

The Information Professional as an Ethical Sentinel: Academic Integrity, Digital Literacy, and the Artificial Intelligence Challenge in Higher Education

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ABSTRACT

Academic integrity is conventionally framed as a pedagogical, disciplinary, or institutional policy concern, yet its foundations rest squarely upon the principles of information organisation, verification, and ethical use that constitute the core competencies of Library and Information Science (LIS). This paper reports a systematic review of academic integrity research published between 2010 and 2026, undertaken through a distinct LIS lens to trace how information literacy frameworks, scholarly communication practices, and digital curation strategies have shaped, and been shaped by, the ongoing effort to counter academic misconduct. Guided by the PRISMA 2020 protocol, an initial pool of 487 records retrieved from Scopus, Web of Science, and Library, Information Science & Technology Abstracts (LISTA) was screened against explicit inclusion criteria, yielding a final corpus of 128 peer-reviewed studies for thematic and chronological analysis. The findings trace a discernible evolution across four phases, from reactive, detection- and deterrence-based policy responses toward proactive, educational frameworks centred on information ethics, culminating in the current AI-driven phase in which authorship itself is being redefined. Four LIS-centred thematic domains were identified: information literacy instruction, digital curation and metadata as integrity tools, the defence of scholarly communication against predatory publishing, and artificial intelligence literacy. On this basis, the review advances two original contributions: it positions LIS professionals as “ethical sentinels” whose expertise in source evaluation, metadata, and digital preservation is indispensable to institutional integrity, and it proposes a new conceptual model, the Information Integrity Ecosystem, which integrates access and curation, literacy and pedagogy, verification and provenance, and equity and ethics into a single sustainable framework. Implications for LIS curricula, institutional policy, and future research agendas are discussed.

Keywords: Academic integrity; Library and Information Science; information literacy; artificial intelligence; scholarly communication.

INTRODUCTION

The discourse surrounding academic integrity has traditionally been dominated by educational psychologists, higher education administrators, and legal scholars, whose work has produced valuable insight into student motivation, institutional policy design, and disciplinary process. This dominant framing, however, overlooks a fundamental truth: academic integrity is, at its core, an information problem. From the correct attribution of ideas through citation practice, to the verification of sources through fact-checking, and from the stewardship of institutional repositories to the detection of fabricated or duplicated data, the principles of integrity are inextricably linked to the organisation, retrieval, evaluation, and dissemination of information. Within this framing, Library and Information Science (LIS) professionals are not auxiliary supporters of academic integrity but central actors in upholding the ethical fabric of academia.

The twenty-first century has posed unprecedented challenges to this fabric. The proliferation of “fake news,” the commercialisation of contract cheating, the growing sophistication of paraphrasing software, and, most recently, the mainstream emergence of generative Artificial Intelligence (AI) tools such as ChatGPT have combined to

create what may be described as a perfect storm of information disorder (Sullivan, 2021; Cotton et al., 2024). Students frequently find themselves navigating an overwhelming and poorly curated information landscape, often lacking the critical evaluation skills needed to distinguish credible sources from predatory ones, or to understand the ethical boundary between using AI as a research assistant and using it as a ghostwriter (Perkins, 2023).

For the LIS profession, this moment represents both a crisis and a professional zenith. The skills traditionally housed within LIS — information literacy pedagogy, metadata creation, digital archiving, and the ethics of access — are precisely the tools required to confront contemporary misconduct (Haddow, 2020). This study re-evaluates the evolution of academic integrity research between 2010 and 2026, positioning LIS expertise as the critical bridge between institutional policy and student behaviour. By adopting a systematic review methodology, the paper addresses the following research question: how has academic integrity research evolved in higher education, and what is the specific, evolving role of Library and Information Science in shaping this discourse and practice? Two subsidiary objectives follow from this question: first, to chart the chronological and thematic evolution of LIS-centred academic integrity scholarship over a sixteen-year period; and second, to synthesise this evolution into a conceptual model capable of guiding institutional practice in the generative AI era.

LITERATURE REVIEW:

The Lis Perspective On Integrity

Information Literacy as the First Line of Defence

From an LIS standpoint, academic integrity is best understood as an extension of information literacy. The Association of College and Research Libraries' (ACRL, 2016) Framework for Information Literacy for Higher Education explicitly links the ethical creation of knowledge to the frames “Authority Is Constructed and Contextual” and “Information Has Value.” Scholars argue that students who lack robust information literacy are more likely to plagiarise not out of malice but out of genuine uncertainty regarding disciplinary conventions of attribution (De Paola & Harwood, 2023).

Traditional LIS interventions — embedded librarianship, one-shot instruction sessions on citation styles such as APA and MLA, and the creation of subject research guides — have evolved into more sophisticated educational programmes that address the nuanced interplay of source evaluation, copyright, and data privacy (Walter, 2018). These efforts, however, remain persistently undervalued within the broader academic integrity literature, which tends to privilege plagiarism-detection software such as Turnitin over the instructional labour of librarians (Mellar et al., 2018). This asymmetry is compounded by the technical limitations of text-matching detection tools themselves; large-scale systematic reviews of plagiarism-detection systems report considerable variance in accuracy and a structural bias toward surface-level textual similarity rather than genuine conceptual misappropriation (Foltýnek et al., 2019).

B. Scholarly Communication and the Threat of Misinformation

The rise of predatory publishing and the so-called “paper mill” industry has placed LIS professionals at the heart of scholarly communication integrity. Librarians are routinely tasked with vetting journal quality, managing institutional repositories (IRs) to safeguard the authenticity of archived scholarship, and educating faculty on legitimate Open Access publishing pathways (Morrison, 2022). The proliferation of AI-generated text has exacerbated this challenge, threatening to flood the scholarly record with low-quality, non-human-authored material (van Dis et al., 2023). LIS expertise in digital curation, metadata standards, and provenance tracking is therefore vital to preserving the trustworthiness of the academic record.

C. The AI Dilemma: Detection, Pedagogy, and Digital Curation

The introduction of Large Language Models (LLMs) has prompted a significant re-evaluation of LIS pedagogy. Independent testing of AI-text detection tools has demonstrated that such systems remain unreliable and easily circumvented, undermining purely detection-based responses to generative AI (Weber-Wulff et al., 2023).

Consequently, the profession is moving away from reactive plagiarism detection toward “process-oriented” assessment that privileges research logs, annotated bibliographies, and demonstrable critical reasoning (Eaton, 2020; Selwyn, 2022). LIS scholars are simultaneously pioneering “AI literacy” frameworks that teach students how to cite AI tools transparently, verify AI-generated claims against primary sources, and understand the algorithmic biases inherent in these technologies (Koltay, 2023). Broader reviews of AI discourse in higher education similarly caution that institutions risk adopting techno-solutionist responses to generative AI unless pedagogical and ethical considerations are foregrounded alongside technical ones (Bearman et al., 2023).

D. Theoretical Foundations

The LIS perspective adds distinctive theoretical depth to the study of academic integrity. Information Ethics (Floridi, 2013) provides a framework for analysing the ethical implications of information creation, storage, and access, moving beyond a simple right-versus-wrong dichotomy to ask who benefits and who is harmed by particular information flows — a question with direct relevance to algorithmic bias in AI-generated content. Uses and Gratifications Theory (Katz et al., 1973), applied to an LIS context, helps explain why students select particular information sources or unethical shortcuts, positing that students are active agents who use available tools, including AI, to satisfy specific needs such as time management or grade pressure, and that LIS interventions must therefore address underlying motivation rather than behaviour alone. A third, complementary lens is offered by conceptual work within the academic integrity field itself: the multi-national Glossary for Academic Integrity (Tauginè et al., 2018) and the Handbook of Academic Integrity (Bretag, 2016) together establish a shared vocabulary of misconduct types and institutional responses against which LIS-specific contributions can be meaningfully situated.

METHODOLOGY

A. Research Design

This study employs a systematic literature review, guided by the PRISMA 2020 framework (Page et al., 2021), to synthesise research on academic integrity published between January 2010 and January 2026. The methodology was specifically designed to extract LIS-related themes — including information literacy interventions, digital curation, and metadata practice — from the broader educational and psychological literature on academic misconduct.

B. Search Strategy

A systematic search was conducted in Scopus, Web of Science, and LISTA (Library, Information Science & Technology Abstracts) to ensure comprehensive coverage of the LIS literature. The following Boolean query combined LIS-specific terms with academic integrity terms:

(“academic integrity” OR “academic dishonesty” OR “plagiarism” OR “contract cheating” OR “AI cheating”) AND (“library” OR “information literacy” OR “scholarly communication” OR “digital curation” OR “citation analysis” OR “metadata”)

Supplementary searches using broader, non-LIS-specific terms were conducted to contextualise the LIS-specific findings within the general higher education academic integrity landscape. The search was restricted to peer-reviewed, English-language articles. Table 1 summarises the screening and selection process.

Table 1. Summary of the Search and Screening Process (PRISMA)

Stage	Records
Records identified through database searching (Scopus, Web of Science, LISTA)	487
Records after duplicates removed	402
Records screened by title and abstract	402

Stage	Records
Records excluded (no LIS relevance or educational implication)	218
Full-text articles assessed for eligibility	184
Full-text articles excluded (insufficient methodological rigour or off-topic)	56
Studies included in the final synthesis	128

C. Inclusion and Exclusion Criteria

Articles were included where they demonstrated either a substantial LIS contribution (e.g., authored by LIS scholars, published in LIS-affiliated venues, or centrally concerned with library-based interventions) or clear educational implications for information literacy, digital curation, or scholarly communication practice within the context of academic integrity. Editorials, unreviewed conference abstracts, and non-English-language publications were excluded.

D. Data Extraction and Analysis

Data extraction focused on four elements for each included study: (1) the nature of LIS involvement, whether direct or implied; (2) the specific intervention or challenge addressed, such as citation education, AI detection, or repository management; (3) the methodological approach employed; and (4) the temporal positioning of the study's focus. Thematic analysis, following an inductive coding process, was combined with chronological trend analysis to map the evolution of the field across the sixteen-year review period.

RESULTS

A. Chronological Evolution and the Rising Prominence of LIS

The analysis revealed that while early academic integrity research was dominated by institutional policy and psychological studies, the volume and influence of LIS-centred research have grown markedly over the review period. Four distinct phases were identified, summarised in Table 2.

Table 2. Chronological Phases in LIS-Centred Academic Integrity Research, 2010–2026

Phase	Period	Dominant Focus
Phase 1: Foundational Focus	2010–2016	Bibliographic instruction; citation management tools (e.g., EndNote, Zotero); mechanics of referencing; detection and deterrence.
Phase 2: Contract Cheating and Open Access	2017–2020	LIS professionals as scholarly communication gatekeepers; ethics of essay mills; copyright education; institutional repository integrity.
Phase 3: Pandemic Acceleration	2021–2023	Digital pedagogy and source veracity in remote/online assessment; the COVID-19 “infodemic.”
Phase 4: The AI Revolution	2024–2026	AI literacy; ethical prompting; redefinition of authorship; curation of truth rather than mere retrieval of sources.

During Phase 1 (2010–2016), LIS literature focused primarily on bibliographic instruction and the mechanics of referencing. Phase 2 (2017–2020) saw LIS professionals step into the role of scholarly communication gatekeepers, with research addressing the ethics of commercial essay mills and the LIS role in educating students about predatory journals; institutional repositories became a focal point for safeguarding the integrity of institutional research output (Morrison, 2022). Phase 3 (2021–2023) was defined by the rapid shift to online proctoring and remote learning, which exposed a significant digital divide; LIS scholars published extensively on maintaining integrity in online environments, with particular emphasis on digital pedagogy and source

veracity amid the COVID-19 “infodemic.” Phase 4 (2024–2026) represents a paradigm shift in which LIS scholarship is no longer concerned solely with searching or citing but with curating truth; the review identified a substantial surge in research on AI literacy, ethical prompting, and the redefinition of authorship in the digital age.

B. Key LIS-Centred Thematic Domains

Thematic analysis identified four pillars that define the LIS contribution to academic integrity, summarised below.

1. The Evolution of Information Literacy Instruction. The shift from “finding sources” to “evaluating contexts” is evident across the corpus. Modern LIS curricula increasingly emphasise critical information literacy, and studies show that students are more likely to maintain integrity when they understand the value chain of information — how scholarly knowledge is produced, funded, and disseminated. In the AI era, these programmes now teach students to fact-check AI outputs using lateral reading strategies, a core LIS skill repurposed for a generative-AI context.

2. Digital Curation and Metadata as Integrity Tools. LIS scholars are increasingly using metadata — time-stamped document versions, digital watermarks, and version control — to authenticate student submissions. Research highlights the role of institutional repositories in combating plagiarism: by making institutional research openly available, universities can check submissions against a broader pool of their own born-digital scholarship. Digital curation practices are also being extended to manage orphan works and verify the originality of student portfolios.

3. Combating Predatory Publishing and Paper Mills. In collaboration with faculty, LIS professionals are developing algorithmic detection tools and curated “whitelists” of trustworthy journals — a direct application of LIS collection-development skills to academic ethics. Research within this theme underscores that an inability to distinguish legitimate from fraudulent journals often leads novice researchers to unknowingly undermine their own academic integrity.

4. Artificial Intelligence Literacy and Algorithmic Transparency. This is the most rapidly expanding theme in the corpus. LIS scholars are developing frameworks that treat AI not as an inherent cheating tool but as an information resource to be evaluated critically. This involves teaching the “black box” problem of algorithmic literacy and requiring students to cite AI prompts in the same way they would cite a database query. LIS expertise in evaluating information sources is now being applied directly to the evaluation of hallucinated or fabricated citations generated by LLMs (Koltay, 2023), and to the broader unreliability of automated AI-text detectors documented in the technical literature (Weber-Wulff et al., 2023).

DISCUSSION

A. Positioning the LIS Professional as an “Ethical Sentinel”

The results of this review challenge the traditional view of the librarian as a quiet, supporting figure within the academic enterprise. The evidence base instead suggests that LIS professionals are becoming the ethical sentinels of the digital campus. This terminology is significant because it implies not merely a reactive role focused on detecting cheating, but a proactive, protective role focused on guarding the integrity of the academic record and the intellectual development of students.

A useful way of framing this contribution is what might be termed the psychological–LIS synergy. Where educational psychologists focus on why students engage in misconduct — motivation, self-efficacy, moral disengagement — LIS scholars provide the how of integrity: how to organise research, how to evaluate credibility, and how to manage data responsibly. This review suggests that institutions that fail to integrate LIS expertise into their academic integrity policies are likely missing a root cause of misconduct: a student cannot ethically reference a source they have never been taught to read critically, nor evaluate an author's authority they have never been taught to interrogate.

B. The Information Integrity Ecosystem: A Conceptual Model

Drawing on the thematic findings, this paper proposes the Information Integrity Ecosystem, a conceptual model positing that sustainable academic integrity in the digital age depends on the interplay of four LIS-driven pillars.

- 1. Access and Curation (the infrastructure).** Ensuring students have easy, legitimate access to resources reduces the temptation to seek illicit shortcuts such as contract cheating. This pillar encompasses robust repository management and discovery-layer design.
- 2. Literacy and Pedagogy (the education).** This pillar moves beyond one-shot library instruction sessions toward holistic, contextualised learning that embeds critical AI literacy within disciplinary teaching.
- 3. Verification and Provenance (the technology).** This pillar draws on metadata, citation graphs, and forensic linguistics to authenticate originality without prematurely criminalising students.
- 4. Equity and Ethics (the philosophy).** This final pillar recognises that students do not have equal digital access or prior academic preparation, and that LIS frameworks must therefore advocate for inclusive integrity policies that account for systemic disadvantage (Walter, 2018).

These four pillars are conceived as mutually reinforcing rather than sequential: weakness in any single pillar — for example, robust literacy provision undermined by inequitable access — is likely to compromise the ecosystem as a whole.

C. Implications for Practice

For LIS curricula: graduate programmes must rapidly redesign their syllabi to include modules on AI ethics, digital forensics, and algorithmic bias. The “meta-librarian” of the future must be, in effect, a techno-ethicist.

For university administration: institutions should consider a “library-first” integrity strategy that embeds librarians at the policy design table and allocates budget for AI-literacy staffing alongside, rather than instead of, detection software.

For research culture: LIS researchers must collaborate with computer scientists and publishers to develop robust, transparent frameworks for citing AI contributions and for countering the “fake paper” crisis threatening the integrity of the scientific record (van Dis et al., 2023).

Limitations Of The Study

This review is subject to several limitations that should inform the interpretation of its findings. First, the search was restricted to English-language publications, which may have excluded relevant scholarship published in other languages, particularly from non-Anglophone higher education systems where academic integrity practices differ substantially. Second, although three major databases were searched, grey literature such as institutional white papers and conference proceedings was not systematically captured, which may understate practitioner-level innovation. Third, the rapid pace of change in generative AI technology means that findings relating to Phase 4 (2024–2026) reflect an evolving and still-consolidating body of research rather than a mature literature. Finally, as with any thematic synthesis, the coding process involved a degree of interpretive judgement; while inclusion criteria were applied consistently, alternative coding frameworks might yield somewhat different thematic boundaries.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This systematic review has demonstrated that the conversation around academic integrity in higher education is incomplete without explicit recognition of Library and Information Science. The evolution of the research from a primary focus on punitive deterrence toward a more nuanced engagement with digital and information ethics aligns closely with LIS professionals' core competencies. As generative AI continues to blur the lines between human and machine authorship, the role of the information professional is transitioning from that of a “keeper

of books” to a guardian of evidence. The future of academic integrity rests not solely on better software or stricter penalties, but on cultivating an informed, critically literate student body equipped to navigate the complexities of contemporary information ecosystems.

Future research should pursue three priorities. First, longitudinal and mixed-methods studies are needed to test the explanatory and predictive value of the Information Integrity Ecosystem model empirically across diverse institutional contexts. Second, comparative cross-national research would help clarify how the LIS ethical-sentinel role varies across differing regulatory, linguistic, and resourcing environments. Third, as AI-detection technology continues to evolve, ongoing independent evaluation of its reliability will remain essential to ensuring that institutional responses to generative AI are proportionate, evidence-based, and fair to students. For LIS scholars, engagement with this agenda is not merely an emerging research field; it is a professional responsibility to defend the foundations of scholarly truth.

Declarations

Ethical Approval: This study is a systematic review of previously published, publicly available literature and did not involve the collection of primary data from human participants or animals. Formal ethical approval was therefore not required.

Conflict of Interest: The author declares no known conflict of interest.

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Data Availability: The bibliographic dataset generated through the systematic search (the list of 128 included studies with coded attributes) is available from the corresponding author upon reasonable request.

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