CHAPTER 26.

AI CAN WRITE LIKE AN EXPERT IN ANY DISCIPLINE ✨ *AI CAN HELP YOU UNDERSTAND HOW EXPERTS USE WRITING*

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You've been having a hard time writing your chemistry report, and the deadline is creeping up.

After finishing your experiments, you hit a wall on how to articulate everything in writing. Then, you remember hearing that you can just plug the data into ChatGPT and it can produce a perfect scientific report—right? Because generative artificial intelligence (GenAI) can write like an expert in any discipline?

Nope.

Academic writing is research-supported writing by disciplinary experts like agronomists, economists, and literary critics. Such disciplinary writing requires both the appropriate conventions (surface-level elements like the right words or citation system) and appropriate interpretations of evidence—all buoyed by context. In other words, academic writing requires situated expertise. You may not feel like an expert now, but you can learn to use writing in expert ways over time.

In contrast, GenAI tools like ChatGPT do not have situated expertise. Their "knowledge" is decontextualized data scraped from the internet. To say that AI can write like an expert is a "bad idea" because AI cannot participate fully in a community of experts.

Expertise, according to Harry Collins and Robert Evans (2009), is "a matter of socialization into the practices of an expert group" (p. 3). Communities of experts use writing to make their ways of knowing, doing, and being visible (Carter, 2007). When experts write, they create and defend interpretations of situations, data, or texts, remaining mindful of their fellow researchers' likely

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questions and objections (Hyland, 2004). Researchers both practice and demonstrate their participation in a community of experts through writing. GenAI does not. At best, it can develop a partial picture of disciplinary context based on textual examples (as in retrieval-augmented generation AI systems). This contextual picture is not the same as community participation.

In this chapter, we discuss how "writing like an expert" requires more than the polished prose and appropriate conventions that tools like ChatGPT can produce. Through our own experimentation, we analyze the quality of AI-produced outlines and parts of research articles, comparing these products to expert practices as established by writing studies researchers. Based on what we find, we encourage writers—especially students—to develop and claim their own expertise through disciplinary writing, offering some strategies for ways tools like ChatGPT might help.

DISCIPLINARY EXPERTISE IN ACADEMIC WRITING

"Academic writing" varies by discipline and is not monolithic. As Ken Hyland (2004) describes it, "successful" academic writing depends on the writer "[embedding] their writing in a particular social world" where they write using an "approved discourse" that aligns with disciplinary values (p. 1). Think back to that chemistry report. A chemist needs to interpret data collected in highly controlled laboratory conditions because experts see that as an "approved" source of data. Meanwhile, historians need to provide extensive background context in a paper to represent established debates on historical topics. They're both participating in a social world, just in different ways.

Of course, there are *some* similarities in how disciplines might approach a piece of research writing. Linguist John Swales (1990) coined the "Create a Research Space" (CARS) model, which describes three rhetorical "moves" academic researchers typically make in the introductions of their research articles: 1) establishing a territory, 2) establishing a niche, and 3) occupying a niche. Still, experts use these "basic" moves in different ways, depending on the social world of their field.

For example, to establish a niche, a researcher can counter-claim previous research by directly arguing that another researcher was incorrect, or they can indicate a gap and describe how they will research what others haven't yet studied. The correct approach depends on the researcher's expert knowledge of which appeal would be most effective for the social situation, including the discipline, the publication venue, the timing of the publication, and even their reputation and relationships with other experts who will review the draft. When using these disciplinary conventions, researchers tap into the expertise they have cultivated

through their training and social interactions (including written interactions) with other experts in a professional community.

There are thus some clear differences in academic writing across disciplines. These differences lie not only in the surface-level indicators like jargon but also in the way that researchers interact with the information (e.g., how much to cite) and present it to other audiences (e.g., their tone). In what follows, we illustrate how you as a student might use ChatGPT to help you enter a community of experts and learn about its typical ways of writing—without relying on the tool to write for you.

HOW AI TOOLS CAN SUPPORT EMERGING EXPERTS' WRITING

To gauge expert ways of writing scholarly research, we prompted ChatGPT-4o to "write a research article outline" for two different courses, philosophy and biology. We used the following template for the prompt:

You are an undergraduate senior enrolled in a capstone course for your major, [insert major]. You have been assigned to write a research article about a [question, hypothesis] relevant to the field. To help in this process, you should create a general outline for an effective research article in [major]. You do not need to fit in specific content at this stage. Instead, focus your outline on the most common organizational structures and moves for a research article in the field.

After receiving both outlines, we identified elements that seemed to be important features of each, given our experiences working with researchers in those disciplines:

- Philosophy: Introduction, literature review, argumentation, analysis and discussion, conclusion, references, and appendices;
- Biology: Title, abstract, introduction, materials and methods, results, discussion, conclusion, acknowledgments, references, and supplementary materials.

ChatGPT also correctly identified some of the distinctive ways each discipline represents knowledge (Carter, 2007). For example, philosophy focuses on research from sources, and ChatGPT included subsections like "Address potential objections or counterarguments." In contrast, biology focuses on empirical research; ChatGPT included subsections like "Provide a thorough description of the experimental procedures, protocols, and statistical analyses." We received roughly similar results through multiple iterations of this prompt, highlighting how they may be useful to emerging experts like you who are looking for a head start.

However, you will also need to exercise some caution and verify what you learn with other experts (like a professor) because some of ChatGPT's

suggestions were superficial or wrong. For example, in the philosophy outline, ChatGPT suggested including an appendix with "supplementary material, such as raw data, detailed analyses, or extended arguments." Appendices are much more common in scientific fields and nearly nonexistent in philosophy. The final section of the biology outline read, "Final Thoughts: Provide any concluding remarks or insights." Without more detailed prompting, this recommendation does not indicate what qualifies as a satisfactory concluding idea in the biological sciences. We suspected this was because ChatGPT does not actually participate in the social world of either discipline and we did not provide clear enough instructions to help it recognize those conventions.

To get more detail, you may need to ask GenAI platforms to explain not only *what* might go into an outline for these disciplines, but also *why* certain sections exist and *how* a researcher might go about writing them. We prompted ChatGPT to rewrite the outline with statements in each section describing "*why* each item should be included" and "*how* a [researcher in the field] would accomplish this in writing, focusing on the kinds of language they would use: keywords, phrases, stylistic considerations, etc."

At first, ChatGPT elaborated only briefly on its recommendations for a satisfactory conclusion, writing, "[Leave] readers with a clear understanding of [the research's] significance" and "focus on the most impactful takeaways and their relevance to the field." We still wondered how a researcher might know and communicate the significance to the field, so we asked for clarification. It finally suggested several useful strategies, including statistically significant results, replication or validation of prior research, and intellectual advancements. It even included template examples, such as "By identifying [specific mechanism], this research provides insights into [broader field or problem]." These much more concrete suggestions could prove invaluable for students who want to become more fluent at communicating with a community of experts.

We saw similarly useful results for other sections of the research article, including the introduction. Recall that Swales's CARS model involves establishing a territory, establishing a niche, and occupying that niche. Compare this model to ChatGPT's reasoning for introductions in philosophy. "Philosophers," it says, "begin with context to help readers understand the significance of the issue." To do so, it suggests, "Use precise and formal language … like 'Historically, philosophers have debated …' and 'This issue is significant because …' [to] help establish context." These statements resemble the "establish a territory" move in Swales's CARS model, in which researchers either claim that the research is central to the discipline or make generalizations about the topic at hand before reviewing previous research. In the biology outline, ChatGPT recommends, "Outline the aims and objectives of the study," including "the specific

goals and intended outcomes of the research" through phrases like "'The objectives of this study are to …'." This recommendation resembles the "occupying a niche" move in the CARS model, in which the researcher will describe the purpose of the current study.

So ChatGPT can produce passably good outlines that include distinctive disciplinary conventions, and it can explain the purposes of those conventions in ways that resemble what experts like Swales say they tend to look like. The trick is knowing *what to ask for*, and you will gain that knowledge the longer you spend in a social world with a community of experts.

Put differently, ChatGPT can't participate in the discipline for you. The path toward gaining disciplinary expertise entails learning to write like an expert. A large part of the writing process is knowing how experts examine and interpret evidence, as well as knowing enough about the field to decide exactly how to intervene in a disciplinary conversation. There is more to expertise in academic writing than "correct" surface-level features: in class and through practice, you learn how to participate in a community of experts who think and communicate in certain ways. Text generators do not learn this way. Solely relying on these generators would undermine your own learning, as college is not *only* about completing final products but also being able to apply skills based on *gaining expertise in a community.* GenAI can point you in useful directions, but it cannot walk the path for you. (For more on these ideas, see Lesh; Alexis & Cassidy; Anson & Cole; and Helberg, all in this volume.)

INCORPORATING AI TOOLS AS ASSISTANTS, NOT REPLACEMENTS

In sum, GenAI tools themselves *cannot* perfectly achieve disciplinary expertise in academic writing. There are still places where AI tools could help you write in the disciplinary ways expected in college and beyond. ChatGPT might alert you to disciplinary writing conventions as we have demonstrated here, but you should cross-check and maintain your own voice, perspective, and interpretation as you go along. You can start with the outline ChatGPT provides you and then check that against articles you read in class. You can ask what parts from ChatGPT's recommendation clash with the formats you've seen previously. Those comparisons will help you develop a mindful awareness of writing conventions and enable you to participate in the classroom community.

In whatever course you're taking, remember that tools like ChatGPT might help you identify *some* important disciplinary conventions that might be expected of you, but that they won't actually help you *gain expertise* in that discipline if you let it write for you. That part is entirely up to you, and learning how to

be in a professional community is useful for your life after college. If you have aspirations of being a leader in your career, then it is vital that you understand the role writing can play in helping you get there.

You earn expertise through participation in your courses with experts in your field. It can be tempting to want to outsource such work to a GenAI tool, but if you put in the work of writing your own ideas and interpretations in light of other (human) readers, you will better position yourself to become an expert yourself.

REFERENCES

Alexis, C., & Cassidy, T. M. (2026). AI output is neither social nor rhetorical: Human-AI collaboration is a complex social and rhetorical practice. In C. Basgier, A. Mills, M. Olejnik, M. Rodak, & S. Sharma (Eds.), *Bad ideas about AI and writing: Generative practices for teaching, learning, and communication*. The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2026.2777.2.14

Anson, C. M., & Cole, K. (2026). Generative AI does all the work for the writer: Writing with AI requires human rhetorical agency. In C. Basgier, A. Mills, M. Olejnik, M. Rodak, & S. Sharma (Eds.), *Bad ideas about AI and writing: Generative practices for teaching, learning, and communication*. The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2026.2777.2.15

Carter, M. (2007). Ways of knowing, doing, and writing in the disciplines. *College Composition and Communication, 58*(3), 385-418.

Collins, H., & Evans, R. (2009). *Rethinking xxpertise.* The University of Chicago Press.

Helberg, A. (2026). AI writing tools can "think": Human writers are always the real "thinkers." In C. Basgier, A. Mills, M. Olejnik, M. Rodak, & S. Sharma (Eds.), *Bad ideas about AI and writing: Generative practices for teaching, learning, and communication*. The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2026.2777.2.20

Hyland, K. (2004). *Disciplinary discourses: Social interactions in academic writing (Michigan Classics Edition).* University of Michigan Press.

Lesh, C. N. (2026). AI can "do it all!" We have work to do, together. In C. Basgier, A. Mills, M. Olejnik, M. Rodak, & S. Sharma (Eds.), *Bad ideas about AI and writing: Generative practices for teaching, learning, and communication*. The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/PER-B.2026.2777.2.06

Swales, J. M. (1990). *Genre Analysis: English in academic and research settings.* Cambridge University Press.