



Critical Thinking and Academic Writing in the Age of Generative AI: A Call to LIS Educators and Librarians

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Generative artificial intelligence (GenAI) is reshaping academic writing, sparking both enthusiasm and anxiety across higher education. Using GenAI tools to summarize literature, suggest outlines, and draft text is becoming more commonplace, but it also raises important questions in today's academic writing: Who is the author when GenAI is involved? What counts as original work? What does learning look like when writing is generated and modified by machines? These questions are closely tied to long-standing concerns in library and information science (LIS), such as information literacy, transparency, authenticity, authorship, and ethics. These further prompt us to ask a larger question: What role should LIS educators play in preparing the next generation of library professionals to support critical thinking in academic writing, and how can librarians contribute? Critical thinking, which encompasses analysis, evaluation, thoughtful reflection, synthesis, inference, explanation, interpretation, and problem-solving, is an essential element of academic inquiry and professional practice. Bloom's Revised Taxonomy (2001) offers a useful framework for understanding critical thinking as a progression—from remembering and understanding ideas, to applying and analyzing them, and ultimately to evaluating and creating new knowledge (Krathwohl, 2002). But do these definitions still hold when GenAI tools can perform many of these tasks? Some argue that human judgment remains essential despite GenAI's expanding capabilities. For example, the *AI Ethics Learning Toolkit* emphasizes that "critical thinking—characterized by the evaluation of information, questioning of assumptions, and the formation of independent judgments—remains a uniquely human skill that AI cannot fully replicate" (Duke University Center for Teaching and Learning, 2025).

When used thoughtfully, GenAI offers many benefits for academic writing. It can function as a writing assistant by providing immediate formative feedback, improving grammar and clarity, enhancing organization, and refining the flow of arguments. GenAI tools can also support early-stage writing tasks such as brainstorming, outlining, and identifying themes in the literature. Evidence suggests that these tools are particularly effective at supporting the lower levels of Bloom's Taxonomy—helping users recall information, understand concepts, and apply ideas in structured ways—while being less effective at supporting higher-order thinking (Deep & Chen, 2025).



Concerns arise, however, when GenAI shifts from a support tool to a cognitive substitute. As Octaberlina and colleagues (2024) observe, GenAI can “create distance between the author and the intellectual process that should be occurring during academic writing.” Research increasingly points to the risks of cognitive offloading, where learners rely on AI-generated outputs rather than engaging in careful analysis, independent reasoning, and original problem-solving. Empirical research supports this: Lee et al. (2025) found that users of generative AI tools self-reported reduced cognitive effort and diminished engagement in critical thinking tasks. Consequently, an overreliance on GenAI can foster passive learning habits, generic writing, and diminished intellectual ownership. Because AI-generated text often recombines existing ideas, it may lack creativity, miss nuance, reproduce bias, or misrepresent disciplinary contexts that require human judgment to interpret and refine.

For LIS educators and librarians, these challenges also present an opportunity. Our expertise positions us to help students engage critically with GenAI tools and understand what constitutes appropriate and responsible use. Our field can help ensure that GenAI supports learning and critical thinking in academic writing by promoting AI literacy, redesigning assignments and assessments, and articulating ethical expectations for AI use.

Promoting Basic AI Literacy

LIS educators and librarians can help academic communities cultivate basic AI literacy skills. AI literacy includes understanding how GenAI systems work, how they aid learning and research, and where they fall short. For LIS educators, this means teaching students to critically review AI outputs rather than accept them at face value. Students need to learn how to evaluate the reliability, bias, and provenance of AI-generated content; recognize hallucinations and contextual gaps; and use generative tools transparently and ethically in academic settings. Frameworks such as the *AI Competencies for Academic Library Workers* (ACRL, 2025) position academic libraries as central hubs for this instruction.

Redesigning Assignments and Assessment

LIS educators and librarians can help academic communities rethink writing assignments and assessments by partnering with faculty to redesign assignments and rubrics that emphasize how ideas are formed, tested, revised, and justified, making the author’s thinking visible and strengthening critical thinking. For example, writing assignments that require reflective annotations, narratives about the writing processes used, comparative analyses of the original text compared to AI-generated text, and



iterative drafts help cultivate critical thinking skills. These approaches encourage students to explain how AI-informed suggestions were accepted, rejected, or revised, reinforcing the important role of human judgment and thinking. Assessment practices may also change to incorporate oral defenses or reflective essays. Another consideration is rewarding transparency in AI use rather than treating disclosure as misconduct.

Stating Ethical Expectations

LIS educators and librarians can help the academic community articulate clear expectations regarding what constitutes ethical and responsible AI use. They can leverage their experience of mediating between users and information systems to help students navigate the evolving and confusing rules around GenAI use and disclosure. They can help students understand how AI reshapes knowledge production itself and help faculty embed ethical guidance into instruction and assignments. Providing this guidance will help students cultivate critical judgment, ethical reasoning, and academic integrity.

As we look to the future, it is clear that GenAI will continue to transform academic writing. This presents an opportunity for LIS educators and librarians to lead by helping their communities be critical consumers of AI-generated content and thoughtful decision-makers about its use. These developments also raise persistent and evolving questions for LIS educators and libraries. How do we preserve critical thinking when AI performs cognitively demanding tasks invisibly? How should assessment be redesigned when writing is increasingly co-produced by students and GenAI tools? And if GenAI is embedded across academic work, what new forms of critical thinking must be explicitly taught? While the answers will continue to evolve as GenAI tools improve, LIS educators and librarians are encouraged to stay current and draw on their foundational LIS knowledge to actively contribute to critical conversations about the future of academic writing.



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