AI in Education: Save Time, Scale Programs, and Prioritize The Human Connection

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OPINION
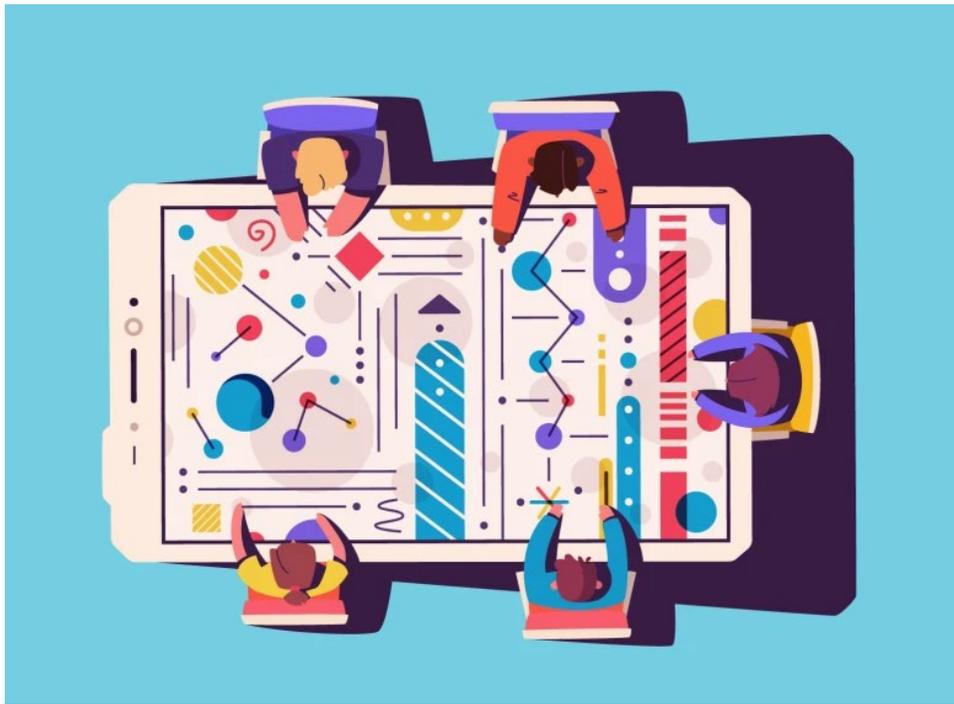
EDITOR'S NOTE

There's no denying it—AI is no longer a distant concept; it's a powerful presence in our daily lives. While uncertainty and skepticism still surround its rapid rise, this spotlight explores the **positive potential of AI in education** when used thoughtfully and ethically. We'll examine how AI can **personalize learning** to meet the individual needs of students and **support educators** in **scaling programs effectively**. Most importantly, we will explore how AI can enhance—not replace—the human connections that make learning meaningful.

DigitalVision Vectors

Published August 20, 2025

'We Need to Reimagine What We Can Do': How Teachers Are Adapting to AI

By Jennifer Igbonoba

The role of artificial intelligence in classrooms is rapidly evolving, and educators are divided over how to handle it. Teachers are using AI to draft lesson plans, brainstorm solutions, and identify where students are struggling. But students' use of AI is raising new ethical and instructional questions.

Many teachers cite generative AI platforms as a common tool for students to cheat on assignments, while some critics warn about potential cognitive effects for students who rely on AI instead of developing their own skills.

Some states and school districts have adopted AI policies, but others have not—creating a patchwork approach that leaves room for misuse. Educators' comfort with AI varies widely. However, as Tanisca Wilson, a member of the National Council of Teachers of English, said, "AI is our friend and not our enemy."

"We need to reimagine what we can do with such a powerful tool," she said.

To do that, Wilson said educators must shift their mindset from seeing AI as a tool that suppresses critical thinking to viewing students as contributors who can shape how AI is used.

She added that for students to develop their creative voice, it's important for educators to demonstrate both the benefits of generative AI—such as revising a paragraph—and its limitations.

"You can't be equally proud of something that a computer has generated," Wilson said.

As more generative AI technologies become available, some teachers employ AI-detection tools, whose effectiveness at accurately detecting plagiarism has been questioned. Wilson said some educators are shifting to a more in-class model of assessments instead of traditionally assigning homework because of the rise in generative AI.

In a May and June 2023 EdWeek Research Center survey about how math instruction should—if at all—change to address the existence of AI platforms that can solve math problems for students, 43% of teachers, principals, and district leaders said students should solve problems in class using pencil and paper. Thirty-seven percent said students should explain their solutions orally, while 34% said students should be taught to incorporate AI into math assignments.

Classroom strategies in action

Ana Sepulveda, a 6th grade math and dual-language teacher in the Dallas Independent school district, said she allows her students to use generative AI platforms for specific assignments, such as translanguaging their curriculum. She added that although she assigns online learning modules, students are required to show their work in a journal, which counts as a project grade.

"That journal [is] the story of how much work they're putting in, day in and day out," Sepulveda said.

Lisa Apau, a high school science teacher in Massachusetts' Worcester public schools, said she encourages her students to use AI platforms, but for situations when they don't understand course material.

"I'm not going to fight that battle. What I want to do is … encourage kids to use it with ethics," she said.

To discourage students from inappropriately leaning on generative AI, Apau recommends that educators design assignments creatively. In her anatomy classes, for example, Apau asks students to draw parts of the body. Although not a direct result of more AI platforms, Apau said those methods make it harder for students to cheat.

Keeping students engaged while defining responsible use

At High Tech Los Angeles, a charter school in California, teachers use a project-based learning model to limit reliance on AI and assess students' learning skills.

"If they get involved in a project, and are super passionate about it, and there's a lot of buy-in, they don't need to or want to use AI," said Bianca Batti, an English teacher at High Tech High. "A lot of it is incumbent on me, as the educator, to make sure I am engaging in the kind of praxis and curriculum development and pedagogy that speaks to students."

Ellese Jaddou, a chemistry teacher at the school, has seen students use generative AI platforms as a "supplement to Google"—sometimes copying homework answers directly from ChatGPT. But she said a smaller portion of her students use it for project inspiration.

In Yakima, Wash., Beth Dallman, a chemistry teacher and International Baccalaureate coordinator at Davis High School, said AI is included in her school's academic honesty policy, which allows for its use if it is cited as a source.

Before the debate on AI, educators wrestled with similar concerns about calculators on students' math performance. Like calculators, Dallman believes generative AI should

be reserved for students age 13 and older—the minimum requirement for some platforms such as Google Gemini and ChatGPT. Dallman believes educators should educate students on how to use AI as a resource—like a search engine or calculator—as she said it is "going to be part of everyone's life."

Regardless of one's personal stance, Colleen Molina, the principal at High Tech High, said educators must teach students how to use AI responsibly.

"I always tell myself, no matter what, we need to educate our students on it. We as a staff need to educate them on the risks of using AI, the [benefits] of using AI, the moral background of using AI, and what you're putting out there," she said. ◼
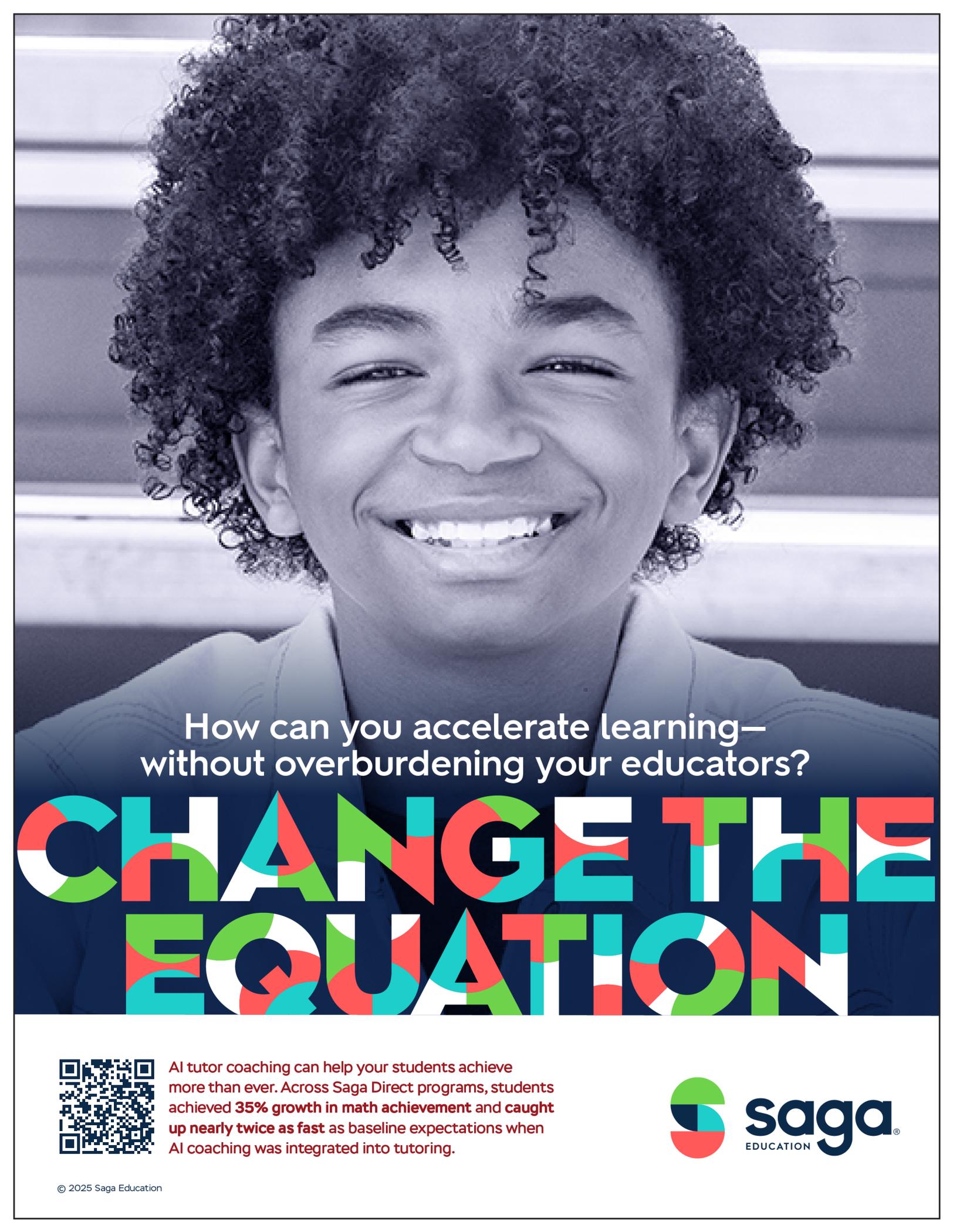
How can you accelerate learning—
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CHANGE THE EQUATION

AI tutor coaching can help your students achieve more than ever. Across Saga Direct programs, students achieved **35% growth in math achievement** and **caught up nearly twice as fast** as baseline expectations when AI coaching was integrated into tutoring.

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EDUCATION

Published August 09, 2025

Want Teachers to Learn How to Use AI for Instruction? Let Them Design the Tools

By Sarah D. Sparks

Teachers may benefit from hands-on learning as much as students when it comes to understanding generative AI—but educators need a clear vision, not just tech training, to make AI tools that solve their classroom problems effectively.

That's one takeaway from an ongoing study of educator-designed AI pilots in California. Researchers from the Center on Reinventing Public Education at Arizona State University tracked more than 80 teachers and administrators in 18 California schools, including district, charter, and private campuses, who created and piloted AI tools through the Silicon Schools Fund's "Exploratory AI" program in the 2024-25 school year.

Teams of teachers and administrators from each school received six training sessions to learn how generative artificial intelligence works, identify problems it can solve, and built and test tools to, among other things, differentiate lessons for students of different academic levels, encourage teacher collaboration, and improve student behavior.

"It was really freeing to just play around with AI and explore use cases," said Daniel Whitlock, who led one development team as a vice principal at Gilroy Prep charter school in Gilroy, Calif. "One of the big benefits of all this AI stuff, is we can now adapt our tech to meet students and staff where they're at versus them having to adapt to a new platform."

CRPE found even with relatively limited training, teachers learned to build and customize tools quickly. Whether teachers truly integrate AI tools into their instructional practice, though, depended on whether AI was being used to solve a specific problem rather than "efficiency for efficiency's sake."

"The underlying instructional model that a school is using really seems to matter," said Chelsea Waite, a senior researcher at CRPE. "AI could be a core accelerator, fueling the teachers' capacity to deliver on an instructional goal, but in other places it was more like a paint job. In absence of a clear vision, it ended up seeming like an interesting tool but not much else."

Getty

Teachers built and tested new AI tools

The CRPE analysis comes as many teachers report feeling unprepared to use AI in their classrooms.

"Among our building staff, so many people think AI is taking away from our interactions with each other. It's taken away that human touch," said Jackie Wilson, the executive director of Summit Tamalpais High School, a charter school in Richmond, Calif., who participated in the pilot. "So we wanted to ensure that our bot was going to prompt people to want to engage more with fellow humans and learn more about how to communicate better with them, how to resolve conflict, how to increase the efficacy of their team dynamics if it was in a work environment, to manage stress, and to build their capacity as leaders."

Wilson and her team created a chatbot that helps teachers use an Enneagram personality assessment to plan collaborations. It's since become a fixture in the school's professional development meetings and even parent-teacher conferences.

The development team at Gilroy Prep, part of a four-campus Navigator Schools charter network, wanted to tackle a common problem. Like many districts, the charter network uses restorative justice practices for discipline, but struggles to make time for teachers to facilitate the process while also informing parents and administrators about behavior incidents.

Whitlock, who has since become Navigator Schools' technology innovation director, and his colleagues created an app that allows teachers to generate a restorative activity based on a discipline incident's description and severity, the grade and reading level of the students involved, the behavioral goals desired (like empathy or responsibility), and the time available for the restorative practice.

The app has proven popular with teachers trying to respond to behavior problems on the fly.

Ally Funk, then a 6th-grade science, technology, engineering and math teacher at Gilroy Prep, used the app last year after a pair of students acted up during a field trip. The app generated a related reading with reflection and discussion questions, as well as a model letter to parents on the discipline incident and how to reinforce the lesson at home.

"Once I hit start, it comes up with a reading passage and questions to go with it, and then a whole message that I can kind of proofread and send to parents," Funk said. "That way, I'm not having to overthink my workload over students that just didn't want to participate in a fun field trip."

Funk, who was on the development team in 2024-25 and has stepped in as an assistant principal at Gilroy Prep this school year, said the tool took weeks of trial and error to fine-tune. While staff could upload the school's behavior policies and decision matrix, for example, they could not for privacy reasons enter personal student data. That meant it was limited in its ability to detect patterns.

"A chatbot is only as knowledgeable as what you teach it, and so you have to keep either feeding it information or practicing the outcome you want," Funk said.

Gilroy Prep teachers regularly use the restorative practice generator, which is being expanded across campuses in Navigator Schools' charter network in the 2025-26 school year. But Funk said the app only works within the context of strong student-teacher trust in the schools.

"I still think there obviously needs to be human interaction," she said. "This restorative assignment generator just gives a piece of paper with questions based on their behavior. You have to have the relationships to build it on. So if you haven't built [student-teacher] relationships that should be priority no. 1." ■
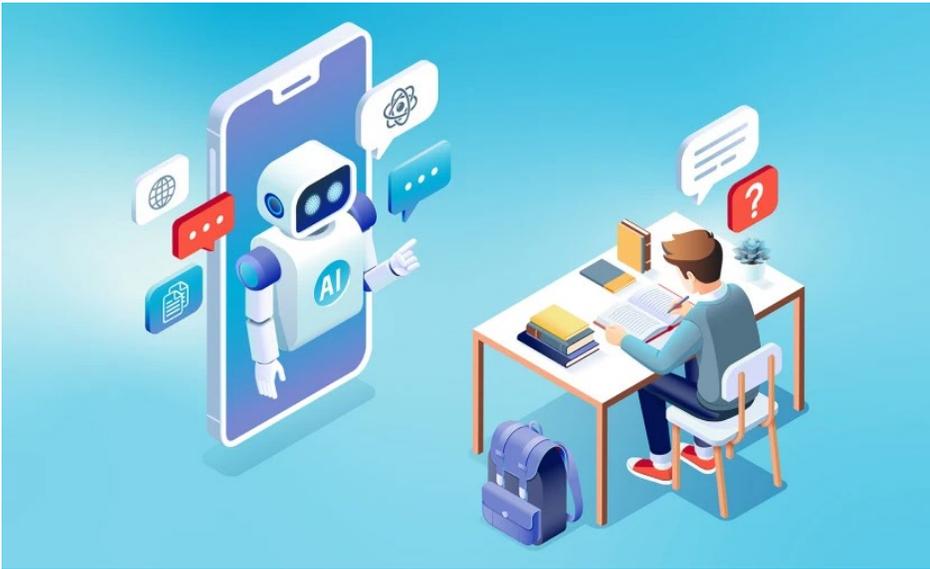
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Published July 01, 2025

Can AI Make History Class More Fun for Students?

By Alyson Klein

San Antonio—

A self-professed math nerd, Heather Brown used to detest history back when she was in school.

Now an elementary school teacher and coach, Brown believes artificial intelligence tools designed specifically for educators may be the key to making the subject come alive for students who also get "bored out of their mind" when forced to memorize a slew of dates.

"I hated history, and I didn't want my students to have that experience. I want them to be excited about it. I want them to see how it ties in with their lives," said Brown, a math interventionist and STEAM teacher at East Coloma-Nelson Elementary School in Rock Falls, Ill., who presented at the ISTELive 25 + ASCD Annual Conference 25 in San Antonio, June 29 to July 2.

Brown used AI to jazz up an assignment that students once completed with old-fashioned graphic organizers. Students research a historical figure. Then they dress up as the person they've studied and share their accomplishments and life story as part of a pretend wax museum.

When Magic School AI—a platform for educators—came out, Brown immediately saw an opportunity to "level up" that assignment with some fun twists.

She created custom chatbots to help students choose their historical character—teachers can provide a pre-approved list, if they wish—interact with that figure, and find avenues for further research.

Of course, educators still need to be careful in using AI chatbots, which can share inaccurate or biased information. But educator-specific platforms like Magic School tend to be better than general interest models like Character.ai, experts say.

Students can have a conversation with the voice of an author who died decades ago

If students are given relatively free rein to choose their historical character, the tool can pinpoint someone who reflects their personal interests.

For instance, this Education Week reporter told Brown she loved murder mystery novels. When Brown inputted that prompt into Magic School AI, the chatbot suggested three research subjects: Agatha Christie, the British novelist celebrated as the "Queen of Crime;" Allan Pinkerton, a detective and spy; and Sir Arthur Conan Doyle, the British writer and physician who created Sherlock Holmes.

This reporter chose Christie, a favorite author. The bot took on her persona, giving an overview of her work, introducing her famous detectives, Hercule Poirot and Ms. Marple, and teasing her mysterious 1926 disappearance.

The bot also shared that Christie wrote her first detective novel, The Mysterious Affair at Styles, on a dare from her sister, and that she worked as a pharmacy dispenser during World War I, a job that gave her deep knowledge of poisons she later used in her fiction.

Such fun facts provide plenty of fodder for follow-up questions, Brown said.

What if a student asked the Christie bot to go off topic, for instance, by naming her favorite movie from the Marvel Cinematic Universe? (The first MCU movie, "Iron Man," was released in 2008, while Christie died in 1976.)

Brown tested it. The chatbot "broke character," in its words.

"I need to stay focused on being Agatha Christie as she was during her lifetime (1890-1976)," the bot said. "I can't comment on Marvel Movies since they weren't around during my time period." The bot suggested more appropriate topics for conversation, including Christie's books, her writing process, and her travels with her second husband.

> ❝
> **I hated history, and I didn't want my students to have that experience. I want them to be excited about it. I want them to see how it ties in with their lives."**
>
> **HEATHER BROWN**
> Math interventionist and STEAM teacher
> East Coloma-Nelson Elementary School, Rock Falls, Ill.

If that exchange had happened in a classroom, the teacher version of the platform would have let Brown know that a student was veering wildly off topic.

"It will flag things on the teacher end, so that the teachers can see what kids are doing," Brown said. "Because this is made specifically for education, it has a lot of safeguards behind it. I've had kids want to be like, 'what's wrong with what I asked?' And I'd be like, 'just word it differently.'"

Creating timelines can be another way to engage students in history

The platform can also write lyrics based on the character and their accomplishments to the tune of a student's favorite song. And it has a read-aloud function for students who need it.

At the end of a conversation, the Magic School AI bot will suggest further areas for research—such as 'what experience in Agatha Christie's childhood influenced her writing?'—and offer up outside sources for exploring it.

"They still have to do the research," Brown said. "It's not giving them the answers."

Magic School can also craft age-appropriate jokes about a historical character, though the bot is not getting a job writing for a late-night talk show anytime soon. (Sample: "Q. What did Miss Marple say when she lost her favorite mystery novel? A. This is a real page-missing case!")

For the wax museum assignment, Brown pairs Magic School AI's chatbot function with another tool, Genially, which allows students to create interactive timelines. Students can use them to present research about their historical figures, with added pictures and audio. For example, a student researching Abraham Lincoln could record themselves reading parts of his famous Gettysburg Address.

Of course, a student can still create a timeline the old-fashioned, non-digital way. But the tool makes the task more "engaging and exciting," Brown said. ∎

More Like This

Your Guide to AI In Action

Published April 16, 2025

Why This School System Is Integrating AI Literacy With Algebra 1

By Lauraine Langreo

Could connecting artificial intelligence with math concepts boost students' attitudes toward the subject? A research project from the Concord Consortium aims to find out.

The nonprofit educational research and development organization has partnered with the Florida Virtual School and the University of Florida to provide an "Artificial Intelligence in Math" supplemental certification program for middle and high school students taking Algebra 1.

The program, which began April 7, will introduce students to the foundational principles of AI that intersect with core math topics. It will also teach students about real-world applications, ethical considerations, and career opportunities in AI-related fields, said Jie Chao, a learning scientist for the Concord Consortium.

Artificial intelligence technologies are poised to shape many aspects of people's lives and are already changing several industries. Experts say students need to understand how the technology works and its potential power and pitfalls so they're prepared for future careers.

At the same time, educators are grappling with the fact that math scores on the National Assessment for Educational Progress are still below pre-pandemic levels.

The AI in math program aims to address both students' need for AI literacy and to improve their math skills and attitudes toward the subject, Chao said.

Students are already learning about AI on their own as they experiment with free tools, such as ChatGPT, said April Fleetwood, the director of research evaluation and planning for the Florida Virtual School, an online public K-12 school district. With this program, students can learn about AI formally, while also gaining a better understanding of the relevance of the math concepts they're learning.

AI can make math more relevant for students

It's unclear how many schools or districts have programs that incorporate AI literacy into math. For the most part, they are still in the beginning stages of figuring out how to integrate the technology into the school day.

But math educators "are trying to stay abreast of these things," said Latrenda Knighten, the president of the National Council of Teachers of Mathematics.

"We like the idea of having students understand the mathematics that's underlying the actual processes that drive AI, because that gives students a better chance of actually applying those mathematics concepts to something in the real world," Knighten said.

Making math relevant to students' everyday lives will help them stay engaged, experts say. Some math educators are already making connections for students between often overlooked math concepts and AI, but doing so on a larger scale can be difficult to pull off when few teachers understand the technology.

The research project also includes professional development for Florida Virtual School teachers to learn how to use emerging technologies to visualize abstract math concepts, with the goal of boosting student engagement and achievement in the subject, Fleetwood said.

For now, the AI in math certification program is being piloted with students enrolled in Florida Virtual School's Algebra 1 course through its "flex" option, meaning students who take individual FLVS courses while attending regular public schools or registered homeschool students, Fleetwood said. The group chose Algebra 1 because it's a graduation requirement and a foundation for higher level math courses.

More than 180 students have already signed up for the course, Fleetwood added.

The students—who can take the certification course asynchronously on Concord Consortium's platform—will complete pre- and post-surveys as well as five activities, including creating their own AI model based on math concepts. The estimated completion time is 250 minutes for the entire module.

"Ultimately, we want [students] to feel like they can use math to do interesting and useful things," Chao said. "Hopefully, [we can] launch them into this journey [of] becoming someone who knows how to harness this power that our modern society will rely on." ∎

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More Teachers Say They're Using AI In Their Lessons. Here's How

By Lauraine Langreo

A much higher percentage of teachers say they're integrating artificial intelligence into their lessons this school year compared with the previous one.

In February, Education Week asked its audience, in an informal LinkedIn poll, if they had integrated AI into any lessons this school year. A majority—60 percent—of the 1,186 respondents said they had integrated the emerging technology into their lessons, while 39 percent said they had not.

Education Week asked a similar question to its LinkedIn audience last school year. Then, 40 percent of the 1,142 respondents said they had integrated AI or discussions about the technology into their lessons, while 60 percent said they had not.

The increase in the number of teachers incorporating AI into their work comes as more of them are getting professional development about the technology, whether from their district or school during dedicated training days or from other organizations on their own time.

Forty-three percent of teachers said they have received at least one training session on AI, according to a nationally representative survey of 1,135 educators—including 731 teachers—conducted in the fall. That's a nearly 50 percent increase from the EdWeek Research Center's spring 2024 survey, when 29 percent of teachers said the same.

The shift in teachers' AI usage also coincides with many ed-tech companies that are fixtures in the K-12 world, such as Google, Microsoft, and Khan Academy, adding AI features to their products.

Here are some of the ways teachers say they're integrating AI into their lessons, based on responses from EdWeek's LinkedIn polls from this school year and the previous one. (For more on teachers' AI use, see in-depth case studies from three veteran teachers and an additional 40 responses from teachers on how they're using AI in their day-to-day work lives.)

"I used AI to help create rubrics."
    —*Ed C.*

"After writing a paper, we plugged it in to see how the AI would have written it, then compared and contrasted the two papers."
    —*Lorie L.*

"Now that my students have figured out My AI on Snapchat, this will become a part of our lessons on responsible technology use and plagiarism."
    —*Elizabeth L.*

"Students are using Magic School to check their writing assignments. I upload the rubrics so the AI knows the expectations. This allows for students to get multiple chances for feedback. I have also used AI to write mini textbooks for students who struggle with research and require text at a specific grade level."
    —*Jeff D.*

"I also used AI image generator in the introduction part of my descriptive reading and writing lesson; first I asked my high school students to imagine themselves in their fav place and then told them to write their descriptive text and put it on Wepik [an AI image generator] to compare if it is the place they imagined or not."
    —*Gülseren K.*

"We discussed using AI as a tool instead of a crutch. For example, using it to rewrite sentences that students are having trouble comprehending, or to paraphrase a student's work making more condensed and to the point."
    —*Michael G.*

"In my high school elective creative writing class, we used AI to explore what a short story is, what qualifies as a short story, and to test out how "cliche" their short story ideas might be."
    —*Joshua G.* ∎

Published August 13, 2025

How AI Can Support Math Instruction

By Ileana Najarro

Artificial intelligence tools can be integrated into math class in ways that enhance instruction without replacing teachers or diminishing students' learning.

That was a key takeaway from educators and researchers at a June Seat at the Table webinar on AI's evolving role in math education.

"The whole conversation starts around pedagogy," said Matthew Karabinos, a 6th grade math and science teacher and a webinar speaker.

He advises fellow teachers to first assess their instructional goals and delivery methods and then determine how AI tools might be meaningfully integrated into that work.

In addition to showcasing creative ways AI can be used in math instruction, speakers also addressed the role developing technologies play in the future of teaching, both by preparing the next generation of teachers and by supporting teachers' professional growth.

Using AI to refine curriculum and streamline tasks

In his own experiments with AI tools, Karabinos taught himself how to create a program that could both test students' fact fluency and provide him with real-time data on their scores.

He stressed that teachers don't have to be tech experts to be able to creatively use AI tools. Success often boils down to knowing how to frame precise requests from generative AI tools and assess the quality of something like a quiz sheet that AI tools produce.

He added that professional development focusing on practical uses of AI tools can be most helpful for teachers at the beginning stages of experimenting with the technology.

One of the biggest benefits AI can offer math teachers now is freeing up time for teaching by having AI tools automate more monotonous tasks, webinar speakers said. But as technology further advances, the potential could go further.

Heather Hill, a professor of teacher learning and practice at the Harvard Graduate School of Education who is studying AI use in teacher preparation, said that soon AI tools will be able to help teachers detect patterns in students' learning.

For instance, if a student doesn't understand division of fractions, many teachers just go back and reteach the content. But AI tools could help identify that the student better understands this math concept when shown content in a particular way or when the teacher uses a specific line of questioning.

Expanding AI's role in teacher training

Feedback from AI tools isn't necessarily limited to students, Hill said. It can also help prepare the next generation of classroom teachers.

Her current grant-funded research looks at using AI to give teachers automated feedback on their mathematics lessons. Teachers record a math lesson, upload it to a specific platform, and get feedback, such as how much student reasoning is going on in their classroom. Math coaches can use these feedback notes for more engaging conversations with teachers, Hill said.

She's also working with fellow researchers on building a virtual teaching simulator, where preservice teachers will be able to log on, get some students in the room, and practice teaching.

"Being able to simulate students gives you the possibility of trying out the stuff you need to do with kids before you actually get in the classroom and do it," Hill said.

AI as a support for teachers, not a substitute

Janel Vancas, the director of curriculum innovation at Appalachia Intermediate Unit 8 in Altoona, Pa., argues that even as AI technology advances, students will still need a trained teacher in the classroom.

"AI certainly is there to enhance, to support, to take some of the redundancies out of learning and teaching, but it's certainly not going to replace the value that the teacher can bring to the process," Vancas said.

Karabinos said that as more students continue to use AI tools in and out of the classroom, his hope as a teacher is to impart the skills they need to discern whether the things AI tools produce are good or not.

He also reminds his students that while AI tools can be useful and helpful in the moment, they shouldn't offload their learning to AI. ∎

AI in Education: Keeping People at the Center of Innovation

How district leaders can harness artificial intelligence to save time, personalize learning, and sustain success—without losing the human connection that drives education.

Human relationships remain at the heart of effective learning— even in an AI-powered future.

The Opportunity and the Challenge

Artificial intelligence (AI) is reshaping nearly every industry—and education is no exception. From automating administrative tasks to personalizing instruction, AI's potential to improve outcomes and efficiency is undeniable. But the most forward-thinking district leaders are asking a deeper question:

How can we use AI to enhance human connection, not replace it?

Educators know that meaningful learning depends on relationships—between teachers and students, tutors and learners, and peers in the classroom. **That's why Saga Education's approach to AI starts with people, not technology.**

Through partnerships with districts and researchers, Saga explores how AI can support educators' time, insight, and impact—while keeping teachers and tutors firmly in the driver's seat.

Using AI to Strengthen Human Coaching

One of the most powerful applications of AI today lies in helping educators grow. Saga Education, in collaboration with the **University of Colorado Boulder**, is studying how AI can support tutor coaching through the _Hybrid-Human Agent Tutoring (HAT) Platform_.

The model uses AI to identify and analyze teacher-student "talk moves"—the subtle conversational strategies that drive engagement and learning. By examining live or recorded tutoring sessions, AI highlights where tutors successfully prompt critical thinking and where they might strengthen student dialogue.

> _"AI will ever replace human coaching, it provides additional evidence and feedback for people to be able to have deeper conversations and better intentionality about what they're actually looking for."_
>
> — Lisa Lanigan, Director of Programs, Saga Education

By automating the analysis of classroom talk, coaches spend less time reviewing recordings and more time mentoring their teams. It's not about automation—it's about amplification.

Human + Machine Collaboration in Action

For decades, providing feedback to teachers and tutors has meant hours of observation and note-taking. AI now makes it possible to surface patterns across hundreds of sessions in minutes—spotting trends that humans might miss and enabling more precise, equitable coaching.

The CU Boulder–Saga team trains AI models using human-coded transcripts that tag effective "talk moves." Over time, the system learns to

Session Snapshots in the Saga Education platform offer a detailed look at tutoring sessions, providing key metrics and identifying when tutors use academically productive talk (Talk Moves).

recognize and flag those moves automatically, helping coaches identify what supports real learning in dialogue. The AI feedback includes word clouds, summaries of conversation topics, and data on the ratio of student-to-tutor talk.

Lanigan notes that some site directors now use these AI insights to help tutors reflect on their own performance. Others use AI-annotated dialogue snippets as evidence when giving feedback, making professional learning more data-driven and actionable.

Still, the human role remains irreplaceable.

"The tutors who are using it enjoy seeing trends," Lanigan explains, _"but sometimes there's information overload. That's where human coaches come in—to help tutors know what to focus on."_

Scaling Feedback Without Losing Focus

The impact of this hybrid model extends beyond tutoring. As more districts explore AI-enabled tools—from automated formative assessments to personalized learning platforms—the same principle applies:

AI should serve educators, not the other way around.

Saga's research underscores a truth that many districts are discovering: technology can support instructional improvement at scale only when grounded in human relationships and guided by clear educational values.

This philosophy aligns with findings [from studies of AI "co-pilots"](#) in tutoring—applications that help instructors respond to students in real time. In these models, AI provides recommendations, but educators make the final call, ensuring that teaching remains personal, contextual, and deeply human.

> *"The data are already remarkable on how student groups who have tutors using the AI co-pilot have improved versus the students who are tutored by tutors who don't have access to the AI."*
>
> — Dr. Scott Muir, Superintendent of Ector County (TX) ISD

Responsible AI for a Sustainable Future

Districts adopting AI today face both opportunity and responsibility. The promise of AI is significant: saving teachers time, supporting differentiated instruction, and helping programs remain sustainable as budgets tighten. But achieving these benefits requires thoughtful design and implementation.

A Future Built on Empowerment

When implemented thoughtfully, AI can give educators back what they need most—**time with students.** It can help personalize instruction, sustain tutoring programs at scale, and uncover new insights into what works in the classroom.

But above all, the future of AI in education depends on keeping people—teachers, tutors, and students—at the center of every innovation.

"AI doesn't replace relationships," Lanigan says. *"It enhances them, making the work of educators more impactful."*

Four Principles for Responsible AI Adoption

1. Start with the instructional need, not the tool. Identify the problem you're solving—like feedback, differentiation, or planning—and let that guide your technology choices.

2. Train educators aongside the technology. Professional learning must ensure that teachers and coaches understand AI outputs and can interpret them meaningfully.

3. Pilot small, then scale. Begin with contained use cases where success can be measured, refined, and responsibly expanded.

4. Keep humans in the loop. AI should *inform* educator decision-making, never replace it. Human oversight ensures fairness, empathy, and context remain central to learning.
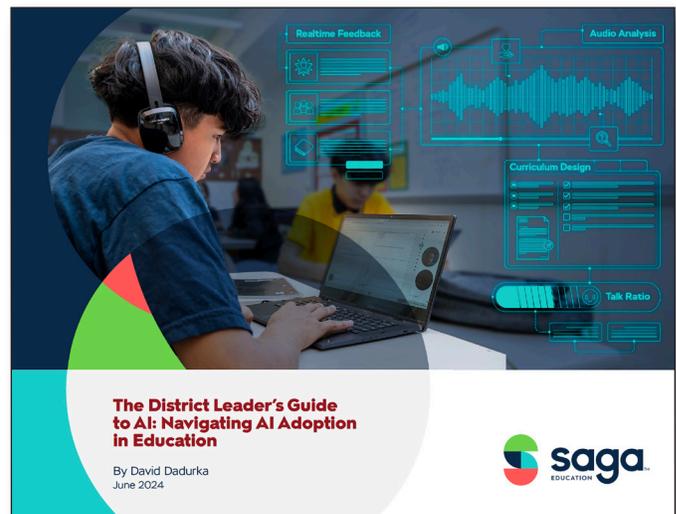
The District Leader's Guide to AI: Navigating AI Adoption in Education

By David Dadurka
June 2024

saga EDUCATION

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OPINION

Published July 28, 2025

4 Principles for Classroom AI, From an Experienced Educator

By Larry Ferlazzo

I'm sure I'm not the only educator who has wondered that now that some schools are beginning to get a handle on student cellphones, do we now have an even bigger challenge on our hands with artificial intelligence becoming ubiquitous?

I've previously published several posts offering some support to educators.

Today's post kicks off a new series offering specific advice on what kinds of AI guidelines teachers and students can use in their classrooms.

AI Is Like a Microwave

Brett Vogelsinger is an English teacher from Pennsylvania with experience in middle and high school and about to enter his 23rd year of teaching. This article features ideas adapted from Brett's new book, *Artful AI in Writing Instruction: A Human-Centered Approach to Using Artificial Intelligence in Grades 6-12*, from Corwin Press:

"We have to pay attention to what this is doing for us and what it is doing to us," I say, when I allow students to incorporate AI in our writing process for English class. "If all it does is speed things up, or worse, if it creates the illusion that you know things you do not yet know or can write in ways that you cannot yet write, then this technology cheats us both of a valuable experience."

"The truth is, I'm learning it to. We are learning how to use AI together, and I want to learn from your experiences just as you will learn from them. So always know that you can talk to me about whether a use is fair or right whenever you feel uncertain. And you do not have to use artificial intelligence at all if you don't want to. Most of all, I want to hear your voice in your writing."

We are teaching in a world where few guardrails exist to keep students—and teachers for that matter—from veering off a cliff with artificial intelligence, losing their ability to work hard, think critically, and experience the pleasures of intellectual breakthroughs.

Many schools have not done much to ac-

knowledge the complexity of what it means to "use AI" in assignments and therefore have not done enough to clearly communicate their reasoning and boundaries. The stoplight model, an image that helped schools to start thinking about AI usage, already feels dated and oversimplified for the school year we are about to enter.

So when I talk to students about a writing assignment where they will be allowed to incorporate AI, I try to be brutally honest about my own experience and inexperience with this technology, always emphasizing what matters to me about their writing. This means centering human assets, skills, and needs. It means having an "is it cheating" discussion in which I demonstrate uses of AI that would clearly violate academic integrity and AI uses that we need to reason on together as a class before they forge ahead with their projects.

Here are four principles for teachers and students that are sure to see us through the emerging use of artificial intelligence in the classroom.

1. Think deeply and create artfully. Students and teachers must pay attention to when AI helps us to do this and when it hurts our ability to do this. The speed of generative AI can be useful in pushing our thinking or creativity,

but if efficiency is the only goal, it replaces some important processing that students need—and adults benefit from, too!

For example, when AI brainstorms ideas for us, it steals an opportunity for thought. But when we brainstorm first and ask AI to point out gaps or weaknesses in our thinking, it pushes us, often awakening fresh material that goes beyond our initial list of ideas. Making art means making choices, so we must never let AI take away our ability to deliberate thoughtfully and choose.

2. Cultivate adaptability to change. Students are probably better at this than adults. But just as teachers believe all students can grow, all teachers can grow, too. When I started teaching 23 years ago, I used chalk and overhead projectors with pens that would stain my ties.

In the arc of two decades, technology changed under and around me, and cultivating a professional persona that was open to change, even when I am given little time to learn or I am critical of its side effects, has helped me to navigate the advent of blogs, wikis, and podcasts; of YouTube, 1:1 laptops, and cellphones; of teacher websites, online gradebooks, and learning-management systems.

I have not grown bitter and jaded with people or technology. Instead, I am willing

to listen to what young people are discovering in their own use of AI. I don't like everything I hear and I'll tell them when I think they are using technology poorly, but they always know I'm interested in hearing about what they have to say about it. Just like some adults, some students hate the very existence of AI, and that's valuable to hear as well. Listening to how they are adapting helps me to learn more about how the students perceive themselves as writers, thinkers, and creators.

3. Value voice. In classrooms where the teacher values student voice—spoken and in writing—dishonest use of AI to altogether replace one's voice is less tempting and easier to spot. There is warmth in classroom communities where students know that their teacher knows their voice, where students get to know each other's voices, so investing in learning how each student sounds when expressing themselves early in the academic term is more valuable in the age of AI than ever.

I encourage teachers to be honest with students when students turn in work that is clearly AI-generated. "I don't like this," I say, "Do you? This piece is missing your voice, and I want to hear you."

4. Be ruthlessly reflective. Many of my colleagues fear that artificial intelligence will ultimately erode human intelligence. I understand their fear. But if we require ourselves and our students to pause and reflect on each use, even write by hand some musings about the experience, we devote our brainpower to a substantive and important academic and life skill.

If through reflection we realize that artificial intelligence dulled an experience or left us feeling hollow, we have had an important epiphany that guides our future use, an epiphany we would not have if we only notice the efficiency it brought us and moved onto the next task or mindless scrolling.

There are abundant issues surrounding AI to read about and reflect on as well, such as environmental impact, intellectual property rights, and biased outputs. These are rich interdisciplinary topics that invite the whole school to dig in and explore one of the most important topics of our time in real time, as the story develops.

Students find this messiness genuinely engaging because there are not answers in the back of the textbook—they require real human engagement, inquisitiveness, and ingenuity. Requiring reflection every time we engage with AI helps us in these early days

to slow down enough to reckon with what it has done or is doing to our work as teachers and learners rather than throw up our hands, overwhelmed by the incoming tidal wave.

Writers have compared generative artificial intelligence to a tool, a monster, Gutenberg's printing press, or a microwave that can speed up aspects of cooking up words but never replace a full kitchen. It is all of these things and none of these things, and we are all still learning and feeling a lot about it. Deciding on a few key principles to guide your decisions can relieve some of the paralysis that gets in the way of making the best decisions for ourselves, our classrooms, our schools, and our students.

Thanks to Brett for offering his thoughts. ■

Larry Ferlazzo is a former award-winning high school English and social studies teacher of more than two decades.

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OPINION

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How AI Helps Our Students Deepen Their Writing (Yes, Really)

4 rules for responsibly teaching composition with chatbots

By Dennis Magliozzi & Kristina Peterson

Since ChatGPT's release, we have witnessed generative AI's potential to push our 9th grade English students in ways that have surprised us. With ethical safeguards and guidance, they rise to the challenge of analyzing and questioning AI's responses. Rather than viewing the technology as a way to cut corners or an unquestionable authority, our readers and writers use its responses to deepen their writing and thinking.

For a number of years, we have used in our classrooms the workshop model where the emphasis is always on process and discovery. Whether our students are drafting a personal narrative or crafting a polished argument, we guide them to embrace the messiness of writing. The workshop model is not just a structure for our classes but an educational philosophy that centers student ownership and authentic voice. In that frame, we present AI as another tool within the workshop, one that offers insights that may or may not be applicable.

Our students don't write in isolation. They are part of a vibrant classroom community where feedback comes in all forms: teachers, peers, and yes, artificial intelligence.

As the leaders of the workshop, we have established a set of rules for writing with AI. (These can be found in our book *AI in the Writing Workshop: Finding the Write Balance*.) **Rule 1 is to write without any AI first.** We want students to connect to their writing and to know what they are asking for feedback on rather than just asking AI to do the writing for them. **Rule 2 is to struggle on your own before turning to AI.**

One of our students, Lexi, spent the weekend mulling over what to do with the end of her poem, and when she returned to school, she was still undecided. We loaded her poem into an AI bot (**Rule 3 is to prompt the bot**), asking for feedback on her ending. After going over the list of suggestions provided by AI (**Rule 4 is to question your AI results**), we picked our favorite words or phrases to apply to her ending.

When Lexi commented in her reflection on the use of AI in the development of her poem, she wrote: "AI did help with my poem's title and ending suggestions. I do not like to use AI, especially if I'm copying exactly what it states because, for lack of a better term, it feels too robotic and not organic. Whenever I use AI, I use it for inspiration and not to complete the assignment because I like how I write."

When teachers give suggestions during a writing workshop, they don't expect the student to accept every comment. In the same manner, suggestions from AI are just that, suggestions. We want our students to be aware of themselves as writers. Many, like Lexi, like how they write and don't want to end up with what she calls a "robotic" voice.

In our classrooms, we also challenge the misconception that AI tools serve merely as shortcuts, bypassing critical thinking and creativity. We don't seek to pit human authorship against AI; rather we aim to show how the two can work together. We can embrace AI as a thought partner, a means to enhance critical thinking and encourage deeper engagement with texts.

In her essay on "Macbeth," another student, Cadence, illustrates this. When provided with an AI-generated essay on liquid imagery in the play, Cadence noted both strengths and gaps in the response. One surprising insight for her came when ChatGPT connected the witches' cauldron with the play's themes of chaos. "I didn't have any notes about the witches' scene with the cauldron," she reflected, "but ChatGPT noted the liquid imagery ... and what it could symbolize." This prompted her to expand her analysis, recognizing how liquid imagery in the witches' scenes further conveyed Macbeth's unraveling fate.

Our students' ability to navigate feedback from AI reflects a shift in how we frame the role of technology in education. Even advanced technology is not a replacement for human thought but a complement, and sometimes even a catalyst, for profound learning.

Other students haven't embraced AI. Lauren feels strongly about holding onto her own writing voice. In a class survey, she stated, "To me, writing is something that is purely made from passion and interest. I feel that this is what AI misses ... . Although AI can be helpful in minor ways, such as finding a word that sounds just right in an assignment, I feel that I would be just fine without AI." Lauren's sentiments are valid. While some students thrive with AI's push, others remain skeptical and choose to push back. Both responses are acceptable in our classrooms.

By shifting the image of AI from shortcut to scaffold, we encourage students and educators to engage with technology in ways that deepen learning and elevate authorship. Students can

interrogate, question, and ultimately refine what AI provides.

Similarly, teachers must resist the siren song of instant grading using AI. If we teach our students throughout their writing lives what the grading robot says matters most, then we are teaching them that their audience doesn't matter. The cycle of students handing in bot-written essays and teachers using AI to grade them is not an educational system either of us hope to see. Similar to our rule of writing first, teachers need to engage with student content before they consider using AI to help them provide feedback.

When we teach our students that their voices matter, their perspectives are unique, and their work is their own, we empower them to push their thinking, defend their ideas, and refine their craft. Even the most advanced technologies cannot rival the authenticity and depth of human authorship. Meaningful integration of AI into our classrooms challenges us to prioritize critical thinking and creativity over mere convenience. It fosters a generation of thoughtful and innovative learners, learners who will go beyond the basics when they find the balance between technology and humanity. ■

Dennis Magliozzi and Kristina Peterson are high school English teachers in New Hampshire. They co-teach writing and teaching at the University of New Hampshire and co-authored AI in the Writing Workshop: Finding the Write Balance, *published last month (Heinemann).*

OPINION

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Teachers Share More Ways to Engage AI in the Classroom

By Larry Ferlazzo

Today's post continues a series on artificial intelligence in education.

AI in High School English

Amanda Muffler is in her 10th year teaching secondary English. She is a current Utah Teacher Fellow:

As a secondary English teacher, artificial intelligence is going to be in my classroom regardless of if I embrace it or not. My team and I have decided, for our own sanity, to embrace it—loosely. This may change as AI continues to grow and adapt and as our curriculum may change and adapt over time as well.

For now, we use AI primarily as a brainstorming tool for help with thesis and body-paragraph ideas.

In our district, we are tied to a set curriculum, and the essay prompts are predetermined within the curriculum. Luckily, so far, students who attempt to use AI to write their essays are easily identified because AI isn't able to use the evidence the curriculum requires, and if it is able to include the evidence, it isn't done accurately or well.

My team and I have presented using AI as a brainstorming tool and shown students that attempting to use it beyond that won't give them a well-written essay anyway so it isn't worth the effort. So far, this is working well in my classroom. My students have put in our essay prompts on various AI platforms as a starting point to get an idea of how they could answer the prompt or what they could include in their thesis statements.

My students have also given AI platforms their thesis statements and asked for a supporting body-paragraph sentence idea. I think this is working well, again—so far, because it really isn't doing much of the writing for them in my opinion. It might help give them ideas, but my students are still reviewing and revising what AI is presenting to them, synthesizing evidence from various texts to support the thesis they create, and explaining the evidence they incorporate in their own words.

English teachers emphasize that writing is a process, and that process includes various revisions along the way. I think introducing AI as just one minor step in the process has been a successful way of embracing something that would be present regardless and doing so in a safe way that my students and I are both comfortable with.

'A Great Discussion Partner for Students'

Danielle Macias teaches English in Utah. She was a district innovative learning coach and an instructional technologist at the Utah state board of education:

Since its release in 2022, ChatGPT has been used by professionals in boardrooms to teachers in classrooms. However, ChatGPT can also be a great discussion partner for students.

1. Debates and Persuasive Writing

Challenge students to engage in debates or persuasive-writing exercises by taking opposing viewpoints. Use the template: "ChatGPT, argue for/against [a controversial topic]. Prepare a persuasive response to counter my points and strengthen your argument."

Students can prompt insightful discussions, encourage varied perspectives, and create a dynamic and engaging learning environment.

2. Literary Analysis

Encourage students to discuss and analyze literary works. Use the prompt: "ChatGPT, provide an alternative interpretation of [a specific literary work]. Engage in a discussion with me to critically evaluate both interpretations and support your analysis with evidence from the text."

Discussing alternative viewpoints helps students analyze evidence, question assumptions, and deepen their understanding of complex literary themes.

3. Historical Events

Enhance students' understanding of historical events. Use the prompt: "Imagine you are a historian studying [a historical event]. Engage in a conversation with me, examining various factors that might have contributed to the event's

outcome and discussing its broader impact."

This exercise cultivates critical thinking by encouraging students to go beyond simple narratives and explore historical complexities.

4. Scientific Inquiry

Utilize ChatGPT as a virtual science partner for scientific discussions. Use the prompt: "You conducted an experiment on [a scientific topic], and I will review your findings. Engage in a scientific discussion with me, critically analyzing the results and considering potential sources of error or alternative conclusions."

By defending their experiments, students strengthen their scientific reasoning and learn to identify potential flaws in their methodologies.

5. Socratic Questioning

Teachers can model Socratic questioning techniques using ChatGPT to stimulate critical thinking. Use the prompt: "Use Socratic questioning techniques to explore the complexities of [a philosophical or ethical issue]. Encourage me to provide well-reasoned answers and challenge my responses with follow-up questions."

By asking and answering thought-provoking questions, students develop their analytical and reasoning skills.

6. Events Analysis

Engage students in analyzing events. Use the prompt: "Select a most recent news article on [a current event]. Engage in a conversation with me to critically analyze the information presented, assess the credibility of sources, and consider different perspectives on the topic."

Engaging in discussions with ChatGPT requires students to think critically about the credibility and reliability of the information presented, enabling them to form well-informed opinions.

7. Creative Writing and Brainstorming

Encourage students to use ChatGPT as a creative-writing partner. Use the prompt: "Have a conversation with me to brainstorm creative ideas, explore various plot directions, and challenge me to think outside the box."

Students can learn to evaluate different

narrative choices and identify the most compelling options.

8. Philosophical Inquiries

Engage with ChatGPT on philosophical questions. Use the prompt: "Explore the concept of [a philosophical topic] with me, engaging in a philosophical dialogue. Encourage me to present my perspective while you critically assess its reasoning and offer your own philosophical insights."

This allows students to delve into complex concepts, challenge assumptions, and refine their ideas on fundamental questions about existence and morality.

9. Problem-Solving Scenarios

Present complex problem-solving scenarios to students for discussion with ChatGPT. Use the prompt: "You and I are members of a team facing a [complex problem]. Engage in a discussion to propose and evaluate potential solutions, considering the feasibility and ethical implications of each option."

By engaging in this process collaboratively, students develop their problem-solving and decisionmaking abilities.

10. Language Learning

Students can practice new vocabulary, grammar, and sentence structures in foreign languages. Use the prompt: "Practice speaking in [target language] with me on a specific topic. Engage in a conversation using newly learned vocabulary and grammar structures and critically reflect on ways to improve my language skills."

By formulating responses and analyzing a given language, students improve their comprehension and linguistic reasoning.

Finally, while ChatGPT can be a valuable discussion partner, it is crucial to guide students in evaluating the information and interpretations it provides. Encourage students to think critically about ChatGPT's responses and consider the limitations and biases in AI-generated content.

A Districtwide Approach

Lakisha Brinson Thomas serves as the director of instructional technology for Metro Nashville Public Schools in Tennessee. In this role, she oversees and supports the use of instructional technology, digital learning, and computer science programming across 150 schools:

The utilization of artificial intelligence within our district is a topic that has generated a mix of enthusiasm, curiosity, and concerns within

the K-12 education landscape worldwide. While AI has existed since 1956, the recent release of Chat GPT has triggered a wave of contemplation within the education sector regarding its safety, appropriateness for academic purposes, and the responsibilities of schools in harnessing its potential.

As an educational technology leader in a large school district, serving over 70,000 students, I am similarly grappling with these questions. As we forge a path ahead, the following road map will serve as our guide:

Establish a Steering Committee

Recognizing that AI implementation is not the sole responsibility of any one department, we are in the early stages of forming a districtwide steering committee. This committee will include district administrators, educators, and students, all of whom will play a vital role in defining AI's role in our educational landscape.

Experiment with Available Tools and Resources

To effectively assess the advantages and potential pitfalls of AI, it is imperative to gain hands-on experience with the available tools. In our district, this would include prioritizing the use of "district-approved tools" such as Microsoft Bing (AI), Canva, and Minecraft, which provide a safe and secure way to engage with AI.

Establish Uniformity and Shared Understanding

Establishing clear processes and procedures ensures a unified understanding among all stakeholders. Our district typically creates a playbook that is distributed to the entire staff. This playbook would outline the vision of the AI project/tool, details professional learning opportunities, and suggests actions that would demonstrate appropriate use of AI tools.

Listen and Learn

It is crucial to tap into the collective wisdom of other districts, subject-matter experts, and learning communities. In our district, this involves reading articles, participating in webinars, and inviting local college professors to share insights with our faculty and staff.

Set the Pace According to Needs

Avoid the pressure to have all the answers immediately. Prioritize actions based on the specific needs of students, educators, and school communities. In our case, we are fo-

cusing on enhancing the knowledge and understanding of our instructional technology team. This will enable them to engage in informed conversations with our steering committees and other stakeholders.

I draw encouragement from the collective intelligence within the education community. As we continue to evolve and expand our use of artificial intelligence in the classroom, we will learn and grow together.

Thanks to Amanda, Danielle, and Lakisha for contributing their thoughts! ∎

Larry Ferlazzo is a former award-winning high school English and social studies teacher of more than two decades.