

Bradley Robinson

Resisting the efficiency imperative in writing education in the age of AI

“There are no limits on how many ways you can ask ChatGPT to help you during finals.” This was OpenAI’s promise in an advertisement that appeared across the social media platform Reddit during final exam season in spring 2025, echoing similar campaigns by Google’s Gemini and xAI’s Grok. Whether students are writing literary analyses, coding algorithms, or preparing lab reports, the vision remains the same: effortless productivity with “no limits.”

What strikes me about the advertisement is not just the way it targets students during a high-pressure time of the school year, but rather the phrase “no limits.” For me, this seemingly banal marketing copy signals something fairly profound about the erosion of boundaries that have long structured writing and writing education: those between teacher and student, between process and product, between thought and expression. But perhaps more troubling is how AI has enacted entirely new boundaries that we must now patrol: between human effort and machine generation, between authentic struggle and its mere appearance, between genuine articulation and algorithmic production.

1 From “not-yetness” to here and now

When I wrote about what I termed the “new autonomous model of literacy” in late 2022 (Robinson, 2023)—an emerging construct of literacy at the intersection of expression, automation, and platform capitalism—I was engaging with what Ross (2017) referred to as the “not-yetness” of emerging technologies in education, a sense that what we now call generative AI loomed on the horizon but had not yet transformed literacy practices or learning processes. ChatGPT had just launched the same month my article was published online, an article in which I attempted to undertake a sort of speculative critique of natural language processing technologies in digital writing education ahead of any uncritical integration or hypercritical rejection.

That not-yetness, as I am sure most would agree, has definitively ended. The Reddit ads targeting students during finals week represent something more than a convenient service; they underscore how a powerful efficiency imperative has been materialized within commercial AI chatbots that are actively shaping educational practices at essentially all levels of education (Hsu, 2025). The speculative has become actual.

This shift reflects what I see as a broader tech-powered efficiency imperative underwriting so much of contemporary social life, education included. Langdon Winner (1977) conceptualized this phenomenon as *reverse adaptation*, or the process by which “people come to accept the norms and standards

Didaktik Deutsch

Halbjahresschrift für die Didaktik der deutschen Sprache und Literatur

Special Issue (2026) – Writing with AI. S. 8–12

DOI: 10.21248/dideu.951

Copyright Dieser Artikel wird unter der Creative-Commons-Lizenz CC BY-NC-ND 4.0

veröffentlicht: <https://creativecommons.org/licenses/by-nc-nd/4.0/deed.de>

of technical processes as central to their lives as a whole” (p. 229). Winner argued that when the lives of individuals become entangled with technological systems, “efficiency, speed, precise measurement, rationality, productivity, and technical improvement become ends in themselves applied obsessively to areas of life in which they would have previously been rejected as inappropriate” (p. 229). Is this not precisely what we see happening today with respect to AI platforms and education—writing education included? The efficiency imperative represents the systematic prioritizing of speed and effort reduction as an organizing principle that shapes our educational practices, technological choices, and understanding of what it means to think and write.

What makes this especially concerning, in my view at least, is how this technical logic has spread beyond its original domain. As Winner observed, efficiency, or “the quest for maximum output per unit” (p. 229), becomes “a universal maxim for all intelligent conduct” (p. 229), rather than remaining appropriately confined to the technical systems where it belongs. In other words, unlike business and industry, where optimizing for speed and output volume drives profit margins, education has traditionally valued the process of learning itself—including its inherent struggles, iterations, and reflective pauses—as much as, if not more than, the final product. But the efficiency imperative now embedded in the design of AI chatbot platforms such as ChatGPT, Claude, and Gemini encourages what Winner described as a “subtle but comprehensive alteration” (p. 229) in how we think about learning and writing. Students and educators find themselves increasingly adapting their goals and practices to match the technical capabilities of AI systems—and are even admonished that failing to do so will imperil their future economic well-being (see Singer, 2025)—rather than demanding that these systems serve educational ends.

2 The efficiency imperative in action

Winner’s (1977) process of reverse adaptation helps explain the fundamental shift in compositional practices we are currently witnessing, and which I have observed in my own teaching. The tension between efficiency and meaningful struggle plays differently across disciplines—such as when and how to use a calculator in mathematics—but it seems particularly acute in writing in which the messy work of articulation is often where the most significant learning happens (e.g., Watts et al., 2023). When students describe, as mine have, typing up their initial ideas in a disorganized manner and using AI platforms to “clean it up”—that is, to convert their exploratory, emergent ideas into language that appears coherent and academic—they are describing a crucial shift, or in Winner’s words, a reverse adaptation, in compositional practices that has serious implications for the practice of writing.

This shift effectively alters the relation between thought and expression. That messy middle where ideas take shape, where writers struggle to articulate their thoughts and, in doing so, bring them into coherence, is precisely the space being optimized away in the name of efficiency. Students are adapting their writing processes to match what AI systems do well rather than preserving the struggle that builds their own capacities. What we risk losing is not just writing as a skill or practice, but rather the possibility for the kind of thinking and intellectual growth that is uniquely nurtured through sustained engagement with difficulty.

3 Word factories versus word gyms

Winner’s (1977) analysis of reverse adaptation also helps explain why the design choices embedded in AI writing platforms matter so much for education. These design choices shape whether we treat

writing as mere production or as intellectual development, a distinction Booten (2024) captures in his distinction between “word factories” and “word gyms.” This metaphor clarifies a critical difference in how we might approach AI writing systems in educational contexts, and it offers a helpful framework for resisting the reverse adaptation that Winner described.

The difference is critical: Factories optimize for output, gyms for capacity. In Booten’s (2024) formulation, the word factory model situates AI writing platforms as industrial assembly lines for language, optimizing for speed, volume, and standardization of output, with writing becoming a form of production rather than expression. Consider the user interface for ChatGPT, for example, everything about which reinforces this factory logic: the minimalist design, the “Ask Anything” prompt, and especially the follow-up suggestions that nudge users toward delegating more of their intellectual work to the machine, prompting them with options such as “Would you like for me to draft an essay based on this outline?” What makes Booten’s factory metaphor so apt is how it captures the industrial, essentially Fordist logic underwriting the design of many AI writing platforms. Just as factories break down complex processes into simplified, repeatable steps that can be performed with minimal skill, AI writing platforms break down the complex processes of composition into simplified outputs that can be generated with minimal thought.

Booten’s (2024) word gym metaphor, by contrast, is less concerned with efficient output than it is with development through resistance. The weights one lifts in a gym are not obstacles to be eliminated, but challenges to be embraced precisely because of the resistance they offer. Similarly, the challenges of writing—finding the right words, restructuring a clumsy sentence, clarifying a complex argument—are not inefficiencies to be eliminated. They are the means by which we become stronger writers and thinkers. The word gym model, then, helps us view writing as a practice that should develop rather than simply generate, which, in turn, allows us to better appreciate why AI-powered writing platforms present such a challenge. They offer a form of optimization that, as Winner (1977) explained, encourages us to adapt our ends to match the available means rather than the reverse. And students may become dependent on technological assistance, not through conscious choice, but through the subtle pressures of systems designed for efficiency above else, a form of what Fourcade and Johns (2020) have described as “dependency by design” (p. 821).

The question students and educators now face in the age of AI feels existential: Is struggle valuable, or is it simply inefficient? The answer may determine how we think just as much as how we write. A recent Microsoft-funded study found that higher confidence in generative AI correlates with less critical thinking, whereas higher self-confidence correlates with more critical thinking (Lee et al., 2025). In other words, the more people trust AI to do their thinking for them, especially when they do not feel confident in their own abilities, the less they actually think when using it. In the context of writing education, this creates the possibility of a concerning feedback loop: experienced writers with high self-confidence tend to be more critical of AI assistance and therefore exert more control over their writing, whereas less confident writers may be more likely to defer to the authority they invest in AI, despite its tendency to produce writing that, as Tressie McMillan Cottom (2025) put it, could best be described as “mid.”

4 Toward resistive pedagogy

In 2022, I proposed what I called a resistive digital writing pedagogy, an approach that acknowledges how deeply the efficiency imperative reaches into our educational institutions while working to create

spaces in which other values can flourish (Robinson, 2023). At the time, this was largely theoretical, but ongoing developments suggest we need to move beyond such gestures toward concrete practices that actively resist the force of reverse adaptation in writing education. In my view, however, a resistive writing pedagogy needs to be about more than simply pressuring educators to design better assignments, as if individual pedagogical heroics were the answer.

Instead, a resistive pedagogy must recognize that we are all—students, instructors, administrators, and so on—caught within an efficiency-obsessed society that, as Winner (1977) described, “tends to arrange all situations of choice, judgment, or decision in such a way that only instrumental concerns have any true impact” (p. 232). In other words, institutional discussions about AI in education, at least in my experience, tend to focus on questions of implementation strategies, learning outcomes, and competitive advantage rather than on deeper questions about the kind of thinking and learning we want to preserve and why, or why we teach writing in the first place. Of course, recognizing this does not necessarily commit us to rejection or acceptance of AI in writing education broadly, but rather suggests that we need to actively resist how these systems, and the marketing campaigns that accompany them, encourage us to frame educational choices in their often purely instrumental terms.

At its core, then, a resistive pedagogy is one that insists that institutional policies, technological choices, and pedagogical practices work to preserve meaningful struggle where and when it matters. What might this look like in practice? It could involve assignments that ask students to document their thinking processes and not just their final products, showing how ideas evolved through struggle rather than emerged fully formed (Giles, 2010). It could involve students in critically analyzing AI-generated synthetic text alongside human writing to examine what patterns and values each one embodies and what different modes of thinking each represents (Levine et al., 2025). It might also involve institutional policies that center the value of process alongside product (Conference on College Composition and Communication, 2022), alongside institutional demands that AI writing platforms be designed for development rather than dependency—word gyms, not word factories. And it must involve classroom practices in which AI becomes a critical object of inquiry rather than a neutral tool, those that enable students to analyze how these systems work, what values they encode, and how they shape writing and thinking (Burris & Leander, 2024).

5 Conclusion

Recall the ChatGPT advertisement I began with: “There are no limits on how many ways you can ask ChatGPT to help you during finals.” Thinking with Winner’s (1977) reverse adaptation, we can now see this promise for what it is: not just a convenience service offered to students but the efficiency imperative in action, positioning struggle as wasteful and efficiency as the ultimate goal. Yet what matters most in education—and indeed in life—often emerges from the spaces where we resist this imperative, where we choose to engage with difficulty rather than avoid it. The value of meaningful struggle, however, cannot be erased entirely. Students will continue experiencing moments of genuine insight when wrestling with difficult ideas, and, as writers, they will still discover what they think through the often awkward, laborious act of articulation. But such moments of intellectual growth will only persist if we actively work to preserve the conditions that make them possible.

The future of writing education will be determined by the values we choose to prioritize, not by technological change alone. In his work, Winner showed us that we have choices to make in how we relate to technology, that we can resist simply adapting ourselves to whatever systems corporations design

for us. By collectively reclaiming meaningful struggle in our lives, classrooms, schools, and universities, we can work toward a future in which technology serves human flourishing rather than merely human convenience.

References

- Booten, K. (2024). Build word gyms, not word factories. *Critical AI*, 2(1).
- Burriss, S. K., & Leander, K. (2024). Critical posthumanist literacy: Building theory for reading, writing, and living ethically with everyday artificial intelligence. *Reading Research Quarterly*, 59(4), 560–569.
- Conference on College Composition and Communication. (2022, April). *Writing assessment: A position statement*. National Council of Teachers of English. <https://cccc.ncte.org/cccc/resources/positions/writingassessment>
- Fourcade, M., & Johns, F. (2020). Loops, ladders and links: The recursivity of social and machine learning. *Theory and Society*, 49(5), 803–832.
- Giles, S. L. (2010). Reflective writing and the revision process: What were you thinking? In C. Lowe & P. Zemliansky (Eds.), *Writing spaces 1: Readings on writing* (pp. 191–204). Parlor Press.
- Hsu, H. (2025, June 30). What happens after A.I. destroys college writing? *The New Yorker*. <https://www.newyorker.com/magazine/2025/07/07/the-end-of-the-english-paper>
- Lee, H. P., Sarkar, A., Tankelevitch, L., Drosos, I., Rintel, S., Banks, R., & Wilson, N. (2025, April). The impact of generative AI on critical thinking: Self-reported reductions in cognitive effort and confidence effects from a survey of knowledge workers. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (pp. 1–22).
- Levine, S., Beck, S. W., Mah, C., Phalen, L., & Pittman, J. (2025). How do students use ChatGPT as a writing support? *Journal of Adolescent & Adult Literacy*, 68(5), 445–457.
- McMillan Cottom, T. (2025, March 29). The tech fantasy that powers A.I. is running on fumes. *The New York Times*. <https://www.nytimes.com/2025/03/29/opinion/ai-tech-innovation.html>
- Robinson, B. (2023). Speculative propositions for digital writing under the new autonomous model of literacy. *Postdigital Science and Education*, 5(1), 117–135.
- Ross, J. (2017). Speculative method in digital education research. *Learning, Media and Technology*, 42(2), 214–229.
- Singer, N. (2025, June 7). Welcome to campus. Here's your ChatGPT. *The New York Times*. <https://www.nytimes.com/2025/06/07/technology/chatgpt-openai-colleges.html>
- Watts, F. M., Dood, A. J., Shultz, G. V., & Rodriguez, J. M. G. (2023). Comparing student and generative artificial intelligence chatbot responses to organic chemistry writing-to-learn assignments. *Journal of Chemical Education*, 100(10), 3806–3817.
- Winner, L. (1977). *Autonomous technology: Technics-out-of-control as a theme in political thought*. MIT Press.

Author's address:

Bradley Robinson, Texas State University, 301 Woods St., San Marcos, Texas 78666, USA
bradrobinson@txstate.edu