI tools as something to build upon. Remind students of the best way to use these tools in their discipline, such as for idea generation, essentializing, brainstorming, or gathering information about the typical understanding of a topic. All uses of AI tools should be supplemented with appropriate evidentiary support and reflection.

Some students may lack the foundational knowledge to understand why or how AI-generated content is inaccurate. This presents an excellent teaching opportunity for you to demonstrate for your students generative AI's strengths and weaknesses.

CET also offers several suggestions on designing assignments and assessments in the age of AI generators, including

- Asking more nuanced questions, beyond simple definitions and common comparisons, related to the course text, articles, media, or activities that may be unknown to or beyond the capabilities of current AI generators,
- Having students complete assignments and assessments during class time,
- Requiring students to submit drafts of their papers or projects before they submit their finished work, and
- Augmenting written papers with additional oral presentations, concept maps, group work, or case studies so that students can further demonstrate their understanding of the course objectives.

If you are going to allow your students to use generative AI as a source in their academic work, you may want to consider requiring your students to clearly disclose the role generative AI played in formulating their work. OpenAI also has [recommended language](#) that you may want to adapt and adopt:

The author generated this text in part with GPT-3, OpenAI's large-scale language-generation model. Upon generating draft language, the author reviewed, edited, and revised the language to their own liking and takes ultimate responsibility for the content of this publication.

Discourage and Detect

Some educators have asked how they can block student use of ChatGPT (see [New York City Department of Education](#) and [others](#)). We suggest that that would be akin to standing on the shore hoping to block a rising tide. Generative AI is here and is not going away. That said, **if you wish to discourage student use of generative AI, let your students know this expectation both in your syllabus and in class.** The guidelines listed at the beginning of this document should serve as a good starting point.

You may also consider adapting and adopting something like [Science Journals' artificial intelligence \(AI\) policy](#):

Text generated from AI, machine learning, or similar algorithmic tools cannot be used in papers published in Science journals, nor can the accompanying figures, images, or graphics be the products of such tools, without explicit permission from the editors. In addition, an AI program cannot be an author of a Science journal paper. A violation of this policy constitutes scientific misconduct.

Another approach is [Nature Journals' large language model guidelines](#):

Large Language Models (LLMs), such as ChatGPT, do not currently satisfy our authorship criteria. Notably an attribution of authorship carries with it accountability for the work, which cannot be effectively applied to LLMs. Use of an LLM should be properly documented in the Methods section (and if a Methods section is not available, in a suitable alternative part) of the manuscript.

In class, you can discourage student use of generative AI by encouraging students to use other tools and techniques instead. In fact, many of the teaching and assessment techniques [recommended by the CET](#) – ask more nuanced questions, have students complete assignments and assessments during class, require students to submit drafts, augment written papers with other activities that demonstrate students' content knowledge – work equally well if you want to embrace and enhance or discourage and detect student use of AI generators.

However, we do not consider requiring handwritten assignments-to be an effective technique to discourage or detect. Students who have academic accommodations may need to use assistive technology in your class. Prohibiting student use of technology or requiring that all students handwrite their work may create a situation that singles out students with accommodations if they can use technology while others cannot.

As for detecting if students' typed academic work contains AI-generated text, the best way is to honestly grade that work and look for errors. Some, if not most, contemporary AI-generated text is [specifically designed to appear plausible and persuasive but is not necessarily accurate](#). OpenAI cautions that "[ChatGPT sometimes writes plausible-sounding but incorrect or nonsensical answers](#)." Because of this, current generation AI text generators have the propensity to make easily discernable, fundamental mistakes that a subject matter expert or even an 'experienced novice' would never make (see "[CNET's Article-Writing AI Is Already Publishing Very Dumb Errors](#)", "[Why Meta's latest large language model survived only three days online](#)", "[ChatGPT Needs Some Help With Math Assignments](#)," and "[Alphabet shares dive after Google AI chatbot Bard flubs answer in ad](#)" for some recent examples). Even if students rewrite AI-generated text to avoid detection, the structural and factual errors in current-generation AI-generated text should remain. But those detectable weaknesses may not last forever, especially with future generations of AI text generators.

Another option is to use a 'similarity detector' (often mistakenly called a 'plagiarism detector') like Turnitin. Turnitin, which is available in every USC Blackboard course, scans submitted text and highlights any phrases or paragraphs that are identical or closely like other sources known to Turnitin. Since some AI text generators have been known to copy from other sources without

attribution – see "[CNET's AI Journalist Appears to Have Committed Extensive Plagiarism](#)" – tools like Turnitin *may* detect AI-generated text. Or not. Turnitin has announced that it will roll out additional, built-in [AI writing and ChatGPT detection features](#) soon.

Open AI, makers of ChatGPT, recently released their own AI Text Classifier tool at <https://platform.openai.com/ai-text-classifier> that "predicts how likely it is that a piece of text was generated by AI from a variety of sources." The tool currently "requires a minimum of 1,000 characters, which is approximately 150 - 250 words." Princeton student Edward Tian also developed a popular tool named GPTZeroX at <https://gptzero.me/> that "highlights portions of text that are most likely to be AI generated" and allows you batch upload files "in PDF, Word, and .txt format."

One word of caution: Students may be able to circumvent these tools. As Melissa Heikkilä noted in an article in the [MIT Technology Review](#) in December, "[b]ecause large language models work by predicting the next word in a sentence, they are more likely to use common words like 'the,' 'it,' or 'is' instead of wonky, rare words." With this in mind, Michael Webb at the National Center for AI in Tertiary Education found a simple [technique to fool many ChatGPT detectors](#), including GPTZeroX:

1. Have the AI text generator create some text.
2. Then ask the AI generator to "Use the word 'the' less"

[We tried this technique](#) and were able to 'fool' both OpenAI's AI Text Classifier and Tian's GPTZeroX into claiming that text copied straight from ChatGPT was most likely written by a human and not AI.

Conclusion

The age of AI-generated content is upon us. In a little over two months, OpenAI's ChatGPT has created a 100 million user market for AI-generated text content that did not exist at scale last fall. And ChatGPT is just the first in a wave of generative AI tools that will soon become ubiquitous. Because of that, rather than focusing solely on ChatGPT, we strongly recommend that instructors instead focus on what role they would like all generative AI tools to play in their classes and in their students' work going forward – either by embracing and enhancing or discouraging and detecting students' use of this technology.

Additional Resources

- USC Center for Excellence in Teaching [AI Generators in the News](#)
- EDUCAUSE [QuickPoll Results](#)
- MIT Technology Review – [Artificial Intelligence](#)
- The Register – [Artificial Intelligence](#)
- [National Centre for AI in Tertiary Education](#)
- Santa Fe Community College Library's [Repository of Information about the Impact of ChatGPT on/in Higher Education](#)