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Abstract:

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Proposing a Critical AI Literacy Framework for Academic Librarians: A Case Study of a Database-Anchored GenAI Tool for Chinese Studies

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ABSTRACT

This article investigates the application of Critical AI Literacy in research strategies in the field of humanities, exemplified by a case study of CNKI SMART, an AI-driven feature in one of the leading databases for Chinese Studies, the China National Knowledge Infrastructure (CNKI). As GenAI transforms information access, libraries and librarians bear increasing responsibility for fostering AI Literacy and Critical AI Literacy among patrons to support thoughtful engagement with GenAI-generated content. Addressing this critical gap, we propose a Critical AI Literacy evaluation practice—the RACBAC Standard—combining seven Critical AI Literacy Skills to assist researchers in humanities and potentially other disciplines. The **RACBAC** Standard evaluates GenAI outputs based on **Relevance**, **Accuracy**, **Coverage**, **Bias**, **Authority**, and **Currency**. Through a case study evaluating CNKI SMART's responses to a given research question, we demonstrate the application of our proposed RACBAC Standards. Findings highlight the necessity of librarians' role in assisting researchers to cross-reference and critically examine GenAI-assisted research using the proposed six standards. This article contributes to the emerging discourse on AI Literacy and Critical AI Literacy by advancing strategies that promote responsible use of GenAI tools across academic fields.

Keywords: AI Literacy, Critical AI Literacy, Chinese Studies, China National knowledge Infrastructure (CNKI)

INTRODUCTION

In the rapidly evolving landscape of Artificial Intelligence (AI) development, the emergence of Generative AI (GenAI) technologies marks a transformative era. As GenAI becomes increasingly influential and accessible to students and researchers, librarians face new challenges in equipping patrons with the necessary AI Literacy, which is essential for effectively leveraging GenAI in teaching, learning, and research.

AI Literacy, a crucial information literacy component, refers to the ability to understand, use, and critically evaluate AI technologies (Long & Magerko, 2020). For decades, librarians have been pivotal in developing students' and researchers' information literacy skills and encouraging critical thinking in their academic endeavors. However, the advent of GenAI—characterized by enhanced information discovery, retrieval functions, and sophisticated writing and analysis capabilities—has significantly altered how students and researchers discover, evaluate, and utilize information. This shift introduces numerous questions and potential confusion. To assist patrons in efficiently navigating information and to mitigate the unethical use of GenAI tools, librarians must explore innovative approaches and frameworks to develop robust AI Literacy strategies.

Moreover, in 2024, GenAI features have been integrated into multiple academic databases, including JSTOR's interactive research tool, Semantic Scholar, Scopus AI, DBpia IDEA, and CNKI SMART. Unlike publicly available GenAI products provided by tech giants such as ChatGPT, Microsoft Copilot, and Google Gemini, academic database-anchored AI tools are trained by data within academic databases—often accessible through university libraries and other research institutions—resulting in perceptions of greater credibility and accuracy. However, questions arise regarding their reliability and utility in research processes.

This article proposes a Critical AI Literacy (CAIL) framework, which is a relativization of AI Literacy, to enhance academic research strategies. The framework is designed to assist librarians in supporting patrons' evaluation of GenAI outputs and comprises two core components: the seven CAIL Skills and the RACBAC Standard. To demonstrate the practical application of the proposed CAIL framework, we present a case study that evaluates the outputs of CNKI SMART, an AI tool embedded within a leading Chinese academic database. This study focuses on text-based GenAI and large language models (LLMs), with a specific emphasis on database-integrated AI tools for Chinese Studies. It also encourages the development and adaptation of Critical AI Literacy frameworks across disciplines and database-anchored AI tools.

LITERATURE REVIEW

I. AI Literacy

In 1974, Paul Zurkowski, the president of the Information Industry Association at that time, introduced the concept of Information Literacy (Zurkowski, 1975). By 1989, the American Library Association (ALA) formalized information literacy as the ability to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1989). This foundational definition paved the way for various global professional bodies to establish standards and frameworks tailored to their needs. Over time, librarians have played essential roles in shaping and promoting information literacy skills, which are crucial for academic community members as they navigate the complex information landscape and continue their endeavors during the digital age. These skills empower individuals in academia to critically evaluate the reliability and relevance of information, enhancing their understanding and effectiveness in teaching, learning, and research.

With the growing presence of AI applications in academia, significant research on AI Literacy has emerged over the past decade. For example, in 2022, researchers from the Institute of Medical Education at University Hospital Bonn conducted a scoping literature review on AI Literacy in higher and adult education, examining current thematic trends and recent

advancements. The review revealed that AI Literacy research is still in its early stages, with a need for clearer definitions of AI Literacy and content guidance for teaching non-experts (Laupichler et al., 2022).

Moreover, a study published in 2021 identified four key components—know and understand, use and apply, evaluate and create, and ethical issues—for fostering AI Literacy by reviewing literature published from 2016 to 2021 through the Web of Science, Scopus, ProQuest Education Collection, IEEE, and ACM digital library (Ng et al., 2021). This study clarifies various approaches to understanding AI Literacy and emphasizes the need for structured frameworks to build robust AI Literacy curricula and teaching practices.

AI Literacy spans a wide range of competencies, from foundational understanding to advanced proficiency in using AI technologies. Various frameworks are emerging across educational disciplines to define AI Literacy levels and support learners in developing these skills. For example, a conceptual framework centered on five key questions about AI—What is AI? What can AI do? How does AI work? How should AI be used? How do people perceive AI?—was proposed to identify seventeen competencies essential for developing AI literacy (Long & Magerko, 2020). However, this framework does not address potential intersections among these competencies but rather offers an initial foundation for further exploring approaches to AI Literacy in education. A research team from New Zealand conducted a Delphi study—an interactive, structured method for gathering expert insights—to design a four-level AI Literacy framework. This framework, developed with input from seventeen AI experts in industry and education, comprises four levels. The Informed Level focuses on building initial awareness and foundational knowledge of AI. The Empowered Level encourages learners to explore ideas and reflect on AI's implications. The Engaged Level urges learners to implement and embed AI concepts and tools in practical contexts. Finally, the Active Participant Level involves creating and applying AI in transformative ways. Each level addresses six categories of knowledge and skills, providing educators with a solid foundation for integrating AI Literacy into teaching (MacCallum et al., 2023). However, this study primarily discusses responses to the first level, leaving further work necessary to refine and expand upon these findings. Separately, two researchers from the UK proposed a conceptual AI Literacy framework tailored to higher education. Their framework integrates AI into the curriculum by building on existing frameworks, AI literature, and case studies from their home institution. It offers a starting structured approach for progressively developing AI skills by aligning learning objectives, teaching strategies, assessment methods, and digital tools. Additionally, it addresses a key gap by suggesting specific teaching and learning activities as well as GenAI tools that educators can incorporate into their instruction (Zhou & Schofield, 2024). However, further empirical studies are needed to validate its effectiveness.

The above-mentioned frameworks lay the foundations for curricula, courses, and learning programs in AI Literacy. Building on the extant scholarship, our project, although in the early stage, proposes a Critical AI Literacy framework for the academic research process. Critical AI Literacy, as a significant part of AI Literacy, is a concept that will be detailed in the next section.

II. Critical AI Literacy

With the rapid development of GenAI and its applications in academia, Critical AI Literacy (CAIL)—a relativization of AI literacy—is becoming increasingly essential. Drawing on the definition from an interview with Deborah Giustini, a scholar on labor, technology, society, and

knowledge creation, CAIL refers to "the skills needed to work with and through AI technologies, and the active awareness of its affordances and limitations" (Giustini & Dastyar, 2024, p. 197). It could be understood as "the reciprocal ways that human interpreters and AI can augment their capabilities through synergistic human-AI interactions (i.e., human-augmented AI and augmented human intelligence), resulting in hybrid intelligence" (Giustini & Dastyar, 2024, p. 199). In other words, AI and human intelligence are not in a binary or competitive relationship; rather, an AI-literate individual could use and develop AI responsibly and critically and foster hybrid intelligence through human-AI interactions, allowing AI to complement human cognition in meaningful ways.

To achieve CAIL, an individual not only needs to understand how AI operates but also recognize the broader, critical impacts of using and developing AI responsibly. Researchers have already underscored the importance of transparency in the data practices of AI systems, suggesting that awareness of the training data is essential for creating responsible AI and ensuring its ethical application (Worth et al., 2024). Another important aspect is data sovereignty, defined as data governance according to the legal jurisdiction of its country of origin (Flinders & Smalley, 2024). This concept is particularly relevant when addressing the ethical implications of collecting, using, and representing data from underrepresented communities, raising issues of digital colonialism (Rana, 2024). From a social perspective, the environmental impacts and the exploitation of human labor, caused by the process of AI development, are also critical areas of concern (Bender et al., 2021; Perrigo, 2023; Williams, 2022). Furthermore, from the users' standpoint, scholars have developed frameworks and indicators to increase awareness of automation bias and deep automation bias (DBA) (Goddard, Roudsari, & Wyatt, 2011; Strauß, 2021; Kupfer et al., 2023). Automation bias refers to the tendency to uncritically accept AI-based recommendations during the decision-making process (Goddard, Roudsari, & Wyatt, 2011). DBA, however, is defined as "a meta-risk of the societal use of AI entailing further risks" (Strauß, 2021, p. 45). Bias in AI systems can stem from pre-existing prejudices in development, technical issues such as poor data quality or insufficient models, and mismatches between AI design and application contexts, often due to gaps between system assumptions and user practices (Strauß, 2021, p. 45). Finally, ableism in information technology is another significant concern, as many systems are designed with an able-centered perspective, creating barriers to access for individuals with disabilities and potentially misrepresenting them in outputs (Brown et al., 2022; Lehrbaum, 2022). Consequently, CAIL encourages users to question "when, why, and to what degree" the deployment of GenAI systems is ethically justifiable (Ross, 2024, p. 12).

In sum, CAIL encompasses a set of skills and ethical awareness vital for responsibly engaging with AI technologies, particularly as these tools become more embedded in academic and research settings. By increasing the awareness of data transparency, data sovereignty, environmental impacts, biases, and ableism embedded in AI systems, CAIL enables users to navigate the complexities and limitations of AI. The above-mentioned critical skills empower individuals to achieve informed and responsible AI use. Fostering CAIL within academic contexts not only enhances research integrity but also supports equitable and conscientious technology applications in academia and beyond.

PROPOSED CAIL SKILLS

Building upon existing scholarship, we suggest seven CAIL skills that an AI-literate individual should possess. Researchers should have these skills before utilizing GenAI tools to support their research process. These skills are designed to address the specific demands of research strategies in humanities while also demonstrating broader applicability across diverse academic disciplines.

- **Advocate for Data Transparency**: AI-literate individuals acknowledge the data transparency in GenAI products, understanding that responsible AI can only be achieved through open data practices.
- **Understand Data Sovereignty**: AI-literate individuals are aware of the issues surrounding data sovereignty, which can impact AI use and development and raise concerns about digital colonialism, data exploitation, and the risks of misrepresenting underrepresented languages and cultures in GenAI-sourced materials.
- **Consider Environmental Impact**: AI-literate individuals understand that the energy demands of training GenAI models are crucial and aware of the concerns that most current models rely on carbon sources, producing significant CO2 emissions and environmental harm.
- **Acknowledge Human Labor in AI Development**: AI-literate individuals understand the concerns about the exploitation of human labor in training and refining GenAI systems and acknowledge that this labor is frequently sourced from the Global South, resulting in one of the aspects of digital colonialism.
- **Recognize Bias**: AI-literate individuals recognize the risk of automation bias and therefore should avoid fully trusting AI-generated results in decision-making, remaining aware that these outputs may contain embedded biases and errors. AI-literate individuals should approach AI results critically, understanding that human oversight is essential to mitigate potential inaccuracies.
- **Aware of Digital Ableism:** AI-literate individuals are aware of their privilege to be able to access and use GenAI and criticize the Ableism inherent in the design of AI systems.
- **Develop Ethical Guidelines**: AI-literate individuals should ensure the ethical use of GenAI, asking critical questions about a GenAI system to determine if it is ethically justifiable.

Acquiring these skills is crucial for academia in the fields of humanities to effectively integrate GenAI tools into their research processes. The following section outlines a practical approach to equip librarians with the critical evaluation standards needed to assist patrons' demands when engaging with GenAI.

PROPOSED EVALUATION METHOD FOR CRITICAL AI LITERACY

After gaining a foundational understanding of CAIL, the AI-literate individual is now equipped with the confidence to integrate AI tools into research processes. However, significant questions persist regarding the guidelines researchers might use to effectively evaluate AI-generated outputs.

To address this need, we introduce six evaluative standards, the RACBAC Standard, designed to assist researchers in assessing the relevance and correctness of GenAI outputs within an academic context. The **RACBAC** Standard stands for **Relevance, Accuracy, Coverage, Bias, Authority, and Currency**. Relevance, Accuracy, Coverage, and Bias focus on evaluating the content of outputs generated by GenAI, while Authority and Currency address the sources provided within these outputs. The RACBAC Standard we proposed is built upon established frameworks and practical methods of Information Literacy, including but not limited to the *Framework for Information Literacy for Higher Education* (American Library Association, 2015), the CRAAP Test (Blakeslee, 2004), the RADAR Framework (Mandalios, 2013), the SIFT Method (Caulfield, 2019), and the SMART Check (Kampen, n.d.).[1]

Standard 1: Relevance

Relevance refers to how well the output meets the request's needs in terms of content and depth. GenAI generates outputs by learning the patterns of its training data and then predicting the next most possible word in response (Fitch, 2024). Given the quality and scope of training data, GenAI may produce less relevant outputs of a field if it is underrepresented or absent from the training data. Researchers should assess relevance by evaluating whether the content aligns with the research request and whether the depth of information is appropriate.

Standard 2: Accuracy

Accuracy refers to the validity of the content generated by GenAI. Due to limitations in LLMs that can produce false information and fabricated content, researchers should approach GenAI outputs with caution, consistently conducting fact-checking and validating the content generated by the system.

Standard 3: Coverage

Coverage assesses whether the output is comprehensive and balanced, as the quality of training data significantly influences the range and accuracy of AI-generated content. Researchers using GenAI in their work should evaluate coverage by examining whether certain areas are underrepresented or omitted, determining if the output includes diverse perspectives on the topic, and comparing the AI-generated results with trusted resources and results from traditional database searches.

Standard 4: Bias

Bias refers to the implicit bias in GenAI outputs, which are inherited from the model's training data. Bias can be limited by implementing filters to the system in the developing stage but cannot

[1] CRAAP stands for Currency, Relevance, Authority, Accuracy, and Purpose.

RADAR stands for Rationale, Authority, Date, Accuracy, and Relevance.

SIFT stands for Stop; Investigate the source; Find better converge; Trace claims, quotes, and media to their original context.

SMART stands for Scope, Motivation, Authority, Relevancy Reliable, and Timely.

be eliminated. Researchers should maintain a critical awareness of biases, particularly within their areas of expertise, and be able to identify nuanced biases embedded within the output, even when these are not readily apparent.

Standard 5: Authority

Authority is the academic reliability and credibility of the outputs' sources provided by GenAI. When prompted to provide sources, GenAI frequently generates non-peer-reviewed or non-existent citations. Researchers should always fact-check these references using traditional database searches and other library research skills, maintaining a cautious approach and not relying solely on AI-generated results.

Standard 6: Currency

GenAI could provide users with bibliographies or suggested reading lists for further exploration of a given research topic. Currency in this context refers to two aspects: 1) the publication dates of materials featured in such lists, and 2) the published dates within the requested periods by users. Researchers should ensure that the lists generated by GenAI are up-to-date and relevant to their research and be aware of the limitations in current LLMs technology, which cannot meet users' requirements of selecting materials from given periods, nor generate a list of bibliographies based on the publication dates. Scholars thus should approach AI-generated citations with caution, manually reviewing them and using their library research skills to cross-verify sources in library databases.

CASE STUDY AND ANALYSIS

This section demonstrates the implementation of the **RACBAC** Standard (**Relevance**, **Accuracy**, **Coverage**, **Bias**, **Authority**, and **Currency**). We apply it through a case study focused on Chinese studies, using CNKI SMART as an example. It illustrates a process for evaluating GenAI-generated content and invites discussion and exploration of this emerging issue.

China National Knowledge Infrastructure (CNKI) is a comprehensive electronic repository encompassing journals, magazines, conference proceedings, newspapers, reference works, and patent documents published in China. It is widely regarded as the leading academic database utilized in higher education institutions within China and for China-related research internationally. In March 2024, CNKI introduced CNKI SMART, a GenAI-powered database feature, which became accessible to international audiences.

Regarding the training dataset of CNKI SMART, two important facts should be underscored. First, although CNKI is regarded as an academic database, its collection also includes non-academic publications and popular magazines. In other words, CNKI SMART is trained by both academic and non-academic data. Second, the vast majority of CNKI's content is in Chinese, with only a small fraction available in English. Therefore, CNKI SMART has been trained predominantly by Chinese-language datasets with a handful of collections in the English language. This language constraint is also inherent to other academic database-anchored AI systems, such as JSTOR's AI tool, which is trained by English-dominated materials collected in the database.

Our case study poses a research question to CNKI SMART using its Academic Q&A (学术问答) function. As shown in Figure 1, the interface displays the chatbot of the Academic Q&A on the left-hand side and the cited sources and additional readings on the right-hand side. Due to the inherent design of CNKI SMART, both the questions and the generated answers are presented in Chinese; the translations in this paper are provided by the authors.

The research question posed to the system pertains to Chinese art history, aligning with the expertise of one of the authors. Specifically, the question for this trial is, "What research has been conducted on photographer Lang Jingshan?" (关于摄影师郎静山的研究有哪些?) This question was chosen because photographer Lang Jingshan's artistic and professional trajectory has been widely studied both within China and internationally, remaining a relevant and frequently discussed topic. Research on Lang spans various aspects, incorporating both Chinese and global perspectives, and includes a balance of praise and critique. Consequently, this question serves as a suitable test case for evaluating the CNKI SMART-generated response based on the RACBAC Standard.

Photographer Lang Jingshan (郎靜山, 1892–1995) was a highly influential figure in the history of Chinese photography and in modern and contemporary Chinese art more broadly. Gaining prominence in the early 1930s, he was among the few Chinese photographers internationally recognized during that period. Lang's artistic trajectory and style reflect a pivotal era when China—and by extension, Chinese art—stood at the intersection of modernity and tradition. During the New Culture Movement (新文化运动), an anti-imperialist and progressive socio-political movement of the 1910s and 1920s, Chinese intellectuals began to reflect deeply on the nature of Chinese modernity and its connection to the country's rich cultural heritage. Lang's response to this issue is embodied in his renowned "composite photography" (集锦摄影) technique, which involves assembling photographic fragments into a single image, mirroring the composition, style, and subject matter of traditional Chinese painting (for further discussion on Lang, see Lai, 2000; Liu, 2015).

Lang is also one of the few Chinese photographers who has been extensively studied, with scholarship on him developed from diverse perspectives and available in both Chinese and English. Some scholars examine his distinctive style within the framework of traditional Chinese literati painting influences (for instance, see Chen, 2003). Others position his work in dialogue with contemporaneous Chinese artists and later generations (for instance, see Lai, 2000; Chen, 2013; Chu 2021), and some discuss his involvement in and contributions to photographic groups and societies of his time (for instance, see Li, 2016). Additionally, certain studies situate his work at the turning point of modernity in Chinese art (for instance, see Kong, 2020), while others adopt a global perspective, analyzing how Lang engaged with foreign contemporaneous artistic styles and movements (for instance, see Kent, 2013). A growing body of scholarship also explores theoretical methodologies through Lang's work, such as examining "composite photography" from a deconstructionist viewpoint (for instance, see Kong, 2024). Critical perspectives on Lang's work often focus on his perceived neglect of photography's unique qualities as a medium itself (for instance, see Bao, 2006), and his misinterpretation and misappropriation of traditional Chinese painting principles (for instance, see Tang, 2014).

This case study was conducted on November 2, 2024. According to the proposed **RACBAC** Standard (**Relevance**, **Accuracy**, **Coverage**, **Bias**, **Authority**, and **Currency**), the product-generated answer excelled in accuracy and relevance but showed areas for improvement

in authority, coverage, and currency. It is important to note that this evaluation is also informed by a comparison with the database's exemplary performance. For this paper, we will focus on the first seven sources and related materials generated by the product, which are also shown in Figure 1.

Relevance and **Accuracy**: As shown in the Figure below, in the chatbot the system correctly identifies the name of the artist and generates a summary of research topics related to Lang. The output includes Lang's artistic achievements and contributions (郎静山的艺术成就与贡献), the techniques and characteristics of composite photography (集锦摄影的技术与特点), his photographic philosophy and practice (郎静山的摄影哲学与实践), his social and artistic influence (郎静山的社会与文化影响), his impact on modern photography (对现代摄影的影响), and commentary on his work and legacy (作品与影响的历史评价). Shown on the right-hand side, the system provides a list of resources that are relevant to the artist's name. The academic quality of the list will be discussed in the section on Authority.

Coverage: Given that the system is trained exclusively on the dataset within CNKI, it could not account for significant information located outside of this database. Researchers should remain mindful of this limitation and consider conducting cross-database checks to ensure comprehensive access to relevant information.

Bias: The standard of Bias in this context presents a slightly different challenge. Scholarly discussions on the photographer encompass both praise and critique, reflecting a range of perspectives on his work and stylistic contributions. However, the CNKI SMART-generated

response tended to oversimplify these viewpoints, summarizing them as "fluctuations on perceiving his works and influence" (他的作品和影响力的波动). This wording reduces the nuanced critical discourse to a generalized statement, potentially misrepresenting the depth and diversity of academic debate. The product condensed complex discussions into broad summaries. Whether this tendency stems from limitations in CNKI SMART or from inherent challenges in LLMs remains non-transparent to the user. Nonetheless, this pattern highlights the need for researchers to recognize and critically engage with such tendencies as part of evaluating the content provided by the database-anchored AI.

Authority: As mentioned earlier, some of the materials in CNKI are popular magazines and journals for public audiences. Shown in Figure 1, among the top seven articles listed in the references generated by CNKI SMART, four originate from popular magazines that are unsuitable for scholarly research—*Tomorrow's Fashion* (明日风尚), *Jin Gu Creative Literature* (今古文创), *Big Stage* (大舞台), and *Junior High School Students* (初中生). This is particularly problematic given that CNKI's database interface could indicate whether a journal is classified as academic. However, for CNKI SMART, in the list of cited sources and additional readings, academic sources, such as peer-reviewed articles, dissertations, and theses, were neither prioritized nor ranked highest in the list, leading to further dissatisfaction. Researchers should exercise caution regarding the authority of references generated by the system, and should not accept these references uncritically, even when the AI is integrated with academic databases. It is essential to question and fact-check the academic credibility of the references provided by the system.

Currency: The case study shows that the system is able to generate answers deemed acceptable, with all cited sources published after 2000 and the most recent source from 2023. However, CNKI SMART is unable to provide reference lists within a specified time period or allow users to sort the reference list, a problem that is also shared by other GenAI products.

The case exemplifies the application of the proposed RACBAC Standard in evaluating database-driven GenAI outputs within an academic context, in Chinese studies specifically. The findings emphasize the significance of critical engagement and cross-referencing when utilizing GenAI tools in research settings, aiming to raise awareness of the pressing need for developing various approaches to Critical AI Literacy in the era of GenAI. One last note is that our process is not intended to be definitive; rather, it serves as an invitation for ongoing dialogue on how to begin addressing these evaluative challenges.

CONCLUSION AND FURTHER THOUGHTS

In conclusion, for the implication of practice, collaboration with instructors teaching the proposed CAIL skills and RACBAC Standard is vital in effectively equipping students and researchers with skills of AI literacy. Partnerships between librarians and database providers could also significantly enhance the scope of information accessible to GenAI systems, enabling them to generate more comprehensive and balanced outputs. These efforts would foster a more integrated knowledge ecosystem, benefiting researchers through broader access to diverse resources across multiple databases. Such implications and practices can help design appropriate pedagogical approaches for critically deploying AI in academia.

Further concerns arise when applying the proposed CAIL framework to database-anchored AI tools. For instance, the lack of data transparency from database vendors places librarians and

researchers at a disadvantage when using these tools. This opacity makes it challenging to evaluate the credibility and authority of the content generated by such systems. Data sovereignty presents another significant concern. Regulations governing data access and usage can restrict the training datasets available to database-anchored AI tools, raising questions about the coverage of their outputs. However, the concept of data sovereignty remains underexplored and not fully understood by humanities librarians. Researchers should recognize that data sovereignty is a critical factor influencing the performance and reliability of AI systems and should consider its implications when choosing to utilize such tools. To improve the two aspects of GenAI tools, especially the database-anchored AI tools in East Asian Studies fields, it is essential for librarians in East Asian Studies who work closely with database vendors to increase their awareness of data transparency and data sovereignty and start more conversations with other librarians and vendors.

Another issue relates to the standard of currency within the proposed RACBAC framework. The determination of how "current" secondary sources need to be for a research project is often subjective and depends on the specific requirements of the researcher. However, database-anchored AI tools fail to generate references based on customizable date ranges, instead limiting results to sources published after 2000, as demonstrated in the case study. This limitation restricts researchers' ability to assess and select sources that are both current and relevant to their specific needs. Despite these important concerns, we have included this component in the standard, with the expectation that future generations of database-anchored AI tools will evolve to address these limitations and eventually provide materials within specific timeframes as requested by users. These concerns and issues could be an area for further research.

Overall, the proposed CAIL Skills and RACBAC Standard are grounded in our experience with GenAI tools, as well as established information literacy frameworks and practical methodologies. As GenAI technology continues to evolve, ongoing testing and discussion are essential for refining evaluation standards and enhancing critical AI literacy skills. This effort calls for increased practice and collaboration in research, teaching, and learning across disciplines.

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