Prompting Future Journalists to Prompt: An Experiential Study on GenAI, Critical Literacy, and Reflective Practice in Data News

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Abstract: Generative AI (GenAI) is rapidly integrating into newsrooms, creating a paradox: while the industry embraces AI for efficiency, public skepticism persists, and scholars warn of AI's potential to exacerbate information disorder. This underscores an urgent need for a sophisticated approach to AI literacy in journalism education. This paper reports findings from the first phase of a two-phase case study investigating how undergraduate communication students (N=19) with prior journalism training interact with a custom GenAI tool for data-driven storytelling. Through a three-part methodology—pre-study questionnaire, logged experiential task, and post-study survey—our analysis reveals that prior AI experience does not uniformly predict success or critique. Instead, a data-driven thematic analysis identifies four emergent archetypes of engagement: the Director, who treats the AI as a controllable instrument; the Collaborator, who frames it as a creative partner; the Delegator, who views it as an often-unreliable shortcut; and the Antagonist, who experiences it as a deficient obstacle. These archetypes, which align with existing frameworks of user-AI interaction, are actively shaped by students' pre-existing journalistic philosophies. This paper argues for a phenomenologically-informed critical AI literacy that equips students with the metacognitive awareness to reflect on the technological relationships they are building.

Keywords: Generative AI, Journalism education, Critical AI literacy, Phenomenology, Human-AI collaboration, Reflective practice, Student perceptions

1. Introduction: The Journalist, The Algorithm, and The Audience

The advent of generative artificial intelligence (GenAI) has precipitated a paradigm shift in journalism. News organizations are integrating GenAI into their workflows at an unprecedented rate for tasks from data analysis to content summarization (Diakopoulos et al., 2024). This embrace, however, coexists with deep societal apprehension. Global surveys reveal significant public discomfort with AI-produced news, citing fears of error and bias (Newman et al., 2025). These concerns are amplified by scholars who warn that Large Language Models (LLMs) risk exacerbating information disorder, a form of "careless speech" that corrodes shared knowledge (Wachter, Mittelstadt and Russell, 2024).

While this disruption presents an epistemic crisis, it also offers an epistemic opportunity for journalism to reinforce its essential values (Perreault, Lewis, and Ely, 2025). Navigating this new landscape requires a deliberate return to the foundational principles of the profession. A guiding framework, such as the Society of Professional Journalists (SPJ) Code of Ethics, provides a clear, structured set of principles: Seek Truth and Report It, Minimize Harm, Act Independently, and Be Accountable and Transparent (Society of Professional Journalists, 2014). These ethical principles are enacted through the practical skills of information literacy, which the Association of College and Research Libraries (2016) defines as the ability to "locate, evaluate, effectively use and ethically apply the needed information". Yet, journalism education is in a reactive race to adapt. Current research predominantly focuses on professional workflows (Diakopoulos et al., 2024) or prompt engineering (Nishal and Diakopoulos, 2024), leaving a gap in our understanding of the subjective learning experiences of emerging journalists.

This paper reports on the first phase of a two-phase study designed to explore this gap by investigating students who have already completed foundational journalism courses. We adopt a stance of experiential plurality, arguing that a GenAI system is co-created in the moment of interaction. This study investigates these emergent GenAIs through the following research questions:

RQ1: How do communication students with prior journalism training approach collaborating with a GenAI tool?

RQ2: What are the key challenges students encounter during this collaboration?

RQ3: What emergent archetypes of engagement can be identified based on how students' pre-existing dispositions mediate their critique of the GenAI tool?

2. Theoretical Framework: From Stable Tool to Subjective Encounter

To understand how emerging journalists engage with GenAI, a purely technical analysis is insufficient. We argue that a GenAI's function is co-constructed in the unique context of each user's interaction. This framework synthesizes phenomenology, post-structuralist thought, and the philosophy of technology.

We begin with the concept of the lifeworld (Schutz and Luckmann, 1973), the taken-for-granted reality that shapes our perception. For a journalism student, the lifeworld is not just a generic personal background but is profoundly shaped by their professional training and internalization of journalistic principles. Each student enters the task from a unique lifeworld that pre-figures the kind of phenomenon the GenAI can become (Hamamra et al., 2025). This is particularly salient when confronting the black box problem—the inherent opacity of AI systems (Misri, Blanchett and Lindgren, 2025). In the absence of technical transparency, users project their own lifeworld onto the machine. When a student confronts the black box of the AI, their interaction is an attempt to reconcile their developing professional ethics with the affordances and limitations of the tool.

We advance this by framing the user as a bricoleur (AI Inquiry Garden, 2025), creatively assembling a solution from whatever is at hand. An LLM, with its vast repository of textual fragments, is the ultimate bricoleur's toolkit. The student must actively assemble a coherent story by sifting through and re-contextualizing the probabilistic pieces the AI provides. This process constitutes a hermeneutic relation (Ihde, 1990), where one reads the world through a technology. Students interpret the dataset through the AI's language while simultaneously interpreting the AI's capabilities through the lens of journalistic values. This dynamic sense-making becomes observable through Schön's (1983) model of the reflective practitioner. Reflection-in-action is the real-time bricolage of tweaking prompts. Reflection-on-action, captured in our post-task survey, is the retrospective moment where the student makes sense of the unique, subjective GenAI.

3. Study Design

This paper reports on the preliminary findings from the first phase of a two-phase sequential case study. This phase was conducted with nineteen (N=19) undergraduate communication students who had completed foundational journalism courses. The three-step procedure involved: (1) a pre-study questionnaire capturing demographics, news habits, and prior AI perceptions; (2) a 60-minute experiential task where students used a custom RAG-style GenAI tool (GPT-4o-mini API) to produce a data-driven news story from a provided dataset, with all interactions logged; and (3) a post-study qualitative survey prompting reflection on their process and challenges. A reflexive thematic analysis (Braun and Clarke, 2006) of the qualitative data was systematically triangulated with the pre-study data and interaction logs to develop a holistic typology of student engagement.

4. Findings: A Typology of Co-Created GenAIs

Our analysis revealed that students, despite using identical software, interact with GenAI by using diverse approaches, motivations, and ethical frameworks. We identified four emergent relational patterns, or archetypes, that describe their engagement, as seen in Table 1.

Table 1: An Emergent Typology of Co-Created GenAIs

Archetype	Core Motivation	Characteristic Behavior (from Logs)	Illustrative Quote (from Post-Study Survey)	Dominant Journalistic Principle (SPJ Code of Ethics)
The Director	Efficiency & Control	Issues precise, multi-step, and technically specific prompts (e.g., "inverted pyramid," 5N1K).	"My relationship with the AI was like boss-employee." (P12)	Be Accountable & Transparent: Demands precision and verifiable outputs, taking responsibility for the final product
The Collaborator	Co-construction & Exploration	Engages in conversational, iterative dialogue; uses anthropomorphic language.	"I tried to be kindly to it, because I felt it did better that way." (P01)	Minimize Harm / Engage the Public: Focuses on framing and tone to make information accessible and engaging for the audience.
The Delegator	Task Offloading & Simplicity	Starts with vague, minimal prompts (e.g., "write a news story") and engages in repetitive refinement.	"The part about copying the table was difficult, the system couldn't deliver it properly." (P13)	Failure to Seek Truth: Abdicates the core responsibility of verification and critical inquiry, leading to potential inaccuracies.

Archetype	Core Motivation	Characteristic Behavior (from Logs)	Illustrative Quote (from Post-Study Survey)	Dominant Journalistic Principle (SPJ Code of Ethics)
The Antagonist	Skepticism & Scrutiny	Encounters critical technical failures (crashes, hallucinations) or interrogates the AI's ethical capacity.	"AI has no *şiar* (guiding principle)... its absence of depth of meaning... is a deficiency." (P14)	Seek Truth & Report It / Act Independently: Upholds the primacy of human ethical judgment and skepticism toward unverified information.

4.1 The Director: AI as an Embodiment of Accountability

This archetype's core motivation for Efficiency & Control can be reframed as an expression of the journalistic principle of Be Accountable & Transparent. The Director's use of precise, technical prompts like inverted pyramid format and 5W1H technique is not just a sign of high AI skill; it is an attempt to hold the AI accountable for producing content that meets professional standards. This behavior directly mirrors the ethical mandate to "Take responsibility for the accuracy of their work" and to "Verify information before releasing it". By treating the AI as a boss-employee, the Director is asserting their ultimate responsibility for the final product, refusing to cede control over journalistic form and structure to an algorithm. For the Director, success is defined by the tool's ability to adhere to their commands, reflecting a professional's need for reliable and verifiable outputs. Their position aligns with research identifying a request-driven AI assistance pattern, where the user maintains control (Gomez et al., 2024)

4.2 The Collaborator: AI as an Effort to Minimize Harm and Engage

The Collaborator's approach of Co-construction & Exploration can be linked to the principle of Minimize Harm and the broader journalistic goal of serving the public by making complex information engaging and accessible. Their conversational and anthropomorphic style ("I tried to be kindly to it") and their focus on making a headline more punchy can be interpreted as an intuitive understanding that tone and framing are crucial journalistic tools. The principle to Minimize Harm involves treating subjects with respect and compassion, a value the Collaborator appears to project onto the AI itself. Furthermore, their exploratory dialogue reflects the journalistic purpose of not just cataloging facts but of telling a story with a purpose, striving to make the significant interesting and relevant for the audience. This interaction can be seen as a form of AI-guided dialogic user engagement, to diversify the ideation process. However, research suggests AI can increase the collective diversity of ideas but not necessarily their individual creativity (Meincke, Mollick and Terwiesch, 2024).

4.3 The Delegator: AI as a Failure to Seek Truth

The Delegator archetype provides a clear example of a deviation from core principles. Their motivation for Task Offloading & Simplicity should be framed as a failure of the fundamental principle to Seek Truth and Report It. This approach resonates with the *passive believer* archetype, which describes users who have high trust but low engagement (Stocker, 2025 Starting with vague prompts like write a news story represents an abdication of the journalist's core responsibility to actively gather, assess, and verify information. This behavior demonstrates poor information literacy, specifically a failure in the initial, critical step of defining and articulating the information need. Their subsequent frustration with the AI's generic outputs and limitations is a direct consequence of this failure. The Delegator's experience highlights the danger of viewing GenAI as a replacement for journalistic labor rather than a tool to be wielded with professional rigor. This experience was frequently defined by friction with the AI's limitations, a common source of user frustration in human-computer interaction when a system fails to meet expectations (Ceaparu et al., 2004; Lazar et al., 2007).

4.4 The Antagonist: AI as an Expression of Independence and Skepticism

The Antagonist is perhaps the most potent example of journalistic principles in action. Their Skepticism & Scrutiny should be framed as the purest embodiment of the principles to Seek Truth and Report It and Act Independently.2 For the student who experienced technical failures, their antagonism reflects the non-negotiable demand for accuracy. For Participant 14, the antagonism was philosophical. Their profound statement that the AI has no "şiar" (a guiding principle or ethos) is a direct ethical critique rooted in the core of journalism. Their interaction was filtered through a deep professional skepticism, mirroring the *hesitant sceptic* or *critical user* archetypes, characterized by low trust in the system (Stocker, 2025). It also reflects a broader ethical resistance to AI in professional workflows (Gutiérrez-Caneda et al., 2024). For the Antagonist, the AI is not a tool to be optimized but a deficient obstacle—either technically broken or ethically bankrupt. This use of the Turkish word *şiar*—denoting a guiding ethos—is telling. For this student, the AI's failure was not a technical

bug but a moral and philosophical void. The GenAI they constructed was a soulless mimic, capable of syntax but devoid of the principled substance that defines journalism.

5. Discussion and Conclusion

Our primary findings demonstrate that journalism students do not merely use generative AI; they actively co-create it through the lens of their developing professional ethics, which we operationalize via the Society of Professional Journalists (SPJ) Code of Ethics. The emergent archetypes are expressions of this co-creation: the Director's precise commands reflect a commitment to Accountability, while the Antagonist's scrutiny embodies the principles of Seeking Truth and Acting Independently. Conversely, the Delegator's uncritical offloading of tasks represents a failure of these same principles. The primary challenge this reveals is not technical, but ethical: ensuring that AI collaboration aligns with, rather than subverts, the core values of journalism. This requires experiential learning spaces where students confront complexities directly, addressing calls for ethical guidance (Djokic et al., 2024 This has profound implications for pedagogy that moves AI literacy beyond operational skills to include an understanding of AI's societal and ethical dimensions (Goodlad and Stoerger, 2024). Our findings suggest AI literacy must also include a *phenomenological* component that facilitate to recognize how students' subjective dispositions and interactional stances are actively shaping a unique 'GenAI' into being.

To address this challenge, our findings suggest the need for experiential learning environments, or ethical labs, designed to move students from passive interaction to principled practice. A tangible model for such a module could involve a three-stage process. Stage 1 (The What) would use the study's archetypes as a tool for metacognitive self-awareness, where students identify their own interaction patterns from logs. Stage 2 (The So What) would apply formal ethical models like the Potter Box to analyze case studies of AI failures, building structured reasoning skills. Stage 3 (The Now What) would then operationalize this learning through *principled prompting,* tasking students with crafting prompts explicitly guided by the SPJ Code of Ethics. This approach transforms prompting from a technical input into a deliberate act of professional practice.

The central contribution of this work in progress is a typology of engagement that reframes AI literacy not as a technical skill, but as a reflective, ethical practice. Experiential models, such as the ethical lab concept, are offered as a concrete way to foster this competency. While the specific AI tools used in this study will inevitably become obsolete, our findings focus on the enduring patterns of human-professional adaptation. The archetypes represent fundamental relational stances—reconciling human principles with algorithmic processes—that will persist as technology evolves.

Ethics Declaration: Ethical clearance for this study was obtained from the Institutional Review Board (IRB), and all participants provided informed consent, with their data being fully anonymized to ensure confidentiality.

AI Declaration*:* Gemini, a large language model from Google, was used for the limited purpose of proofreading the text to identify grammatical errors and suggest phrasing to improve clarity.

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