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Framing Your Approach to AI Instruction

Navigating Competing Interests and Shared Goals in Academic Support

Academic institutions are racing to stay relevant in the development of artificial intelligence (AI) and other emerging technologies. Librarians, in particular, are being asked to quickly upskill in order to lead workshops, offer one-shot instruction, or develop an online module.[1] Meanwhile, institutions vary widely in their stages of AI adoption, creating uneven expectations and support structures. All of these factors can leave librarians feeling unsure of where to start with AI instruction or their role in AI adoption. This challenge is compounded by the complex web of institutional support units.

Universities and colleges typically have multiple entities that support faculty, students, and researchers. They may be libraries, writing centers, research institutions, or centers for teaching and learning. When new administrative requirements emerge that affect teaching and research, it's not always clear who will take the lead in providing training and support. The rapid development of AI technology has prompted nearly every service-oriented department to reconsider its role and what type and level of support they will provide. As a librarian, I have been forced to ask: How am I developing AI instruction within an already crowded support landscape?

Framing AI Instruction through the Research Life Cycle

This year a faculty member asked me to provide instruction on AI, and I spent a long time considering how best to approach such a broad and rapidly evolving topic. As a STEM liaison librarian, I decided to frame my presentation around the research life cycle. It's a familiar structure and reflects how I support researchers in their work. Using AI as the lens, I aimed to reinforce the value of librarian expertise throughout each phase of the research process.

AI tools are often developed to address specific challenges, whether it's through machine learning, deep learning, or generative AI. The research life cycle is full of its own complexities, and many researchers are already turning to AI to help navigate them. I ultimately shaped my presentation around a guiding question: In what ways might AI tools contribute to or hinder the development of essential research skills? This question helped ground the conversation in both practical application and critical reflection.

The research life cycle begins with planning as researchers define a topic, the scope, and research goals. Researchers then move into searching, finding, and evaluating sources to gather credible and relevant information. Finally, they synthesize their findings into coherent insights and share their work through publications, presentations, or other forms

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of dissemination. Talking through the stages of the research life cycle afforded me the opportunity to discuss multiple AI tools and highlight support I currently provide to faculty, students, and researchers.

Breakdown of Instruction

In the planning phase, the challenge is clear: Defining a focused research question can be difficult, especially when the topic is broad or unfamiliar. This is where I introduced generative AI tools, particularly large language models (LLMs), to support brainstorming and question refinement. These tools help researchers analyze the structure and intent of their questions, identify key concepts and relationships, and clarify scope and purpose. While more advanced researchers may lean on disciplinary expertise, AI tools can be especially valuable for those exploring new or complex topics.

During the searching, finding, and evaluating phases, the challenge lies in locating credible sources, navigating paywalls, and assessing the reliability and relevance of information in a dynamic information ecosystem. In my instruction, I selected an AI research tool already familiar to our campus community and presented a balanced view of its capabilities. I emphasized its strengths in citation analysis and its ability to identify supporting and contrasting sources while also noting that its coverage depends on the repositories and databases it can access.

In the synthesizing and disseminating phase, the challenge is integrating diverse findings into a coherent narrative and choosing the right platform or format for sharing results, tasks that can be complex and time consuming. I highlighted how traditional tools, like citation managers, are evolving with AI integration and introduced newer technologies such as retrieval-augmented generation (RAG) tools, which support concept mapping and overview generation within a closed corpus. I also demonstrated how AI is being used in journal matching, helping researchers identify appropriate publication venues.

Through instruction, librarians can help researchers understand not just how to use these tools but also how to maintain academic integrity, transparency, and ethical awareness in the process. I wound down my presentation by shifting focus to the ethical considerations surrounding AI, an area that is both expansive and essential. I briefly addressed key concerns such as academic integrity, privacy and security, and environmental impacts. I support researchers who do work in environmental resources and sustainability, and if I don't highlight those concerns in my presentation, it feels like a disservice. I ended the presentation by providing more clarity into the roles of other organizations that provide AI research and instruction support. I pointed attendees to other campus resources and contacts who specialize in areas like course policy development, data analysis, and discipline-specific AI applications.

Call to Reflection

As you consider your own approach to AI instruction, I encourage you to reflect on your role within your library and institution. What kinds of support do you already provide to researchers? What is your subject matter expertise? Use that foundation to shape AI instruction that feels authentic to your role. For example, data librarians and OER specialists can offer highly tailored instruction by connecting AI tools to their existing areas of proficiency. By grounding our instruction in what we already do well, we can provide meaningful, relevant support in a rapidly changing landscape.

The way I see it, if we don't define our roles in the context of AI support and instruction, the work can quickly become overwhelming and may even duplicate efforts already underway in other campus units. At the same time, this moment presents librarians with a valuable opportunity for cross-campus collaboration to support shared goals.

Note

1. Sandy Hervieux and Amanda Wheatley, "Building an AI Literacy Framework: Perspectives from Instruction Librarians and Current Information Literacy Tools," *Choice* (2024).