Forging New Practices: AI Use Cases and the Need for Experimentation

Bremen Vance, Mercer University
Samuel Oliver, Jr., Mercer University
Philip B. Gallagher, Mercer University

Exploring generative AI in writing instruction, we advocate for experimentation with AI. We also introduce Techne Forge, a platform inviting scholars and educators using generative AI to share their uses and experiences.

In one of the first large studies of AI in communication classes, Peter Cardon et al. (2023) found that among hundreds of business communication instructors, educators broadly agree that change is necessary due to AI-assisted writing tools, but the majority are also concerned about plagiarism, critical thinking, creativity, and more. The survey showed that we are in a difficult position: we must adapt to a technology that seems to challenge and undermine the core values and goals of writing classes. Digital tools that contain AI present opportunities and challenges for writing instruction, but adapting to new systems has many complications and requires significant effort (Blakely, 2015; Harrison & Van Dyke, 2023; Selfe, 1999). Still, educators must adapt—and quickly. Generative AI is already being used widely, showing up in our software, classrooms, and student deliverables. As we contend with AI in writing, education, and across our lives, we are likely, at different times, to feel awe, surprise, exhilaration, frustration, and fear, or what Ethan Mollick (2024) described as three sleepless nights. As educators, we believe that managing our learning environments is crucial to the learning process, and AI has certainly caused disruption. We are also cautious about rapid change. At the same time, the disruption brought by AI is a call to action in which we must examine our values and our relationship to technology.

Our presentation explores the urgent need for scholars and educators to examine the practical uses of AI by discussing the ways experimentation and play can help address the uncertainty caused by disruptive technologies. We highlight the gaps in norms caused by AI, proposing *Techne Forge* as a means to bridge them. *Techne Forge* is a platform for publishing generative AI uses and experiences aligned with our goals in the fields of Technical and Professional Communication (TPC). Our argument is that the field needs to directly encourage and support AI use, which requires venues that are capable of

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making experimentation visible. An example we discuss here, accessibility, is a central concern of TPC that GenAI may disrupt. To effectively advocate and design better practices, our field must embrace the disruption to meaningfully center humanistic goals.

Stances on AI - Optimism, Fears, and Questions

The wave of highly capable generative AI over the past two years is impacting all areas of content creation and knowledge work, which is why Mollick (2024) categorized AI as a general purpose technology that can "touch every industry and every aspect of life" (p. xv). Given the broad capabilities and potential uses, AI tools like ChatGPT are difficult to categorize and address for the purposes of teaching and reskilling. While scholars in TPC have begun working with generative AI, the discussion about the place of AI in writing and communication is filled with uncertainty. The goal of *Techne Forge* is to provide a space where discussions about AI can be grounded in the use of the technology, leaving space for us to evaluate and understand the new in context of our existing knowledge, practices, and values.

For a field that is focused on both education and professional practice, the questions we face are numerous and complex. While our field is well suited to address AI, the technology is also new. Selena Anderson's (2023) discussion of ChatGPT outlined the implications of how we categorize and understand AI, noting that in our attempts to understand AI, we employ metaphors that significantly shape how it is understood. Like Anderson, we know that a reductive or singular presentation of AI is inadequate. To address the many challenges being posed by AI, we believe that there is an urgent need to address a shared social problem– the lack of AI literacy. It may take several years for definitive models of AI literacy to emerge, and in the meantime, AI will continue to advance and evolve.

From several perspectives, AI tools threaten and challenge many of our models of learning, teaching, and writing instruction. While AI might enable individualized learning, it may also discourage critical thinking by doing too much work for students (Cardon et al., 2023). Stories of cheating are rampant, as are stories of false accusations and confusion about which writing tools and practices are acceptable and how to reimagine our work as we are navigating the dual challenge of moving forward while also holding back (Fyfe, 2022; Gallagher & Wagner, 2024; Jiang et al., 2024; Marche, 2022). The impulse to create and enforce a strong defensive stance to protect and guard established practices is understandable, but this comes with problems, too, as the necessary trust and goodwill of the classroom are undermined by zealous enforcement practices.

Our response to AI is marked by concern, curiosity, excitement, frustration, alarm, wonder, and more. Our concern is that the sudden and dramatic rise of highly capable generative tools is disruptive and has caused a lot of uncertainty. We believe that understanding and teaching about AI requires us to engage and reflect on the potentials and pitfalls. *Techne Forge*, conceived of and developed by two of the three authors of this paper, started as a response to several statements by publishers discouraging or banning AI content, an approach that discourages scholars and practitioners from learning about AI because our success depends on our ability to share our work. *Techne Forge* encourages experimentation with AI, providing an opportunity for peer-review and open discussion about the merits and limitations of AI use.

Focusing on What matters

At any point of significant disruption, a useful exercise is to take stock of what we value most. Gavin Johnson (2023) described the escalating discourse of crisis as the pace of AI continues to present an escalating set of challenges. An alternate framing is that AI represents a significant exigence for the importance of critical thinking and language instruction, which means our work is more important than ever. The history of TPC scholarship is filled with lessons of addressing disruptive communication technologies. However, the panic about new technologies is a widespread phenomenon in which the TPC community has an opportunity to lead.

Outside of TPC, the disruptive nature of AI has significant consequences. At the start of the millennium, higher education was grappling with discussions about technological literacies, and the pattern of alarm and adjustment is familiar. For example, Marc Prensky (2001) coined the term 'digital natives,' to represent the widely held view that younger people (i.e. our students) are naturally comfortable and familiar with digital technologies, a view that suggests that they do not need formal instruction. Shortly after, Sue Bennett et al. (2008) critically described the concept of 'digital natives' as a moral panic, and they argued that the assumption that young people have a naturally developed competence with technology is flawed at best and negligent at worst. We are now at a time where we must face a similar challenge. Developing AI literacy will require systematic, formal training. It will not simply spontaneously emerge.

In the scholarship of TPC, we have established that comfort, knowledge, and skill with technology requires systematic education. We agree with Johnson's (2023) argument that our response should be grounded in the existing scholarship and frameworks. Johnson points to the foundational maxims about technologies as embedded in human systems, developed over time, and requiring specialized knowledge and training. Johnson's final reminder that

"policing is not pedagogy" (p. 172) is central to our argument that our field needs to create space for supporting AI use to foster the kind of discovery and applied knowledge that is prerequisite for AI literacy.

The positions we take on AI technologies will shape the skills and perspectives of students for decades to come, but to craft effective skills and policies, we must take the time to discover and understand the technologies ourselves. TPC has a long history of promoting experimentation and play with new technologies. Unforgettably, Cynthia Selfe (1999) advocated that we dive in. We are now at a similar moment in which scholars and educators must seek out opportunities to meaningfully engage with disruptive technologies to find the opportunities, to understand the limitations, and to advocate for the core values at the heart of TPC.

The rich theory and practices in TPC are a necessary element of the social response to AI, and through our work as educators and practitioners, we are now positioned to advocate. We can advocate for our students and for practices that are ethical, effective, and human. AI may do some impressive work, actually designing good content to solve specific problems still requires significant amounts of effort, knowledge, skill, and critical awareness, regardless of AI's involvement. In a manifesto for AI in technical communication, Stuart Selber (2024) made the case that students need to know more about technical communication, not less. We would add that we need to encourage and support more engagement with AI, not less. As Selfe declared more than twenty years ago, now is the time to dive in. Our field must take stock of how we understand AI, and how we position AI relative to our work.

One clear way we see our work with AI as necessary is through the rhetorical and humane grounding of TPC work. Our work with language and technology is about human empowerment, so we argue that simple narratives of AI as *dangerous* or AI as *the solution* need to be avoided because there are clearly significant opportunities emerging. For example, AI is increasingly an integral aspect of human-machine interaction by users with disabilities. This is one example of empowerment and general use. Smart devices have been taken up as a means to provide more users the ability to "overcome physical and cognitive challenges" (Snow, 2019, n.p.) when interacting with technology. But, after ChatGPT went public in 2022, articles about AI users with various cognitive and neurological experiences began to appear in mass media, claiming AI solves or improves disabled users' day-to-day communications and their professional lives (Harwell, Tiku, & Oremus, 2022; Henneborn, 2023; Weitzman, 2023; Levin, 2024). These publications often present reductive narrative traps as light human-interest stories often do.

While some of these editorials provide clear examples of how users with various experiences and abilities are making use of AI tools, others offer those

examples as license to assume and assert that AI is some kind of a digital 'solution' to accessibility problems. Such claims are appealing because they absolve us from needing to create accessible and inclusive designs. While there is reason to be optimistic, most if not all of these publications offer little more than anecdotal evidence. Importantly, the idea that disability is a problem to be solved' is reductive and harmful (Ringo, 2013; Erard, 2017; Gallagher & Gallagher, 2024), and more work should be done to fully determine the ways people with disabilities can and want to use AI. So, we ask, how should we consider the relationship between AI and people with disabilities? And we argue that, again, we need to know more, not less, about these topics. Similarly, we need to examine and explain AI's potential precisely because the value is contextual, in much the same way all communication practices are.

The Need for Experimentation and Play

Carving out time for ourselves to experiment and encouraging our colleagues to explore AI are necessary tasks for developing awareness and competencies that can inform effective curriculum and program development. Timothy Ponce (2024) suggested an empathetic approach to encouraging colleagues to work with AI. Together, we can apply the same approach ourselves to reflect on our own concerns and to address our own misunderstandings about AI. Our classes and programs cannot successfully adapt to AI in the contemporary educational landscape without this work.

While writing may be a product or a process, it may also be classified as problem-solving and design work, and Jim Purdy's (2014) discussion of design thinking as iterative problem-solving underscores the value of experimentation, which we see as a necessary mindset as we explore new AI technologies. Similarly, Andelyn Bedington et al. (2024) reflected on a semester in which students engaged with AI, finding that successful use of AI requires critical engagement and sustained problem solving. They illustrate the important point that critical use of AI is the result of sustained, meaningful practice. Sustained practice is difficult, however, when policing practices discourage and prohibit AI or obfuscate what is allowed.

The impulse to avoid AI is not just felt in the classroom. As aforementioned, some disability groups and communities have not been quick to adopt AI into their lifestyles, while others may forsake them. According to Philip B. Gallagher and Marci J. Gallagher (2024), the societal push for adopting new technologies to address disability "problems" is traditionally "an ableist point of view" (p. 4). That is, what society labels "problems" is actually the normal state of being for many people, and they may not want to change how they live—and they shouldn't have to be "fixed" (Ringo, 2013). No technology

should be forced on users; but instead, users should have the opportunity to self-select technologies. According to Liz Hutter and Halcyon Lawrence (2018), as designers we should think less about how we experience the world, push less for changes to others' experiences, and seek to include diverse experiences and voices in our work. So, anyone looking to AI as a digital panacea to address disabilities should instead pivot to support all users of today's technologies via an access-first design method (Gallagher & Gallagher, 2024). We need spaces to explore these processes and study users, study everybody and our approaches to AI for all.

There can be no doubt that generative AI is worthy of scrutiny and criticism. We are concerned, for example, about the ecological impact of training and use of AI, the use of AI to promote disinformation, questions of intellectual property and law, and more. Additionally, we are concerned about the accuracy of information that AI produces, the impact that this technology will have on critical thinking, and our ability to effectively motivate students to do the hard work of learning. Worries about AI have even led to claims about the end of college writing (Lieberman, 2024; Marche, 2022). Collectively, these concerns may result in the understandable impulse to create distance from AI altogether. However, we believe that the problems with AI are, instead, a significant reason to pay attention. Managing the risks and promoting the benefits requires us to dive in. Tracking the development of AI policies, engaging new applications and capabilities, and mapping the practices surrounding implementation are all necessary steps for informing a robust and usable response and the only way to address the challenges caused by AI. Choosing to avoid and stigmatize the use of AI undermines the very conversations that are necessary.

Discussing Priorities: AI and New Techniques

Our field of TPC is well-suited to the challenge of evaluating new resources and designing new practices, and the mission of *Techne Forge* is to encourage and promote a space for the necessary experimentation that will foster the development of applied AI communication. In examining key priorities for AI integration in our field, the short sections below address several critical areas. We begin by emphasizing the human elements in AI interactions, exploring how user judgment and engagement shape AI outputs and ownership considerations. We then analyze The Death of the GUI as an exemplar of critical AI exploration on *Techne Forge*, particularly its examination of accessibility and visual communication in the transition from GUIs to AIUIs. The discussion then turns to AI's role in research and learning, including both its practical applications and ethical considerations. Finally, we explore the importance of

experimentation and knowledge-sharing through *Techne Forge* as a venue for developing AI literacy practices.

Emphasize the Human Elements of AI

The use of AI to solve problems can be a process of experimentation and exploration. For example, human judgment and interaction play an important role in managing the level of detail and refining outputs. AI tools and language models vary tremendously, and the variations allow users to actively engage with, not just discover. The amount and nature of human engagement has implications for determining ownership and navigating questions of intellectual property (Hilty et al., 2020). Human use of AI through guidance, evaluation, and corroboration are necessary, and the human effort involved needs further examination and consideration in discussions about AI use. AI is not simply doing the work alone, as there is an ongoing exchange between humans and AI constantly. A design and problem-solving approach that recognizes the contributions and efforts involved in effective AI use is a necessary part of establishing models of AI literacy.

Exploring an AI and Access Exemplar

As an example of this type of critical exploration on *Techne Forge*, "The Death of the GUI" offers a compelling reflection on the potential shift from graphical user interfaces (GUIs) to AI user interfaces (AIUIs) and their implications for visual communication and accessibility (Gallagher, 2024). Through critical engagement with viewpoints from various stakeholders, including industry leaders like Sam Altman (CEO of OpenAI) and AI agents like Google's Gemini, the author navigates the complexities of this technological paradigm shift. His expertise in visual communication and commitment to accessibility enriches the discourse by highlighting the importance of preserving visual elements in human-computer interaction while advocating for inclusive design practices and working with generative AI at the same time to find a path forward for the GUI. The article exemplifies a thoughtful exploration of AI's impact on user experience and accessibility, demonstrating both engagement with generative AI and human accessibility in order to examine the changing AI literacy landscape. Jay Dolmage (2017) argued for combating ableism that is overlooked in many ways on our campuses; the works of *Techne Forge* aim not to perpetuate such mistakes with AI. Rather than diminishing AI and disability through avoidance, the work pushes the limitations of our knowledge about technology, bodies, and minds (Dolmage, 2017, p. 20).

As the first discussion article on our site, "The Death of the GUI" exemplifies the type of resources necessary for spurring discussions of AI. It offers insights into the intersection of AI, visual communication, and accessibility

fields and brings these subjects into discussion with both human and machine agents. By incorporating perspectives from academia, industry, and generative AI, the article illustrates collaborative dialogue and encourages a holistic understanding of the implications of AIUIs. Through collaboration and reflection, this work contributes to shaping a more accessible and equitable future in the realm of collaborating with AI technology on topics of communication and user experience.

AI for Research and Learning

AI's abilities are perhaps best used as a resource to quickly develop ideas and gather initial ideas to work with. AI is being used in many ways across research practices, literature reviews, and multiple forms of analysis (Christou, 2023). While the capability may not be in question much, the ethics of its use are. Discussions about the appropriateness of using AI in the writing practice are often sweeping and discouraging, while at the same time the uses and capabilities are expanding and increasingly powerful. Thus, we are led down a rabbit hole of contradictions.

Researchers are always balancing ethics, novelty, and new possibilities by the very nature of conducting research. While caution is warranted, so too is seeking out and using the most efficient and advanced methods. Where possible, encouraging and supporting the use of AI is an ethical imperative because of the potential gains. Discouraging AI use can create undue limitations on research and education. A crucial part of any research is familiarizing oneself with the data being researched as a data analysis method (Belotto, 2018). It may be that researchers using AI do not develop a high level of intimacy with data, or it may be that AI can encourage new and deeper relationships with data. Carefully attending to when, where, how, and why AI is used is more important than simply asking if AI is used.

Reframe, Reimagine, Play, and Share

Opportunities to experiment with AI are omnipresent in the work of scholars, professors, students, and communication practitioners, and *Techne Forge* offers a venue where such work can be shared and encouraged. Developing a better sense of AI may begin with experimentation during regularly occurring knowledge work like developing course materials, creating templates, responding to emails, advising students, and more. Developing familiarity with the possibilities and dangers requires us to test, explore, and play with the technologies, whether gathering information, finding helpful examples, or soliciting advice. As a field, we need to share successes, discuss new approaches to common problems, and highlight the clear limitations or dangers. Use cases that reflect attempts at experimentation are what we want to

feature on *Techne Forge*, and it is our hope that we can collectively reflect on AI literacy practices.

Ultimately, we aim to share practical ways to establish a foundation and reflect on what we are facing with generative AI. Now is the time for thoughtful experimentation by scholars, practitioners, and educators who dive in—a time for a collaborative approach to explore and apply AI responsibly. *Techne Forge* is our invitation to academicians to join this vital exploration. *Techne Forge* can be a place of realization and comfort as its purpose is to shine light on AI, its processes, and how we can work with it better, instead of being apprehensive about it. *Techne Forge* is thus a collective space that pulls credible information into a singular domain offering a practical space for AI reflection and progress.

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