What Your Colleagues Are Saying . . .

"Considering Brett Vogelsinger's reputation as a true teacher's teacher, the fact that *Artful AI in Writing Instruction* is both eminently usable and a joy to read is no surprise. Eschewing the polarizing framing of LLMs as either the savior or downfall of education, Vogelsinger delivers a cautiously optimistic guide for AI-curious educators hoping to hone their writing instruction. Whether you are an artificial intelligence aficionado or just starting out, this book is jam-packed with excellent tips, tricks, and resources. Better still, it never loses sight of the fact that, regardless of the technology involved, writing instruction is all about human connection and communication."

—**Trevor Aleo,** teacher and educational consultant
Greenwich Country Day School, Connecticut

"A thoughtful meditation on AI's role in writing instruction, in this book Brett Vogelsinger balances his attention to pedagogical craft and human, cultural care with great intention. Rather than chasing quick fixes, this nuanced guide helps teachers navigate the ethical complexities of AI in order to support today's learners, who must navigate the same complexities. Vogelsinger's humble approach invites us to question, explore, and imagine how AI can deepen—rather than shortcut—the writing process."

—**Angela Stockman,** author, teacher, and professional learning facilitator

"*Artful AI in Writing Instruction* brings Brett Vogelsinger's characteristic curiosity and sensitivity to one of the biggest question marks in education today. A brilliant overview of the issues surrounding AI in the classroom, this book also offers practical lesson plans to help students develop their own philosophy and practices around thoughtful, ethical, artful AI usage. This is a gem for teachers and students alike!"

—**Rebekah O'Dell,** author of *Mini Moves for Every Writer*

"Brett Vogelsinger's *Artful AI in Writing Instruction* is a guide for educators seeking to thoughtfully integrate artificial intelligence into their writing classrooms. With a human-centered approach, Vogelsinger empowers teachers to enhance creativity, critical thinking, and engagement while maintaining the heart of authentic writing instruction. This book is an essential resource for anyone navigating the intersection of technology and education with purpose and care."

—**Glenn Robbins,** award-winning educational leader, best-selling author, and speaker

"The future of writing is here, and it's powered by AI. Brett Vogelsinger's *Artful AI in Writing Instruction* creates the road map that equips teachers with the knowledge and tools they need to navigate this new landscape. Learn how to ethically and effectively integrate AI into your writing instruction, empowering students to become exceptional writers who express their unique voices in an AI-driven world."

—Aaron Blackwelder, digital learning coach and author of *Future-Ready Teaching With AI*

"In the quickly shifting world of AI, Vogelsinger offers specific ways to put stakes in the ground in regard to writing instruction. With input from students and teachers across the country, these lessons offer ideas of how AI can be a tool to enhance student ideas and processes—not replace them. Highly recommend!"

—Susan Barber, English teacher, author of *100% Engagement*, and consultant Midtown High School, Georgia

"Artful AI in Writing Instruction is an essential guide for educators navigating the complexities of integrating AI into teaching. Brett Vogelsinger blends practical strategies with a human-centered philosophy, empowering teachers to cultivate creativity and critical thinking while embracing technology. This book inspires meaningful dialogue and equips classrooms to thrive in the age of AI."

—Jason Jaffe, director of technology and innovation Central Bucks School District, Pennsylvania

"Artificial intelligence is here. As educators, we can run from it, bury our heads in the sand, or refuse to embrace it. But it's here. Our students are using it in productive (and often not-so-productive) ways. *Artful AI in Writing Instruction* is the book we need right now! Brett Vogelsinger has created the perfect resource to help educators embrace and utilize the tools at our disposal to *increase* student learning and engagement. I can't wait to share this book with more of my ELAR friends!"

—Todd Nesloney, director of culture and strategic leadership Texas Elementary Principals and Supervisors Association

"Artificial intelligence *can* be a co-partner in learning for students and teachers. Vogelsinger finds the right balance between the fears and the promises of using AI as a digital tool. Whether you want to dip your toes into AI for writing instruction or dive deep, in these pages you will find the strategies, activities, and promising practices that help students let go of their writing fears to unlock the critical thinking skills every writer needs."

—Andy Schoenborn, high school teacher Clare Public Schools/Chippewa River Writing Project, Michigan

Artful AI in Writing Instruction

Artful AI in Writing Instruction

A Human-Centered Approach to Using Artificial Intelligence in Grades 6–12

Brett Vogelsinger

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FOR INFORMATION:

Corwin
A SAGE Company
2455 Teller Road
Thousand Oaks, California 91320
(800) 233-9936
www.corwin.com

SAGE Publications Ltd.
1 Oliver's Yard
55 City Road
London EC1Y 1SP
United Kingdom

SAGE Publications India Pvt. Ltd.
Unit No 323-333, Third Floor, F-Block
International Trade Tower Nehru Place
New Delhi 110 019
India

SAGE Publications Asia-Pacific Pte. Ltd.
18 Cross Street #10-10/11/12
China Square Central
Singapore 048423

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Typesetter: C&M Digitals (P) Ltd.
Cover Designer: Gail Buschman
Marketing Manager: Margaret O'Connor

Printed in the United States of America

Paperback ISBN 978-1-0719-7859-7

This book is printed on acid-free paper.

25 26 27 28 29 10 9 8 7 6 5 4 3 2 1

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ACKNOWLEDGMENTS

Unbounded thanks . . .

First, to my wife Nichole for her endless patience, and not just during the writing process. She is my beloved partner, friend, and companion in this world.

To my sons, Leo and Remy, who always keep me thinking and growing and who I love so very much.

To my parents and my siblings for giving me the roots to become a writer.

To Liz Gildea, Melissa Rostek, Tori Mirsadjadi, Shannon Kelly, Zack Vann, Margaret O'Connor, Gail Buschman, and the team at Corwin for helping to bring this book into the world and for trusting me with such a perplexing topic.

To John Crea, Matt Smith, Jen Tannous, Jason Hepler, Kelsey Hughes, and all the teachers at Central Bucks High School South who have engaged with me in conversations around this topic over the past two years, stretching and challenging my thinking. And to the wonderful team of educators at Holicong Middle School who helped shape the first two decades of my teaching career.

To my principal, Jason Bucher, and my assistant principal, Jennifer Opdyke, for supporting my efforts to create and to grow in the field of education. To Jason Jaffe and Lindsay Smith for inviting me to join in a district committee around this topic and for supporting my passion and curiosity with excellent information and resources.

To Tori Bachman, who first encouraged me to write this book and believed I had it in me.

To all of the teachers I interviewed for this book: Your words give me a more three-dimensional, technicolor view of this topic in varied classroom contexts, and I am grateful to you for sharing your thinking.

To my students, named and unnamed in this book, who will think as deeply as we invite them to about AI and all sorts of technology. They generously shared their insights and experiences with me every step of the way as I crafted this book. To Dharunish Yugeswardeenoo, our high school's AI club president, who helped offer a student technologist's perspective on my revisions.

PUBLISHER'S ACKNOWLEDGMENTS

Corwin gratefully acknowledges the contributions of the following reviewers:

Trevor Aleo
Teacher and Educational Consultant, Greenwich Country Day School
Fairfield, CT

Susan Barber
English Teacher/Consultant, Midtown High School/College Board
Atlanta, GA

Amanda McDonough
English Teacher, Rockland High School
Rockland, MA

Andy Schoenborn
High School Teacher, Clare Public Schools/Chippewa River Writing Project
Midland, MI

ABOUT THE AUTHOR

Brett Vogelsinger has been teaching English for over twenty years and currently teaches a full schedule of students at Central Bucks High School South in Bucks County, Pennsylvania. He is the author of *Poetry Pauses: Teaching With Poems to Elevate Student Writing in All Genres*. He is also a regular contributor at Moving Writers (www.movingwriters.org) and has been featured on Edutopia, NCTE Verse, NPR's *MindShift* podcast, and *The New York Times* Learning Network. When not teaching, grading, or writing about such things, you will likely find him spending time with his family, his garden, or the Jenga tower of books he plans to read. You can find him on most social media @theVogelman or at his website, www.brettvogelsinger.com.

In memory of three dear ones we lost this year:
Bert and Olga and Debbie

INTRODUCTION

I embark on this book with a bit of an identity crisis: In relation to the topic of artificial intelligence (AI), who am I?

First, you should know that I am a full-time English teacher entering my twenty-third year of teaching. Currently I teach a full schedule of high school sophomores and seniors in a public high school in Pennsylvania, and for a long time I taught English in eighth and ninth grades. Helping students grow as writers is the best part of my profession. By the end of my career, I will be able to say that I have supported the growth of writers in a world with very little AI and writers in a world flooded with AI, and I find this fact exciting.

You should also know I am not a tech guru. I am not that teacher you lean on when you cannot figure out how to get your online gradebook to cooperate. Technology is a key component of my writing instruction, but so is paper, and so is conversation.

I am not an AI enthusiast, touting all the ways it will seamlessly simplify our teaching lives or individualize each student's experience. My primary interests in AI are not about productivity for teachers and students but about how generative AI affects the creative process, writing, and human capacity for deep thinking.

I am neither an AI denier, ignoring the impact of AI on my students and their writing, nor a doomsayer, prophesying the collapse of all human intelligence as the influence of its artificial cousin expands.

This leaves me, I guess, as an explorer, a sojourner, a learner. I am curious, tinkering with my lessons and refining the options I give for assigned writing in a new era. I talk to students and try to listen closely to what they have to say about AI—and other things too! As we take on something unfamiliar, something that raises both zeal and alarm, I think being a listener is a good place to start.

Mary Oliver's poem "Mysteries, Yes" (2009) resonates with me right now. After enumerating some of the mysteries of the natural and human world, the speaker concludes:

> Let me keep my distance, always, from those
> who think they have the answers.
>
> Let me keep company always with those who say
> "Look!" and laugh in astonishment,
> and bow their heads.

As I explore and adapt to a world quickly becoming saturated with AI, I often find myself laughing in astonishment at how speedy, how artificial, how perfect, or how absurd AI-generated text can be. And I often find myself bowing my head, alternately humbled and disappointed at what this technology can do *to* and *for* humans.

I remember that I am not alone in my newness; teachers everywhere are exploring both the tactics and the ethics of navigating artificial intelligence. I continue to learn from them each day.

There is one thing that especially excites me about the present: I get to be a learner alongside my students in a way I never have been before. During a teaching career there are times when we start teaching a new grade level or move to a new school and feel ourselves energized, learning as much as we are teaching. And in all of these circumstances we bring the wisdom that experience and adulthood afford us.

In the expanding universe of text-generating artificial intelligence tools, we are all beginners, students and teachers alike, and by opening a dialogue and learning alongside our students, my hope is that we can treasure human voices more than ever. My experiences with students over the past several years and my avid reading and research on the topic of generative AI suggest that this is possible. My own development into a teacher who feels more confident in how and when to apply sound pedagogy to the decisions I make around generative AI

tools serves as living proof that teachers can keep growing in productive ways as this technology evolves.

FROM ARTIFICIAL TO ARTFUL

In a world where AI-generated text can seem like a writing teacher's enemy, incorporating it into our writing instruction feels to some like an act of betrayal. Deep thinking is under constant attack in our world. The advent of generative AI might feel like "one more thing" eroding the capacity for sustained and focused thought in the young humans before us.

You may be a reader who picked up this book because you feel that generative AI is a grave threat to learners, to teachers, to writers, to anyone seeking to deepen human thought. I see you. There are days I feel a bit like that myself. To suggest that generative AI can create something artful feels like a stretch, and you approach this book skeptically.

Other readers may be approaching this book with a hopeful mindset. You have always treasured writing as an artful act. You enjoy and appreciate it as such, and you try to cultivate this mindset in your students. But you wrestle with the feeling that the skills your students develop will be diminished when an option exists to organize words into sentences and paragraphs so easily. You know that artful work is never easy.

Still others open this book with great enthusiasm for what AI can do for teaching and learning, and I hope you will feel welcomed here too! I have felt enthusiastic many times in the past few years as my knowledge and experience grows. Where I am guarded or cautionary in these pages, I hope that we can pause together and reflect on what we know so far and what is yet unknown about the effects of integrating this technology into writing instruction. The lessons in this book are made to modify, so play with them and see what adaptations best fit your vision for the future of AI in education and best assist the writers you work with every day.

As I caught myself expressing to my umpteenth colleague that my journey with this topic has been a rollercoaster, I changed course. "No," I said, "It's been more a tilt-a-whirl!" My own reactions spin with delight and disappointment, rise and fall with new experiences and interactions and iterations and knowledge, and sometimes this brings on a sense of dizziness and intellectual nausea. I don't think this ride is going anywhere. And our students know it.

But as humans, we create. We paint in caves and on canvases and on the sides of buildings. We create viral videos and we tell stories around the fire. We sculpt with clay and design architecture with computers and embellish scarves with sequins. We write, not just to communicate with clarity, but to bare our souls and shape the world around us. And we teach.

Humans are artful beings, and while over the centuries the media and tools have changed, this essential element of humanity has not. So when we encounter a new tool—one that is powerful enough to be scary in more than one way—it feels fair to consider how we can use it artfully. So in the context of artificial intelligence and writing instruction, what does that mean—to use AI artfully?

It means exploring the ways that artificial intelligence can help us mine our authentic human ideas more efficiently and deeply. It means classroom lessons that tap new creative wells within our students. Engaging with AI tools need not be paving paradise to put up a parking lot of AI-generated text. Rather, we can uncover some nuances of what a particular large language model (LLM) can and cannot deliver to its users and explore the varied approaches of different LLMs. At times, using artful AI may mean weaving our students' words with generated words to practice expanding ideas, or fishing for just-right words within generated text that they can transfer to their own vocabulary, adding new brushstrokes for more artful diction.

It is healthy to think in terms of possibility and abundance even as we proceed with caution. The best art is always produced through a balance of audacity and care. This is true of both writing and the teaching of writing.

I invite you to weigh each idea in this book for the value added and the hidden costs. Allow for the prospect of teachers and students engaging their own intelligence with this technology in ways that are more artful than artificial.

A comparison to smartphones—a technology we love to decry for its pervasive effects—may be informative here. In her 2018 book *How to Break Up With Your Phone*, Catherine Price posits that smartphones themselves are not an enemy. Instead, she notes that "smartphones have infiltrated our lives so quickly and so thoroughly that we have never stopped to think about what we actually want our relationships with them to look like—or what effects these relationships might be having on our lives" (Price, 2018, p. 2).

The speed at which the smartphone began to dominate our lives resembles the speed at which AI tools are expanding. We can learn from recent history and proceed more thoughtfully with how we engage with AI in our writing instruction. We can envision, articulate, and work to build the kind of relationship we want with this technology and help guide our students to do the same.

Building relationships is a kind of art as well, and when we face a new technology that is suddenly everywhere, engaging artfully becomes especially important if the relationship we develop is to be a healthy one. So far, this technology's greatest contribution in my classroom has been the quality and quantity of reflection it has provoked for both me and my students. You will notice this thread runs colorfully through these pages. The mere existence of generative AI has my students talking and thinking in new ways about how and why we write, what is valuable in our process or not, and what makes human thought so special. Conversations with them about AI have been enlightening and energizing. We need to pause and listen.

My hope is to feed thoughtful reflection as generative AI technology evolves. We need to harness the energy of this technology without letting it overwhelm the good things we already do to nourish writers in secondary classrooms. With this goal in mind, here are some features you will find in this book that honor the pedagogy, practices, and aspirational mindset that make the growth of writers possible in the first place:

- This book values writing as a process and is organized in the general order most people take to approach composition, from prewriting through publishing. No matter what long-term impacts AI-generated text has on writing, the arc of an iterative writing process will remain.
- Each chapter begins with a quote from an esteemed writer about writing. These anchors remind us of the essence of what matters about writing and why humans become writers in the first place.
- This book shares lessons that integrate AI into our students' writing process in ways that can amplify their skills and shape their values. These lessons may make students embrace or pull away from AI; either of these results can be desirable depending on the circumstances.
- Each chapter excerpts and embeds interviews I conducted with other teachers. These "Teacher Voices" sections aim to value

the experience and the adaptability of professionals currently in classrooms working with students on their writing.

- This book also values student voices. It contains both samples of what students have created and reflective moments about how they feel, how they have grown, or what they think as a result of their experiences writing with AI. “What My Students Say” sections in each chapter model the kinds of conversations you can have with students and the feedback you can invite from them. You might share some of my students’ thinking from these sections with your students and ask them what they agree or disagree with.
- I could never write a book on generative AI without including “A Word of Caution” notes throughout. Too much is emergent and unknown about the educational effects of this technology, and it would be irresponsible not to share the hesitations I have myself and have read about from others every step of the way, suggesting some necessary guardrails we can incorporate.
- And, of course, what would a book about AI be without some “Bot Thoughts” entries. These are pure, unedited but credited blurbs crafted by AI, published alongside the prompt I engineered to elicit the response. These responses are not exactly "thoughts" of course, but I hope that they will provoke your own thinking. For those less familiar with generative AI’s capabilities, they demonstrate effective prompt engineering and potential outputs.

A WORD ON MIDDLE AND HIGH SCHOOL

I spent years of my career working in a middle school teaching seventh to ninth graders, and now I teach tenth to twelfth graders in high school. The lessons in this book have been written so that they can scale up or down according to the age and needs of your students.

Each lesson has some middle school and some high school Common Core Standards listed. Many states have their own standards with similar wording. Most of these standards are for ELA, as this is a book on writing instruction. But since writing affects all of the academic disciplines, some of the listed standards reflect this. While I write from the perspective of an English teacher, the lessons are broad and adaptable enough to be applied wherever students are writing.

At present, the terms of use on the big, readily available GenAI tools exclude students in elementary schools from using the products. While

educational technology companies will no doubt develop tools that can be used by younger students, it pays at this point to pause and think about whether childhood writing instruction without any artificial intelligence in school is worth preserving, at least until those middle school years.

I trust teachers to mold and weld and collage these lessons in ways that will most benefit their students.

I began this introduction referencing my own identity crisis in creating this book, but in the age of artificial intelligence, perhaps we are all due for an identity crisis—at least all of us writers.

As a teacher who deeply values writing as a vehicle for thought and as an art form, you will come across some ideas in this book that intrigue or excite you and others that agitate or even infuriate you. That is a good thing. Gauging our reactions to what AI *can* do helps us determine how best to communicate what it *should* do for our students. It helps us better articulate what we value most about writing and why. It helps us hold our assignments under a critical spotlight and determine whether they pass muster in terms of making students lift what we want them to lift, ponder what we hope they will ponder. Feel all those feels as you read this book. It will yield some new thinking about teaching, learning, and writing!

As I said at the start, I see myself as a humble explorer of this topic. I invite you to come and explore with me, open-minded and cautious and keenly observant all at once. Bring your classroom experience with what already works well for writing instruction and what does not, and I will bring mine, and together we can figure out some ways that artificial intelligence opens new possibilities for artful practice without damaging processes students need to acquire to build their own skills and identities as writers.

My hope is you will find that your own adaptations of the lesson plans in this book illuminate some meaningful truths for the writers in your care. Teaching students to write well has always been and always will be hard, hard work. It is also noble work, and I give you my standing ovation for taking it on in the first place, and doubly so for engaging in the challenges of our generative AI world.

Let's begin.

"Art is notoriously hard to define, and so are the differences between good art and bad art. But let me offer a generalization: art is something that results from making a lot of choices."

—Ted Chiang, "Why A.I. Isn't Going to Make Art"

1

PREPARING FOR ARTFUL CHOICES

It might seem strange to start the first chapter of a book called *Artful AI in Writing Instruction* with a quote from an article entitled "Why A.I. Isn't Going to Make Art." But in truth, I agree with every point Chiang makes in his much-discussed, brilliant *New Yorker* essay. It should be required reading for all high school students and teachers.

Throughout the essay, Chiang emphasizes that the key ingredient in any writing worth reading, even a seemingly simple piece of human writing, is choice—myriads of choices made with an aim to communicate person-to-person through words. He concludes that artificial intelligence (AI) will never be able to make the abundance of choices that human artists make, whether writers or painters or teams of moviemakers; all of these decisions that result in art are the product of our human experiences "living our lives in interaction with others," something no machine will ever be able to replicate (Chiang, 2024, para. 28).

Often in my reading about artificial intelligence as I consider how to incorporate AI tools into my writing instruction, I gravitate toward the critics and skeptics and away from the AI enthusiasts and evangelists. Critics and skeptics tend to illuminate the reasons we have for turning to generative AI in the first place. They invite us to think about the deeper purposes of our writing. They expose this technology's many weaknesses and the pitfalls it creates and thereby help me wrap my mind around the possibilities and opportunities that remain. They needle me with the feeling that, like with any powerful tool, there exist both dastardly and dynamic ways to apply it. (Confession: I used AI to choose the word *dynamic* and fuel that last alliteration, for example.)

Scan this code to read Ted Chiang's essay from *The New Yorker*.

qrs.ly/6tgdfxe

To read a QR code, you must have a smartphone or tablet with a camera. We recommend that you download a QR code reader app that is made specifically for your phone or tablet brand.

So as I began to read more widely and voraciously on this topic, the idea that we could artfully apply artificial intelligence to the writing process, for ourselves and our students, became my focus. Can it help us learn to expand and improve the choices we make—that defining feature of art? Writing teachers first addressed the inappropriate use of AI standing in for student writers—a violation of academic integrity—but soon organizations and individuals began taking a more nuanced approach to its other possible uses. While Chiang's point that AI cannot create art is a good one, this book joins a growing body of work that suggests it can help human writers make artful decisions with their words.

The next section takes a brief look at what researchers and academics are thinking about this technology, never losing sight of how criticism of its impact can help shape our decisions as teachers.

THE VOCABULARY OF ARTIFICIAL INTELLIGENCE

Artificial intelligence is giving us some new vocabulary to adjust to, and even in writing this book it has sometimes been a challenge figuring out which is the most precise term to use for each sentence.

Artificial intelligence (AI), the broadest term used in this book, refers to the theory and practice of building computer systems that can mimic human reasoning and perform tasks that typically require human intelligence.

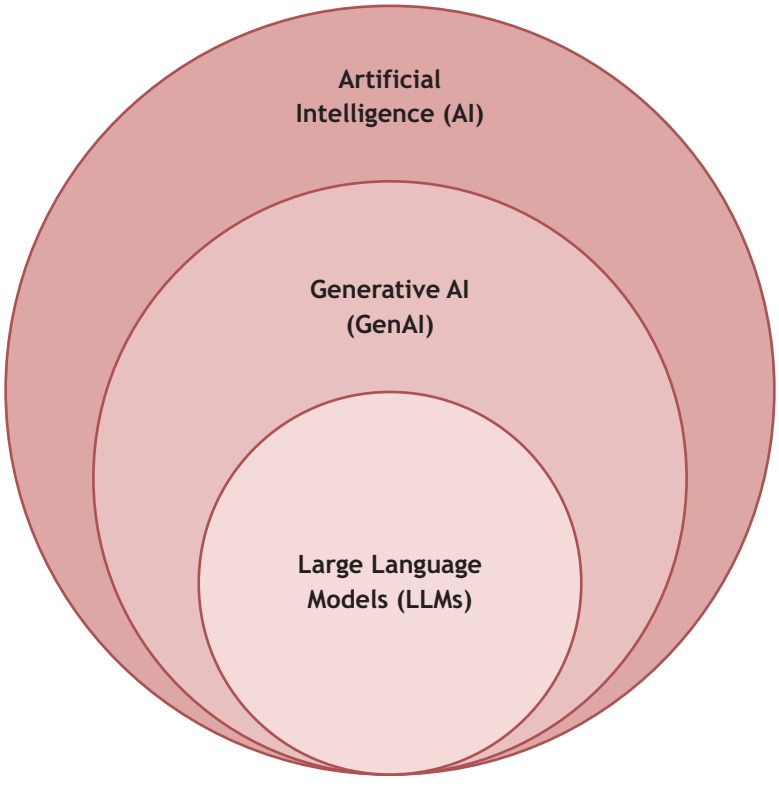
Generative AI (GenAI) is a specific type of artificial intelligence. This refers to an automated system that uses AI models to generate something new, such as coherent text, artwork, music, or video.

Even more narrowly defined, and of particular concern to writing instructors, are **large language models (LLMs)**, which are trained using a large set of texts and linguistic data to generate new text using prompts input from humans. Different generative AI tools capable of producing human-like text, such as ChatGPT, Gemini, CoPilot, and Claude, use different LLMs that acquire their data in different ways. There have been calls for greater transparency about what data (writing) LLMs "scrape" to create text, leading to some lawsuits over copyright infringement and concerns about how user input (for example, the draft of a piece of your student's writing) is used to continue developing and refining the LLM the generative AI tool uses.

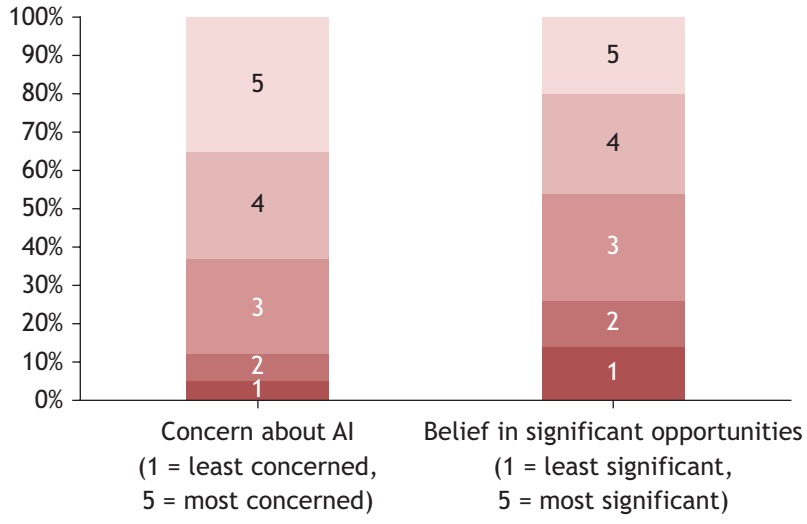
WHAT EDUCATORS, WRITERS, AND ORGANIZATIONS ARE SAYING

Leading organizations acknowledge in early reports about generative AI, specifically large language models (LLMs), that AI can generate text analogous to what humans can create. For example, a joint task force from the Modern Language Association and the Conference on College Composition and Communication notes that while LLMs "may provide students with models of writing and analysis, such models reproduce biases through the flattening of distinctive linguistic, literary, and analytical approaches," and flattened, biased thinking will certainly do humanity no good at all (MLA-CCCC Joint Task Force on Writing and AI, 2023, para. 14). Still, their report on the topic went on to enumerate ten specific benefits of weaving AI into writing instruction (several of which make an appearance later in this book). A survey of over four hundred writing instructors about their perceptions of AI revealed that they perceived both substantial cause for concern and substantial potential for opportunity, as Figures 1.1 and 1.2 reveal (MLA-CCCC Joint Task force on Writing and AI, 2023).

1.1 Defining Artificial Intelligence



1.2 Concerns and Opportunities Among College Writing Instructors



Source: Data from MLA-CCCC Joint Task Force on Writing and AI (2023).

As far back as 2018, long before ChatGPT was released, the National Council of Teachers of English (NCTE) published the following in its statement "Core Beliefs for Integrating Technology Into the English Language Arts Classroom": "Consider literacies before technologies. New technologies should be considered only when it is clear how they can enhance, expand, and or deepen engaging and sound practices related to literacies instruction" (Lynch et al., 2018, para. 9).

For guidance from CCCC-MLA that colleges are using to create GenAI policies, scan this QR code.

qrs.ly/hzgdfxp

This matters. A lot. No matter how shiny or horrifying you personally find artificial intelligence, it is worth our time as teachers to pause and question whether there is room for the enhancement, expansion, or depth in what students experience in their writing classroom whenever we integrate a new technology, and especially when that new technology has the potential to write (almost) without us.

Time is essential to integrate AI purposefully. Approaching the topic as a historian and philosopher, author Yuval Noah Harari puts it this way: "[Artificial intelligence] moves at an inorganic speed. And humans are organic beings, and we move much, much, much slower in comparison. Humans . . . need time to adapt and that's the main requirement for how to deal effectively, positively with the AI revolution: Give us time" (Raskin, 2024). Some schools and teachers are rushing to apply this technology on a grand scale without pausing to process change. We need to take our time as we focus on applying these technologies

well, reflecting and evaluating each attempt we make at improving our instruction or our students' capabilities as writers. For centuries we have known that haste makes waste.

Plenty of current classroom teachers argue that artificial intelligence makes waste too. In a counterargument to my own NCTE blog post about approaching AI with curiosity, early career teacher Anastasia Gustafson (2024) wrote a response piece on the NCTE blog called "Plagiarism Is Not on the Guest List," contending that all AI-created text is plagiarism since "AI is given written samples from a multitude of authors (many of whom do not offer their permission for such experiments), and then the AI works to Frankenstein it all together with the goal of presenting a 'new' piece of work" (para. 4). This perspective rightly challenges the sources LLMs use for training but also limits the possibilities of how outputs from GenAI tools can be used. The possible uses go far beyond a new age of plagiarism that substitutes "Frankenstein" papers for original student work.

As a writer with books under copyright, I understand the value and importance of copyright protections. I defend them. I respect and value the intellectual and artistic property of others. At the same time, technology has already and will continue to challenge our notions of ownership. It will push us to define and write our ideas with sharper edges that differentiate them from the mire and muck of words that just anyone—or now any*thing*—can produce.

Generative AI writing has even become an invasive weed in academia. Fraudulent science has infiltrated professional journals, fueled by so-called "paper mills" that produce phony academic papers, even phony guest editors, faster than journals can catch them, leading to abundant retractions and even shutdowns of journals. Research on these fraudulent academic research papers reveal that many "included technical-sounding passages inserted midway through, what [Oxford University psychologist Dorothy] Bishop called an 'AI gobbledygook sandwich,'" a troubling pattern that threatens to erode trust in the research underpinning all academic disciplines (Subbaraman, 2024, para. 13).

So Gustafson's concern is bigger and broader than the secondary classroom. It is the type of grand question about truth and justice that high school teachers should think about and talk about with their students. Teenagers are often eager to discuss what defines cheating and what is fair, but the resolution of when AI technologies commit plagiarism will play out in courtrooms not classrooms. Is "scraping" copyrighted work to train LLMs to write something new plagiarism? Dr. Joshua Bennett,

poet and professor at MIT, calls it "one of the great heists of intellectual property in human history" (Bennett, personal communication, October 31, 2024). Many writers agree with that perspective, and while the U.S. Copyright Office has determined that AI-generated text cannot itself be copyrighted, it continues to work on how copyright laws will need to adapt to protect intellectual property moving forward.

Meanwhile, early career journalist Reece Rogers (2023) from *Wired* was willing to train a custom chatbot on his own writing, creating a bot that applies his style and sounds like him. He says, "I was never afraid to train an AI chatbot on my writing, because OpenAI had already broken the seal. . . . So, what the hell! Why not wrestle around with the chatbot and see if it can mimic me tout à fait? Together, let's see how far we can trek into the uncanny valley with AI and learn how to make one of these so-called GPTs using OpenAI's tools" (Rogers, 2023, paras. 1–2). He went on to feed an LLM from OpenAI, the creators of ChatGPT, fifty of his *Wired* articles in a semisuccessful attempt to replicate his voice.

Opinions on artificial intelligence clearly vary, even among people whose livelihood revolves around writing. Some are stridently against yielding any part of their process to artificial intelligence, while others are befriending it.

As teachers, we naturally fell somewhere on that continuum when we first learned about GenAI tools for writing and started playing with them ourselves. We have likely already moved on that continuum, and, as we learn more and play more and work more with our students, as we encounter research studies on this topic, we will continue evolving in our views. This book aspires to keep us learning and growing in ways that will sustain us through change. I hope that the lesson ideas within it will give you fresh perspective on how to help your students be more artful in all of their writing work and help you engage artfully with this particular technology as well.

The only consensus among educators, writers, and organizations is that we need an awareness of what AI can do and is doing. How do we respond to it? This question brings more diverse responses.

WHAT STUDENTS ARE SAYING

Most of the following chapters contain "What My Students Say" sections, which include interviews with students about their early attempts to use AI artfully to improve their writing and to help them

grow as writers. That matters because how we experience technology is often informed by context. Speaking to specific students in your teaching context will help you craft your own vision of the use of AI in writing instruction.

Statistics about what students are doing more broadly can also be helpful in understanding the scope and trends of usage and the reasons that students turn to AI. Just like my one-to-one conversations, the statistics reveal that this is nuanced and students are not simply using generative AI as a cheating machine.

In June 2024, the report *Teen and Young Adult Perceptions on Generative AI* was published by the Harvard Graduate School of Education based on data collected from the autumn of 2023. The two most common reasons teens and young adults reported turning to AI for help with writing were "getting information" and "brainstorming." This is important to know! Generative AI has been notoriously untrustworthy so far in delivering accurate information, but it does so in an authoritative tone. Students will need to learn that "appearing knowledgeable isn't the same as being factual" (Buolamwini, 2023, p. 60). Moreover, brainstorming is a task that can build our neural networks, and outsourcing it to a technology that mimics those networks shortchanges our students. These statistics identify a few key facts about AI that any classroom where research and writing happens should be discussing.

When young GenAI users and nonusers were asked what they felt older adults needed to know about AI, responses ranged from "AI is creepy" to "AI is the future," from "AI concerns me" to "I can't wait to see how it evolves!" These responses are not so different from the kinds of things you have likely heard from the adults who work in your school! Again, we are all learning and finding our way together, no matter our age.

Of the young people (aged fourteen to twenty-five) surveyed who never used GenAI at all, 24 percent said they made that choice because "it is associated with cheating and stealing the work of others," and another 17 percent said they made that choice because they heard that GenAI can be "inaccurate of biased." These smaller numbers are important too. Students do care and are hearing about the ethical concerns of this technology, and some are even abstaining because of those concerns.

When we attend to data about student use and listen to our own students' reasoning, we find that their stories, their perceptions, and their frustrations will help us lead in the classroom in ways that are relevant, supportive, and fair.

ENVIRONMENTAL IMPACTS OF GENERATIVE AI

It would be wrong to write about artificial intelligence without noting its environmental impact. Like all widely used technologies, generative AI has a substantial carbon footprint, consuming large amounts of energy to sustain our queries. AI is also a particularly thirsty beast, consuming water, our most precious resource, at alarming rates. To cool the "delicate electronics" required to keep technology ticking, Google's data centers alone consumed five billion gallons (twenty billion liters) of freshwater during 2022, and both Google and Microsoft saw huge increases in consumption (20 percent and 34 percent, respectively) in the year their servers began to expand generative artificial intelligence functions (Berreby, 2024, para. 21).

This ubiquitous technology has the potential to further damage our tender planet, the destructive opposite of an artful act, and if companies persist in expanding generative AI technology, one of the most urgent goals for developers must be reducing its environmental impact.

It would be wrong to bring AI into our 21st century classrooms without exposing students to these uncomfortable facts so that they can use their voices now and in the future to advocate for more energy-efficient generative AI than these early, pervasive models have given the planet. Have your students read about it, consider infographics and statistics, and write about it. AI and its environmental impact is not the central focus of this book, but it is an opportunity to bridge several academic disciplines and their standards as we help students think beneath the shiny surface of the technology with which they interact.

Just as the existence of generative AI sheds new light on conversations with our students on tone and voice, it gives new reasons to communicate through writing. It will take human-crafted language to let corporations and regulatory bodies know that people are watching and that they care about the impact of technology on our planet.

WHAT GENERATIVE AI MEANS FOR TEACHERS OF WRITING

While AI may presently dominate conversation around writing instruction, dividing opinions among educators, it is worthwhile to pause and reflect on what it looks like to teach writing well without artificial intelligence tools. Writing instruction has never been about the

written pieces themselves but the thinking, the decisions, the skills that students develop by creating these pieces. Even student writers who never publish beyond the classroom benefit from the process of writing. Generative AI does not have to steal any of this from our students; instead, it offers new opportunities for thoughtful, writerly work, and, in my experience so far, has invited some of the best reflection I have ever seen from student writers. Applying ideas from this book will preserve and deepen the reflective work of the writing process in your classroom.

Meanwhile, let's also preserve the thoughtful and well-timed exclusion of AI tools, valuing the purity and messiness of human thought with abundant opportunity to note and jot and mull and meander with good old-fashioned pencil and paper. The latest brain research confirms that writing by hand is good for children and adults, as it requires "a lot more fine-tuned coordination between the motor and visual systems. This seems to more deeply engage the brain in ways that support learning" and "simply forces us to slow down" (Lambert, 2024, para. 9). This book will integrate suggestions on when and why *excluding* generative AI is important too.

Steve Graham, a professor from Arizona State University and expert in writing instruction, has been investigating ways to incorporate AI into writing instruction "without hijacking the cognitive benefits of writing" and synopsizes his approaches so far into four main recommendations (Ofgang, 2024):

1. Have students brainstorm without AI.
2. Have students write a first draft without AI.
3. Have students go deeper than the first AI response.
4. Emphasize thinking in all AI writing tasks.

Notably, his first three suggestions involve withholding AI tools at some stage of the writing process while allowing it at others, and this is a concept you will see surface in this book quite often in rationale, lessons, and interviews. Graham's fourth point is an umbrella we all need to carry with us into this stormy new world. Whatever our decisions about allowing versus banning AI throughout our courses, we must emphasize the thinking, reflection, and decision-making skills that are inherent in the very act of writing.

If we fail to do this, AI tools can reduce writing to a mere "product," when it is so much more. John Warner (2025), in his book *More Than*

Words, reminds us that "LLMs act as a probability machine where the object of prediction is the next word in a sequence. . . . At its core, an LLM is just fetching one word after another in a sequence" (p. 16). In contrast, the act of writing artfully is "a form of figuring out what you think," as Sarah Levine, assistant professor at Stanford University's Graduate School of Education, puts it (Salman, 2023, para. 4–5).

Above all else, keep *thinking* at the forefront as our writing instruction practice evolves.

After Google aired their ill-conceived and poorly received "Dear Sydney" commercial for its Gemini AI during the 2024 Olympic Games—in which a father directs his young daughter to Gemini to help her start writing a fan letter to an Olympic athlete—educators were quick to note how soul-crushing it felt to see fan letter drafting disrupted by artificial intelligence and spotlighted by the advertisers as somehow better than an original, imperfect note from a child.

Children's book author Jamilah Thompkins-Bigelow (2024), who has taught writing with many children, called the ad "a suggestion to steal important experience from that child." In a social media post, she continued, "It steals the messiness of coming up with that thinking. The writing process is messy. The messiness of process can be frustrating, but also fun" (Thompkins-Bigelow, 2024).

Scan this QR code to see the Google Gemini "Dear Sydney" commercial, aired during the 2024 Olympics.

qrs.ly/u9gdfxt

In their decision to pull the advertisement, Google explained their belief "that AI can be a great tool for enhancing human creativity but can never replace it. . . . [The advertisement] aims to show how the Gemini app can provide a starting point, thought starter, or early draft for someone looking for ideas for their writing" (quoted in Hayes, 2024).

My heart sank to read that statement. What the company failed to recognize is that the fan letter might have been the *worst* genre to demonstrate Gemini as a tool for young writers. In deeply personal writing like a fan letter, the most important aspect is the heartfelt, individualized thinking and manner of expression. To invite artificial intelligence into the process steals something meaningful from both the fan letter's writer and the recipient.

At the time of this book's publication, some teachers are feeling pressure from administrators, thought leaders, or circuit speakers who have not led classroom instruction in many years to apply this new technology that they believe threatens to steal something from their students' experience as growing writers. Stand up for students and

speak out when you see generative AI misapplied in ways that steal developmental opportunities from them.

In this book, I will share what I am finding to be positive, productive ways to invite GenAI into a classroom, but I am also determined not to let down my guard against what opportunities I may jeopardize or lose by inviting my students to engage with these new tools. If we all proceed with caution and candor, it will help us to be thoughtful and reflective in our practice. This will help our profession to avoid major pitfalls and help our students develop needed skills and good sense about when to avoid this technology—when writing a fan letter, for example.

SIX PRINCIPLES FOR MOVING FORWARD

I had a conversation with a friend recently about how we read professional books for teachers. I learned he reads in precise chronological order, cover to cover, whereas I sometimes take a skip-around approach. Either method works for this book!

In Chapter 7, I conclude the book with six principles for moving forward. I hope to send readers off into whatever comes next with not just a pocketful of lessons to use but some habits of mind that will serve us all well.

If you are approaching this book with a rising sense of panic about AI and what it is doing or is about to do to your classroom and your students, you may enjoy skipping ahead to the last chapter and considering these principles. I promise, there are no spoilers on the last page that will take away from your enjoyment of the book! Thinking through those six principles may actually help you to best approach the thinking and the lessons that come between Chapter 1 and Chapter 7 if you are coming to this book with a sense of deep trepidation.

FOUNDATIONAL VALUES AND INTRODUCING AI TO STUDENTS

It makes sense to clarify, as individuals and institutions, what we value about student writing, writing instruction, and the potential of a particular AI tool before we embark on introducing it for student use.

Here are five foundational values that have always mattered for student writers and writing instruction and that we will need to bolster in the age of AI:

1. Classroom culture and relationships that value curiosity and praise student ideas
2. Class discussion practices that encourage and praise divergent thinking
3. Writing assignments that are thought-provoking rather than regurgitative
4. Classroom prewriting and drafting time that require composition exclusively on paper
5. High expectations for students' ability to flesh out written ideas with meaningful details

Throughout this entire book, these values resurface repeatedly, as they should in our classrooms.

A central and valid concern that teachers have about using generative AI tools is that it blurs lines between original and derivative thought. Will this debilitate our students in a world where thinking for oneself is already under attack? Will it deprive them of the intellectual pleasure of mulling things over, the stages of composition that happen in our heads before anything happens on paper or screen?

These concerns have merit.

While AI can help us to build or grow our ideas, we need to make sure students can differentiate between their own original ideas and ideas that they are lifting wholesale from AI. Otherwise we endanger them, raising consumers and creators of recycled mish-mash, a grim and unsatisfying gruel. As Kashmir Hill puts it in *The New York Times*, "An underrated risk [of AI] may be . . . erasing individuality in favor of a bland statistical average, like the paint color A.I. initially recommended for my office: taupe" (2024, para. 6). Every teacher of writing has read some taupe essays; no teacher of writing wants to read more of them.

Does this mean we have one more thing to teach? With a sigh, I confess, it does. But in a world where AI is not going anywhere, it is imperative to acknowledge that new technologies raise new priorities and needs for adaptable instruction: How much better to weave it into our instruction than try to ignore an additional threat to human thought!

There is good news. We do not need to start "teaching AI" per se. We need to teach students how to reason, as we have always done, but with a new slant. We need to teach students how to write well, but with new tools and new decisions to make. We need model attribution in the tools we create for class with AI and to verbalize our thought process about this topic for our students. Dan Cryer, a college professor researching AI teaching practices in freshman composition courses, coined the phrase *critical minimal adoption* of AI, arguing that we cannot ignore its presence but rather must ask ourselves, "What is the least I can responsibly do with AI in my teaching?" (Cryer, 2024). This stance can prevent teachers from getting overwhelmed and still allows us to discover productive ways to engage with change.

Helping students think through how and when to use artificial intelligence builds useful tools for engaging with the world beyond school. Separating fact from conspiracy theory, reality from deepfake—these are already relevant skills! Teaching them to evaluate the differences between AI-generated text and human-generated text is just one more way we can help our students grow into discerning adults. It may not be a skill set we bargained for when entering the profession, but it is not outside of our wheelhouse either. We already aim to help writers become observant, detail oriented, analytical, and creative in their work. Those essentials persist and will help us build classrooms that can handle new things thoughtfully.

I have found the easiest way to start thinking about AI with your secondary students is to ask them a few questions, perhaps granting amnesty for any past unethical uses that come up in the discussion:

1. So how many of you have ever used AI before? What tool or application have you used?
2. How many of you have used AI for an assignment? Can you share with me how you used it? I'm learning more about it and shaping my opinions, so I would like to hear yours.
3. What have you noticed about AI in your experience so far? What do you like and dislike about it?
4. What tells you when your use of AI crosses a line and becomes cheating or breaks our school's academic integrity policy?
5. What is something you think all teachers need to know about AI, and why do they need to know this?

6. How have you seen teachers using AI in their work? Where do you see AI embedded in tools our school already uses?
7. Why do you think it is important for teachers and students to be transparent about using AI? What are your questions about attribution and citation of AI tools?

Students enjoy discussing topics related to AI. When they see you are learning with and from them, they are inclined to engage.

Then, brace yourself. You are likely to hear some uncomfortable truths as your students share. Take it all as a learning experience, and listen for values you can build on. Let students know this is not the last time you will talk about questions like these because becoming a good thinker, learner, and writer means taking time to let ideas percolate before drawing conclusions.

It also pays to play with AI live in front of the class. Recently, I took the short poem "The Eagle" by Alfred Lord Tennyson, which we had analyzed in a previous lesson on tone. "Let's see what words AI uses when we ask it to describe the tone. Will it match our conclusions?" I said. Unsurprisingly, it did: The poem is "majestic, inspiring, powerful" (OpenAI, 2024).

Scan this QR code to read Tennyson's poem "The Eagle."

qrs.ly/6tgdfxw

I went on: "Now, let's have it rewrite this classic in various tones and pick out some of the words the AI uses to create those tones." Enter the sarcastic version of "The Eagle," the postapocalyptic, the joyful, the "tone of a teenaged YouTuber," and, with each of these versions, a look at the diction and a lot of laughter.

Start with curiosity and play. The hard work will follow (see Figure 1.3).

1.3 Artwork Generated by Canva AI Inspired by Tennyson's Poem "The Eagle."

It's noteworthy that Canva's AI chose to create a bald eagle, native to North America, rather than an eagle native to England, which would have inspired Tennyson's poem. While this might make the poem relatable to students in the United States, it veers away from the poem's original inspiration.

Source: Created by Brett Vogelsinger using Canva AI

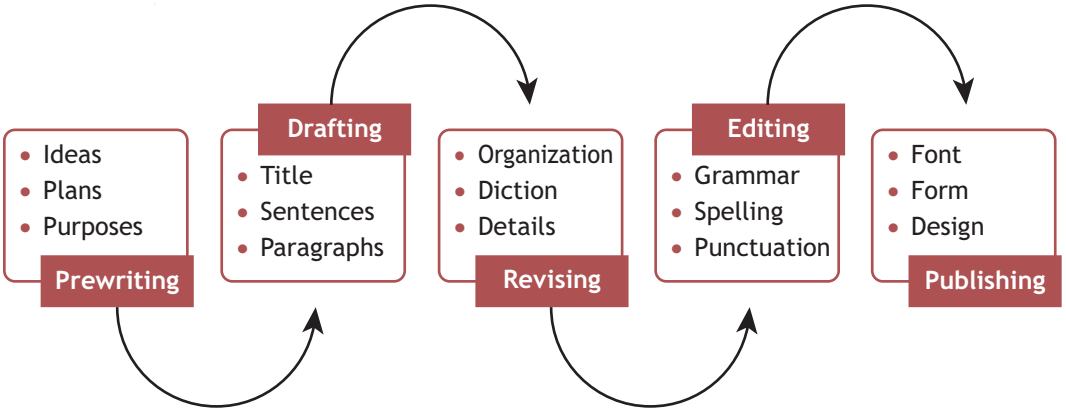
THE WRITING PROCESS AND GENERATIVE AI

The chapters in this book provide specific lessons that can be applied and adapted for the writing process in your classroom. When I first learned the writing process in elementary school, it was presented as a fairly lockstep routine that I still remember from large-lettered posters taped in my second-grade classroom:

1. Prewrite
2. Draft
3. Revise
4. Edit
5. Publish

We acknowledge now that writers are recursive with their process, sometimes pausing to revise a bit before finishing a draft or looping back to some prewriting as they realize one part of their composition is not coming together as planned (see Figure 1.4). I did this while writing this book, and you see your students do it in class.

1.4 The Writing Process



We teach our students to be flexible, and sometimes we even rename the elements of the writing process. The pedagogical approach at Dartmouth, for instance, conceives writing as "a three-step recursive process of invention, composition, and revision" (Dartmouth College, n.d., para. 2).

It is useful to name the parts of a process so that we can zero in on what we are trying to do with our writing at any given moment. Common terms used to describe the writing process serve to organize the lessons in this book, but call these steps or stages by whatever language you use for them in your school. Teach them when they are useful in meeting the needs of the students in front of you; save them for later or skip them when they do not.

This book is not meant to be a curriculum through which students march to learn about how AI can be used or avoided in their writing. Rather, it is a guide to help you teach your students to make artful choices at any step of their writing process. While the technology will

continue to change over time, the things we will need to weigh and consider and employ in our daily practice will be stabilizing forces.

Like writing, teaching is filled with artful choices, and I hope the chapters that follow will be helpful in making the best choices for your classroom.

"I think there are two types of writers, the architects and the gardeners. The architects plan everything ahead of time, like an architect building a house. . . . The gardeners dig a hole, drop in a seed and water it."

—George R. R. Martin