WHAT ARE SOME STRATEGIES FOR TEACHING WITH LLMs MOVING FORWARD?

We offer four principles to guide you as you decide how to teach with AI in the classroom: 1) favor context over content, 2) favor process over product and writers over writing, 3) expand modes of communication, and 4) treat AI as a multiplier. We also share possibilities for assessing work in a classroom that involves AI.

favor context over content	favor process over product, writers over writing
orient assignments & teaching to *situations* of communication: writers, audiences, media, genres, purposes require students to analyze/target specific audiences for their work ask students to study the "discourse communities" that value certain kinds of writing—to understand, describe, and write to specific specialized audiences do not assign information-heavy "research papers to no one" assign writing that asks students to make personal connections with your class or other classes teach students to develop metacognitive habits. Require students to: *write about what they hope to learn* *set goals for projects / course* *write about professional communities they will join* *write about communities they belong to now* *reflect on how content is meant to be applied* *reflect on what they learned while completing writing projects*	create opportunities for students to experience the creative process (and hold them accountable for it): coming up with ideas, planning a writing task, gathering information, making outlines or initial drafts, getting feedback, revising, and reflecting ask students to talk about their work with others—peers, peer tutors, TAs, you—and explain the decisions they made as writers use peer reviews, teacher-student conferences, presentations, writing center visits, etc to draw out students' experiences with their writing process ask students to write process essays to describe the steps they took to produce writing and what they learned as a result scaffold longer assignments into smaller parts and deliverables ask students to use GPT during different parts of the writing process (brainstorming, planning, drafting, revision) and then reflect on the experience emphasize what endures about the writing process no matter what tools are used: even if you're using AI, you still have make judgments how to generate, organize, and present ideas encourage students to consider the affordances of a variety of the writing tools available to them: AI, word processors, pen and paper, brainstorming strategies, revision strategies, peer readers, etc.

expand modes of communication	treat AI as a *multiplier*
go beyond the double-spaced word-processed paper stop assigning content-heavy take-at-home short-answer essays that lean more towards *knowledge-telling* rather than *knowledge-transforming* have students write by hand in class (but consider accessibility concerns) increase chances for students to develop interpersonal competencies, including working with groups, asking good questions, collaborative presenting, etc. assign presentations, multimedia projects (audio, video, web and social media), group collaborations, experiential components require students to interview people, gather and analyze data, or do original research assign impromptu, in-process oral presentations experiment with new genres: storytelling, public writing, case studies, role play	expect more from student writing demand clearer, cleaner, more professional writing expect students to be more aware of strengths, weaknesses of a text, to know the difference between the output of a bot and the creative power of human writers expect more stylish writing; teach students advanced style (specialized terms, sentence variety, transitions and *non*-transitions, data design, integrating sources creatively, employing humor or metaphors or storytelling, varieties of professional response, etc.) expect students to fact check their work ask students to revise and fact check AI generators' work give students examples of professional work to emulate encourage students to *compete* with AI for the best response teach students "prompt engineering" to generate work, using AI as a collaborator; encourage students to refine their prompts and request revisions until they are happy with what the machine has produced create assignments that require competencies that have not been mastered by AI write a paper with AI and a separate "slow" paper without AI and reflect on the benefits of writing with and without AI

assessment
assign and collect handwritten writing such as notecards for fast, informal writing assess students' metacognitive, reflective writing about their learning goals and context require students to refer to class discussions, lectures, class "inside jokes," and other live insights in their work get creative about assessment: assign portfolios of curated work; use "ungrading" practices like grade contracts; assign critical reflections that require students to evaluate what they have written ask students to evaluate—in writing or speech—things the machine can do: writing choices, writing for specific audiences, writing in genres, responding to assignment descriptions and rubrics

ask students to evaluate–in writing or speech–things the machine can't do (yet): fact-check information, evaluate sources, build authentic relationships with readers ask students to evaluate the value of writing they produced with AI ask students to evaluate their experience writing with AI

HOW DO LLMs INFLUENCE INFORMATION LITERACY?

Recently OpenAI, the company that created ChatGPT, reported on an analysis performed on ChatGPT-4, their most recent model (as of this writing), to determine the range of safety risks that come from using it. The list of risks is sobering. LLMs like ChatGPT can—and have—presented or invented false information, taught people how to make weapons, tricked humans into thinking an AI is human, created propaganda for hate groups, written threatening emails upon request, and produced other shocking text based on human prompts.

Of great concern to educators is the tendency of LLMs to invent (often called "hallucination") information that is untrue (misinformation) but convincing; of equal concern is the prospect of bad actors using LLMs deliberately to produce false and damaging information (disinformation). Faculty have discovered, for example, that when we ask LLMs to produce sources for scholarly bibliographies, some of the sources do not exist, even if the answer given seems convincing and authoritative. (For more information from OpenAI on educator concerns, go here.)

As students use LLMs in their writing and research, they must learn to

- Study the strengths and weaknesses of LLM responses to academic inquiries
- Develop information literacy competencies whose frameworks have been developed by professional associations
- Verify information provided by LLMs by checking the sources provided and checking them against other credible sources
- Prompt LLMs to provide sources to support AI-generated assertions
- With instructor guidance, cite texts generated by LLMs like ChatGPT