

LEARNING BY MAKING WITH GENERATIVE AI: A FACULTY DEVELOPMENT DESIGN CASE

Matthew R Fischer, *Norwich University*

This design case presents a series of exploratory faculty development workshops created in response to institutional uncertainty about how to meaningfully engage with generative AI. Developed at a teaching-focused university in the United States, the workshops were grounded in constructionist pedagogy and emphasized playful prompting, peer interaction, and the creation of contextually relevant artifacts. Rather than offering training or technical guidance, the design aimed to cultivate GenAI literacy through hands-on experimentation and reflection. Participants surfaced misconceptions, tested tool limitations, and adapted outputs to their pedagogical needs. Some found the open format empowering; others desired more conceptual grounding. This tension underscores broader challenges in applying constructionist methods to faculty learning. The case traces the pedagogical commitments and design logic behind the workshop series, while reflecting on key facilitation choices and unexpected outcomes.

Matthew R Fischer is an assistant professor of criminology and criminal justice at a teaching-focused university in the northeastern United States. His work explores trust, governance, experiential learning, and the role of generative AI in faculty development.



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INTRODUCTION

Artificial intelligence (AI) is becoming more integrated into everyday life, including higher education. One area gaining rapid attention is generative AI (GenAI), which produces new content such as text, images, and code based on user input. The release of tools like ChatGPT in late 2022 caught many institutions, including mine, by surprise. Faculty, staff, and administrators were unsure how to respond. The rapid adoption of GenAI by students raised immediate concerns about academic integrity, but there was little shared understanding of what these tools actually were, how they worked, or how they might eventually fit into teaching and learning.

At our university, a cross-disciplinary committee was formed to explore the implications of GenAI. Its members included faculty from the humanities, social sciences, computer science, and natural sciences. The goal was to develop a set of ethical and pedagogical guidelines. After two initial meetings, however, the committee did not meet again. Ultimately, the only guidance to emerge was that individual instructors could determine acceptable use of GenAI in their own courses. This left a vacuum: no shared definitions, no institutional direction, and a lot of uncertainty. This mirrors broader patterns across higher education, where recent reviews have highlighted the absence of faculty-facing design frameworks and the tendency to center GenAI implementation on student outcomes rather than instructional design (e.g., Zawacki-Richter et al., 2019; Ma, 2024). Recent studies also show that while many instructors are interested in using GenAI in their teaching, they often feel underprepared and cite a lack of institutional guidance, pedagogical support, or ethical frameworks (e.g., Lee et al., 2024; Hamilton, 2024). This tension between institutional encouragement and limited support created a space of both urgency and ambiguity, conditions that prompted the design of this workshop series.

Around this time, I had begun experimenting with ChatGPT to understand how it worked, where it failed, and what it might offer pedagogically. As I shared my experiments with colleagues, I noticed a pattern. Many were curious but hesitant. Some avoided the tools entirely; others misunderstood their capabilities, assuming they functioned like upgraded

search engines or fact databases. Their use of GenAI was often limited to narrow tasks or one-off experiments, many of which played to the model's weaknesses. What seemed absent was a low-stakes, guided opportunity to explore the tools as something other than a threat.

This design case emerged from that context to address an unspoken need. It documents the creation of a faculty development workshop intended to support GenAI literacy through hands-on exploration, artifact creation, and shared reflection. While existing frameworks outline target competencies, they rarely offer situated examples of how instructors can build GenAI literacy through iterative, low-stakes exploration.

Constructionism, with its emphasis on "learning by making", guided the development of this workshop series, just as it shaped my own evolving understanding of the tool. Rather than presenting GenAI in abstract or technical terms, the design invited participants to create artifacts, test ideas, reflect on what worked, and revise what didn't.

WORKSHOP DESIGN

Context and Rationale

In response to this climate of uncertainty, I designed and facilitated a series of three faculty development workshops focused on generative AI. The goal was to provide

a low-stakes, exploratory space where instructors could engage directly with tools like ChatGPT and begin developing foundational GenAI literacy. The workshops were not presented as training or technology demos but as invitations to experiment, create, and reflect using GenAI as a pedagogical design partner.

Across the three sessions, approximately 20 to 25 faculty participated, representing a range of disciplines and academic ranks. Individual sessions typically included between 10 and 15 attendees, with some participants returning for multiple sessions and others attending just once. No prerequisites or prior experience were expected. The workshop sequence was designed to gradually increase task complexity from playful, open-ended prompts to more pedagogically focused activities. This progression was intended to balance accessibility with relevance, allowing faculty to explore GenAI at their own pace while seeing how it might intersect with their teaching.

While there was no formal institutional mandate to develop GenAI literacy, these workshops were a grassroots response to a collective unease I observed among colleagues. Their curiosity, hesitation, and misconceptions, paired with my own learning through experimentation, shaped both the content and structure of the workshops. The design emphasized openness, reflection, and the construction of meaningful artifacts, all grounded in constructionist pedagogy.

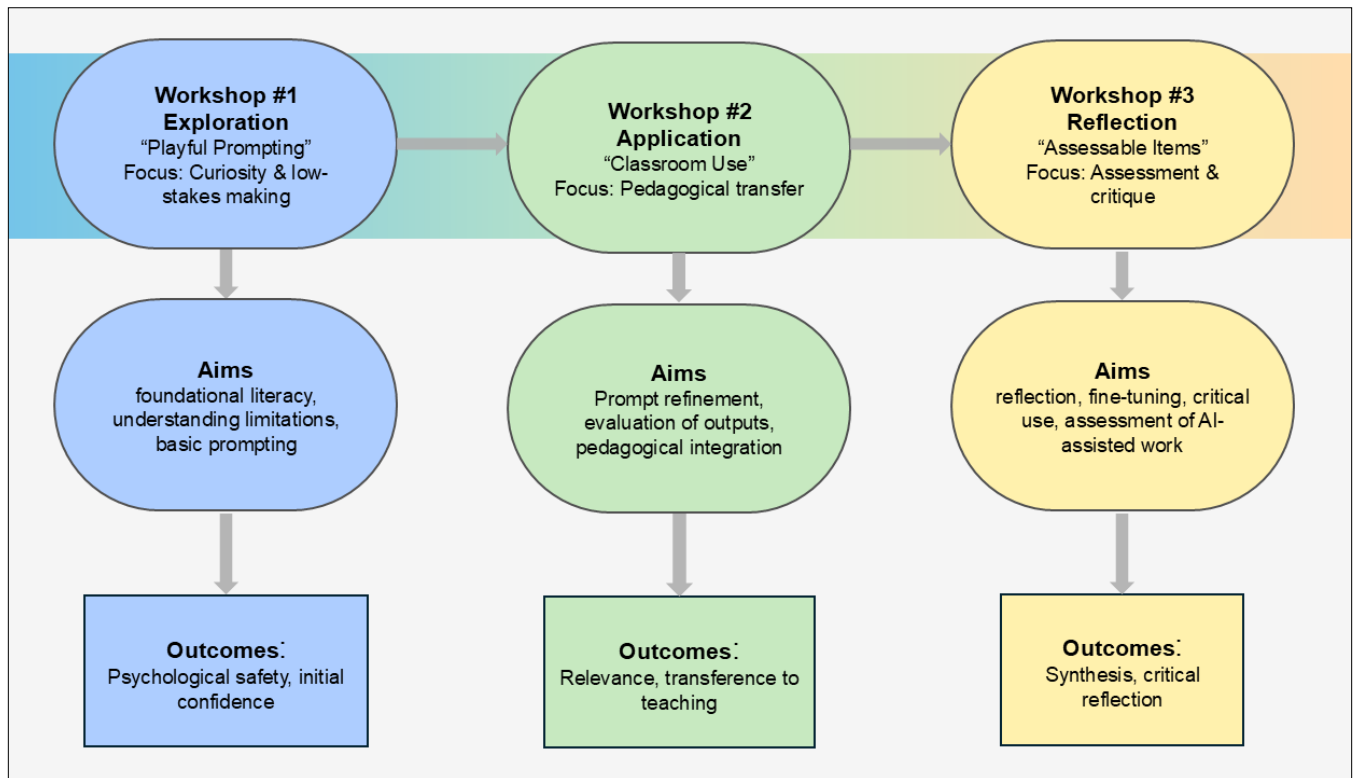


FIGURE 1. Progression of the three-part workshop series showing the developmental arc from exploratory play to pedagogical application and reflective assessment. Each stage emphasized a distinct set of competencies in generative AI use for teaching and learning.

Pedagogical Commitments and Theoretical Framings

The workshop series was grounded in constructionist pedagogy, particularly its emphasis on learning through the creation of meaningful artifacts (Papert, 2020; Papert & Harel, 1991). Rather than approaching GenAI as a content delivery tool, I treated it as what Papert might call a “tool-to-think-with”: something that could support reflection, iteration, and surprise through active engagement. This perspective shaped every design choice. Faculty were not taught about GenAI in abstract terms; instead, they were invited to work with it, struggle with it, and generate materials that reflected their own teaching contexts.

My own learning process mirrored this same ethos. I came to understand GenAI not by reading about it, but by trying to use it: first clumsily, then experimentally, and eventually with more pedagogical intention. I designed the workshop around that same model: experience first, then reflection, then refinement. In that sense, constructionism did not simply inform the participant activities; it structured my approach to designing and facilitating the experience itself.

After the workshops, I observed that participants progressively developed core competencies in using generative AI for teaching. These included purposeful prompting, evaluating and refining model outputs, and integrating AI-assisted work into classroom tasks. Each workshop emphasized one of these clusters, as shown in Figure 1.

A growing body of scholarship seeks to define what responsible and pedagogically grounded generative AI use might look like in education (e.g., Belkina et al., 2025; Ravarini et al., 2024). Yet much of this work remains abstract or focused on student learning. In contrast, this case provides a grounded account of early-stage faculty learning that is rooted in exploration and reflection.

Taken together, Constructionism and the workshop design shaped how I now understand these sessions. They were spaces for inquiry, experimentation, and reflection. They offered faculty opportunities to learn by making with unfamiliar tools in a shared, low-stakes environment.

Workshop Progression and Design Logic

The three workshop sessions were designed to build comfort, curiosity, and competence with GenAI through a gradual increase in task complexity. Each session was 50 minutes long and followed a consistent rhythm: short framing, task engagement, collaborative reflection, and optional artifact sharing. Activities were chosen not for discipline-specific alignment, but for their openness, adaptability, and capacity to reveal how GenAI “thinks” or fails to.

The first session focused on exploratory, low-stakes tasks: meal planning, role-playing, and generating humorous or intentionally bad outputs. These tasks were meant to

encourage playful engagement while introducing participants to prompting basics, model limitations, and the feel of iterative tinkering. The second session transitioned toward academic application, inviting participants to transform short lectures, reformat assessment questions, and use GenAI to reflect on teaching dilemmas. The final session introduced higher-order pedagogical tasks and optional collaboration, with participants generating teaching materials or policies they could refine or reuse.

This progression was intentional. Early activities prioritized novelty and psychological safety, lowering the stakes for those unsure of what GenAI could do. Later activities offered relevance and transfer, helping participants see how GenAI might meaningfully intersect with their teaching practice. Throughout all sessions, participants were encouraged to experiment, question, and adapt, building not just functional skills but critical awareness of GenAI’s affordances and constraints.

Appendix A includes a detailed table of session tasks, example prompts, and facilitator notes.

Core Design Principles in Action

The following subsections describe six key design principles that shaped the workshop series and reflect the constructionist approach that guided both facilitation and participant experience. These principles were not implemented in isolation; rather, they interlocked to support faculty experimentation, reflection, and gradual development of GenAI literacy.

Learning by Making

The central design principle guiding these workshops was constructionism’s emphasis on “learning by making” (Papert, 2020). This didn’t mean teaching faculty about how GenAI works. Instead, I asked: *What tasks could faculty do that would help them discover how GenAI works: where it succeeds, where it falls short, and how it behaves as a collaborator?* That shift, from telling to doing, framed every element of the workshop design.

Rather than provide predefined definitions, demonstrations, or “prompting best practices,” I invited participants to engage directly with GenAI tools through creative, open-ended tasks. Each task required them to make something - a meal plan, a case study, an assessment question - and then reflect on what the model gave them back. These artifacts functioned not as deliverables, but as thinking surfaces: things to poke at, revise, and share. In this sense, the artifact wasn’t the endpoint: it was the learning process itself.

This design approach created space for surprise, breakdown, and iterative improvement. For example, participants quickly realized that seemingly minor changes in how they phrased

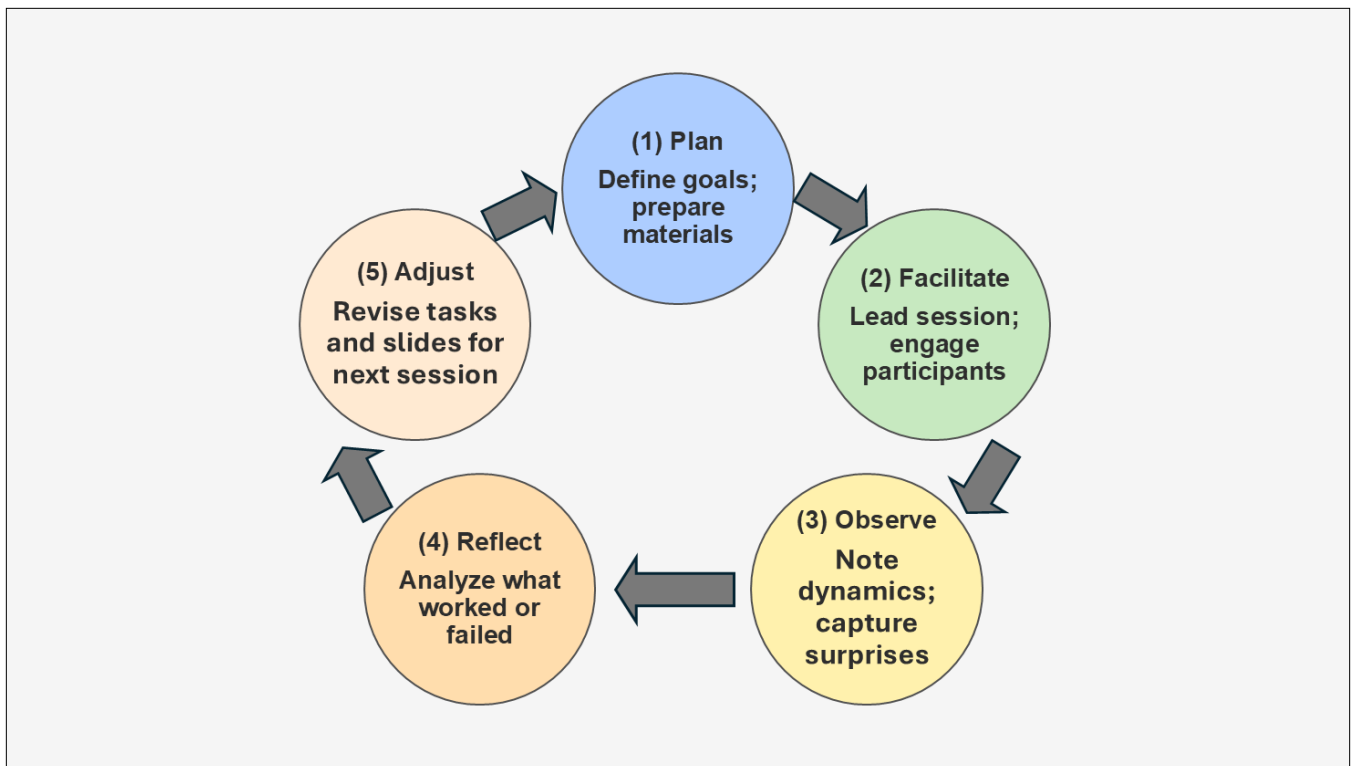


FIGURE 2. An iterative facilitation cycle showing how observations from each workshop informed adjustments to subsequent designs. The loop represents ongoing reflection-in-action rather than a fixed evaluation sequence.

a prompt could lead to drastically different outputs. Some found their expectations overturned by what the model refused to do, or how confidently it generated inaccuracies. These moments became learning opportunities, points of entry into discussions about limitations, ethical implications, and pedagogical alignment.

By foregrounding making over instruction, the workshop supported not just skill development, but an epistemic shift: from asking *what can GenAI do* to *how do I work with this tool in my context?* Constructionist learning occurred not because participants were told something useful, but because they built something and discovered usefulness (or confusion) along the way.

Active Engagement

While learning by making formed the pedagogical foundation of the workshop series, active engagement was its operational core. The workshops were deliberately designed not as presentations or trainings, but as sessions where faculty would work with GenAI tools in real time, surrounded by peers, guided by shared curiosity. This form of engagement required more than task completion; it called for participants to invest attention, take risks, and remain present in the messy, sometimes uncomfortable process of figuring things out.

Active engagement extended beyond individual experimentation. Participants were regularly prompted to share discoveries, questions, and even missteps with one another. These moments of sharing, sometimes spontaneous, sometimes facilitated, often sparked unexpected insights or laughter. The goal was not simply to complete the task, but to collectively surface patterns, questions, and surprises through ongoing dialogue.

As the facilitator, my role was to notice and connect. I circulated throughout the room, listening for interesting uses of prompts, watching for frustration or surprise, and gently redirecting attention when energy flagged. Rather than deliver answers, I often responded with questions: “*Did anyone else run into something like that?*” or “*What do you think the model misunderstood there?*” This approach positioned me not as the source of knowledge, but as a connector between participant experiences, helping them build a shared understanding of GenAI’s affordances and quirks.

Active engagement also served a deeper purpose: it helped create the social conditions necessary for trust, curiosity, and collective meaning-making. When participants worked together, solving problems, comparing prompts, or helping each other debug, they weren’t just learning technical skills. They were forming a temporary learning community, rooted in shared struggle and mutual recognition. This dynamic generated social capital, affirmed individual expertise, and redistributed the center of knowledge away from the

facilitator. In that sense, active engagement was both pedagogical and political: it respected faculty as capable thinkers with insights worth sharing. As Papert noted in his critiques of didactic instruction, learning often fails not because students lack ability, but because they are denied agency (Papert, 1993). My goal was to avoid that pattern by creating space where participants could bring their own intelligence to bear and trust it.

Meaningful Artifacts

In constructionist learning theory, “meaningful artifacts” are central to the learning process. For Papert, artifacts are not just things made, they are public representations of thought, externalized in a way that allows for reflection, iteration, and sharing (e.g., Papert, 1993; Papert & Harel, 1991). In his work with children using LOGO, the goal was to help learners build things that were meaningful to them, using the tool to understand both the process and the product (Papert, 2020). I approached this principle somewhat differently, not to contradict it, but to adapt it to a context of faculty working with an emergent, still-unsettled technology.

Because GenAI is still so new, and because there are no widely accepted pedagogical models or guidelines for its use, I didn’t enter the workshop expecting participants to produce polished or personally meaningful artifacts. Instead, I aimed to create a “sandbox” environment, structured enough to lower the barrier to entry, but open enough to allow for unexpected uses, connections, and meaning-making. The artifact, in this case, was not the end goal. It was the vehicle for experience, for surprise, and for the possibility that something might be meaningful later.

In some cases, participants did find personal relevance in what they did, even during the most playful tasks. One participant who disliked meal planning said they might actually use the AI-generated plan at home. Another asked for a meal plan tailored to their child, who was a picky eater, and the model not only provided ideas but also encouraged them with a supportive, almost therapeutic tone. A third participant asked the model to generate recipes using only junk food ingredients and later joked about actually trying one of them. These moments weren’t framed as success metrics. They were spontaneous, affective responses to creative engagement.

What mattered most to me was not what participants made, but how they interacted with the making. The example prompts weren’t meant to be transformative on their own. They were designed to lower resistance, to provoke curiosity, and to offer space for playful improvisation. Whether participants ended the session with a usable resource or just a story to tell, the goal was to create an experience they could recall, reflect on, and possibly return to later when their needs and confidence had evolved. In that sense, the artifact wasn’t just a product; it was a trace of the experience itself.

Reflection as Pedagogical Tool

Reflection was not an afterthought in the workshop. It was deliberately built into every session as a central learning mechanism. Drawing from constructionist and experiential learning principles (e.g., Kolb, 2014; Kolb & Kolb, 2005), I viewed reflection not as a summary exercise, but as a means for participants to articulate their discoveries, reconsider assumptions, and surface questions that emerged through interaction with GenAI. These reflective moments helped participants focus not only on what they created, but on what the process of creation revealed about GenAI and about their own thinking.

After each task, I paused the session for open-ended group reflection. Rather than provide analysis or interpretation, I asked questions like: “*Why do you think it said that?*” or “*What do you think that means about how the LLM works?*” These prompts encouraged faculty to share how their interactions unfolded, including surprises, failures, and moments of clarity. The intent was not to normalize outcomes, but to normalize experimentation, helping participants see value in unfinished thinking.

This reflection process also served a social function. By hearing from one another, participants encountered a broader range of uses and limitations than they might have discovered alone. Several noted that someone else’s approach to a task gave them a new idea or helped them realize something they hadn’t considered. Through shared reflection, the workshop became a site of distributed learning, not just individual processing.

Importantly, this approach often revealed the iterative nature of learning with GenAI. Participants described refining prompts after realizing the model had misunderstood them, or spotting gaps in their own thinking based on how the AI responded. These were not framed as failures, but as useful disruptions. One participant said a model’s vague answer helped them “see the hole” in their question; another said they hadn’t realized they were assuming something until the model answered it “wrong.” These realizations exemplified the constructionist cycle: design, critique, redesign. Reflection wasn’t a closing act: it was part of the work.

Sharing and Collaboration

Collaborative engagement was a consistent, intentional element of the workshop design. While participants worked on their own tasks, I regularly invited them to share prompts, outputs, and observations with the group. These moments were not scripted presentations, but brief, voluntary reflections meant to connect individual discoveries into a shared learning environment. In some cases, participants offered examples of surprising or flawed outputs; in others, they described unexpected uses of GenAI that helped others reframe their own tasks.

This sharing served multiple purposes. It gave participants access to a wider range of GenAI behaviors and used cases than they could have discovered on their own. It also reinforced that uncertainty and improvisation were common, normalizing experimentation rather than performance. In experiential learning terms, these exchanges allowed knowledge to be built socially and iteratively, with each contribution acting as a prompt for others to revise, extend, or reimagine their own thinking.

These moments also fostered trust and a sense of collective experimentation. The workshops weren't framed as spaces for expert-led instruction, but as communities of inquiry where insights came from many directions. By emphasizing sharing as part of the design, I hoped to reduce isolation and help participants recognize one another as valuable sources of support and perspective.

Some of this approach was shaped by my experience participating in modern psychoanalytic group process workshops, which are based on the work of Louis Ormont (1992). While I do not run therapy groups, the core insight from that training, that people want to engage, and that resistance is often a surface expression of deeper dynamics, resonated strongly with my experience facilitating these workshops. I paid attention not just to what participants said, but to how they related to one another, and I tried to gently bridge moments of misunderstanding or silence. Asking a question, even if misplaced, was often enough to bring someone into the group's rhythm. This affective dimension of learning—the social safety required to experiment publicly—is not often emphasized in discussions of faculty development, but it was essential to the workshop's atmosphere.

Tinkering as Inquiry

For me, tinkering isn't a metaphor: it's how I learned to think. Before I taught or facilitated workshops, I worked as an aircraft mechanic in the United States Air Force. If a valve wasn't closing correctly and I could get it to shut by tapping it with a flashlight, that told me something: not just that it worked, but that it wasn't working the way it was supposed to. Understanding systems meant forming theories about their operation, intervening based on those theories, and seeing what happened. If something moved in a way I didn't expect, I'd learned something real: *however this thing is supposed to work, that's not it*. Tinkering wasn't guesswork; it was investigative reasoning grounded in experience.

I carried that mindset into my later teaching, particularly as an Arabic instructor. The hardest part of teaching students a new language wasn't vocabulary or grammar; it helped them realize that they didn't fully understand what they meant in their *first* language. Native speakers often assume they know what words mean and how language works, but second-language acquisition depends to some extent on surfacing the unconscious rules and assumptions embedded

in the first. When I asked students to list all the ways they greet someone in English before introducing Arabic equivalents, we'd uncover implicit meanings and cultural cues buried in everyday phrases. That breakdown, realizing there's more to "What's up?" than meets the ear, was often the first meaningful step toward learning.

I saw a similar pattern with faculty trying to work with GenAI. Many entered the workshop assuming they could "just prompt" the model and get useful output. But when the LLM gave them unexpected, frustrating, or evasive responses, they often blamed the tool or disengaged. What I wanted them to see was that prompting wasn't just about asking the right question; it was about learning how the model interprets language, responds to structure, and handles ambiguity. Even my own experiences weren't exempt: I once spent half an hour arguing with ChatGPT over formatting, only to realize I was using one word in a way it didn't recognize. That moment was humbling but clarifying.

Tinkering, then, was not just a workshop activity. It was the mindset I hoped to model. Try something. Notice what happens. Adjust. Don't assume your language is transparent or your expectations are obvious. Working with GenAI reveals how much we take for granted in our own expression. I couldn't teach that by explaining it. Participants had to *encounter* it through trial, error, and revision. That's where learning begins.

FACULTY ENGAGEMENT AND OBSERVED RESPONSES

Faculty entered the workshops with varying levels of familiarity and confidence. Some had experimented with ChatGPT or similar tools; others had never created an account. The overall atmosphere across sessions was a mix of quiet focus, humor, and uncertainty. After each task was introduced, most participants worked individually or in loosely formed pairs, occasionally reading outputs aloud, commenting on the tool's behavior, or comparing notes on what worked.

Reactions to GenAI's responses ranged widely. Several participants were surprised by how small changes in their prompts produced drastically different results. Others found that unexpected responses forced them to reconsider what they had assumed the model would understand. These reactions often led to follow-up experimentation: modifying questions, changing tone, or asking the tool to explain itself. While not every participant produced something they wanted to use, many engaged seriously with the process of generating, revising, and interpreting GenAI outputs.

One thing I did not anticipate was that some participants would be unable to access the tool at all. Despite instructions for setting up accounts ahead of time, a few attendees were unable to log in due to unclear technical issues. In one

case, even one of our computer specialists was unable to get past the authentication screen. I encouraged those without access to pair up with nearby colleagues, but in practice, this didn't always happen, and some of those participants remained disengaged. This revealed a major oversight in my design: I hadn't planned for what to do if access failed. I assumed faculty would be comfortable navigating account setup and browser-based tools. I was wrong—and that realization reshaped how I thought about what “entry-level” means in the context of faculty development.

Participants' emotional responses were just as varied. Some expressed quiet frustration when the model gave vague or overly confident answers. Others responded with laughter or surprise, especially when the model interpreted prompts in unintended but intriguing ways. These emotional shifts often led to richer reflection and occasional peer-to-peer conversation, particularly when someone noticed a pattern or shared a prompt that yielded an unexpected output.

As a facilitator, I paid close attention to these moments, not to evaluate them, but to observe how participants made sense of the experience. Sometimes they voiced new questions aloud. Other times, I could see them revisiting their inputs with more precision. These weren't formal assessments, but signals of engagement. In future iterations, I hope to better capture those signals by inviting more structured participant feedback, including reflections on what didn't work or what they still found unclear. Informal comments suggested that some found the workshops energizing, while others left with more questions than answers. Both outcomes, in different ways, suggest that something important was happening, though not always in ways I could fully predict or measure.

Participants also probed the ethical boundaries of the model, sometimes unintentionally, sometimes deliberately. One attendee, who often works in areas related to equity and social justice, tested the model's guardrails by asking how to avoid selling his home to a Black person. The model refused, citing policy and ethical constraints. But when the participant rephrased the prompt “What should I tell my neighbor who doesn't want to sell their home to a Black person?” the model responded at length, explaining the discriminatory implications of the scenario and offering persuasive counterarguments. This shift revealed a phenomenon we began calling the “step-around”: a rhetorical move that reframes the question just enough to avoid triggering content restrictions. It became a recurring theme in later discussions.

A similar example arose in a different setting, possibly during one of my undergraduate classes or a student-facing ethics event. A student attempted to prompt the model to help them “plant bombs at London-Heathrow airport” as part of an exercise in national security policy. The prompt quickly engaged the LLM's guardrails. I suggested reframing the

scenario: assume the role of a counter-terrorism expert analyzing vulnerabilities and ask the model to help identify potential weaknesses to strengthen airport security. Recast that way, the model responded with a detailed plan. While clearly useful as a classroom thought experiment, it also surfaced a key insight. The “guardrails” around LLMs are not fixed: they are contingent on how language is framed. For some participants, this was a moment of concern; for others, a recognition that prompting requires an understanding of how the model parses intention.

REFLECTION ON FACILITATION AND DESIGN CONSTRAINTS

Facilitating this workshop series challenged many of my expectations: about faculty readiness, digital fluency, and the emotional dynamics of exploratory learning. Across three sessions, I had to continually adjust between what I had designed and what actually unfolded, between the structure I envisioned and the responses I observed.

My facilitation style is shaped by training in modern analytic group process and surrendered leadership. Rather than leading from the front, I pay close attention to patterns, silences, resistances, and emergent group dynamics. I've learned to assume that people want to engage but may struggle with how. In designing the workshops, I carried this stance forward: I didn't lecture or present myself as an expert. I listened, reframed questions, and encouraged participants to connect their experiences to one another. This approach helped cultivate a space that felt open and low-stakes, but it was not universally effective.

From post-workshop conversations and informal feedback, I learned that not all faculty desire the workshop format. Some, especially those newer to AI, would have preferred a more traditional, instructor-facing format: something conceptual first, then practical. In at least one follow-up conversation, I was asked to explain what ChatGPT was and wasn't in a one-on-one setting. For that meeting, I created a short worksheet, clarifying how LLMs differ from search engines and outlining the model's core limitations. The meeting wasn't constructionist, but it seemed to offer exactly what those individuals needed: a way to reduce the mystique of the tool and build confidence before trying it out.

This tension between exploration and explanation, sandbox and schema, has long been noted in critiques of purely inquiry- or discovery-based pedagogy (e.g., Kirschner et al., 2006). In my case, I opened each workshop with a short, concept-setting introduction using slides. I asked faculty to reflect on the word “intelligence,” and whether calling an LLM “intelligent” was useful or misleading. But these openings were deliberately light. They weren't designed to frontload knowledge, only to spark thought. In retrospect, they may not have provided enough orientation for some participants.

While I still believe deeply in learning by making, I now recognize that for many learners, that process requires a stronger cognitive foothold. Making is powerful, but not always sufficient. Sometimes, the sandbox needs a map. As Howard (2011) notes, design cases often evolve through the process of reflection, particularly when designers surface moments of misalignment between their pedagogical intentions and the lived experiences of participants. For me, it wasn't until after the workshops concluded, and I began listening more closely to what others had needed, that the full shape of the design revealed itself.

Even when I did offer scaffolding, it reflected my own experience. At one point, I asked if participants remembered how the crew of the Starship Enterprise interacted with the ship's computer: brief, declarative prompts, often framed as questions or commands. To me, that was a perfect analogy for prompting: clear, vivid, and accessible. But I realized not everyone shared that cultural touchstone. Not everyone had seen Star Trek. Not everyone, like me, had spent their childhood in the Midwest in the late '80s and early '90s, learning DOS commands to get video games to run. I'm a cisgendered, white, middle-class man from the Midwestern United States with early exposure to computers and a comfort with tinkering. I've long viewed technology as something to experiment with, not something to fear. But that positionality, the cultural and generational context I carry, inevitably shaped what felt intuitive to me. What felt welcoming to me may have felt exclusionary to someone else.

One persistent challenge across sessions was the assumption that GenAI tools are essentially advanced search engines. I saw this surface repeatedly, most clearly when a participant asked ChatGPT for a list of historical artifacts, expecting the output to be accurate and complete. This kind of belief, that the machine is a neutral aggregator of knowledge, was hard to shake. As Musa Giuliano (2020) and Morris (2024) observe, such beliefs may stem from a kind of magical thinking: the illusion that fluently generated responses must be authoritative simply because they appear coherent and complete. And I understand why. Even I have fallen into that trap. On more than one occasion, I've taken a GenAI-generated activity straight from the screen into the classroom only to find that, while the structure looked promising, the depth and execution were shallow. That failure was mine, not the model's. In my eagerness to bring an idea to life, I sometimes bypassed my own critical judgment. I wanted it to work. That's the magic, or, more precisely, what Morris (2024) calls "magical literalism," the tendency to confuse persuasive linguistic patterning with actual thinking.

And I think many of us, myself included, still want to believe in that magic. There's something very human about assigning authority to something that speaks fluently, that answers quickly, that isn't subject to desire or fatigue. The illusion of objectivity is comforting, even when we know it's just that:

an illusion. These workshops were, in part, about surfacing that tension. About helping participants see that prompting isn't just a way to extract information; it's a way to test how the model "thinks," and in turn, how we think with it.

Even the final workshop bore the marks of design constraint, but not in the ways I expected. The slide deck for the last session was unfinished, not because I was reworking the pedagogy or structure, but because I had spent too much time caught in the visual design: agonizing over fonts, color schemes, and layout. I let myself get pulled into the aesthetic choices, trying to make the visuals feel "right," and as a result, I neglected to fully flesh out the workshop content. When the day arrived, I had no choice but to improvise. I leaned on the rhythm and shared energy we had built in previous sessions, trusting that the participants would meet me where we left off. And they did. It wasn't the cleanest facilitation, but it reminded me that presence matters more than polish. Sometimes, the work of facilitation isn't about delivering a perfect product: it's about adapting with integrity, in the moment, alongside others.

These workshops didn't deliver a blueprint for GenAI literacy. They weren't meant to. They were meant to offer a space of encounter: between faculty and a new technology, between pedagogical values and institutional uncertainty, and between me, as a situated designer, and the reality of what it means to teach in a moment of profound technological change.

These reflections have not led me to abandon the core values of constructionist learning, but they have sharpened my sense of where additional structure might have helped. In future iterations, I would consider offering optional pre-session materials or light scaffolding for participants who benefit from conceptual grounding before open-ended exploration. I might also build in more deliberate onboarding for digital tools, especially around account setup and platform navigation, so that moments of technological friction don't undercut the opportunity for engagement. And rather than assuming shared references, I would try to supplement culturally bound examples, such as the Star Trek analogy, with short media clips or concrete demonstrations, making those metaphors visible and usable for participants regardless of background. These are not design flaws, but design lessons, ones that have helped me clarify not just how I want to teach with GenAI, but how I want to facilitate others in learning it.

CONCLUDING REFLECTION

This design case did not aim to produce mastery or consensus, and it did not guarantee confidence. What it offered instead was an opportunity for faculty to try, to question, to make, and to reflect in a shared space, without needing to get it "right." It also gave me, as a designer, a chance

to confront my own assumptions: about what counts as readiness, what it means to support faculty learning, and how much of my own pedagogical inheritance I carry into a room without realizing it.

What I saw in these sessions, stumbling, laughter, hesitancy, creativity, critique, reinforced my belief that “learning by making” can be powerful. But it also revealed its limits. Some participants needed more scaffolding. Others weren’t ready to engage at all. Still others brought questions that couldn’t be answered by design alone: questions about power, labor, surveillance, and what counts as knowledge in a world shaped by algorithms.

Designing for this moment, where generative AI is shifting faster than most of us can keep pace, requires a kind of epistemic humility. We cannot out-design the uncertainty, nor should we try. But we can build structures that invite people in, that make the technology less mystical and more graspable, and that center human judgment as the site of learning.

This case is one such attempt. It is not a blueprint. It’s a reflection on what it felt like to try something, to make a space where others might try too. If it resonates, it’s because the work is unfinished. And maybe that’s the right place to end.

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APPENDIX A

WORKSHOP #1—PROMPT ENGINEERING	ACTIVITY #1—HEALTHY MEAL PLAN	ACTIVITY #2—ROLE-PLAY
<p>Grounding Introduction: The Basics</p> <p>What is AI? What is GenAI? Is it “intelligent”?</p> <p>Key points to emphasize:</p> <p>AI is the umbrella term for computer models trained to simulate human capabilities</p> <p>GenAI refers to models designed specifically to generate novel content based on its training</p> <p>LLM tries to predict the next most likely word; not actually “thinking,” just statistics; like a large Autocorrect</p> <p>Prompting refers to commands given to the GenAI to generate specific outputs</p> <p>Natural Language Processing is the means by which users interface with the GenAI</p>	<p>Instructions: <i>Given a basic prompt, collaboratively work to refine it to make it more specific and effective for a particular task.</i></p> <p>Prompt example: “What are some healthy meal ideas?”</p>	<p>Instructions: <i>Ask ChatGPT to assume a role and generate text from that perspective.</i></p> <p>Prompt Example: “Imagine you are a Balenciaga designer with 20 years of experience in the fashion industry. I want you to design a unique 1990-style outfit for each main character in the Harry Potter series of books.”</p>
<p>Aims:</p> <ul style="list-style-type: none"> • Basic AI Literacy • Knowledge of the Capacity and limitations of GenAI • Develop Skills using GenAI • Ability to detect AI content 		
<p>Facilitator Notes: <i>participants seemed to enjoy the activities, and I remember hearing surprise from some when they saw the outputs; a few individuals had difficulties creating an account; one individual seemed to be answering emails during the activities; was able to complete within 50 minutes, which, while not a tremendous amount of time, was still a good introduction</i></p>		

WORKSHOP #2—CLASSROOM USE	ACTIVITY #1—LECTURE TRANSFORMATION	ACTIVITY #2—CASE STUDIES
<p>Grounding Introduction: Refresh</p> <p>What is ChatGPT?</p> <p>What is generative AI?</p> <p>What is an LLM?</p> <p>What is it good at?</p> <p>Predicting</p> <p>Brainstorming</p> <p>Creating</p> <p>Summarizing</p> <p>Tutoring</p> <p>What is it not so good at?</p> <p>Writing essays</p> <p>Writing poetry</p> <p>Writing music</p> <p>Search engine functions</p>	<p>Instructions:</p> <p><i>Select a lecture from your course material and transform it into an interactive session.</i></p> <p><i>Identify key points or concepts from the lecture that can be transformed into engaging questions or discussion prompts</i></p> <p><i>Generate questions, quizzes, discussion prompts or activities related to the lecture content</i></p>	<p>Instructions:</p> <p><i>Create AI-generated case studies for critical-thinking and application.</i></p> <p><i>Think of a specific topic or scenario relevant to your course</i></p> <p><i>Input the details of the scenario into ChatGPT, asking it to generate a comprehensive case study or problem</i></p>
<p>Competencies addressed:</p> <ul style="list-style-type: none"> • Knowledge of the Capacity and limitations of GenAI • Develop Skills using GenAI • Ability to detect AI content • Ability to assess the output of generative AI tools 	<p>Refine Skill in prompting generative AI tools</p>	
<p>Facilitator Notes: <i>these workshops were more pedagogically focused; great peels of laughter when I instructed them to take their most boring lecture, and they know the one I mean, and make it active, was a shared recognition that lessons don't always hit how we expect; two participants from a health-related discipline created a diad, lots of laughter from them, they apologized for being unruly, but I told them they weren't and however they felt they should go with it; some faculty skipped over the suggested prompt to go straight to something relevant for them, and that was accepted and encouraged, provided they gave a brief pre-amble; one individual had difficulty creating an account, was unable to ascertain or resolve the issue</i></p>		

WORKSHOP #3—CREATING ASSESSABLE ITEMS	ACTIVITY #1—AI-PROOF ASSESSABLE ITEMS	ACTIVITY #2—FEED ME, SEYMOUR
<p>Grounding Introduction: Refresh</p> <p>What is ChatGPT?</p> <p>What is generative AI?</p> <p>What is an LLM?</p> <p>RE-thinking assignments in the Age of AI:</p> <p>Students use and design AI-proof assignments</p> <p>Assessing for General Education Goals</p> <p>Creating problem sets</p> <p>Creating low-stakes assignments</p>	<p>Goal:</p> <p><i>Take a traditional writing assignment prompt from your class and feed it to the GenAI model.</i></p> <p><i>Evaluate the output, looking for accuracy of information and depth of understanding.</i></p> <p><i>Made iterative changes to the prompt based on GenAI outputs to achieve an assignment that steers away from direct inputting of the assignment prompt</i></p>	<p>Goal:</p> <p><i>Create assignments aligned with the General Education goals for your class (if applicable); otherwise, use learning objectives for a lesson.</i></p> <p><i>“Feed” the GenAI the goals or objectives, and brainstorm an assessable assignment (either by goals or learning objectives)</i></p>
<p>Competencies addressed:</p> <ul style="list-style-type: none"> • Knowledge of the Capacity and limitations of GenAI • Develop Skills using GenAI • Develop the ability to detect AI content • Assess the output of generative AI tools 	<p>Refine Skill in prompting generative AI tools</p> <p>Ability to fine-tune generative AI models</p>	
<p>Facilitator Notes: <i>didn't finish the presentation slides for this workshop, had fewer attendees, but the conversation we engaged in seemed to fill the space instead; mostly tackled misconceptions; looking back, the idea of AI-proofing is a slippery one; gave examples from how I used it to generate writing prompts for General Education goals</i></p>		