



Information literacy as an epistemic negotiation of the utilization of artificial intelligence at Institut Pertanian Stiper Library

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Abstract

Purpose. This study aims to examine and conceptually explain how information literacy functions as an epistemic negotiation mechanism in AI-mediated academic environments.

Methods: This qualitative case study was conducted at the Institut Pertanian Stiper (INSTIPER) Yogyakarta Library using semi-structured interviews with lecturers and students, supported by institutional documents on information literacy and AI-related academic policies. The data were analyzed thematically through transcription, coding, categorization, and interpretative analysis.

Findings. The findings demonstrate that information literacy functions as an epistemic negotiation mechanism through which lecturers, researchers, and students critically evaluate, verify, and justify AI-generated knowledge before integrating it into academic practice. The study further reveals that the INSTIPER Yogyakarta Library has evolved beyond its conventional role as an information service to an institutional actor that strengthens AI literacy, mediates institutional AI governance, promotes data ethics and digital information security, and supports responsible knowledge production.

Implications. The principal contribution of this study lies in conceptualizing information literacy as an epistemic negotiation mechanism that connects the institutional epistemic role of academic libraries with AI governance and individual scholarly judgment. This conceptual framework extends current discussions beyond AI adoption and AI literacy, providing a foundation for developing evidence-based information literacy programs and institutional AI governance that strengthen academic integrity in higher education.

Keywords: Information literacy; Epistemic negotiation; Generative artificial intelligence; Ai governance; Academic Library; Academic integrity

1. Introduction

Information literacy has traditionally been understood as the ability to locate, evaluate, and use information effectively. However, the rapid transformation of digital knowledge environments has expanded this understanding beyond procedural information skills toward a more complex epistemic function. In contemporary scholarship, information literacy can be conceptualized as an epistemic negotiation mechanism through which individuals critically interpret evidence, question competing knowledge claims, validate information across multiple sources, and determine what may legitimately be accepted as

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knowledge. Rather than representing a collection of discrete competencies, it constitutes a continuous process of evaluating, contextualizing, and justifying knowledge before it is incorporated into scholarly reasoning. This perspective becomes particularly important in AI-mediated environments, where generative artificial intelligence (AI) produces information that is often persuasive and coherent, yet not always accurate, transparent, or contextually reliable. Consequently, AI should be understood not as the focal point of this conceptualization, but as the context that amplifies the need for information literacy as an epistemic negotiation mechanism.

This conceptualization is grounded in the understanding that knowledge creation and validation have never been linear processes. In any academic field, knowledge is gained through reflection, critical assessment, and iterative testing of data points, rather than through passive consumption of information. They constantly compare competing claims, weigh their relative credibility, situate them within relevant empirical and theoretical contexts, and justify their conclusions with available evidence. This view is consistent with emergent research on epistemic cognition, which sees the construction of knowledge not as a contrast between the individual and passively acquired knowledge, but rather as an active process in which evidence is evaluated, beliefs are justified, and contextually sensitive judgments are made (DeGlopper & Stowe, 2024). Thus, from that perspective, information literacy (as defined above) provides epistemology-related knowledge and skills that individuals can use to negotiate credibility, meaning, and legitimacy. This ongoing negotiation process allows knowledge claims to be examined and refined in order to be accepted as legitimate in academic discourse.

Generative AI actually builds on these epistemic requests, rather than replacing them. Recent research shows that AI-generated content is less verifiable or complete and more context-dependent, so users must exercise greater critical and contextual awareness and engage more reflectively (Hirvonen, 2024). Instead of acting as an independent knowledge generator, AI introduces a new layer of epistemic uncertainty that demands a more critical assessment of information than ever before. Here, information literacy serves as a tool for citizens to interrogate AI-generated results, compare their validity with authoritative sources, assess them in the context of a particular discipline, and justify their ethical use before using them in scientific arguments (Pinski & Benlian, 2024). Therefore, AI is a valuable cognitive partner in facilitating the exploration of knowledge. At the same time, information literacy protects academic integrity by ensuring the primacy of human judgment as an important epistemic determinant in determining what knowledge is (and thus in validating and generating it).

In the last five years, artificial intelligence (AI) has become a phenomenon that has truly impacted knowledge outcomes in academic contexts. AI is now used by thousands of people in the academic world (lecturers, students, and researchers) for a variety of tasks, ranging from finding libraries and formulating ideas and frameworks to preparing scientific manuscripts (Kasneci et al., 2023). In higher education institutions, AI interaction is likely to be further exacerbated by academic obligations, pressures to meet scientific publication productivity targets, and the increasing complexity of the scientific information ecosystem. However, this convenience raises serious issues regarding the originality of work, the validity of knowledge, epistemic authority, and academic integrity.

Thus, academic contexts cannot escape conceptual layers that govern how AI output is read, assessed, and acted upon.

The advent of the AI era has triggered a paradigm shift in the practice of information literacy development within libraries. In the past, information literacy was defined as knowing when one needs information and being able to identify, locate, evaluate, organize, create, use, and communicate that information effectively and ethically for action to solve a problem (Hendrawan & Putra, 2022). This process further complicates information literacy because algorithmic systems produce information that is not transparent to the users presented (Lusiyanti et al., 2025). Information literacy is now oriented toward the level of reflection required to regulate relationships and sets limits on what knowledge production contributes from human vs. AI roles.

Information literacy and epistemic negotiation are recognized as important dimensions of literacy programs, particularly in the context of knowledge production provided by generative artificial intelligence, as they both help explain how users assess, validate, and support knowledge claims made by AI systems. The role of AI as a technical solution and epistemological challenges that affect the truth, validity, and integrity of knowledge through algorithmic bias, reliance on data, and limited system transparency are some of the discourses in Indonesia based on the latest sources. From this perspective, information literacy is understood not only as the ability to search for and use information, but also as the ability to critically examine the knowledge production process, its social context, and the potential distortions that accompany AI outputs (Dewi et al., 2025). Thus, the information generated by AI can be understood as part of the epistemic negotiation process, which is a process in which the knowledge claims of the machine must be tested through human judgment, comparison with other sources, and consideration of the context of its use (Dewi et al., 2025; Rustandi et al., 2025).

One of the drawbacks of using AI in academia is that it can encourage overreliance, thereby affecting researchers' ability to think critically or freely about issues (Bender et al., 2021). Hence, institutional policies and guidelines need to be implemented to manage the use of AI applications in education, especially in scientific publishing (Cotton et al., 2024). Information literacy is a problem with the noun: it is studied not as a faculty to act of feminism, but as a regulatory approach. Thus, there is a lack of explanation of the processes by which users negotiate AI's role in knowledge production.

There still seems to be a lack of literature on the actual role of libraries in controlling the use/abuse of AI by lecturers, students, and researchers. Additionally, most academic institutions do not regard the Library as an intermediary in developing policies on AI use for scholarly activities. This limited institutional recognition may stem from the fact that many university libraries remain focused primarily on information literacy activities, such as citation management and plagiarism prevention. This condition illustrates how much research is needed to broaden libraries' role in AI-based academic ecosystems.

In addition to providing access to information that supports the Tri Dharma of higher education, university libraries also act as institutional actors that produce, evaluate, and communicate academic knowledge within an epistemic environment. Libraries are spaces for building norms, values, and practices that guide members of the academic community in responsible interaction with new information and technologies through information

literacy programs, learning services, and AI-related policies. Thus, the epistemic role of libraries does not function at the individual level, but rather derives from the institutional capacity to create conditions that allow the informed application of knowledge practices. The Library does not conduct direct epistemic negotiations. In fact, the discipline of librarianship, as a discourse, places greater emphasis than ever before, but libraries provide institutional infrastructure, educational functions, and governance mechanisms through which lecturers, researchers, and students alike utilize information literacy in their academic work. In this context, information literacy operates at the individual level in an epistemic negotiation space, where parties in academia evaluate AI-generated content, assess evidence from various sources to determine its trustworthiness, and decide whether knowledge claims are credible. Understanding how the epistemic role of library institutions enables individual epistemic negotiation through information literacy is critical to frameworks for responsible AI use in higher education.

We chose the Institut Pertanian Stiper (INSTIPER) Library as the research location because it is in the process of integrating information literacy initiatives with new AI governance practices, given the increasing use of generative AI tools for teaching and research. This sustained institutional transition has become fertile ground for examining approaches to redesigning information literacy services in university libraries, governance strategies in the age of AI, and ways academic library workers can effectively support the responsible use of artificial intelligence. This case study captures the complex relationship among institutional policies, library practices, and individual information literacy behaviors in a way that provides analytical insights beyond a single institutional context and may be useful to other higher education institutions undergoing similar changes.

Although the Library has initiated institutional efforts to integrate information literacy with AI governance, important conceptual and practical challenges remain. Existing studies and institutional guidelines on AI in higher education continue to focus primarily on ethical issues and the use of AI in scientific writing. While the expanding epistemic role of university libraries has received increasing attention, comparatively little research explains how this institutional role is translated into individual epistemic practices through information literacy. In particular, limited attention has been paid to understanding information literacy as an epistemic negotiation mechanism through which lecturers, researchers, and students critically evaluate AI-generated knowledge, validate evidence across multiple sources, and determine the credibility of knowledge claims. As a result, systematic investigations that integrate the roles of institutional libraries, information literacy, and AI governance remain very limited, highlighting the need for a conceptual framework that explains how institutional support enables individual epistemic negotiation in an AI-mediated academic environment.

This study aims to research and conceptually explain how information literacy functions as an epistemic negotiation mechanism in the use of generative AI in the academic environment, through qualitative case studies conducted at the INSTIPER Library. More specifically, the study describes how the institutional epistemic role of university libraries enables individual information literacy practices in evaluating, validating, and responsibly integrating AI-generated knowledge into academic work. In theory, this study provides a conceptual framework explaining how the institutional

epistemic role of libraries relates to information literacy as an epistemic negotiation mechanism through AI governance in higher education. These findings will have immediate and practical applications, which are expected to help shape information literacy programs, library service delivery, and institutional AI governance policies to support good academic integrity practices while responding to the responsible use of AI tools. Overall, this supports a broader discussion of how university libraries can foster more resilient and responsible knowledge production and governance in the context of artificial intelligence.

This research formulates information literacy as an epistemic skill outside of library teaching that enables lecturers, researchers, and students to assess, validate, and use AI-generated knowledge in academic contexts. From this perspective, the research aims to present a conceptual framework that integrates information literacy, the institutional epistemic role, and AI governance as a tool for developing evidence-based information literacy programs, as well as institutional guidelines or policies that strengthen academic integrity. In addition to the direct institutional context, the proposed framework could also assist university libraries in redesigning information literacy initiatives or directly inform institutional AI governance for the responsible, trustworthy, and ethically grounded use of AI-based knowledge in higher education institutions.

2. Methods

This study adopted a qualitative case study design to explore how information literacy functions as an epistemic mechanism in the use of generative Artificial Intelligence (AI) within the academic environment of the INSTIPER Yogyakarta Library. Qualitative case studies are considered to be the right design because they are used to understand participants' life experiences, explore their interpretations, and the meanings they have built regarding AI practices in the academic world that take place in a natural institutional environment; they do not measure the cause-and-effect relationship or test hypotheses (Moleong, 2021; Sugiyono, 2024).

Informants were recruited using sampling based on these three inclusion criteria: (1) involved in academic writing or research activities; (2) have used generative AI for any academic purpose; and (3) voluntary participation in research. Recruitment continued until the required number of informants was reached, resulting in a total of 15 informants, consisting of 10 undergraduate students and 5 lecturers who were active researchers. The age of the student participants ranged from 20 to 23 years old; meanwhile, the age of the lecturers ranged from 35 to 54 years old and included those with master's or doctoral degrees. The study was given the opportunity to draw on diverse perspectives on the use of AI across different levels of academic experience, as well as on the participants' digital literacy.

In this study, researchers were used as the main instruments. Data were collected through semi-structured in-depth interviews and document analysis from July to August 2025. This interview aims to investigate participants' experiences, decision-making processes, perceptions of information credibility, and strategies for validating AI-generated content. Institutional documents related to regulations, information literacy

training materials, documentation of library services, and university policies regarding the proper use of Artificial Intelligence. These various data sources provide a more complete picture while ensuring robust results.

Qualitative data analysis procedures (Creswell & Poth, 2024) are used to analyze data manually. The analysis method consists of compiling and transcribing interviews, repeatedly reading transcripts, encoding relevant units of information, organizing similar codes into categories, interpreting interactions among data, and drawing conclusions based on conceptual frameworks that guide information literacy and epistemic negotiation. Interpretations between analyses are re-compared with documentary evidence to ensure credibility and consistency of findings.

Source triangulation is seen through data collected from students, faculty, and institutional documentation to enhance the credibility of these findings, as well as member checks that reinforce that the interpretation reflects their experiences. Epistemologically, this research is in an interpretivist paradigm that views social reality as something that is socially constructed through interactions, experiences, and institutional contexts.

During the preparation of the manuscript, the authors use AI tools only for language editing and readability. Research results are not generated, empirical data are not analyzed, and scientific interpretations are not made using AI. The authors are solely responsible for respecting the originality, accuracy, and scientific integrity of this publication in accordance with Elsevier's policy regarding the responsible use of AI tools in scientific writing. All analytical decisions, interpretations, and conclusions are entirely generated by the authors.

The general research process used in this study can be seen in Diagram 1. This flowchart is a schematic representation of the methodological steps: research design; participant recruitment and selection; data collection; data analysis and credibility procedures; interpretation of findings and development of study conclusions.

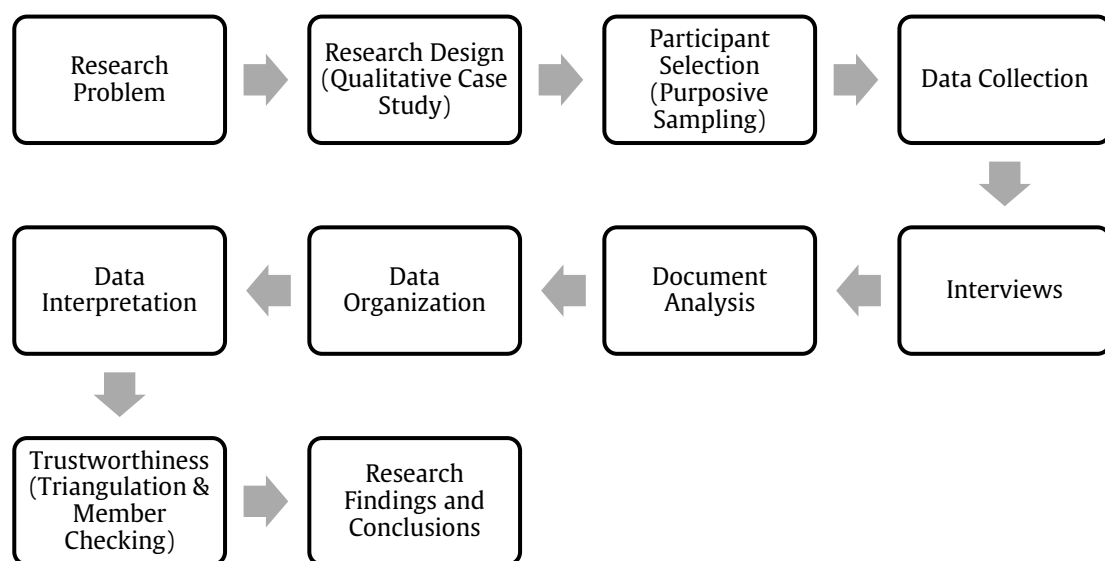


Diagram 1. Research Flow of the Study

3. Results and Discussion

INSTIPER Yogyakarta Library is strategically positioned as a center for information literacy and scientific information services for higher education institutions in the fields of agriculture, plantations, and forestry. The rapid advancement of Artificial Intelligence (AI) has changed the academic information landscape, so libraries must constantly redefine their services and functions. This dynamic is reflected in the evolving shape of the digital ecosystem, the adoption of AI readiness practices, and shifts in information-seeking behavior among students and academic staff.

The role of libraries has now expanded far beyond simply hosting physical collections, such as printed works or special materials in the so-called *realia*. Gradually, the service has transformed its offerings through the mobile electronic library platform and the institutional repository (Digilib) to enable more efficient access to scientific resources. With the increasing presence of AI in academic activities, libraries are also taking on a role that expands their function as a facilitator of digital and information literacy. Instead of just providing information, the program teaches users how to use AI responsibly while promoting academic integrity and research ethics, as well as the value of supporting authoritative scientific sources.

The way users behave has also changed drastically. More and more college students, especially those born in the digital native era, are turning to AI-based search engines or smart assistants as their first choice for gathering the data they need for research, which they then use to compose an undergraduate thesis or other academic assignment. As a result, the Library also has a new face. Google no longer presents Internet-based literature; Libraries have moved from isolated spaces to various critical academic areas, places of information certainty, cross-examination of facts, and reviews of scientific evidence to assess credibility and relevance.

A similar trend can be observed among faculty members. The adoption of AI in scientific research and publishing continues to grow, but important academic processes remain outside the capabilities of versatile AI tools. In this context, the INSTIPER Library serves as a strategic academic partner by supporting plagiarism detection, facilitating access to trusted scientific publications, and helping researchers identify high-quality journals that are often only accessible via open AI platforms.

With the increasing institutional research culture at INSTIPER, researchers have seen a significant increase in scientific output, from writing research papers to publishing journal articles and undergraduate theses. While this indicates higher research productivity, it also raises additional expectations for libraries.

Its mission now extends beyond information provision toward mentoring the academic community in the ethical use of AI throughout the scholarly writing process. Such a role is essential to ensure that the increasing volume of academic publications is accompanied by sustained standards of originality, scientific integrity, and overall research quality.

3.1 The Process of Epistemic Negotiation in AI Utilization for Scientific Writing

Artificial Intelligence (AI) has already started to creep into nearly every field, even scientific writing. AI is equipped with a range of tools and techniques that can assist

writers in writing more efficiently, accurately, and productively. There are so many domains in which AI is used in scientific writing, from grammar and spelling checkers to automated text generation and plagiarism detection—commonly used AI tools include ChatGPT, Grammarly, Consensus, and DeepL.

In scientific writing contexts, ChatGPT acts as a first draft assistant to help come up with ideas, draft and refine text by proposing sentence structures, providing literature reviews, and even generating code for data analysis (Zhao, 2025). Despite the improvements, ChatGPT outputs should still be verified, as it is not designed to check citations or detect plagiarism. Grammarly is the most widely used software for checking grammar, spelling, and sentences, especially for non-native English speakers in academic writing (Almryad & Musa, 2025). Consensus is an AI-based literature search engine designed to help users find, organize, and analyze literature related to topics of interest (Lim, 2026). Instead, DeepL serves as an AI-based translation tool designed to improve the clarity, style, and grammar of texts. DeepL is commonly used in scholarly domains to translate journal articles, revise sentences, and help authors formulate more natural scientific texts without altering their underlying meaning (Awalia et al., 2025).

Academics, including students, lecturers, and researchers, are negotiating in scientific writing how AI may be applied, what shall count as the continuing role of AI compared to a human role, and therefore ensuring that knowledge produced with AI can remain reliable. Establishing shared understandings of AI's role in scientific writing is an ongoing process that evolves through discussions, new regulations, and changes in professional practice (Alkhatib et al., 2025). In the epistemic negotiation of AI use in scientific authoring, a dynamic process arbitrates the provenance of knowledge among lecturers, students, and researchers, who must actively stake out how far human agents may encroach in producing machine outputs.

While making work up to 10 times faster, AI is used for scientific writing, but also obliges authors to continuously evaluate truthfulness, value, and ethical acceptability simultaneously. This dynamic can thus be understood as a form of epistemic negotiation, in which knowledge claims and their representations are critically assessed through interactions between authors and AI. Here, the authors do not accept AI-generated responses outright but instead scrutinize AI output and assess whether it is sufficiently accurate for use in scientific writing.

The dynamics of epistemic negotiation are clearly illustrated through the practice of an oil palm agronomy researcher who also serves as a lecturer at INSTIPER. In this case, artificial intelligence was employed as an initial analytical partner to assist in identifying disease symptoms in oil palm seedlings and to generate preliminary management recommendations. The interaction began when the researcher submitted a textual description of the observed symptoms, along with photographs of the affected leaves, to an AI system.

Interaction 1: Initial Prompt "*Bercak melingkar berwarna coklat tua dan kuning berkembang pada daun bibit kelapa sawit selama tahap pembibitan. Diagnosa penyakit tersebut dan berikan fungisida kimia dengan dosis untuk 1 hektar.*" which is rendered in English as: "Dark brown and yellow circular patches appear on the leaves of oil palm

seedlings during the seedling stage. Diagnose the disease and apply a chemical fungicide in doses for 1 hectare."

Interaction 2: Initial AI Response "*Diagnosis: Akar tanaman terinfeksi cacing akar nematoda. Tindakan yang disarankan: Obati infeksi jaringan daun dengan aplikasi mingguan 5 kg/hektare fungisida berbahan dasar mankozeb selama dua bulan.*" which is rendered in English as: "Diagnosis: The roots of the plant are infected with nematode root worms. Recommended step: Treat leaf tissue infection with a weekly application of 5 kg/hectare of mancozeb-based fungicide for two months."

Although responses are generated in seconds, the researchers do not consider those recommendations to be certain. AI outputs are rigorously examined for scientific, practical, and environmental credentials. The data is seen as an initial hypothesis that should be confirmed by experts in the field, rather than as an authoritative conclusion with the results generated by AI.

From a factual standpoint, researchers quickly discovered fundamental inconsistencies that characterize AI hallucinations. Based on known agronomic knowledge and field experience, brown and yellow circular patches on oil palm seedlings appear to be more consistent with leaf spot disease associated with *Curvularia maculans* than infections by nematodes that cause root rot. In addition, recommending the use of fungicides for the scientific control of nematodes is unreasonable, since plant-parasitic nematodes require nematicides, not fungicides.

In addition, AI-generated recommendations also miss the value dimension. In the context of seed production, it clearly does not make economic sense to treat plants with mancozeb at a target rate of 5 kg/ha per week, because most disease control programs in nurseries involve concentrated spraying of seedlings showing symptoms rather than thorough chemical application.

Ethically and environmentally, the proposed treatment violates the principles of Integrated Pest Control. Repeated large-scale fungicide applications over two months can increase chemical inputs, trigger pathogen resistance, and pollute the environment, thus opposing sustainable agriculture.

Rather than discarding the AI output entirely, the researcher initiated an epistemic negotiation by providing corrective feedback grounded in scientific reasoning.

Interaction 3: Researcher Feedback

Diagnosis Anda tidak akurat. Bercak melingkar berwarna coklat dan kuning pada daun kelapa sawit lebih khas sebagai gejala Curvularia sp. Ini adalah infeksi jamur, bukan nematoda akar. Hal lain lagi, penambahan 5 kg/ha ke seluruh area akan tidak tepat untuk pedoman IPM pembibitan. Diagnosis secara cermat dan lakukan pengendalian secara biologis serta kultural terlebih dahulu; gunakan fungisida selektif hanya jika ambang batas ekonomi telah terlampaui.

Formulated in English as:

Your diagnosis is inaccurate. Brown and yellow circular patches on oil palm leaves are more typical of *Curvularia* sp. It is a fungal infection, not a root nematode. Another thing: adding 5 kg/ha to the entire area is not in accordance

with the HDI nursery guidelines. Diagnose carefully and perform biological and cultural control first; use selective fungicides only if the economic threshold has been exceeded.

Following this intervention, the AI revised both its diagnosis and management recommendations.

Interaction 4: Revised AI Response

Terima kasih atas koreksinya. Diagnosis diubah menjadi penyakit bercak daun yang disebabkan oleh Curvularia maculans. Rekomendasi untuk strategi Pengelolaan Hama Terpadu meliputi: (1) tindakan kultur dengan memisahkan bibit yang terinfeksi dan mengurangi kelembapan daun; (2) aplikasi biokontrol seperti Trichoderma sp.; dan (3) aplikasi fungisida mankozeb dengan dosis 2 g/L air melalui penyemprotan titik hanya pada bibit yang menunjukkan gejala apabila kejadian penyakit >10%.

Formulated in English as:

Thank you for the correction. The diagnosis was changed to leaf spot disease caused by *Curvularia maculans*. Recommendations for an Integrated Pest Management strategy include: (1) cultural action by separating infected seedlings and reducing leaf moisture; (2) biocontrol applications such as *Trichoderma* sp.; and (3) application of the fungicide mancozeb at a dose of 2 g/L of water through spot spraying only on seedlings showing symptoms during the >10% disease.

Before implementation, the revised recommendation was further validated against scientific literature, field observations, and economic considerations. Only after this verification process was the recommendation incorporated into the Standard Operating Procedure (SOP) for nursery management. This case demonstrates that AI cannot replace the contextual expertise of agricultural researchers. Instead, its outputs require continuous interpretation, verification, and refinement by domain experts. In this process, the researcher functions as an epistemic gatekeeper, ensuring that AI-generated recommendations remain consistent with empirical evidence, agronomic principles, and the ecological realities of agricultural production systems.

In scientific writing, AI can assist authors in generating ideas, organizing writing outlines, and clarifying content. These functions are valuable because they save time and help authors structure their writing more effectively (Chetwynd, 2024). However, AI assistance does not eliminate the need for critical evaluation, as AI-generated outputs may contain hallucinations or convincing but inaccurate information. This relationship between human judgment and AI assistance is commonly described as Human-in-the-Loop (HITL) (Holzinger et al., 2018). Humans take on the role of agents who ascribe meaning, while AI becomes a data-processing machine that can scale faster than the human biological processor. The need for critical evaluation of AI-generated content provides the context in which epistemic negotiation emerges.

The need for critical evaluation of AI-generated content provides the context in which epistemic negotiation emerges. An author must automatically question the accuracy of

information, its source availability, and whether it corresponds with the topic discussed. Questions like this reinforce accountability around the knowledge that is integrated into scientific work. Trust in AI should always be total in scientific writing (Granjeiro et al., 2025). AI will always be a support tool because final decisions are made by humans who have the research context, writing goals, and disciplinary expectations in mind.

Most authors use AI to shorten long, complex sentences; this is especially useful if English is a second language. Therefore, AI plays a linguistic support role in constructing papers; however, authors need to ensure that the scientific meaning is not altered (Hu et al., 2025). This process is also related to a very important academic identity issue: while some authors feel AI assists them because it provides a boost of confidence, others are still unsure whether employing an AI generative tool makes their work scientific. Thus, writers need to navigate between efficacy and fidelity. How do we get there? Among other things, by writing not just quickly, but honestly, transparently, and on point with how academic standards are worked out at any particular time.

Fact-checking is a key component of epistemic negotiation. If AI machines provide data, quotes, or references, writers need to check the facts of this information, as they can generate incorrect answers and even make up references. Authors need to be aware of bias in AI-generated language, not only with respect to factual accuracy. Consider how AI will sometimes generate blanket, exaggerated, and tonally stupid statements. Therefore, the author is obliged to adapt the output into neutral and discipline-related language. The idea is that good epistemic negotiation occurs when the writer interacts with the AI and not just accepts its output. This kind of dialogue may include asking for a replacement phrase or a simpler definition, and then you'll re-evaluate whether the output is good enough to use. As an illustration in the field of plantation science, AI may occasionally generate exaggerated statements, such as claiming that "the application of fertilizer X miraculously eliminates all oil palm pests." Such assertions are inappropriate for scholarly writing because they rely on sensational language rather than empirical evidence. Consequently, the researcher engages in an epistemic negotiation process by critically interacting with the AI and requesting that the statement be reformulated in accordance with academic writing conventions.

During this iterative process, the AI is instructed to adopt evidence-based and scientifically precise wording. For example, the statement is revised to "The measured application of fertilizer X was shown to reduce the population of *H. theivora* by up to 25% over a 14-day observation period." Through repeated cycles of confirmation, revision, and critical evaluation, the researcher ensures that the resulting scientific claims remain accurate, quantifiable, empirically supported, and free from sensational or misleading expressions.

The healthy use of AI in academia should position it as an assistant, not an authoritative genius. Keep knowledge authority centered on researchers, reputable scientific sources, and artificial critical thinking. Thus, the use of AI in scientific writing must always be supported by explicit ethical principles. Authors must keep records of the use of AI and prove the correctness of the facts shown, whether or not there is attribution violation, plagiarism, or academic fraud.

The process of epistemic negotiation in writing with AI involves weighing technological capabilities against scientific responsibilities. AI can speed up and simplify writing, but the integrity of scientific writing ultimately lies in the diligence, honesty, and judgment of a human writer.

3.2 The Function of Information Literacy as a Mechanism that Guides and Limits AI Utilization

Information literacy in the digital era is primarily grounded in two interconnected competencies: digital literacy and data literacy. Digital literacy refers to an individual's ability to access, evaluate, and use digital technologies, including artificial intelligence, ethically and responsibly (Airman, 2024, as cited in Zulmi et al., 2025). Meanwhile, data literacy encompasses the capacity to understand, interpret, analyze, and communicate data to support informed decision-making (OCTAVE - John Keells Group, 2025).

Together, these two competencies provide the foundation for AI literacy, which extends beyond technical proficiency to include a critical understanding of how AI systems operate, their potential benefits, and their broader social, ethical, and epistemic implications (Holmes et al., 2022). Rather than functioning as separate capabilities, digital and data literacy reinforce one another in fostering critical thinking and self-regulation when interacting with AI technologies. The findings of this study indicate that variations in these two literacy dimensions directly influence how participants guide and constrain their use of AI in academic practices.

Participants classified within the High-Critical Literacy group consistently viewed AI as a supportive tool rather than an unquestionable source of knowledge. They formulated specific and context-sensitive prompts to obtain more relevant outputs and systematically evaluated AI-generated responses before incorporating them into their work. Validation was commonly conducted through information triangulation by comparing AI outputs with primary literature, peer-reviewed publications, and indexed academic databases. In this context, information literacy performs a dual function. It serves as a limiting mechanism by preventing excessive dependence on AI while simultaneously acting as a guiding mechanism that enables users to identify, filter, and critically assess potential inaccuracies, biases, and AI hallucinations.

A contrasting pattern emerged among participants categorized as Basic-Low Literacy. They tended to accept AI-generated responses at face value without conducting independent verification or consulting alternative sources. Their interactions with AI were generally characterized by broad and non-specific prompts, resulting in a more passive information-seeking process. Limited critical literacy weakened the limiting function of information literacy, making AI utilization less deliberate and increasing the likelihood of relying on inaccurate or hallucinated information.

Overall, these findings demonstrate that information literacy is a key determinant of how effectively individuals engage with artificial intelligence. Higher levels of information literacy enable users not only to maximize the practical benefits of AI but also to manage its inherent limitations and risks critically. Consequently, information literacy should be understood as an epistemic mechanism that safeguards the reliability, validity, and

credibility of AI-assisted knowledge production rather than merely as a set of technical competencies.

Nowadays, much information is generated by AI, embedded in search, processing, and dissemination; therefore, information literacy plays an influential role in the era of artificial intelligence. AI provides great convenience, from answering questions at high speed to summarizing long texts and aiding in ideas and analysis. Nevertheless, behind these advantages lie serious dangers, such as information bias, algorithmic bias, overreliance on technology, and deteriorating critical-thinking skills. In this case, information literacy serves as a compass that helps users use AI wisely while reducing the potential for abuse, overdependence, and unethical behavior.

Users need to know that AI is a tool and not an absolute source of truth (Hirvonen, 2024). Most people have a high level of trust and take for granted the responses from AI because the answers are very convincing. However, in reality, AI does not generate factually correct, complete, and contextually relevant information every time. With information literacy, users are trained always to double-check AI-generated responses against other sources and to recognize that the validity of information must be checked at all times (Itsnaini et al., 2025). The importance of this critical perspective is to ensure AI is not considered an end goal, but rather an input into the broader process of thinking and learning.

But information literacy also educates users about the basics of AI. This understanding is crucial, as many cases of AI abuse arise from incomplete information about how these systems generate results. In contrast to human knowledge that brings certainty of cognition, AI output is a probabilistic prediction based on training data, statistical patterns, and predictive models (UNESCO Jakarta, 2024). Users who understand these principles will be less relaxed in accepting AI-generated answers and be in a better position to recognize when AI outputs are good enough to be used, and when they need further validation. Therefore, information literacy is not passive but active: a user of technology who knows the context of technology.

In addition, information literacy guides users in choosing competent sources. Although AI is used as a reference tool in the digital sector, not all of the sources you see are of good quality (Hirvonen, 2024). Information literacy teaches users to evaluate the authority, accuracy, currency, and relevance of sources. With this capability, users do not use AI carelessly; Instead, it is seen more as a starting point for information that we will then critically filter. This process is changing the use of AI to be more directed, efficient, and responsible.

Information literacy goes beyond the selection of sources to influence how information is interpreted. AI can help generate text summaries or explain complex ideas, and users should understand the limitations of these summaries. A very brief summary simply removes nuances, historical contexts, or opposing ideas that need to be communicated. Information literacy is more than just finding the answer; it encourages users to check what lies behind the information. AI can support deeper understanding by clarifying complex information while preserving the user's responsibility to evaluate and interpret it critically.

Instead, information literacy serves as a restraint on AI functions so they do not violate ethical boundaries. The main limitation is the prohibition of plagiarism and the improper use of intellectual works. The speed at which AI can generate text is dazzling – but that should not be taken as an excuse to use unchecked and claimed genuine output. Data is questioned with respect and recognition, enrichment practices, and scientific responsibility. Through these limitations, users learn that while AI can help with the process of learning or writing, it cannot replace human intellectual integrity.

It also limits the reliance on AI, thus ensuring that a person does not simply fail to perform their activities. When humans overuse AI to think, write, analyze, or make decisions, they risk damaging their minds. Users may become less adept at formulating problems and assigning weights to assess alternatives and build independent arguments. Information literacy also tells users that AI needs to support human capabilities rather than replace them. So, there must be a line of distance between the help of technology and the total surrender of the mind.

These functions of guidance and restriction are particularly relevant in an educational context. When used properly, it can be a super-effective learning tool at universities. However, without data literacy, students might be encouraged to pass off superficial AI-generated content before understanding the material, or, worse, lie about their work. Information literacy helps students use AI for exploration, practice, and conceptual clarification rather than as a shortcut (a means of avoiding the processes of learning) (Itsaini et al., 2025). Info literacy, on the other hand, constrains AI use because it teaches us originality, understanding/explaining in our own words, and academic integrity.

Empirical research reveals a prominent trend that college students are increasingly relying on AI to conduct academic activities. Based on interviews with several students from the Agrotechnology Study Program at INSTIPER, most of the participants used AI platforms, especially ChatGPT, to instantly create or rearrange draft thesis text. However, more often, their work automatically includes AI-generated content without verifying whether the factual details are true or whether the source is accurate. One participant explained: "*Kami sering dikejar deadline, jadi paragraf dari AI langsung kami copy-paste ke MS Word tanpa mengedit lagi karena bahasanya sudah terlihat ilmiah.*" (Dena Alfian Noor). "We are often under tight deadlines, so we usually copy and paste AI-generated paragraphs directly into Microsoft Word without editing them because the language already sounds academic." (Dena Alfian Noor)

This statement illustrates how time pressure can encourage students to prioritize efficiency over critical evaluation. Under such circumstances, AI shifts from being a learning aid to becoming a substitute for the analytical and reflective thinking processes that should characterize academic writing. Consequently, conceptual understanding may develop only superficially, as students depend more heavily on AI-generated outputs than on their own interpretation, synthesis, and critical reasoning.

These findings further reinforce the role of information literacy as both a guiding and limiting mechanism in AI utilization. Information literacy encourages users to verify sources, critically evaluate AI-generated content, and reflect on its validity before incorporating it into academic work. Without these competencies, students are more likely to bypass deep processing and adopt shortcut strategies to satisfy academic deadlines.

Consistent with this perspective, Itsnaini et al. (2025) argue that the purpose of information literacy is not to discourage the use of AI, but to ensure that it functions as a tool for initial exploration, idea generation, and conceptual clarification rather than as a replacement for critical thinking, academic integrity, and intellectual originality. In this sense, effective use of AI remains fundamentally dependent on the user's ability to exercise informed judgment throughout the knowledge-construction process.

On the other hand, limiting functions arise from the understanding that not all available information must be used immediately. AI can analyze personal data, predict preferences, or produce highly personalized content. However, being information literate clearly shows the importance of protecting your privacy and data security, and of exercising caution when sharing sensitive information. Digitally literate users become more picky about what they input into AI systems and understand the negative impact of digital footprints. These kinds of limitations are key to ensuring that the ease of use offered by AI does not seriously compromise personal rights and safety.

Finally, information literacy also informs the use of AI for research and for writing in a scientific style. In an academic context, AI can help with finding topics and organizing. That said, one should never take AI outputs without sufficient scientific validation. At the same time, information literacy points researchers towards verifying references, testing data, and checking whether arguments conform to logical structures that tie accountability in. This distinction positions AI as a supportive tool for research rather than a substitute for scientific methods and rigorous validation.

In terms of policy, information literacy informs society about the rights and responsibilities of using AI. With most AI regulations still in the works, users must have the ability to critically evaluate risks and comprehend the directions policymakers are taking. More importantly, information literacy not only makes society technology users but also citizens who can oversee public policies related to AI. At the same time, its constraining power motivates adherence to relevant institutional, educational, organizational, or national legislation regarding AI use.

In the end, one can interpret information literacy as a driving and controlling solution for AI use. It guides users on how to choose, comprehend, assess, and harness AI for productive use. Simultaneously, it restricts the use of AI so that it does not violate ethical principles, impair critical thinking, perpetuate biases, or cause social harm. Information literacy is the foundational competence, and it will determine whether technology empowers or imprisons human beings in a world where AI becomes hyper-intelligent and widely available (even if not necessarily through sophisticated algorithms). That is why reinforcing information literacy has become a primary need to ensure that AI use continues intelligently and safely.

3.3 The Role of the INSTIPER Yogyakarta Library in Developing Information Literacy and Mediating Policies Related to AI Utilization

The INSTIPER Library no longer serves solely as a unit responsible for managing physical collections and library catalogs. As digital transformation continues to reshape higher education and Artificial Intelligence (AI) becomes increasingly embedded in academic

activities, the Library has evolved into an intellectual hub that supports not only learning and research but also the mediation and implementation of institutional policies on AI use. Drawing on empirical evidence from observations, in-depth interviews, and document analysis, this study identified four principal roles the INSTIPER Library played in responding to the growing integration of AI in the academic environment. These findings demonstrate that the Library has moved well beyond its traditional service function and now acts as a strategic institutional actor that strengthens information literacy, supports academic governance, and fosters an ethical, transparent, and accountable ecosystem for the responsible use of Artificial Intelligence.

3.3.1 Strengthening Critical Academic Culture through Integrated AI Literacy

The findings indicate that the INSTIPER Yogyakarta Library has expanded its role beyond providing access to information resources and now functions as an institutional driver of critical academic culture in response to the increasing use of Artificial Intelligence (AI). Interviews revealed that librarians regard AI as a valuable academic support tool; however, its use must be accompanied by the ability to evaluate the credibility of information, verify evidence, and recognize the limitations of AI-generated outputs. Information literacy, therefore, extends beyond information retrieval skills and serves as an epistemic mechanism that enables students and lecturers to make informed intellectual judgments when interacting with AI systems.

This transformation reflects a broader shift in the function of university libraries. Rather than serving primarily as collection managers, libraries increasingly act as learning environments that cultivate critical reasoning. Before the widespread adoption of generative AI, information literacy programs mainly emphasized catalog navigation, database searching, and literature retrieval techniques. The empirical findings, however, demonstrate that the INSTIPER Library has begun integrating AI literacy into its existing literacy programs by introducing discussions on how generative AI operates, the presence of algorithmic bias, strategies for validating AI-generated content against authoritative academic sources, and the ethical implications of AI-assisted scholarly writing. Consequently, AI literacy is positioned as an extension of information literacy rather than as an independent competency.

This role has become increasingly important because students frequently use AI for brainstorming, summarizing literature, and drafting academic assignments. Without adequate guidance, these practices may encourage superficial understanding, excessive dependence on automated systems, and declining critical thinking skills. Accordingly, the library functions as an educational institution that ensures AI supports (rather than replaces) scientific reasoning. These findings are consistent with UNESCO's perspective that information literacy constitutes a strategic response to the challenges posed by generative AI, including misinformation, algorithmic bias, and the ethical evaluation of digital information (Frau-Meigs, 2024).

3.3.2 Mediator of Academic Transparency Policies and Accountability in AI Utilization

The findings demonstrate that the INSTIPER Yogyakarta Library extends its role beyond delivering information literacy services, serving as a mediator in implementing institutional policies governing the use of Artificial Intelligence (AI). Interview data indicate that librarians recognize the rapid adoption of AI in learning, research, and scholarly writing as requiring practical, operational guidance to ensure that members of the academic community share a common understanding of acceptable AI practices. In this context, the Library serves as an intermediary, translating institutional policies into everyday academic practice through literacy programs, academic consultations, and ongoing guidance for both students and lecturers.

The findings further reveal that transparency has emerged as a central principle promoted by the Library. Participants emphasized that the use of AI is not inherently academic misconduct, provided it is used proportionally, responsibly, and openly disclosed. This principle is implemented by encouraging users to acknowledge the specific stages of their work supported by AI, including brainstorming, outline development, language refinement, or preliminary literature exploration. Such transparency enables lecturers to evaluate students' work more fairly while simultaneously reinforcing a culture of academic honesty amid the growing integration of generative AI into higher education.

Another important finding concerns the Library's role in clarifying the boundary between AI as an assistive technology and AI as a substitute for intellectual work. Throughout information literacy training and individual consultations, librarians consistently emphasize that AI should facilitate analytical thinking rather than generate scholarly arguments independently. Consequently, AI-generated outputs are expected to be verified against primary sources, compared with credible academic literature, and critically interpreted by the user before being incorporated into academic work. This approach reinforces the understanding that intellectual responsibility remains with the author rather than with the AI system.

The empirical evidence also indicates that the Library helps translate broad institutional regulations into practical guidance that can be implemented consistently across academic activities. Participants explained that many AI-related policies remain normative and therefore require operational interpretation to guide teaching, learning, and research practices effectively. Through training programs, AI usage guidelines, and consultation services, the Library bridges the gap between institutional regulations and the practical needs of academic users. In doing so, it functions not merely as a policy implementer but also as a facilitator that supports the interpretation, application, and continuous evaluation of AI governance within the university.

Overall, these findings suggest that the Library's responsibilities have evolved toward a broader knowledge governance role in which transparency, accountability, and academic integrity constitute fundamental principles for responsible AI utilization. This interpretation is consistent with the guidelines issued by the Direktorat Pembelajaran dan Kemahasiswaan (2024), which advocate for operational and context-sensitive AI governance to safeguard academic integrity. Likewise, Frau-Meigs (2024) argues that transparency represents a core component of digital and information literacy because it

enables users to understand the relationship between technological innovation, intellectual responsibility, and academic ethics. The findings, therefore, indicate that the INSTIPER Yogyakarta Library contributes not only to strengthening information literacy competencies but also to establishing an institutional governance framework that promotes responsible, transparent, and ethically accountable AI use in higher education.

3.3.3 Center for Data Ethics, Privacy, and Digital Information Security Education

The findings indicate that the growing adoption of Artificial Intelligence (AI) in higher education has introduced challenges that extend beyond information quality to include data ethics, privacy, and digital information security. Interview data reveal that most academic users primarily perceive AI as a tool for improving efficiency in learning and research, whereas awareness of the risks associated with handling personal information and research data remains relatively limited. In response to this situation, the INSTIPER Yogyakarta Library has expanded the scope of its information literacy initiatives by incorporating data protection and digital ethics into its educational services, positioning these topics as essential components of responsible AI literacy.

The empirical evidence further demonstrates that librarians actively encourage students and lecturers to exercise greater caution when using cloud-based AI platforms. Participants explained that many users remain unaware that documents uploaded to AI systems (including research manuscripts, institutional documents, experimental datasets, and personal information) may be processed, stored, or reused in accordance with the policies of individual service providers. Consequently, library training sessions and consultation services increasingly emphasize the distinction between information that can be safely processed using AI and information that is confidential, sensitive, or unpublished. This educational approach encourages users to consider not only the efficiency AI technologies offer but also the ethical and legal implications of sharing academic data with external digital platforms.

The findings also suggest that the Library has begun integrating data ethics into its broader information literacy framework. From this perspective, evaluating information is no longer limited to assessing the credibility of sources; it also includes understanding how digital data are collected, processed, managed, and protected throughout their lifecycle. Librarians consistently emphasize that responsible AI use requires users to understand privacy policies, recognize institutional data governance requirements, and evaluate potential risks related to intellectual property, confidentiality, and research integrity. Accordingly, information literacy evolves into a more comprehensive digital competency that combines information evaluation, technological understanding, and ethical decision-making within a single educational framework.

Another important finding concerns the Library's contribution to fostering a culture of digital information security across the academic community. Through literacy workshops, research consultations, and academic support services, librarians promote preventive practices such as using institutional accounts whenever possible, removing personally identifiable information from AI prompts, avoiding the upload of unpublished research materials, and reviewing the security policies of AI platforms before use. These initiatives

demonstrate that the Library's responsibility extends beyond developing technical competencies toward cultivating responsible digital behavior and strengthening awareness of information security as an integral component of academic professionalism.

Overall, these findings indicate that the Library has assumed a broader role in supporting academic data governance in the age of Artificial Intelligence. Rather than merely facilitating access to information, it equips members of the academic community with the knowledge and ethical awareness needed to manage data securely and responsibly throughout research and learning. This interpretation aligns with the recommendations of the Direktorat Pembelajaran dan Kemahasiswaan (2024), which identify data protection, information security, and AI governance as essential elements of institutional AI policy in higher education. Similarly, UNESCO argues that information literacy in the AI era should encompass an understanding of digital ethics, data privacy, ownership rights, and the responsible management of digital information (Frau-Meigs, 2024). The findings therefore demonstrate that the INSTIPER Yogyakarta Library contributes significantly to establishing an academic ecosystem in which AI adoption is accompanied by strong commitments to data ethics, privacy protection, and digital information security.

3.3.4 Policy Testing Ground and Research Partner for Academic Staff

The results show that the INSTIPER Yogyakarta Library is a strategic testing ground for AI governance at universities. As confirmed by interview data, libraries continue to interact with students, lecturers, and researchers through a variety of academic support services. These repetitive interactions allow librarians to discover new patterns in the use of AI, identify changing user needs, and uncover practical problems in learning, research, and scientific writing. The data drawn from these routine interactions provide concrete evidence to guide institutional decisions and help formulate AI policies that are more responsive to changes in technology and academic practice. Policy implementation in libraries is also characterized as an environment where empirical findings are treated as needing to be tested first and improved before being institutionally expanded.

Participants explained that questions that arise in the context of literacy programs, consulting services, and referral assistance often reveal gray areas or practical issues related to existing AI regulations. With this experience systematically recorded, libraries can identify policy exceptions that need to be defined or reconsidered, as well as other policies that need increased socialization. As a result, libraries present data-driven insights that can inform institutional policies and support gradual progress in AI governance at the university level.

Another finding concerns how libraries evolve into research partners for academics. The report shows that librarians are increasingly engaged in tasks beyond traditional reference services, such as systematic literature searches, database navigation, and reference management, as well as presentations on integrating AI into research workflows responsibly. In this collaborative environment, librarians act as information consultants who assist researchers in improving literature review strategies, strengthening credible scientific sources, and aligning AI-centric research practices with the principles of

academic integrity. This ever-changing role reflects a shift from providing traditional information services to being an integral part of the university's research ecosystem.

These results also show that libraries can generate institutional knowledge about the use of AI in Higher Education by engaging closely with campus life and daily academic practices. The process of recording user questions, evaluating consultation outcomes, and identifying literacy needs helps libraries build knowledge that informs evidence-based decision-making at the local level. In this case, libraries must be understood not only as setting university standards but also as institutional policymakers capable of linking user studies to policy formulation. This position is increasingly important as the development of artificial intelligence technology outpaces institutional regulation.

Although formal hierarchies often lead to lengthy timelines in administrative procedures, libraries can generally respond more quickly by providing up-to-date literacy materials, practical guides, and training activities, or by offering consulting services to keep pace with current technological developments. Institutional flexibility is essential to close the gap between technological innovation and academic governance, ensuring that members of the academic community are promptly guided to meet their needs, even when formal regulations are still in the drafting stage.

These results demonstrate that the INSTIPER Yogyakarta Library has become a center for policy innovation and can serve as a strategic research partner for the university. Its role goes beyond simply providing access to information, generating real-world knowledge that underpins adaptive, evidence-based, and user-centric AI governance. This expanded role of academic libraries is consistent with the ACRL (2025), which emphasizes their contributions not only as research partners and facilitators of digital learning but also as knowledge management actors within their institutions. Similarly, the Direktorat Pembelajaran dan Kemahasiswaan (2024) affirms that to respond to rapidly evolving technologies, effective higher education AI governance requires ongoing policy evaluation in a multi-stakeholder landscape. These findings show that the INSTIPER Yogyakarta Library functions as a living laboratory, an institutional learning space that houses user experience, research support, and policy innovation in a sustainable AI governance ecosystem. This ever-evolving role places university libraries as strategic actors in today's knowledge governance (Ulum et al., 2025), not just custodians of research collections. Today, the Library is responsible for facilitating learning, supporting research activities, shaping institutional policy, and encouraging ethical scientific production as a system for responsible knowledge creation. The significant involvement of generative artificial intelligence (AI) in higher education is no longer optional but a necessity that enables the development of technological innovations with academic integrity.

This transformation is further supported by new empirical evidence. A study by Zipf et al. (2026) shows that university libraries are seen as stakeholders in the academic community, not just as information providers, but as part of an environment where responsible practices regarding the use of artificial intelligence can be well understood from an ethical point of view and in terms of academic integrity issues. Their research supports the view that encouraging AI literacy in academic libraries is an important step towards fostering a proper dialogue about the ethical use of AI in academia. In parallel, a systematic review of academic library literature examining AI adoption found that the

adequacy of the technology infrastructure is only one step towards successful implementation; Effective governance mechanisms within the institution and strong information literacy skills among students are also very important (Tarbiyati & Riady, 2025).

The main findings of this study show that there is a profound transformation in university libraries' information services, shifting the institutional approach from passive implementers of information dissemination functions to active knowledge governance actors. Meanwhile, the previous literature has mostly focused on two aspects: the implementation of AI services and the adoption of technology, as well as the development of AI literacy. Studies on Library epistemic governance, which mediates AI-based innovation and principles of academic integrity, have received relatively less attention. This article expands on the current discussion of AI in academic practice by exploring how information literacy at the INSTIPER Yogyakarta Library is formulated as a strategic mechanism to guide, regulate, and legitimize the responsible use of AI by scholars in their research practices.

4. Conclusion

This study demonstrates that information literacy in AI-mediated academic environments can no longer be understood merely as the ability to locate, evaluate, and use information. Drawing on a qualitative case study conducted at the INSTIPER Yogyakarta Library, the findings show that information literacy functions as an epistemic negotiation mechanism through which lecturers, researchers, and students critically assess, verify, and justify AI-generated knowledge before integrating it into scholarly work. Within this process, epistemic authority remains with human judgment, while AI serves as a cognitive partner that supports (rather than replaces) knowledge construction and academic reasoning.

A distinctive finding of this study is that the INSTIPER Yogyakarta Library performs a broader institutional role than that commonly associated with academic libraries. This institutional position is shaped by the characteristics of INSTIPER as a higher education institution specializing in agricultural, plantation, and forestry sciences, where AI is increasingly employed not only for academic writing but also for research activities that require contextual interpretation, empirical verification, and discipline-specific expertise. These characteristics create a greater institutional demand for mechanisms that safeguard the credibility and integrity of AI-assisted knowledge. Consequently, the Library has evolved beyond its traditional information service function into an institutional actor that strengthens critical academic culture through integrated AI literacy, mediates the implementation of transparent and accountable AI governance, promotes education on data ethics and digital information security, and serves as both a policy-testing environment and a research partner for lecturers and students. These interconnected roles explain why the Library can bridge technological innovation with responsible knowledge production and academic integrity within its institutional context.

The principal novelty of this study lies in demonstrating that information literacy is not merely a competency for responsible AI use but functions as an epistemic negotiation

mechanism that connects institutional AI governance with individual scholarly judgment. By explaining how the institutional epistemic role of an academic library enables lecturers, researchers, and students to critically validate, legitimize, and responsibly integrate AI-generated knowledge, this study extends current discussions beyond AI adoption and AI literacy towards a broader understanding of knowledge governance in higher education. Several limitations should be acknowledged. This research was conducted as a single qualitative case study within a single higher education institution; therefore, the findings are intended to provide analytical rather than statistical generalization. In addition, the participants were limited to lecturers and students within the INSTIPER academic community, which may not fully represent AI practices across different institutional contexts. Future research directions are expected to include comparative case studies of different types of higher education institutions, as well as (mixed methods or quantitative evaluation) of the conceptual frameworks presented to provide additional empirical validity and generalization.

5. Acknowledgment

5.1 Declaration of Generative AI Use

During the preparation of this manuscript, the authors used ChatGPT (OpenAI GPT-6) solely to assist with language refinement, wording, and improvements in linguistic clarity. The tool was not used for data collection, data processing, data analysis, or the interpretation of research findings. Following the use of this tool, the authors carefully reviewed and edited the manuscript and take full responsibility for the accuracy, integrity, and content of this publication.

5.2 Author Contributions

Author 1 contributed to conceptualization, methodology, validation, writing of the original draft, data curation, formal analysis, project administration, writing, review and editing, visualization, and supervision. Author 2 contributed to conceptualization, software, formal analysis, investigation, resources, writing review and editing, and visualization. Both authors contributed to the development of the manuscript and approved the final version for publication.

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