Using AI in your writing process

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Writing Specialist
Academic Success Center
(she/her/hers)

✓ Learning Support
✓ Writing Support
✓ Tutoring Program
The plan

• Define generative AI
• AI tools
• Prompts
• Writing process
• Attribution & citation
• Publishing
• Limitations
Learning objectives

• Write effective prompts for generative AI tools
• Use generative AI ethically and effectively during the writing process
• Determine appropriate disclosure and/or citation for generative AI use
• Consider the ethics and practicalities of using generative AI
Define generative AI
Generative AI

“computer systems that can produce, or generate, various forms of traditionally human expression, in the form of digital content including language, images, video, and music”

(Byrd et al, 2023)
Large Language Models (LLMs)

“subset of generative AI used to deliver text-based formats like prose, poetry, or even programming code” (Byrd et al, 2023)
What to consider

• Purpose
• Deliverable
• Work flow
• Open source
• Accuracy and precision
• Cost
Prompts
Create specific prompts

- Be precise & clear
- Provide quality input (data to analyze)
- Describe context (role, situation, audience)
- Specify tasks, process, output/deliverable
- Refine responses (if needed)
You are an easygoing graduate professor in a Rhetoric and Composition program. Provide general feedback on the introduction of this article I've written:

Bartholomae's "Inventing the University," published in the Journal of Basic Writing in 1986, was a reaction to the focus of composition studies on writing process during the 1970s and 1980s. In this article, Bartholomae advocates for the examination of the product of student writing, both in terms of theory and research method. Though it does not seem that it was Bartholomae’s intention, the article gave rise to a debate about academic writing, with Bartholomae, a self-proclaimed cognitivist, on one side and Peter Elbow, an iconic figure in the process movement, on the other. The other articles examined in this trace—"Writing with teachers: A conversation with Peter Elbow" (Bartholomae, 1995), "Being a writer vs. being an academic: A conflict in goals" (Elbow, 1995), "Interchanges" (Bartholomae et al, 1995), and "Inventing the university' at 25: An interview with David Bartholomae" (Bartholomae & Schilb, 2011)—span the 25 years following the publication of "Inventing." These pieces, however, do not only reveal the differences in Bartholomae and Elbow’s conceptions of what academic writing is and how it should be taught, but also the similarities in their ultimate goals for students.
Your introduction sets a clear and engaging foundation for your discussion of Bartholomae’s “Inventing the University” and its broader implications in composition studies. Here are a few points of feedback to refine and strengthen it:

• Clarify Context and Purpose: It would be helpful to briefly explain what "composition studies" and the "process movement" entail, especially for readers who might not be familiar with these terms.

• Smooth Transitions: Some of your sentences could flow more smoothly into each other. Consider using transitional phrases to guide the reader through your argument more seamlessly.

Provide feedback on the same introduction, but now be really nitpicky about how it needs to be improved.

Refinement!
Rules & ethics
Writing process
Using AI in the writing process: Early stages

• Refine research questions
• Identify additional search terms
• Claims/thesis statements/central arguments
• Outline from zero draft
• Body paragraph structure
• Topic sentence options
• Summaries, paraphrases of sources
• Generate models of writing (w/ caution)

Any of these could be disallowed
Any of these might require some kind of attribution
Using AI in the writing process: Later stages

- Receive feedback on a draft
- Evaluate for audience appropriateness
- Summarize for abstract
- Identify keywords/search terms
- Data analysis & visualization
- Review data for errors and bias
- Translation
- Bullet points for lecture, presentation

Any of these could be disallowed

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• Smooth Transitions: Some of your sentences could flow more smoothly into each other. Consider using transitional phrases to guide the reader through your argument more seamlessly.

• ...
Results of request for “general feedback”

• Provided a rewritten version using its feedback, even though I didn’t ask for that
• Identified 5 areas for improvement
• Provided general guidance on content and structure
• Did not provide many examples
Provide feedback on the same introduction, but now be really nitpicky about how it needs to be improved.
Your introduction is well-written and provides a clear overview of the topic. However, there are several areas where you can make improvements to enhance clarity, flow, and depth. Here are some nitpicky suggestions:

- **Title Formatting:** Ensure consistency in how you format titles. For instance, "Inventing the University" is in quotes while journal titles like the Journal of Basic Writing should be italicized.

- **Clarity and Specificity:**
  - "Reaction to the focus of composition studies on writing process during the 1970s and 1980s" is somewhat vague. Specify what aspects of the writing process were focused on and why this was significant.
  - Instead of "examination of the product of student writing," clarify what you mean by "product" and how this contrasts with the writing process.

- **Grammar and Punctuation:**
  - Use a comma before "published in the Journal of Basic Writing in 1986," to avoid a run-on sentence.
  - ...
Results of request for “nitpicky” feedback

• Provided a rewritten version using its feedback, even though I didn’t ask for that
• Identified 9 areas for improvement
• Mostly addressed sentence-level mechanics
• Provided multiple examples to show me how to change
Create an **outline** for a **30-minute presentation on this paper**. This is for a job talk, so the **audience** will be colleagues at a university who I do not know and who are deciding whether or not they want to hire me. This means they will likely be familiar with these scholars but perhaps not with the specifics of their ideas or work. I also need to make sure it's clear how what I'm discussing is relevant to the scholarship I'll be expected to perform as a tenure-track faculty member (if they hire me).

*David Bartholomae’s “Inventing the university,” published in the Journal of Basic Writing in 1986, was a reaction to the process movement in composition studies during the 1970s and 1980s...*
Presentation Outline: Overlooked Similarities and Incompatible Differences in the Bartholomae/Elbow Debate

• Introduction (5 minutes)
• The Bartholomae/Elbow Debate: Overview (5 minutes)
• Unsung Similarities (8 minutes)
• Irreconcilable Differences (8 minutes)
• Relevance to My Scholarship and Teaching (4 minutes)
• Conclusion (5 minutes)
• Q&A Session (3 minutes)

Ok, but this is 38 minutes...
## How different styles cite GenAI

<table>
<thead>
<tr>
<th>Style</th>
<th>Format</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APA</strong></td>
<td>Author. (Date). <em>Name of tool</em> (Version of tool) [Large language model]. URL</td>
<td><em>OpenAI</em>. (2023). <em>ChatGPT</em> (Mar 14 version) [Large language model]. <a href="https://chat.openai.com/chat">https://chat.openai.com/chat</a></td>
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| **CMS** | Author, Title, Publisher, Date, url for the tool. | Text generated by ChatGPT, OpenAI, March 7, 2023, https://chat.openai.com/chat.  
## Citation vs. disclosure

<table>
<thead>
<tr>
<th><strong>Citation</strong></th>
<th><strong>Disclosure</strong></th>
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<tbody>
<tr>
<td>• Discloses when something isn’t the author’s original idea</td>
<td>• Describes AI’s role in the creation of the text</td>
</tr>
<tr>
<td>• Gives credit to whoever’s idea it actually was</td>
<td>• Provides prompts, complete chat logs</td>
</tr>
<tr>
<td>• Allows the reader to follow a scholarly thread</td>
<td>• No way for reader to follow the thread</td>
</tr>
<tr>
<td>• Situates our own ideas in a larger conversation</td>
<td>• Might occur in methods, acknowledgments, appendices</td>
</tr>
</tbody>
</table>

Bedrick (2024)
Cover your bases

- Follow attribution/citation/disclosure policies
- Thoroughly track and document GenAI use
- Read sources cited by AI yourself
How publishers are using AI

• Not sole decision maker (myth of “automatic rejections”)
• Suitability scores for selecting a journal (if they oversee many)
• Copyediting scores
• Identifying plagiarism, paper-mills
• Conflicts of interest
• Proposal Classifier (NSF)
• Resubmit Checker (NSF)
• Vocabulary Explorer (NSF)
• Suggest Reviewer Dashboard (NSF)
## Some publisher GenAI policies

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Allows generated text w/ documentation</th>
<th>Allows generated images w/ documentation</th>
<th>Grants authorship to GenAI</th>
<th>Allows reviewers to use during peer review process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elsevier</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>JAMA</td>
<td>Yes (Methods, Results, Discussion, Acknowledgments)</td>
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<td>No</td>
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<tr>
<td>NIH</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
<td>No</td>
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<tr>
<td>NSF</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
<td>allows approved AI tools for reviewers</td>
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<td>PLOS</td>
<td>Yes (Methods, Acknowledgments)</td>
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<td>No</td>
<td>No (except for improving reviewer’s report)</td>
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<td>Yes (Methods, Results, Discussion, Acknowledgments)</td>
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<td>No</td>
<td>No</td>
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<td>Science</td>
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<td>Springer Nature</td>
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<td>Wiley</td>
<td>Yes (Methods, Acknowledgments)</td>
<td>?</td>
<td>No</td>
<td>No (except for improving reviewer’s report)</td>
</tr>
</tbody>
</table>

- **Author is responsible; mostly excludes spell, grammar check.**
- **Confidentiality concerns**
HONOR SYSTEM

As of right now, there is no AI detection software with a high accuracy rate.
Limitations
You know what the biggest problem with pushing all-things-AI is? Wrong direction. I want AI to do my laundry and dishes so that I can do art and writing, not for AI to do my art and writing so that I can do my laundry and dishes.
Limitations

• Purposely opaque
• Undiscerning
• “Hallucinates” facts, sources
• Risk of accidental plagiarism
• Knowledge cutoff
  • ChatGPT 4, 4o = Dec. 2023, May 2023
• Highly biased
• Timesaving?
• Writing improves critical thinking
• Security, personal data concerns
• Labor, environment concerns
Using Generative AI for Scientific Research

A Quick User's Guide

(Last updated: 1/8/2024)

This is a guide on how Generative AI can be used in multiple aspects of your research, based on published guidelines by journals, funding agencies and professional societies, as well as our own assessment of Generative AI’s benefits and risks. Generative AI is a rapidly evolving technology, and as a society we are all learning to cope with it. We will update this guide as new information becomes available.

If you have thoughts about what to add to this guide or how to improve it, please email midas-research@umich.edu. We look forward to collaborating with our research community to develop this guide for the community.

Using Generative AI for Writing

Can I use Generative AI to write research papers?

Can I use Generative AI to write grants?

Excellent resource
ChatGPT. What is the actual cutoff date for GPT-4? https://community.openai.com/t/what-is-the-actual-cutoff-date-for-gpt-4/394750/12


Online Writing Lab (OWL) at Purdue. (n.d.). Publisher policies and requirements. https://guides.lib.purdue.edu/c.php?g=1371380&p=10135076


Smith, C. (May 17, 2024). GPT-4o is the best ChatGPT model, but it has one weakness. BGR. https://bgr.com/tech/gpt-4o-knowlege-cutoff-is-worse-than-chatgpts-gpt-4/


Swaak, T. (2023, September 27). “We’re all using it”: Publishing decisions are increasingly aided by AI. That’s not always obvious. Chronicle of Higher Ed. https://www.chronicle.com/article/were-all-using-it-publishing-decisions-are-increasingly-aided-by-ai-thats-not-always-obvious

Terry, O.K. (2023, May 12). I’m a student. You have no idea how much we’re using ChatGPT. Chronicle of Higher Ed. https://www.chronicle.com/article/im-a-student-you-have-no-idea-how-much-were-using-chatgpt


