What Will Be Lost? Critical Reflections on ChatGPT, Artificial Intelligence, and the Value of Writing Instruction

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Since its launch in November 2022, ChatGPT has generated a firestorm of editorials warning that it could be the end of college writing as presently practiced (e.g., Heilweil, 2022; Marche, 2022; Rosenblatt, 2022; Shrivastava, 2022; Stone, 2022). Produced by OpenAI, ChatGPT is a form of text-generating artificial intelligence (AI) that produces original answers to user-based questions while mimicking a range of writing styles. While OpenAI has been working on this program for a while, the fluidity, readability, and coherence of the text generated by ChatGPT 3.5 have led to considerable pontificating about the future of text-dependent industries (in addition to those previously referenced, see Vanian, 2022). With respect to higher education, ChatGPT's ability to generate coherent answers to a wide range of questions—complete with citations and references—raises the very real concern that students could soon (if not now) submit AI-generated papers without detection (Heilweil, 2022; Marche, 2022; Rosenblatt, 2022; Shrivastava, 2022; Stone, 2022). While much discussion focuses on the implications of ChatGPT for plagiarism, in this note, I want to consider the implications of calls for less nefarious uses of this new technology as a research and writing assistant (rather than replacement). I argue that relying on this technology to outsource and accelerate too much of the writing process runs the risk of shortchanging one of the well-recognized values of writing: the development of critical thinking and depth of understanding.

ChatGPT still has research and writing errors to work out (not unlike students). OpenAI warns that ChatGPT can include factual errors and biases that derive from its algorithms and the text-based repertoire upon which programmers trained the AI. However, the key with any learning machine is that it learns, improves, and becomes more accurate. Thus, despite the current limitations, commentators see the writing on the wall: it is only a matter of time before AI transcends the identifiable limitations of the present (Lametti, 2022; Shrivastava, 2022; Stone, 2022). In my exploratory use of ChatGPT, I asked it to respond to some 500-word essay prompts I often pose to my undergraduates and found the answers to be of the depth and breadth I have seen in student responses. While ChatGPT tended to produce passable answers to these prompts, which focus on reproducing general content knowledge, it did not perform as well when I requested longer responses that require deeply nuanced and complex critical assessment (similarly observed by Schatten, 2022), though at times I suspected these shortcomings were more reflective of the limitations currently imposed upon its use by OpenAI than of the AI's capabilities. However, for a student who is willing to engage in an iterative dialog with ChatGPT, asking (and re-asking) a series of specifically worded questions and piecing the answers together with some general revising,

the role of AI in producing the final product would be nearly unidentifiable (see similarly Anson, 2022; Puiu, 2022).

The increased capability of this text-generating AI has, understandably, raised educator anxieties about the implications it could have for writing-based assessments in higher education. Many of the recently published editorials recognize that this technology could make it easier for students to submit work that is not their own. Indeed, some speak about how the AI industry could minimize academic dishonesty by implementing safeguards, such as "digital watermarks," to identify AI-generated text (Puiu, 2022; Stone, 2022). Others focus on how educators need to adjust their approaches to text-based assessments (Schatten, 2022). The inherent problem, though, is that given how fast the technology is developing, it seems nearly impossible for educators or even plagiarism detection software to consistently stay ahead of AI capabilities (Schatten, 2022).

For some commentators, rather than resisting ChatGPT (and other text-generating AI), as a tool for plagiarism, educators should prepare students to leverage its text-generative power for their future vocations (Schatten, 2022). Susskind and Susskind (2022) examined trends in the use of AI across eight professions and found that these "increasingly capable machines" are now able to transfer expert knowledge faster, more efficiently, and with greater accuracy than human professionals (such as lawyers, architects, educators, doctors, and others). As a result, AI will, they argued, increasingly absorb many tasks currently performed by humans and will inevitably lead to a transformation of vocational services within these professions (e.g., Brynjolfsson & McAfee, 2011). Schatten (2022) questioned whether students will, then, need to learn writing skills for their future careers if AI can automate them. More specifically, what would be lost if students would have access to the same communication-enhancing writing tools in the workplace that they learn to rely on in college? Schatten did not suggest that the development of writing skills will become obsolete. However, the reasons for valuing the development of writing skills may change. Schatten (2022) wrote,

> In this new world, the argument for writing as a practical necessity looks decidedly weaker. Even business schools may soon take a liberal-arts approach, framing writing not as career prep but as the foundation of a rich and meaningful life. (para. 10)

Schatten predicted that this increased functionality of AI will force educators to rethink the practical, professional value of writing in higher education.

While it is true that students learning to use AI as a "tool" or "aid" to research and communicate can also learn to use it for similar purposes in the workplace, the problem with outsourcing the task of writing is that students lose its educational value as a means to develop their critical thinking on a given topic. Phillips and Pugh (2005) wrote, "Our view is that until you actually sit down and try to write a paper you do not think your way through logically. Writing helps understanding of your own topic . . ." (p. 69). This value of writing as a tool for learning that deepens writers' understanding of and critical thinking about a given topic is a core feature of Kellogg's (2000) argument in *The Psychology of Writing*. For Kellogg (2000), writing is thinking externalized. The process of writing allows authors to slow down, externalize their thoughts, consider connections between disparate ideas, and reorganize these connections to speak to a specific audience. The process of writing and rewriting on a

topic serves the purpose of helping authors extend and deepen their thought on the topic (e.g., Hays et al., 1983; Lawrence, 1972). Outsourcing the process of writing runs the risk of shortchanging the learning benefits of engaging in the iterative approach to writing.

The emergence of accessible and user-friendly AI systems no doubt raises numerous concerns for educators about how writing processes, goals, and assessments will need to evolve. Aside from the dominant concern over its potential to increase student plagiarism (e.g., Heilweil, 2022; Marche, 2022; Rosenblatt, 2022; Shrivastava, 2022; Stone, 2022), AI does offer many potential benefits for students' educational experiences (see discussion in Aoun, 2017). However, fully embracing AI as a research and writing assistant to increase the productivity and accuracy of student writing runs the risk of losing one of the core benefits of the writing process: the development of critical thinking. Writing, of course, is not the only way to develop critical thinking; however, it remains a powerful tool in the process.

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