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AI in Academia: Policy Development, Ethics, and Curriculum Design

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Abstract

Artificial intelligence (AI) has emerged as a pivotal force in modern society, significantly impacting various sectors, including academia. This paper examines the broad implications of AI, particularly Large Language Models (LLMs), and their transformative potential across educational institutions. The San Jose State University's iSchool is highlighted as a case study, demonstrating its proactive approach to integrating nascent technologies and revising curriculum competencies to address AI's influence. As AI reshapes library and information science (LIS) education, the development of new competencies, such as data privacy and ethical AI use, becomes essential. Furthermore, the ethical and societal implications of AI, including potential inequalities and biases, are explored. The response of scholarly publishing communities, illustrated by the iSchool's Student Research Journal's policies, underscores the need for adaptable frameworks to manage AI's impact on research integrity. This paper advocates for immediate curriculum design adjustments and ongoing policy reviews to ensure responsible AI integration, emphasizing the importance of equitable access and the ethical use of AI technologies.

Keywords

Artificial Intelligence (AI), Large Language Models (LLMs), AI in Academia, AI Ethics, Library and Information Science (LIS), Educational Technology, Curriculum Development, AI Competencies, Information Ethics, AI Policy, AI and Higher Education, Digital Transformation, AI-driven Education, Information Science Trends, Academic Research and AI, AI Implementation in Libraries, Ethical AI Use, AI Impact on Education, AI in Library Services, Responsible AI Use

About Author

[Odin Halvorson](#) works at the intersection of technology, creativity, and community, bridging the gap between science, the arts, and empathy. As an itinerant volunteer and community organizer, he has helped build projects for social good at both the national and local scales, with organizations such as Socrates Cafe and EveryLibrary. As a librarian and creative writer, he engages directly with the public in multiple spheres, working to foment a plurality of perspective within diversity's infinite combinations. Odin's research has been twice featured at the International Conference on the Fantastic in the Arts (ICFA). His fiction and nonfiction work has been nominated for the Pushcart Prize and has appeared online and in print in venues such as The Strand and Analog Science Fiction and Fact. He also co-founded [Round Table Writers](#), an organization dedicated to "writers helping writers".

AI in Academia: Policy Development, Ethics, and Curriculum Design

Artificial intelligence, or "AI" is absolutely a buzzword storming the sociopolitical zeitgeist, but it is also a change actor that cannot be ignored. Particularly within the academic and scholarly contexts, the ethical and responsible use of AI is key to the furtherance AI development for the common social good, and for ensuring the integrity of those institutions responsible for disseminating reliable knowledge. As this conversation is rapidly developing within the academic community, it is vital to first highlight what "AI" actually is. "AI" is a shorthand term for a vast array of interconnecting, and sometimes, competing, technologies, protocols, and methodologies (Bowman, 2023). Currently, "Large Language Models" (or LLMs) represent the brunt of what is popularly termed "AI," and this technology represents an incredible landscape for change at every level of human society (Manning, 2022). Specifically, "AI systems are constructed with computational procedures that learn from large bodies of human-authored and curated text, imagery, and analyses, including expansive collections of scientific literature" (Blau et al., 2024, p. 1). LLMs, and all forms of AI technology, are merely tools. Yet, as with any tool, the widespread use of AI carries innumerable potential consequences, and "challenge core norms and values in the conduct of science, including accountability, transparency, replicability, and human responsibility" (Blau et al., 2024, p. 1).

Across the State University system, institutions are grappling with a surge of AI use in every sector, from the student body to the faculty (Ochigame, 2019; Bin-Nashwan et al., 2023). The policies and habits that emerge from this intense period will set the stage for the conversations and decisions of the decades to come. The San Jose State University's iSchool has long served as an early adopter for nascent technologies, from Virtual and Augmented Reality ("VR" and "AR") to dramatic shifts in library function and design (Hirsh et al., 2018). As an institution focused on the practical application of library studies and other information professions, it makes sense that the iSchool would likewise be at the fore of the discussion on AI. Institutional change takes time and tends to move much slower than the pace of modern technology, yet already shifts are taking place toward new systems of operation. One such shift is the burgeoning guidance for new curriculum competencies in AI presented by Souvick Ghosh and Denise McCoy (2024), which highlights how programs across the country might begin to reassess how AI impacts their learning outcomes. Likewise, as researchers around the world grapple with AI's impact on scholarly work, policies like those crafted by the *Student Research Journal's* AI Working Group provide vital leadership in assessing and incorporating AI-influenced work (Hoffeditz, 2024).

Furthermore, as the landscape of the Internet, and of the role of LIS within an information-dense landscape rife with AI-generated material, it is more vital than ever to explore the complex patterns of opportunity and inequality created at the confluence of these new technologies. To render comprehensible the changing landscape of modernity, a careful examination of historical periods of sharp transition provides important contextual balance. This is something that Madelaine Russell highlights in her review of Christine Pawley's book *Organizing Women: Home, Work, and the Institutional Infrastructure of Print in Twentieth-Century America*. "The proliferation of print technology," writes Russell, "allowed for publications ... to link sometimes widely dispersed members. These print-centered institutions provided both White and Black women with new opportunities to participate in public life on a large scale" (Russell, 2024, p. 1). Russell then goes on to write that: "many educated middle class women, already active consumers and producers of print, recognized and acted upon the unique opportunity for personal agency and societal influence that participation in organizations

of print afforded them" (Russell, 2024, p. 1). This same process is visible on the Internet today, as the implementation and use of AI is "not always equitable, as some socially vulnerable populations do not have equal access to or use of AI, and the implementation or development of AI does not consider marginalized populations" (Yuan et al., 2023, p. 32). As with early print adoption, new technology (and access) provides new opportunities. But it can also repress, introduce new biases, reinforce old biases, and have unintended social, economic, environmental, and psychological effects (Cox, 2024). While there are vast benefits that might be had for marginalized communities from access to AI, their access to, and adoption of, this technology has systematic roadblocks in place (P.S., 2023). Furthermore, the biases inherent in these AI models themselves, which can perpetuate stereotypes, reinforce so-called acceptable norms within communication, and subtly undermine the agency of historically marginalized people the world over (P.S., 2023).

It is from this context that clarity arises for the role of AI within the LIS profession. Librarians are no longer gatekeepers for book collections but serve as resource providers for a vast array of community needs and have an inherent responsibility to "self-assess and work to remove the barriers of privilege whenever possible" (Halvorson, 2024, p. 3). The "patron experience is directed by the librarians, who are custodians of information and culture, a role that encompasses a diverse set of skills and responsibilities" (Ghosh & McCoy, 2024, p. 1). Libraries are trusted sources of reliable information, particularly within the Millennial generation (Geiger, 2017), and that trust requires continual self-reflection and evolution within library programs themselves. In order to prepare the next generation of library students for an information-dense, AI-influenced world, where issues of copyright, AI-use-ethics, and so much more are fundamental social considerations, LIS programs must take immediate steps towards curriculum design that prioritizes imparting fundamental skills in these areas.

An AI-focused revitalization of LIS educational programming is exactly what Ghosh & McCoy undertake in *Looking Ahead: Incorporating AI in MLIS Competencies*, as they consider each of the San Jose State iSchool's core education competencies and offer suggestions on how these competencies can be updated so that MLIS graduates can "lead in an AI-integrated future, enhancing their capability to serve diverse and evolving community needs" (2024, p. 1). For this project, the authors break down each of the current competencies, and then explore how they might evolve to better suit an AI-altered pedagogical and professional landscape. For example, the iSchool's "A" competency is focused on information ethics. Ghosh and McCoy highlight that while the iSchool's current offerings on "ethics focus heavily on the values of service, privacy, and intellectual freedom" LIS professionals "need an education in data privacy, algorithmic bias, and ethical data usage" that includes training in things like XAI (explainable AI) which can help make "AI decisions transparent and understandable to users and professionals alike" (2024, p. 2). They then go on to deliver clear suggestions that institutions can use to springboard real curriculum and policy changes from, such as how updating core competencies "might involve setting up guidelines for data privacy, AI interaction protocols, and regular audits of AI systems to ensure they comply with ethical standards" (2024, p. 2). Furthermore, as the information world is far from static, the authors go beyond simply updating existing competencies, and extend their proposal by "recommend[ing] new competencies that could tackle some of the challenges emerging from a highly digitized and AI-driven world" such as "Understanding and Implementing Privacy and Data Protection," "Responsible Data Science and Analytics," and "Sustainability Practices" (2024, pp. 7-8). This last competency is especially vital, as the AI-boom continues, serious risks associated with energy-inefficient technology

sectors have come to the fore of public consciousness (Li et al., 2023), and since "'green' and open-source AI models ... are more energy and resource-efficient and require less computational power" (Ghosh & McCoy, 2024, p. 9).

Alongside academic institutions, scholarly publishing communities have engaged with this difficult conversation as well and have struggled to assess and manage the impact of AI on the research field (Blau et al., 2024). In 2023, I discussed this dilemma with the *Student Research Journal's* managing editor, Marc Hoffeditz. We quickly agreed that AI presented one of the most important issues facing the journal, and that the *SRJ's* nature as a fully student-governed journal within the SJSU iSchool gave it the mobility needed to assess and act more quickly than larger institutions might be able to manage. Over the next several months, an in-house "AI Working Group" compiled a broad review of the literature and research of the evolving AI issue, then set about synthesizing that information into workable recommendations for a policy framework. It became quickly clear that such a framework needed to "establish a suite of policies to help authors make transparent choices in how these tools were utilized and disclosed in the creation of their research" (Hoffeditz, 2024, p. 1) and to ensure that this framework could evolve consistently alongside AI technology. Due to "the rate of development that artificial intelligence tools have" it became clear that, at "minimum, a biannual review [would need to] be implemented to ensure that [the] policies [remained] reflective of the current state of technology while remaining supportive of both [the] authors and editors" (Hoffeditz, 2024, p. 7). The first elements of this work were released during the College of Professional and Global Education (CPGE)'s 2024 Student Conference, after which additional feedback from the full editorial team and the *SRJ's* faculty advisor, Dr. Anthony Bernier, was solicited (Hoffeditz & Miller, 2024), and final work on the policy undertaken.

Understanding that AI use in academic settings is unlikely to be curtailed, and that automated and manual detection methods "are flawed and unreliable for broader adoption" (Hoffeditz, 2024, p. 5), the working group's approach shifted toward establishing a permission structure by which "student researchers are afforded the opportunity to responsibly experiment with new methodologies in their research development" (Hoffeditz, 2024, p. 7). Rather than continue to foist unrealistic and potentially biased punitive measures upon authors, the *SRJ's* approach is to invite *responsible* use and establish a culture that normalizes disclosure. This approach is backed up by data from the field, which shows that the "higher the academic integrity among academicians, the lower their usage of ChatGPT in their work" (Bin-Nashwan et al., 2023, p. 9). Yet the same meta-study highlighted that the use of AI tools to aid "academic work [might be an] effective way to relieve anxiety and stress associated with feeling overwhelmed by the workload" (Bin-Nashwan et al., 2023, p. 8). This suggests a possible area of future research, wherein the relationship between academic overwork contributes to negative ethical use of AI tools, but where positive social environments provide a grounding structure for responsible AI tool use.

Following the work of Bin-Nashwan et al., the principle assumption made while enacting this policy is that authors *want to be responsible* with their use of AI, and that they will attribute their AI use accordingly, as long as the methods for doing so are not unsuitably frictional in their implementation, and they are not discouraged from truthfulness through various factors (including those that are financial, professional, or punitive). This is in-line with the recommendation provided by Ghosh and McCoy, that students in LIS programs have a "professional responsibility to understand the ethical implications around [AI] use, as well as be required to make informed decisions around its increasing use in professional settings" (Ghosh &

McCoy, 2024, p. 10). Furthermore, the policies enacted by the *Student Research Journal* are aligned with the conclusions of a worldwide panel of experts convened by the National Academy of Sciences, the Annenberg Public Policy Center of the University of Pennsylvania, and the Annenberg Foundation Trust at Sunnylands to explore "rising challenges posed by the use of AI in research and to chart a path forward for the scientific community" (Blau et al., 2024, p. 1). Namely, the work done by the *Student Research Journal's* AI Working Group prefigured the suggestions made by that international panel of experts, including: "Transparent disclosure and attribution ... Verification of AI-generated content and analyses ... Documentation of AI-generated data ... A focus on ethics and equity..." and "Continuous monitoring, oversight, and public engagement" (Blau et al., 2024, pp. 1-2). This final item is of particular importance, since any static policy enacted in such a dynamic environment would be doomed to failure. As such, the *SRJ* AI Policy is intended as a comprehensive and updatable framework that can respond to changes in the AI ecosystem, be those ethical, privacy-focused, or otherwise.

Methodology

In order to provide a useful example for future authors, editors, and researchers, the policies developed by the *Student Research Journal's* AI Working Group were implemented within the creation of this article. An AI tool, OpenAI's GPT-4o, was used to analyze the contents of this article and detect the important points needed for the creation of a scholarly abstract. Furthermore, a list of keywords was generated based on the contents of this work, to help ensure widespread reach within database systems. As such, this methodology section, a proper reference, and an attached appendix containing the relevant AI prompt and response have been included.

Discussion-Conclusion

As AI-generated content becomes more prevalent, it is crucial to explore the patterns of opportunity and inequality it creates. Madelaine Russell, in her review of Christine Pawley's *Organizing Women*, highlights the historical impact of print technology on women's public participation in a way that highlights parallels with today's digital landscape, noting that new technologies offer both opportunities and risks for marginalized groups (Russell, 2024; Bin-Nashwan et al., 2023; Blau et al., 2024). AI may provide significant benefits to marginalized communities but also risks reinforcing existing biases and introducing new ones, as access to AI technology remains unequal (Yuan et al., 2023). Addressing these disparities requires careful consideration of the social, economic, environmental, and psychological effects of AI, ensuring that its implementation fosters equity and inclusivity rather than exacerbating existing inequalities.

At the fore of this evolving landscape are LIS professionals, both those working on the front lines in libraries, and those undertaking research into the effects of this increasingly prevalent technology. Libraries hold a trusted place in the heart of the American people as reliable information sources (Geiger, 2017), and must continuously reflect and evolve as the AI-era dawns. Because modern librarians serve as guides and custodians of information and culture, their training needs to also reflect equally diverse skills and responsibilities (Ghosh & McCoy, 2024). To prepare future librarians for an AI-influenced world, LIS programs must update their curricula to include fundamental skills in data privacy, algorithmic bias, and ethical AI use. This is precisely the focus of Ghosh and McCoy's work in *Looking Ahead*, where they propose updates to core competencies and suggest new ones like "Understanding and Implementing

Privacy and Data Protection" and "Responsible Data Science and Analytics" to ensure graduates can lead in an AI-integrated future (2024).

And finally, moving forward, academic institutions and scholarly publishing communities must continuously update their curricula and policies to keep pace with rapid technological advancements. This involves integrating new competencies related to AI, data protection, and sustainability into LIS programs, as suggested by Ghosh and McCoy (2024). Additionally, as the *Student Research Journal's* AI Working Group has demonstrated, it is vital that journals and research databases hurry to consider adaptable policies that encourage responsible AI use while ensuring transparency in research practices (Hoffeditz, 2024). Thus, by fostering an environment of ethical AI use and ongoing policy revision, academic institutions can prepare students to navigate and lead in a rapidly evolving AI-driven world, ensuring that technological progress offers equitable benefits to all members of society.

As this very editorial has shown, it is possible to responsibly use AI tools to engage with scholarly material, ease the academic workload, and build trust within the new information-dense landscape. But this is only the first step. Further research also needs to be undertaken to understand the use-cases for AI, and to lay the groundwork for intelligent changes to academic training in the LIS field and beyond. Changes to laws involving copyright will need to be considered, to preserve the integrity of human-created work and ensure greater ownership and agency for researchers. And, to ensure that this technology does not hasten a late-Anthropocene catastrophe, immediate work to curtail environmentally unfriendly AI technology must be implemented across the world stage.

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Appendix A: ChatGPT-4o prompt

Prompt provided to ChatGPT (contents of paper uploaded using attach function of ChatGPT-4o):
"Analyze the structure of the attached and consider which points are most relevant for a scholarly abstract."

ChatGPT response

To create a scholarly abstract from the provided text, it is important to identify the main themes, significant findings, and the context of the discussion. The abstract should be concise, highlighting the most relevant points for an academic audience. Here are the key points that should be included:

1. **Introduction to AI and its Impact:**
 - AI as a transformative force in society and its relevance in various fields.
 - Specific focus on Large Language Models (LLMs) and their implications.
2. **AI in Academia:**
 - Challenges faced by academia in adapting to AI technologies.
 - Ethical considerations and the impact on institutional policies and practices.
3. **Case Study: San Jose State University's iSchool:**
 - The iSchool's role as an early adopter of technologies like VR, AR, and now AI.
 - Introduction of new curriculum competencies in AI by Souvick Ghosh and Denise McCoy.
 - Influence of AI on library functions and education.
4. **AI's Role in Scholarly Publishing and Research:**
 - Impact of AI on scholarly work and the responses from academic journals.
 - Example of the Student Research Journal's (SRJ) approach to integrating AI responsibly.
5. **Societal and Ethical Implications:**
 - Examination of AI's potential to create opportunities and inequalities.
 - Historical parallels with the adoption of print technology and its societal impact.
 - Importance of equitable access to AI for marginalized communities.
6. **Future Directions:**
 - Recommendations for integrating AI ethics and competencies in education.
 - Need for ongoing policy adjustments to keep pace with AI developments.
 - Importance of fostering responsible AI use and maintaining academic integrity.

This abstract succinctly encapsulates the key themes and findings from the text, providing a clear overview for a scholarly audience.