



Faculty–Library Partnerships for Advancing Ethical Artificial Intelligence Literacy

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Abstract

Artificial intelligence has become embedded in contemporary higher education through generative writing tools, discovery platforms, research assistants, automated analytics, recommendation systems, translation services, and AI-supported teaching applications. The rapid expansion of these technologies has made artificial intelligence literacy an educational requirement that extends beyond operational proficiency. Students increasingly need to understand how AI systems generate information, recognize their epistemic limitations, verify machine-produced claims, identify bias, protect personal and research data, distinguish responsible assistance from academic misconduct, document AI use transparently, and retain human accountability for scholarly decisions. This paper examines faculty–library partnerships as an institutional mechanism for advancing ethical artificial intelligence literacy across higher education. A conceptual-methodological design was adopted, combining structured synthesis of AI-literacy, information-literacy, academic-library, and responsible-AI scholarship with scenario-based curriculum analysis.

The proposed Faculty–Library Ethical AI Literacy Partnership Framework (FLEAL-PF) integrates disciplinary faculty expertise in subject knowledge, pedagogy, and assessment with librarians' expertise in information evaluation, source provenance, scholarly communication, citation practice, database literacy, copyright awareness, and information ethics. Six competency domains are identified: AI foundations, source and output verification, bias and fairness, privacy and data stewardship, attribution and disclosure, and human oversight. The paper further proposes an iterative instructional cycle in which students learn AI concepts, interrogate outputs, apply ethical safeguards, disclose AI assistance, and reflect on human judgment.

The analysis does not claim empirical improvements in student performance; instead, it provides a transparent framework for subsequent institutional testing. The study concludes that ethical AI literacy is best treated neither as a narrow technical skill nor solely as an academic-integrity issue. It is an interdisciplinary information practice requiring sustained collaboration among faculty members, librarians, students, academic-integrity professionals, and institutional leaders.

Keywords: artificial intelligence literacy; academic libraries; faculty–library collaboration; generative AI; information literacy; AI ethics; higher education; responsible AI; academic integrity; scholarly communication



1. Introduction

Artificial intelligence is reshaping how knowledge is located, generated, summarized, communicated, and evaluated in higher education. Generative AI systems can produce fluent explanations, synthesize large quantities of text, generate code, suggest research questions, translate content, and assist with writing. Their growing accessibility, however, creates educational challenges that differ substantially from earlier forms of digital technology. AI-generated content can appear authoritative while containing inaccurate information, fabricated references, incomplete contextualization, or subtle biases. UNESCO's guidance on generative AI consequently emphasizes a human-centred approach involving privacy protection, ethical validation, equitable use, and appropriate pedagogical design rather than unrestricted technological adoption.

The resulting challenge is frequently described through the concept of AI literacy. Long and Magerko conceptualized AI literacy around competencies enabling individuals to understand and critically engage with artificial intelligence, while Ng and colleagues subsequently synthesized the concept through technical understanding, application, evaluation, and ethical considerations. Later higher-education research has reinforced the multidimensional nature of AI literacy rather than equating it with the ability to formulate effective prompts. Ethical literacy is particularly important because students may use AI competently at an operational level while remaining unable to judge whether an output is reliable, appropriately sourced, fair, privacy-preserving, legally permissible, or acceptable within a particular academic context.

Academic libraries are well positioned to contribute to this educational task. The ACRL Framework for Information Literacy already defines information literacy in terms of reflective information discovery, understanding how information is produced and valued, creating new knowledge, and participating ethically in communities of learning. Importantly, the framework explicitly encourages collaboration among librarians, faculty, and institutional partners in redesigning instruction, assignments, curricula, and assessment. AI complicates these established information-literacy questions rather than replacing them. Students must now evaluate not only conventional documents and databases but also machine-generated representations whose sourcing, training data, selection processes, and evidentiary foundations may be opaque.

Recent developments within academic librarianship make this connection more explicit. Lo's study of 760 academic-library employees found gaps in AI understanding, practical experience, discussion of ethical implications, and collaborative AI activity, while respondents identified professional development and ethical guidelines as important needs. ACRL's AI Competencies for Academic Library Workers, approved in October 2025, subsequently organized library-relevant capability around ethical considerations, knowledge and understanding, analysis and evaluation, and use and application. The competencies also emphasize that AI literacy should support informed judgment rather than create an obligation to adopt every available AI technology.

2. Objectives of the Study

2.1 To Develop a Faculty–Library Ethical AI Literacy Framework

The first objective is to construct a practical framework through which faculty members and academic librarians can jointly design AI-literacy instruction. The framework seeks to move beyond isolated



workshops by embedding ethical AI competencies into disciplinary learning activities, research assignments, assessment guidance, and information-literacy instruction.

2.2 To Identify Core Ethical AI Literacy Competencies

The second objective is to identify competencies that students require when interacting with generative and algorithmic systems. Particular emphasis is placed on source verification, bias recognition, privacy, intellectual property, disclosure, attribution, accountability, equitable access, and appropriate human oversight.

2.3 To Evaluate the Partnership Model Through Structured Scenarios

The third objective is to compare isolated instruction with a faculty–library partnership model using a transparent scenario-based design rubric. The comparison focuses on curriculum coverage rather than claiming changes in actual student achievement.

3. Review of Literature

3.1 Evolution of Artificial Intelligence Literacy

Long and Magerko's influential AI-literacy framework established that meaningful literacy extends beyond knowing that an AI system exists. Their competencies address recognition of AI, understanding its capabilities and limitations, interpreting outputs, and interacting critically with intelligent systems. Ng, Leung, Chu, and Qiao extended this conversation through an exploratory review that consolidated AI literacy as a combination of knowledge, use, evaluation, and ethical awareness.

Laupichler, Aster, Schirch, and Raupach's scoping review demonstrated growing interest in AI literacy among non-specialists in higher and adult education while also identifying variation in definitions, competencies, instructional approaches, and evaluation practices. This variability remains consequential for universities. A short course focused almost entirely on prompt writing may produce functional familiarity but leave learners poorly prepared to evaluate provenance, representational bias, privacy implications, or the evidentiary quality of generated claims.

3.2 Academic Libraries, Information Literacy, and AI Ethics

Information literacy and AI literacy overlap most strongly in the evaluation of authority, evidence, provenance, and information production. A generative system may synthesize information without exposing a conventional bibliography or may generate plausible but nonexistent citations. Consequently, the traditional instruction to “evaluate the source” must be expanded to include evaluation of the generation process, verification against independent scholarly sources, and recognition that fluency does not establish truth.

Lo's 2024 survey provides direct evidence of the professional-development challenge facing academic libraries. Although library workers recognized the potential importance of artificial intelligence, self-reported familiarity and practical readiness remained uneven, with notable gaps in ethical discussion and AI-project collaboration. Earlier work by Hervieux and Wheatley similarly found a need for greater AI training among academic librarians in Canada and the United States.



Cox's examination of AI ethics for information professionals further demonstrates why technical knowledge alone is insufficient. Ethical concerns can involve privacy, social justice, accountability, data use, professional values, and institutional decision making; scenario-based discussion can make such abstract principles more concrete for professional learning.

3.3 Faculty–Librarian Collaboration and the Research Gap

Faculty–librarian collaboration predates the current AI environment. The ACRL information-literacy framework explicitly encourages faculty and librarians to redesign learning activities and curricula together. More recent conceptual analysis by Andres and Usova shows that information-literacy collaboration depends on shared goals, role clarity, communication, interdependence, and meaningful integration rather than one-time service delivery.

Research examining faculty perceptions also suggests that sustainable information-literacy instruction requires stronger relationships between librarians and disciplinary teachers rather than treating librarians as external providers of a single database session. This insight is especially important for AI literacy because disciplinary standards differ. Responsible AI use in computer programming, nursing, history, business, engineering, journalism, or literary studies cannot be governed entirely through generic institution-wide instructions.

The research gap therefore concerns how the established collaborative architecture of information literacy can be adapted to ethical AI literacy. Existing research describes AI competencies, library readiness, AI ethics, and faculty–library collaboration, but these domains are often treated separately. The proposed framework integrates them into a single instructional design model.

4. Research Methodology

4.1 Research Design

The study adopted a conceptual-methodological design based on structured evidence synthesis and scenario-based curriculum analysis. No human participants were recruited, no questionnaires were administered, and no institutional student records were used.

The analytical corpus emphasized literature addressing:

- AI-literacy frameworks;
- responsible and ethical artificial intelligence;
- academic libraries and AI;
- information literacy;
- faculty–librarian collaboration;
- generative AI in education; and
- scholarly information evaluation.

The conceptual synthesis was informed particularly by UNESCO's human-centered guidance, ACRL's information-literacy and AI-competency frameworks, and peer-reviewed AI-literacy scholarship.

4.2 Faculty–Library Ethical AI Literacy Partnership Framework

The model places co-design at the center. Faculty contribute disciplinary expertise, pedagogy, assessment interpretation, and understanding of professional standards. Librarians contribute source



evaluation, database knowledge, information provenance, scholarly communication, copyright awareness, citation practice, and information ethics.

Table 1. FLEAL-PF Competency and Responsibility Matrix

Competency Domain	Faculty Contribution	Library Contribution	Expected Student Capability
AI foundations	Contextualizes AI within discipline	Introduces information-system context	Explain basic capabilities and limitations
Source verification	Defines acceptable disciplinary evidence	Teaches database and provenance verification	Verify generated claims independently
Bias and fairness	Identifies discipline-specific consequences	Teaches representational and information bias	Recognize potentially biased outputs
Privacy and data stewardship	Identifies sensitive course/research data	Explains privacy and information-governance risks	Avoid inappropriate disclosure of data
Citation and disclosure	Defines permitted academic use	Supports attribution and scholarly communication	Disclose AI assistance transparently
Human oversight	Evaluates intellectual quality	Reinforces critical information judgment	Retain responsibility for final claims

The matrix avoids assuming that every responsibility belongs either to the librarian or to the faculty member. Ethical AI literacy emerges through overlapping expertise.

4.3 Scenario Construction and Analytical Procedure

Twelve hypothetical higher-education instructional scenarios were developed, including literature searching, essay preparation, data interpretation, coding assistance, research-question development, source summarization, presentation design, laboratory interpretation, reflective writing, policy analysis, collaborative assignments, and capstone research.

5. Analysis

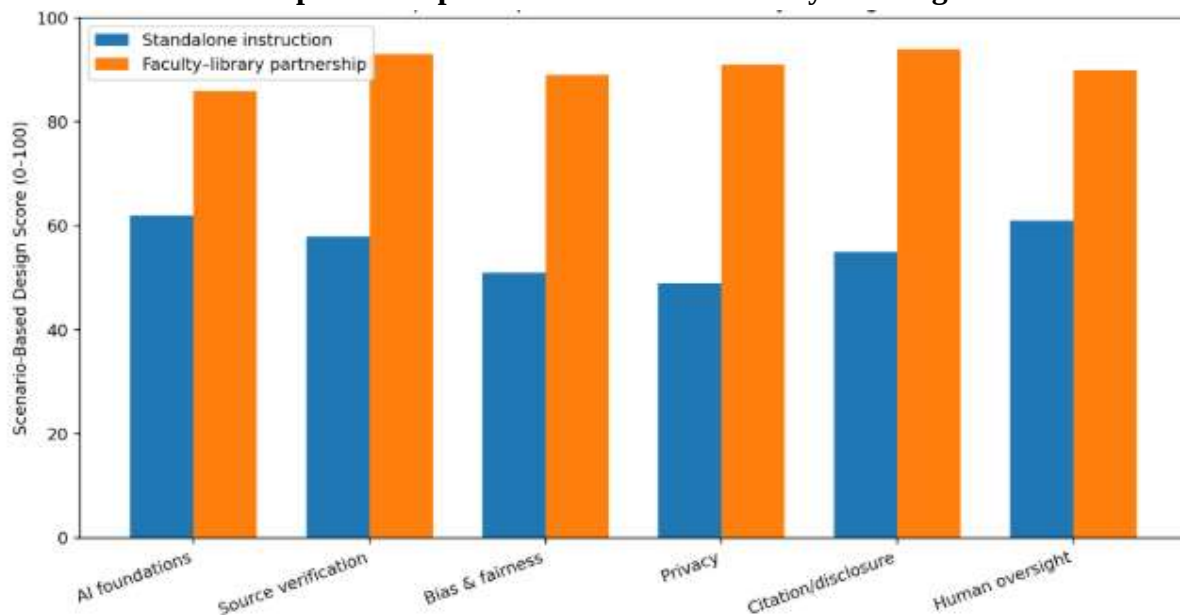
5.1 Comparative Ethical AI Literacy Coverage

The scenario analysis suggests that standalone instruction can provide reasonable coverage of basic AI foundations but becomes less comprehensive where information evaluation and governance intersect with disciplinary practice.

Table 2. Scenario-Based Comparison of Instructional Coverage

Ethical AI Literacy Dimension	Standalone Instruction	Faculty–Library Partnership	Difference
AI foundations	62	86	+24
Source verification	58	93	+35
Bias and fairness	51	89	+38
Privacy and data stewardship	49	91	+42
Citation and disclosure	55	94	+39
Human oversight	61	90	+29
Mean score	56.0	90.5	+34.5

Graph 1. Comparative Ethical AI Literacy Coverage



The model produces its largest difference in privacy and data stewardship. This pattern reflects the fact that generic discussions of academic integrity may not adequately address whether students should place confidential research data, personal information, unpublished manuscripts, assessment content, or proprietary information into external AI platforms. UNESCO's guidance similarly identifies data privacy and institutional preparedness as significant issues in educational use of generative AI.

Citation and disclosure also show a substantial modeled difference because appropriate AI disclosure depends simultaneously on institutional policy, disciplinary convention, assignment expectations, and scholarly communication.



6. Discussion

6.1 Why Faculty–Library Partnership Strengthens AI Literacy

The principal argument emerging from the analysis is that ethical AI literacy is inherently interdisciplinary. Faculty members possess knowledge of what counts as credible evidence, appropriate reasoning, acceptable AI assistance, and authentic practice within their disciplines. Librarians, meanwhile, specialize in information structures, authority, search systems, provenance, scholarly communication, licensing, citation, and evaluation.

Lo's survey of academic-library employees also found gaps in collaborative AI activity, making partnership itself an important capability-building objective. Andres and Usova's work on information-literacy collaboration reinforces the importance of shared purpose and genuine interdependence when faculty and librarians work together.

A partnership model therefore provides a more coherent instructional environment. Rather than hearing one message about AI in the classroom and another in the library, students encounter aligned expectations.

Key point:

- Ethical AI literacy is inherently interdisciplinary and requires collaboration between faculty and librarians.
- Faculty contribute disciplinary expertise about credible evidence, reasoning, appropriate AI use, and authentic professional practice.
- Librarians provide specialized knowledge of information evaluation, search systems, source authority, provenance, scholarly communication, licensing, and citation.
- Effective AI literacy cannot depend on either faculty or librarians alone because their expertise is complementary rather than interchangeable.
- Faculty–librarian partnerships can create a more consistent learning environment by providing students with aligned expectations for responsible and ethical AI use.

6.2 Ethical AI Literacy Beyond Academic Misconduct

Universities initially responded to generative AI largely through concerns about plagiarism and unauthorized assistance. These issues remain significant, but treating AI literacy solely as academic-integrity enforcement is too narrow.

A student may openly acknowledge AI use and still employ it irresponsibly. For example, the student may:

- trust fabricated references;
- upload sensitive data;
- reproduce biased classifications;
- rely on copyrighted or unverified content;
- use outputs outside their domain of competence;
- fail to check consequential claims; or
- delegate intellectual decisions that the assignment was intended to assess.

Cox's examination of AI ethics for information professionals illustrates the wider ethical landscape surrounding AI, including privacy, data use, social justice, accountability, and professional



responsibility. UNESCO likewise frames responsible educational AI around human agency, safety, equity, privacy, and meaningful use rather than compliance alone.

6.3 Institutional and Publishing Implications

The proposed framework has several implications for university governance. First, institutions should distinguish between general AI literacy and disciplinary AI literacy. Institution-wide guidance can establish common principles, but individual programs must interpret these principles in relation to disciplinary evidence, assessment, professional regulation, and research practice. Second, professional development should involve faculty and librarians together. Training librarians without involving faculty may leave AI-literacy expertise detached from curriculum decisions.

Training faculty without librarians may underuse existing expertise in information evaluation and scholarly communication. Third, assignment design should incorporate verification directly. A student might be required to submit an AI-generated claim alongside the scholarly sources used to test it, explain discrepancies, or document why a particular output was rejected. This approach transforms AI from an invisible shortcut into an object of critical inquiry. Fourth, disclosure guidance should be precise.

Students need to know not merely whether AI is “allowed,” but which functions are permitted, which require acknowledgement, which forms of data may not be uploaded, and where responsibility remains entirely with the human author. For scholarly publishing, the same principles extend to research authorship and manuscript preparation. AI tools should not be treated as accountable authors because responsibility, conflicts of interest, consent, verification, and scholarly accountability remain human obligations.

Faculty–library education can help students learn these principles before they become researchers and professional authors. The study nevertheless has limitations. Its analysis is conceptual and scenario based. It does not establish that the FLEAL-PF improves grades, information-literacy assessment scores, academic integrity, or long-term responsible behavior. Institutional contexts also differ in staffing, library resources, privacy regulations, disciplinary culture, and access to licensed AI systems.

7. Conclusion

Artificial intelligence literacy has become a core educational concern because AI increasingly mediates information discovery, knowledge production, academic writing, research, and professional decision making. Yet operational competence alone is inadequate. Students must also learn to question machine-generated claims, verify evidence, recognize bias, safeguard confidential information, disclose AI assistance, understand limits on attribution and copyright, and retain responsibility for consequential scholarly judgments.

This study proposed the Faculty–Library Ethical AI Literacy Partnership Framework as a structured response to that challenge. The model combines disciplinary expertise with librarians' established strengths in information evaluation, provenance, scholarly communication, and ethical information practice. Scenario-based analysis indicates that this integrated approach offers broader conceptual coverage than isolated instruction, especially in source verification, privacy, fairness, disclosure, and human oversight.



The contribution of the paper is methodological rather than empirical. It does not claim experimentally demonstrated learning gains. Instead, it translates contemporary AI-literacy and information-literacy principles into a framework that universities can implement, assess, refine, and validate.

As AI systems continue to evolve, higher education will require more than tool-specific training. Ethical AI literacy should become an enduring component of information literacy, disciplinary education, academic integrity, and research preparation. Faculty–library partnerships provide a credible institutional mechanism for achieving this integration while preserving critical inquiry, human agency, scholarly accountability, and responsible participation in an AI-mediated information environment.

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