



Unveiling the GAIS Constructs: A Qualitative Investigation into the Real-World Manifestations of Effective Generative AI Integration in Scholarly Works

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Abstract

Background and Aim: The integration of Generative AI (GenAI) in scholarly works presents transformative opportunities alongside ethical, cognitive, and institutional challenges. This qualitative study investigates the real-world manifestations of effective Generative AI adoption through the Generative AI Integration in Scholarly Works (GAIS) framework, aiming to explore how scholars operationalize AI tools while addressing critical concerns such as ethical integrity, equity, and governance.

Materials and Methods: Adopting an interpretivist paradigm, the study conducted focus group discussions involving 15 scholars drawn from two graduate institutions. Data were analyzed using thematic analysis to identify key dimensions of Generative AI integration in scholarly works.

Results: Six central themes emerged: (1) Productivity and Creativity (efficiency vs. over-reliance risks); (2) Ethical Integrity (transparency, plagiarism, authorship); (3) Equity (access disparities, algorithmic bias); (4) Personalized Learning (adaptive knowledge scaffolding); (5) Cognitive Trade-offs (efficiency vs. critical thinking erosion); and (6) Institutional Governance (policy gaps in privacy and oversight). Findings highlight Generative AI's potential to augment scholarship but reveal tensions in ethical accountability, access inequality, and academic self-efficacy.

Conclusion: Significant access disparities persist, intensifying academic inequities. While Generative AI aids personalized learning and knowledge construction, its over-reliance risks diminishing critical thinking and self-efficacy. Institutional governance remains inconsistent, highlighting an urgent need for clear policies, structured oversight, and inclusive training. Practical recommendations include (a) institutional policies on Generative AI ethics, (b) cross-disciplinary Generative AI literacy programs, and (c) inclusive governance models. Future research should pursue longitudinal studies on GAIS evolution and broader stakeholder engagement to ensure equitable and sustainable AI adoption in scholarly works.

Keywords: Generative AI, Scholarly Works, GAIS Framework, Academic Integrity, Generative AI Ethics

Introduction

Generative AI is no longer merely approaching academia; it is actively reshaping it. This transformation is not distant or speculative; it is unfolding now, with deep, far-reaching implications. The moment demands urgent and informed responses regarding how best to integrate Generative AI into academic practice effectively, ethically, and responsibly. This study, *"Unveiling the GAIS Constructs,"* directly addresses that imperative.

We adopt the GAIS framework, Generative AI Integration in Scholarly Works, as our analytical lens because it provides a robust, multi-dimensional structure for evaluating the integration of generative AI into academia. This framework enables a comprehensive assessment of how Generative AI is being used in real-world academic contexts, including the concrete practices scholars engage in, the challenges they encounter, and the adaptive strategies they devise in response. GAIS is particularly valuable because it critically examines the quality of integration across four core domains. These include **Ethical Integrity**, which ensures that AI use aligns with academic honesty and professional standards; **Equitable Access**, which addresses disparities in Generative AI tool availability and usage across different institutions and demographic groups; **Enhanced Learning and Cognition**, which evaluates Generative AI's potential to deepen understanding and improve educational outcomes; and **Effective Governance**, which focuses on the development and implementation of policy frameworks,



oversight mechanisms, and institutional guidelines that support responsible Generative AI adoption in scholarly settings.

This investigation moves beyond theoretical debates to capture the lived experiences of scholars as they engage with generative AI tools in their research, writing, and teaching. Rather than relying on abstract speculation, it highlights observable behaviors and contextual realities, providing a grounded understanding of what AI integration genuinely looks like across diverse academic environments. While scholarly discourse surrounding Generative AI continues to grow, this research distinguishes itself in several significant ways. It is among the first to empirically apply a structured framework (GAIS) to examine the complex dynamics of Generative AI adoption. It qualitatively uncovers the nuanced practices and challenges faced by scholars who are actively incorporating these technologies into their work. Furthermore, it systematically identifies concrete markers of successful implementation, all grounded in authentic, real-world academic contexts.

Objectives

This study seeks to achieve several key objectives in examining the integration of Generative AI (GenAI) in academic research. First, it aims to explore how scholars operationalize GenAI tools in their scholarly works by investigating real-world applications, challenges, and decision-making processes. Second, the research will assess the effectiveness of GenAI integration through the Generative AI Integration in Scholarly Works (GAIS) framework, with particular focus on four critical dimensions: ethical integrity (including issues of transparency, plagiarism, and authorship); equity (examining access disparities and algorithmic bias); cognitive engagement (analyzing the balance between critical thinking and over-reliance); and institutional governance (evaluating policies, oversight mechanisms, and accountability structures).

A third objective involves identifying potential gaps between the theoretical constructs of the GAIS framework and their practical implementation by analyzing scholars' lived experiences and disciplinary-specific approaches to Generative AI adoption. Building on these findings, the study then aims to develop evidence-based recommendations for strengthening ethical guidelines and institutional policies, enhancing Generative AI literacy across academic disciplines, and promoting equitable access while mitigating biases in Generative AI tools. Ultimately, this research seeks to contribute to the development of context-sensitive frameworks that effectively balance the benefits of Generative AI with academic firmness, ensuring appropriate human oversight and maintaining scholarly credibility.

Literature review

Generative AI (GenAI) demonstrates significant dual-purpose utility in academia, enhancing both productivity and creativity. Grounded in Amabile's (1983) theory that reduced cognitive load fosters creativity, GenAI automates tasks like literature summarization and drafting, freeing scholars for higher-order thinking. This aligns with Goodhue and Thompson's (1995) Task-Technology Fit model, which emphasizes that tool efficacy depends on alignment with user objectives. Further, Flower and Hayes' (1981) cognitive writing model reveals how GenAI supports planning and revision, core stages of scholarly composition.

However, its adoption triggers profound ethical integrity challenges. Floridi (2018) and IEEE (2019) stress the need for transparency and accountability in Generative AI systems, yet unresolved dilemmas persist. Ambiguous intellectual property frameworks (Hristov, 2017; Abbott & Rothman, 2023) complicate ownership claims for Generative AI-assisted outputs, while unattributed training data perpetuates epistemic injustice (Lemley & Casey, 2021). GenAI also enables "ghostwriting" (Eaton, 2023) and "prompt laundering" (Fyfe, 2023), eroding academic integrity. Hallucinated citations (Jaramillo & Chiappe, 2024) and algorithmic bias (Bender et al., 2021) introduce epistemic risks, compounded by data privacy violations (Jobin et al., 2023) and exploitative labor practices (Crawford, 2022; Perrigo, 2023). Gallant's (2008) work thus calls for updated academic integrity policies to address these threats.

Equity and access concerns further complicate GenAI's integration. Noble (2018) warns that algorithmic systems replicate societal biases, marginalizing underrepresented voices. Warschauer



(2004) highlights socioeconomic barriers to technology access, while Rawls' (1971) justice theory obliges institutions to prioritize equitable distribution of AI resources.

In education, GenAI enables pedagogical transformation. Vygotsky's (1978) Zone of Proximal Development theory is operationalized through Generative AI's capacity to scaffold learning, while Siemens' (2005) connectivism aligns with AI-driven knowledge networking. Mishra and Koehler's (2006) TPACK framework underscores the necessity of balancing technological, pedagogical, and content expertise for effective implementation.

Nevertheless, cognitive trade-offs emerge. Bandura (1977) notes that over-reliance on Generative AI may undermine scholarly self-efficacy, while Carr (2011) and Selwyn (2019) caution that automation can erode critical thinking and deep engagement.

Consequently, institutional governance is critical. Zuboff (2019) critiques surveillance capitalism in AI systems, urging protections against data exploitation. UNESCO (2021) advocates for global ethical standards, and Biggs' (2003) constructive alignment model emphasizes policy coherence. These frameworks collectively argue for robust oversight to ensure GenAI aligns with academic values. While discussions around plagiarism detection and algorithmic bias have traditionally dominated ethical debates on generative AI (GAI) in scholarly works, scholars are increasingly confronting a more complex landscape of structurally embedded ethical dilemmas. One of the most pressing issues involves intellectual property (IP) ambiguity. Current copyright frameworks, such as those outlined by the U.S. Copyright Office and EU law, generally do not recognize protections for content generated by non-human authorship, creating a copyright void (Hristov, 2017; Abbott & Rothman, 2023). This legal gray area raises profound questions about the ownership of scholarly outputs derived from GAI. For example, can scholars ethically claim authorship or copyright over Generative AI-assisted work? Who "owns" the novel hypotheses or theoretical syntheses produced by Generative AI systems?

Compounding this issue is the appropriation of training data. Generative AI models are often trained on vast, unattributed corpora of existing human intellectual work. Using these models for scholarly synthesis may perpetuate systemic appropriation of knowledge without recognition or compensation for original creators, raising concerns about intellectual fairness and academic justice (Lemley & Casey, 2021).

Another major concern is the erosion of academic integrity and process. GAI has enabled a form of sophisticated ghostwriting, allowing scholars to automate key research stages such as literature reviews and methodological drafting. This automation bypasses essential skill development and misrepresents scholarly labor, undermining the process-oriented values of academia (Eaton, 2023; Lundie, 2024).

There are also significant epistemic risks and accountability gaps. One well-documented problem is GAI's tendency to fabricate sources or hallucinate citations. When false information generated by Generative AI enters academic discourse, it remains unclear who bears responsibility: the scholar using the tool, the Generative AI developers, or the academic institution (Bommasani et al., 2021). Moreover, the framing of Generative AI as a "collaborator" in scholarship may erode scholars' critical distance, potentially leading to overreliance on Generative AI-generated insights and a weakening of essential academic skepticism (Casper et al., 2023; Bender et al., 2021).

The novelty of this study lies in moving beyond theoretical or policy-based analysis to empirically examine how these ethical dilemmas unfold in real scholarly practices. Through the application of the GAIS framework, your research explores how scholars actively navigate IP ambiguities in their workflows, the strategies they use to preserve or circumvent academic integrity, and the varying vulnerabilities across disciplines to epistemic risks like hallucinated sources (e.g., in humanities versus STEM fields). It also assesses scholars' awareness of or disregard for issues related to data privacy and ethical labor sourcing.

Recent studies highlight Generative AI's dual role as both an enabler and disruptor in academia. While Jafari (2023) and Kumar et al (2023) demonstrate AI's potential to enhance teaching through data-driven personalization, our study extends this discourse by examining how scholars operationalize these tools in research contexts. The GAIS framework addresses a critical gap identified by Hmoud





(2024) and Suh and Ahn (2023), who note the lack of standardized evaluation metrics for AI integration, particularly in scholarly works.

The ethical dimensions of Generative AI adoption emerge as a central concern across studies. Amirjalili (2023) and Matthews & Volpe (2023) question the reliability of Generated AI-generated content, while Lund et al. (2023) and Yeo (2023) grapple with authorship disputes - concerns that directly inform our investigation of Ethical Integrity within the GAIS framework. Similarly, Floridi (2023) and Kumar (2023)'s findings on plagiarism risks align with our study's focus on developing practical guidelines for maintaining academic integrity in Generative AI-augmented research.

Our examination of Equity constructs builds upon emerging research on access disparities. While Kadaruddin (2023) and Fazil (2023) demonstrate Generative AI's potential to enhance engagement, Kronivets et al. (2024) and Wiredu (2023) caution about unequal access - a tension our study explores through scholars' lived experiences. The Cognitive Trade-offs dimension of GAIS responds to concerns raised by Nasution (2023) and Abbas et al. (2023) about potential erosion of critical thinking skills despite increased efficiency.

Institutional Governance, another key GAIS construct, engages with policy research by Thompson (2024) and Li et al (2025). Our findings complement their work by providing ground-level insights into how existing policies function (or fail) in actual research practice. The multidisciplinary perspectives highlighted by Gasparini and Kautonen (2023) and Kumar et al (2023) further validate our approach of examining disciplinary differences in AI adoption.

The development of assessment tools by Grassini (2023) and Biagini (2024) informs our methodological approach to evaluating effective integration. However, our study addresses Nazaretsky et al. (2022)'s identified need for trust-building measures by proposing context-sensitive frameworks that balance AI capabilities with human oversight.

This literature review establishes the theoretical foundation for our investigation of GAIS constructs, while highlighting how our study advances current understanding by:

Moving beyond technical applications to examine scholarly integration challenges (Martinez, 2023; Biswas, 2023), bridging the gap between theoretical frameworks and practical implementation (Salah et al., 2024; Paul et al., 2022), and providing qualitative insights to complement existing quantitative scales (Sindermann et al., 2020; Chai et al., 2024).

This study employs a qualitative research method under the interpretive paradigm, which seeks to understand how individuals construct meaning from their experiences within specific social contexts (Creswell, 2013; Lincoln & Guba, 1985). This paradigm is appropriate for examining how scholars engage with generative AI (GAI), as it captures their subjective interpretations, ethical concerns, and adaptive practices.

Data is analyzed using thematic analysis, a method that identifies recurring patterns or themes within qualitative data (Braun & Clarke, 2006). Thematic analysis is especially suited for this study as it allows for the systematic exploration of scholars' real-world behaviors, challenges, and decisions regarding GAI use, core concerns of the GAIS framework.

Conceptual Framework

This study utilizes the Generative AI Integration in Scholarly Works (GAIS) framework as its conceptual foundation, examining six interdependent dimensions of effective GenAI adoption in academia. The framework builds on existing scholarly works while addressing critical gaps in implementation research, offering a structured approach to understanding how AI tools are operationalized in real-world academic settings.

The Productivity & Creativity dimension builds on Jafari's (2023) findings on AI-enhanced teaching strategies, exploring how scholars balance efficiency gains with creative augmentation. It addresses Kumar et al (2023)'s call for "responsible acceleration" in academic workflows while mitigating risks of over-reliance (Amirjalili, 2023). Ethical Integrity integrates Lund et al.'s (2023) concerns about AI authorship with Floridi's (2023) plagiarism frameworks, forming a tripartite model that emphasizes transparency (disclosure protocols), attribution (authorship standards), and originality (plagiarism prevention).

The Equity dimension extends Kronivets et al.'s (2024) legal analyses by examining access disparities (institutional resource allocation), algorithmic bias (disciplinary applicability), and training gaps (literacy development). Meanwhile, Personalized Learning adapts Kadaruddin's (2023) instructional models to assess adaptive scaffolding (research skill development), feedback systems (writing improvement), and knowledge curation (literature synthesis).

Cognitive Trade-offs responds to Nasution's (2023) concerns about efficiency by evaluating critical thinking preservation, metacognitive awareness, and quality assurance mechanisms in AI-augmented research. Finally, Institutional Governance synthesizes Thompson's (2024) policy research with Li et al (2025) ethical frameworks, analyzing policy formulation processes, implementation monitoring, and stakeholder engagement strategies to ensure sustainable AI adoption.

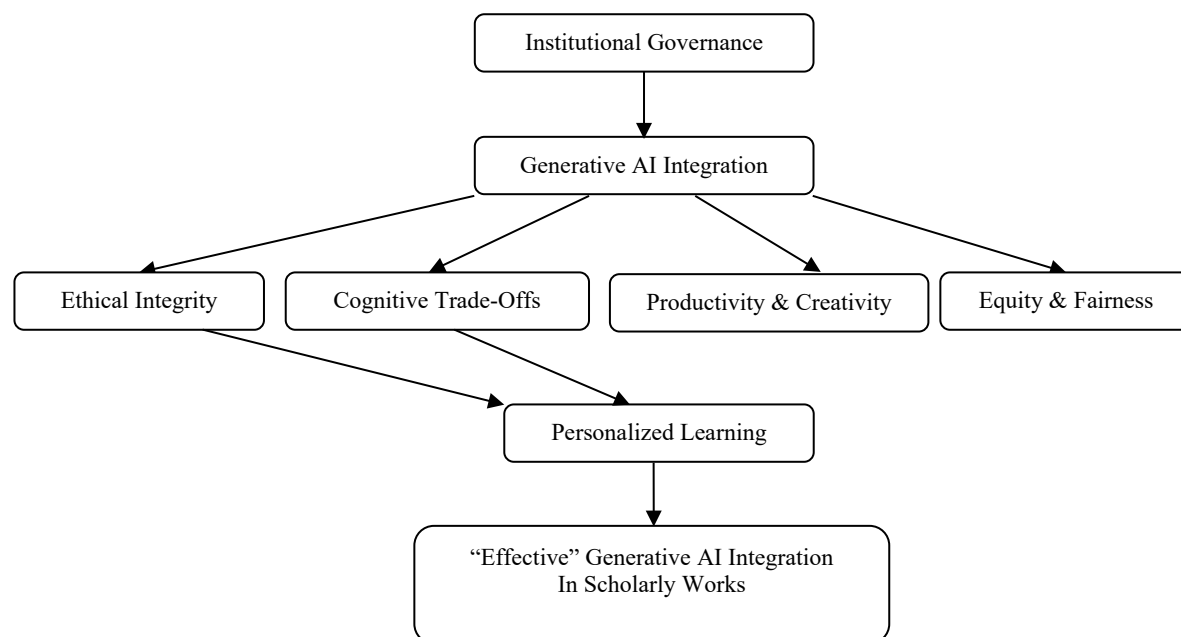


Figure 1: Conceptual Framework

Methodology

The study involved 15 graduate students from two institutions and explored their perspectives on generative AI (GenAI) in scholarly work. Participants viewed GenAI as transformative, enhancing academic research, personalized learning, and teaching strategies. They recognized its ability to streamline content creation and promote educational innovation, echoing scholars like Popenici & Kerr (2017) and Doğru et al. (2023). Ethical concerns, especially around plagiarism and academic integrity, were prominent, highlighting the need for strong ethical frameworks as emphasized by Jarrah et al. (2023) and Uddin & Abu (2024). Participants reported using tools like ChatGPT for drafting and organizing content, consistent with Bonnet & Teuteberg (2025), and noted its utility in improving scholarly communication, as observed by Nicholas et al. (2024). Overall, GenAI was seen as a valuable tool for enhancing access, personalization, and efficiency in academic contexts, supporting findings by Liu Schuppener (2023).

Sample

The main survey for the Generative Artificial Intelligence Scale (GAIS) is administered to postgraduate students from three public higher education institutions in the Zamboanga Peninsula: J.H. Cerilles State College (JHCSC) - Main Campus, JHCSC Dumingag Campus, and the Northwestern Mindanao State College of Science and Technology (NMSCST). The primary objective of this phase is to collect empirical data for conducting an Exploratory Factor Analysis (EFA), which is essential for

identifying the underlying structure of the GAIS and establishing its construct validity (Fabrigar et al., 1999).

Sampling

Stratified random sampling is employed to ensure a representative and unbiased selection of participants across three distinct educational institutions. These institutions include JHCSC Main Campus, with a population of 270; JHCSC Dumingag Campus, with a population of 94; and NMSCST, which has a population of 170. The total target population consists of 534 postgraduate students. Stratified sampling is selected to preserve the proportional representation of each institution, account for potential inter-group variations (such as curricular differences and resource access), and enhance statistical precision compared to simple random sampling (Cochran, 1977; Lohr, 2019).

Campuses are treated as non-overlapping strata to reflect their unique institutional contexts. This approach prevents the underrepresentation of smaller campuses, such as JHCSC Dumingag, and controls for heterogeneity between groups (Kish, 1965).

Focus Group Discussion

To explore scholars' evolving perceptions, experiences, and challenges surrounding the use of Generative Artificial Intelligence (GAI) in scholarly works, a qualitative inquiry was conducted using semi-structured interviews and focus group discussions. This phase aimed to develop foundational constructs for understanding how AI tools such as ChatGPT, Google Gemini, and Microsoft Copilot are integrated into scholarly workflows and how academics interpret their ethical and practical implications.

Participants were recruited from graduate students of J.H. Cerilles State College and the Northwestern Mindanao State College of Science and Technology. A total of 15 postgraduate students were targeted to ensure data saturation while maintaining depth of inquiry (Guest, Bunce, & Johnson, 2006). Before the interviews, participants were briefed on the study's purpose, its voluntary nature, and the measures taken to ensure confidentiality. Verbal or written consent was obtained by ethical research protocols (Creswell & Poth, 2018).

The interview guide included key questions designed to elicit detailed reflections on current Generative AI use in scholarly works. Participants were asked how they currently use Generative AI tools in their academic process, the perceived benefits of Generative AI for scholarly work, and the ethical concerns or limitations they have encountered. Probing questions like where Generative AI either enhanced or hindered the research process, and participants were encouraged to define their criteria for distinguishing between responsible and problematic Generative AI use.

Each interview concluded with an open-ended opportunity for participants to share additional thoughts on Generative AI's role in scholarly works. Interviews were transcribed and analyzed thematically using Delve software, following Braun and Clarke's (2006) framework for thematic analysis. This process enabled the identification of recurring patterns and fine-grained insights into the intersection of Generative AI and scholarly work practice.

Thematic Analysis

Thematic analysis is a widely used qualitative research method for identifying, analyzing, and reporting patterns or themes within data. It offers a flexible and accessible approach to analyzing textual data, making it suitable for both novice and experienced researchers. Braun and Clarke (2006) are often credited with formalizing thematic analysis as a distinct and rigorous method.

Drawing from the thematic analysis, key constructs were identified and operationalized into measurable items. The items were formulated to reflect the most prominent concerns and attitudes expressed by participants in the qualitative phase, ensuring content validity (Creswell & Creswell, 2018). Each item was structured using a 5-point Likert scale format, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), which allows for the capture of varying degrees of agreement and is commonly used in attitudinal research for its psychometric robustness (Likert, 1932; Allen & Seaman, 2007).

Results

The findings of this study reveal that generative AI, when integrated with thoughtful intent and pedagogical awareness, has the capacity to significantly enhance scholarly activities across a wide range

of academic disciplines. Far from being a one-size-fits-all solution, generative AI functions as a flexible academic tool that adapts to the needs of different fields, offering unique advantages in both research and teaching contexts. At the heart of this enhancement are six core constructs collectively known as the GAIS framework, which provides a conceptual foundation for understanding how AI can be responsibly and effectively deployed in academia. These constructs include: Generative AI as a Productivity and Creativity Tool in Scholarly Works, which underscores AI's ability to automate routine tasks and inspire innovative thinking; Ethical Integrity in Generative AI-Augmented Scholarly Works, which focuses on maintaining academic honesty and addressing issues such as plagiarism and authorship; Equity in Academic Generative AI Tools, which highlights the need for fair access and bias mitigation; Generative AI-Personalized Learning and Knowledge Structure, which explores the use of AI in supporting adaptive and student-centered learning environments; Cognitive Trade-Offs in Generative AI-Assisted Scholarly Works, which calls attention to the balance between efficiency and critical thinking; and Institutional Governance of Generative AI in Scholarly Works, which stresses the importance of policy frameworks, data privacy, and quality assurance.

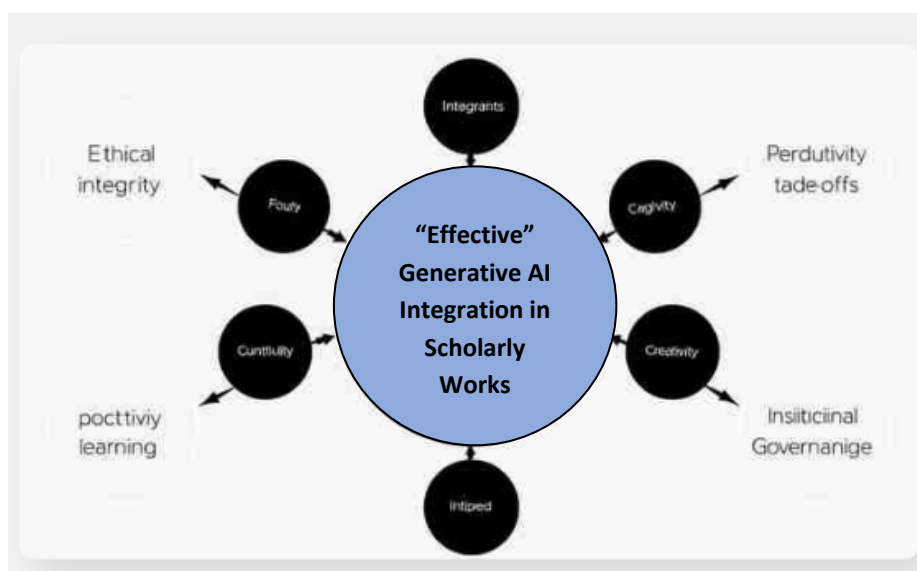


Figure 2: “Effective” Generative AI Integration in Scholarly Works

Discussion

The concept of dual utility in generative AI emphasizes its capacity to enhance both productivity and creativity in academic contexts. Anchored in Amabile’s (1983) theory that reducing cognitive load unlocks creative potential, this perspective highlights how Generative AI automates routine tasks to free scholars for higher-order thinking. At the same time, it acknowledges a critical contrast by pointing to ethical tensions raised by scholars such as Abbott and Eaton, who warn that efficiency gains may introduce risks related to plagiarism, authorship ambiguity, and academic integrity. The theoretical foundation is further expanded by integrating Goodhue and Thompson’s (1995) Task-Technology Fit model, which emphasizes aligning technological tools with user needs, and Flower and Hayes’ (1981) cognitive writing architecture, which explains how Generative AI supports planning and revision processes essential to scholarly composition. While there is agreement that Generative AI delivers notable productivity and creativity benefits, the framework cautions against over-reliance, recognizing the importance of maintaining critical engagement. Both perspectives ground Generative AI’s value in its potential for cognitive liberation, but while the review of related literature studies strand emphasizes the ethical tensions such liberation introduces, this study details the underlying cognitive mechanisms that enable this transformation.



The ethical integrity dimension of Generative AI integration in scholarly works centers on pressing issues such as copyright voids (Abbott & Rothman, 2023) and the emergence of academic ghostwriting practices enabled by Generative AI tools (Eaton, 2023). Floridi (2018) provides the ethical foundation for this discussion, emphasizing principles like transparency and accountability as essential for responsible AI use. The scope of this framework broadens by incorporating Gallant's (2008) call for evolving academic integrity policies to address new misconduct forms, the IEEE's (2019) guidelines for mitigating algorithmic bias, and concerns about plagiarism and proper attribution. This perspective highlights the crucial role of institutional accountability in establishing clear policies and oversight mechanisms. While both strands agree on the need for transparency and urgent policy development, the review of related literature studies focuses specifically on intellectual property challenges and ghostwriting, while this study addresses systemic bias, scholarly trust, and the broader need for ethical governance in academic contexts.

The equity and access dimension of Generative AI integration centers on Warschauer's (2004) concept of the democratization paradox, which highlights how AI, while promising to broaden access, can also intensify existing educational and technological divides. This framework is expanded by incorporating Noble's (2018) critique of algorithmic bias, which reveals how Generative AI systems often replicate systemic inequalities, and Rawls' (1971) justice-oriented theory, which emphasizes the ethical obligation to distribute opportunities and resources in ways that prioritize the least advantaged. Together, these perspectives explicitly call for bias audits, inclusive policy design, and governance structures that ensure equitable access to AI tools in academic settings. While both strands agree that Generative AI has the potential to act as an inequality amplifier, this study connects equity concerns to justice theory and emphasizes the need for concrete, actionable interventions to address these disparities.

The pedagogical transformation dimension analyzes the role of AI in education through frameworks such as TPACK (Mishra & Koehler, 2006), which emphasizes the integration of technological, pedagogical, and content knowledge, while also recognizing self-efficacy risks highlighted by Bandura (1977) that may arise from over-reliance on automation. This perspective is further enriched by integrating Vygotsky's (1978) concept of scaffolding, which positions AI as a tool to support learners in tasks just beyond their current abilities, and Siemens' (2005) theory of connectivism, which frames learning as networked knowledge construction across digital domains. Despite these opportunities, the framework also warns against the risks of depersonalized learning experiences if Generative AI is implemented without careful instructional design. While both strands agree on Generative AI's potential to act as an educational scaffold with significant implementation risks, this study's perspective provides a richer foundation in learning theory to guide thoughtful, learner-centered integration.

The cognitive trade-offs dimension highlights concerns that over-reliance on Generative AI can undermine learners' self-efficacy, drawing on Bandura's (1977) theory that emphasizes the importance of individuals maintaining control over their learning processes. Complementing this, Carr (2011) and Selwyn (2019) critique how digital technologies, including Generative AI, can erode sustained attention and critical thinking skills. This perspective consistently emphasizes the need to design learning activities that prioritize higher-order thinking tasks, ensuring that Generative AI serves as a support rather than a substitute for deep engagement. There is full alignment across these arguments and citations, all underscoring the importance of maintaining learners' critical faculties and promoting reflective, independent thought in AI-integrated educational environments.

The institutional governance dimension proposes Biggs' (2003) constructive alignment framework as a way to reconcile the various tensions introduced by Generative AI integration in scholarly works, ensuring that technological adoption aligns with core educational values and outcomes. Suggested solutions include establishing ethical guardrails grounded in Floridi's principles of transparency and accountability, promoting equity-centered access as highlighted by Warschauer (2004), and supporting cognitive sustainability informed by Bandura's (1977) emphasis on maintaining learner agency. This perspective is further enriched by incorporating Zuboff's (2019) critique of surveillance capitalism, which warns of exploitative data practices, and UNESCO's (2021) call for





global ethical standards in AI use. It also emphasizes practical tools such as AI review boards, data protection protocols, and clear usage policies to operationalize responsible AI governance. While both strands prioritize the need for policy coherence, the related studies frame governance as a means of reconciling ethical, equity, and cognitive tensions, while this study emphasizes the importance of concrete operational safeguards to ensure effective implementation.

The study could propose several new dimensions and relationships to extend existing frameworks on Generative AI integration in scholarly works. One important dimension is the transparency-engagement trade-off, which examines how requiring transparency about Generative AI use might affect student or scholar engagement, whether disclosure reduces over-reliance or creates new tensions around stigma and acceptability.

Another proposed dimension is ethical literacy as a mediator, suggesting that even well-designed institutional policies rely on user awareness and training to be effective, positioning ethical literacy as a crucial link between policy and individual behavior. The equity-innovation tension models the inherent conflict between rapid, innovation-driven Generative AI adoption and equity goals, acknowledging that without deliberate inclusion strategies, deployment can exacerbate disparities. Additionally, cognitive load redistribution refines the cognitive trade-offs construct by focusing not just on reducing load but on changing which tasks scholars perform, shifting from mechanical work to conceptual synthesis. The governance-trust feedback loop proposes that clear policies and oversight mechanisms build scholarly trust in Generative AI, creating a reinforcing cycle that supports responsible adoption.

A further dimension, human-AI co-authorship ethics, clarifies roles, contributions, and disclosure standards when AI meaningfully shapes scholarly outputs. Finally, socio-technical context sensitivity underscores the need for context-specific approaches to Generative AI integration, recognizing variation across disciplines, institutional resources, and cultural norms, and rejecting one-size-fits-all policy solutions.

Knowledge Contribution

From these findings, several key conclusions emerge. First, participants widely acknowledged generative AI as a powerful tool for enhancing productivity and creativity in academic work. Scholars reported that AI tools streamlined tasks such as literature synthesis, grammar correction, and citation formatting, while also sparking creative insights during the brainstorming and writing phases. However, this enhancement was not without caveats, particularly about ethical integrity. Concerns about proper attribution, the risk of unintentional plagiarism, and the blurring of authorship boundaries emerged strongly, suggesting a need for clearer institutional policies and individual responsibility in disclosing AI contributions.

In terms of equity, the research revealed significant disparities in access to generative AI tools. Scholars from underfunded institutions or marginalized communities often lacked the same technological infrastructure and digital literacy as their more privileged counterparts, reinforcing existing academic inequalities. This digital divide points to a critical need for inclusive policies that ensure all researchers can benefit from AI advancements. Findings also underscored the growing role of AI in personalized learning and knowledge construction. Educators and students described AI as a collaborative partner capable of adapting to individual learning needs, supporting personalized instruction, and fostering deeper engagement with content, especially when integrated into learning management systems and feedback loops.

Nevertheless, the study also exposed the cognitive trade-offs associated with heavy reliance on AI. While AI can reduce workload and support surface-level understanding, some participants expressed concern about diminishing critical thinking, reduced writing proficiency, and weakened academic self-efficacy, especially among students. These concerns emphasize the importance of instructional design that challenges learners to think independently, even when AI is involved. Lastly, the research identified varying degrees of institutional governance regarding AI use. While some universities had begun drafting policies on acceptable AI use, many institutions lacked formal guidelines, leaving scholars uncertain about ethical boundaries and best practices. The absence of



standardized oversight mechanisms points to a broader need for structured governance, including review boards, training programs, and data privacy protocols to guide responsible AI use in research and education.

This study makes several important theoretical contributions to understanding generative AI's integration in scholarly and educational contexts.

First, it advances *the dual-purpose view* of generative AI in academia as both a productivity enhancer and an ideation facilitator. Building on Amabile's (1983) creativity theory, Goodhue and Thompson's (1995) Task-Technology Fit model, and Flower and Hayes's (1981) cognitive writing model, this research empirically demonstrates how scholars use AI to reduce cognitive load, enabling higher-order thinking and creative exploration. By documenting real-world workflows, the study enriches theoretical models of scholarly writing and academic labor with AI as a co-authoring partner, highlighting not just efficiency gains but also the creative process itself.

Second, the study offers an expanded *ethical integrity framework* for AI in academia, integrating Floridi's (2018) principles of transparency and accountability with Gallant's (2008) academic integrity policies and the IEEE's (2019) technical ethics standards. It contributes empirical evidence on emerging misconduct forms, such as AI-enabled ghostwriting and plagiarism ambiguities, illustrating the need to update institutional policies to address novel ethical risks introduced by generative AI.

Third, the research deepens understanding of *equity and access* in AI adoption, drawing on Noble's (2018) critique of algorithmic bias, Warschauer's (2004) concept of the digital divide, and Rawls' (1971) theory of justice. By documenting real disparities across institutions and scholarly populations, the study calls for a more justice-oriented approach to AI governance in academia, including inclusive policy design and equitable resource allocation.

Fourth, it contributes to *learning theory* by situating generative AI within learner-centered, adaptive education models. Anchored in Vygotsky's (1978) Zone of Proximal Development, Siemens' (2005) connectivism, and Mishra and Koehler's (2006) TPACK framework, the research shows how AI can scaffold personalized learning while underscoring the need for pedagogical intentionality to avoid depersonalization or excessive automation.

Fifth, the study elaborates on *cognitive trade-offs* inherent in Generative AI adoption. Using Bandura's (1977) self-efficacy theory, Carr's (2011) critique of digital distraction, and Selwyn's (2019) call for critical ed-tech engagement, it identifies risks of diminished critical thinking, writing proficiency, and scholarly agency. This contribution stresses the importance of instructional design that explicitly fosters independent thinking and metacognition even when AI is integrated.

Sixth, the study reinforces the role of *institutional governance* in Generative AI adoption, applying Biggs' (2003) constructive alignment framework to argue for coherent policy development that aligns Generative AI use with educational values and missions. It also connects to Zuboff's (2019) critique of surveillance capitalism and UNESCO's (2021) call for ethical AI guidelines, offering evidence on the gaps and needs in current university policies regarding data privacy, authorship standards, and responsible use training.

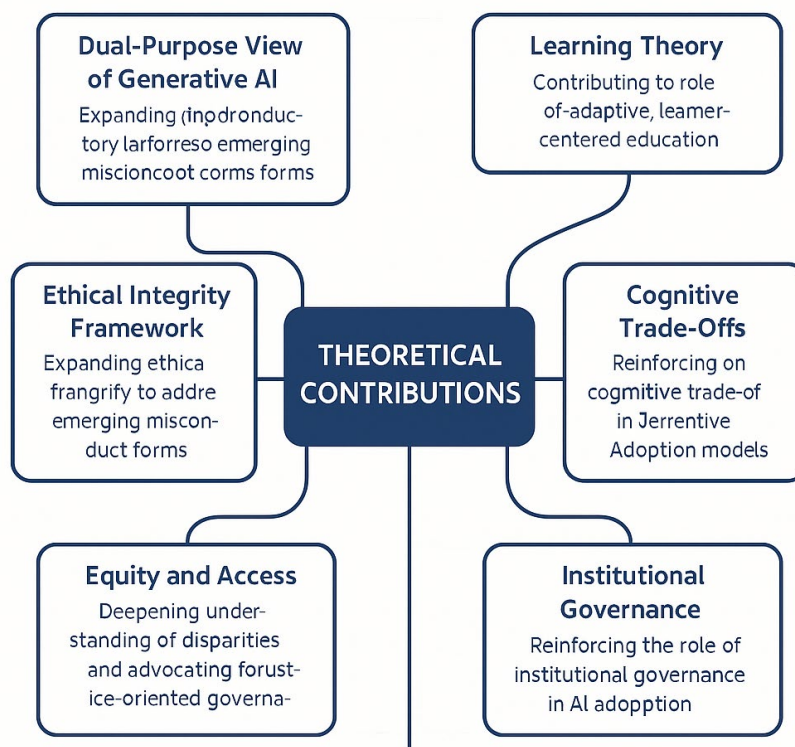


Figure 3: Effective Generative AI Integration in Scholarly Works

Recommendation

For Academic Institutions:

Academic institutions must proactively integrate comprehensive Generative AI literacy into their core academic programs, particularly within research methods and academic writing courses. This requires developing mandatory modules that extend beyond technical instruction to cultivate critical engagement with Generative AI's ethical dimensions, including nuanced discussions about authorship attribution, algorithmic bias, intellectual ownership, and transparent disclosure practices. Furthermore, institutions should establish discipline-specific Generative AI use guidelines that clearly delineate appropriate applications across academic fields. Given the divergent expectations in STEM, humanities, and social sciences, tailored policies must define permissible Generative AI assistance (e.g., drafting support, data analysis, ideation) while safeguarding disciplinary integrity. These field-sensitive frameworks will ensure consistency, fairness, and scholarly works as Generative AI becomes embedded in academic workflows.

For Scholars and Researchers:

Rigorous adoption of three interrelated practices is essential. First, mandate transparent disclosure by explicitly stating the nature and extent of Generative AI assistance in all scholarly outputs, whether used for drafting, data analysis, language editing, or literature synthesis. This establishes accountability and maintains academic integrity. Second, adopt reflective Generative AI practices by continuously evaluating the ethical implications (e.g., bias mitigation), epistemological consequences (impact on knowledge creation), and practical effects of Generative AI usage. Critically assess how Generative AI influences research process integrity, originality of contributions, and methodological validity. Third, deliberately position Generative AI as a cognitive collaborator, influencing it to augment human intellect and critical engagement while vigilantly avoiding over-reliance that compromises scholarly rigor. This approach ensures that Generative AI supports rather than supplants original thought, preserving academic agency and intellectual growth.



Future Research

To advance understanding of generative AI's scholarly integration, longitudinal studies must systematically track the evolution of GAIS constructs across temporal dimensions. Such research should document how Generative AI adoption dynamically reshapes *writing practices* (e.g., drafting processes, citation norms), *learning outcomes* (critical thinking development, skill acquisition), *institutional policy development* (ethical guidelines, resource allocation), and broader *scholarly norms* (authorship conventions, evaluation metrics). As Generative AI capabilities and academic responses co-evolve, these temporal insights will reveal emergent patterns, unintended consequences, and inflection points requiring proactive intervention, enabling evidence-based adaptation of pedagogical and research frameworks.

Complementing this longitudinal focus, future investigations must deliberately broaden stakeholder inclusion beyond traditional academic circles. Research designs should engage *journal editors and peer reviewers* (gatekeepers of scholarly quality), *educational technologists* (implementers of Generative AI systems), *Generative AI developers* (architects of underlying technologies), *policymakers and librarians* (stewards of institutional governance), *students from diverse backgrounds* (primary beneficiaries and users), and relevant *industry partners* (bridging academic-commercial applications). Integrating these polyphonic perspectives will expose blind spots in current discourse, uncover systemic barriers, and generate holistic solutions for equitable, sustainable Generative AI integration. This inclusive approach ensures that GAIS frameworks reflect the complex ecosystem in which scholarly Generative AI operates, ultimately fostering more robust, adaptive governance models.

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