Empowering Educators And Engaging Students

EDITOR’S NOTE
Modernizing classrooms can empower educators and spark engagement to better prepare students for the digital age. This Spotlight will help you leverage technology to meet students’ individual needs; learn how one district is using AI to heighten instruction and optimize teachers’ time; review the tech skills students need for the digital age; investigate how ed tech can be an invaluable tool for teachers; and more.

National Ed-Tech Plan Outlines How Schools Can Tackle 3 Big Digital Inequities ..............................................2
This Husband-and-Wife Team Created a Chatbot Just For Teachers .................................................................3
8 Tech Skills Every Student Should Have, According to Educators ...........................................................5
Thinking About ‘Gamifying’ Your Classroom? Teachers Use These Tools .........................................................6
How 3 Districts Are Integrating Tech Into Math Instruction And What They’ve Learned .........................7
What Podcasts Did for Student Engagement in These Schools .................................................................9

OPINION
Ed Tech Can Be an Invaluable Tool for Teachers. Here’s How To Use It Best ...............................................11
AI Is Helping Us With Our Instructional Practice. Here’s How .........................................................14
National Ed-Tech Plan Outlines How Schools Can Tackle 3 Big Digital Inequities

By Alyson Klein

Education technology has become central to teaching and learning in school districts across the country. But there are still big inequities in access to devices and broadband, and some districts are using technology much more effectively than others, concludes a national ed-tech plan released on Jan. 22 by the U.S. Department of Education.

Specifically, the education department’s blueprint for the nation’s ed-tech priorities, sees three big digital equity divides. They include:

- **The digital access divide**, which refers to the gaps in access to devices and high-speed internet, as well as lessons in digital citizenship and media literacy.

- **The digital design divide**, which refers to the differences among teachers in understanding how to effectively use technology to meet students’ needs.

- **And the digital use divide**, which refers to the variance in how schools use technology to engage students and teach critical thinking skills.

“It’s essential we focus on empowering teachers to become designers of active learning, using technology in effective ways to engage and inspire students,” said U.S. Secretary of Education Miguel Cardona in a statement about the plan.

The National Education Technology Plan was last updated in 2016, before the pandemic catapulted school districts’ reliance on education technology to deliver lessons.

The report includes recommendations for school districts, state officials, and policymakers on how to improve in each of the three areas of digital inequities.

For instance, to use digital tools more effectively, the report recommends that educators steer away from using devices simply to show videos or allow students to email their teacher with a question. Instead, they should strive to use technology to help students collaborate on projects, learn to code, or to create their own podcasts.

To improve “digital design” or ensure educators are making the most of technology, districts should carefully vet tech platforms before they purchase them. Once a district has purchased a tool, they should continually evaluate it, including by seeking feedback directly from teachers, the report says.

To bolster access to digital tools, the report recommends that districts form public-private partnerships to ensure students have access to high-speed internet and integrate skills like digital safety and media literacy across the curriculum.

Joseph South, the chief innovation officer for the International Society for Technology in Education, praised the report’s focus on educators’ skills.

“It’s great to see the increased emphasis on ensuring that ed tech works for educators in addition to students,” he said. “We need solutions that are both teacher ready and student ready.”

‘Every brain is as different as a fingerprint’

The report places a big emphasis on how technology can help districts offer universal design for learning, or UDL, to all students. UDL is a strategy that encompasses a wide set of teaching techniques, allowing multiple ways for teachers to present information and for students to engage in lessons and demonstrate what they know.

UDL began as an approach to special education but has since branched into general education as it has become increasingly clear that all students—not just those who receive special education services—have their own unique ways of learning, experts say.

The report recommends that educators be given training in how to use technology to make their content engaging and accessible for students with a wide range of learning differences. The report also suggests that school officials model UDL principles in their interactions with teachers, including in staff meetings, and provide time for educators to discuss the techniques in a meaningful way.

The department outlined how to support children in special education using digital devices, in guidance released alongside the report.

UDL is mentioned on 74 pages of the 113-page report, according to Lindsay Jones, the CEO of CAST, a nonprofit education research and development organization that created the Universal Design for Learning framework.

“We have an opportunity with technology embedded appropriately, in education systems, to create dynamic, flexible learning environments for students, because they don’t all learn the same,” Jones said. “It’s not just kids with disabilities that learn differently. It’s not just English learners. The reality for the teacher is that every brain in their classroom is as different as a fingerprint.”
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This Husband-and-Wife Team Created A Chatbot Just for Teachers

The chatbot, ‘Agnes,’ is envisioned as a personal assistant for busy educators

By Madeline Will

Teachers consistently say they want to spend less time doing administrative tasks and more time teaching. A rural Texas school district is piloting an artificial intelligence tool that promises to help educators do just that.

Jim Beasley, the director of technology for the Llano Independent school district, and his wife Maurie Beasley, the network system administrator and a former teacher and assistant principal, developed a chatbot named Agnes that serves as a virtual personal assistant for school employees. The tool became available this fall for educators in the nearly 1,900-student school district.

Agnes—named after the little girl in the Despicable Me movies—can answer questions about school schedules, district policies, state laws, and more.

Is our HR documentation. What’s the superintendent’s phone extension? What’s the payday for this month? That kind of thing.

But then on a campus level, we have digested information—like [schools’] duty schedules and testing schedules. Since I was an assistant principal, I knew this is what teachers are always looking for. “Where did I put that piece of paper?” And you’re digging through your desk: “When does the window open for the first curriculum-based assessment?” “Who’s supposed to be on duty with me?,” because you show up for your duty post, and you’re the only one there.

We’ve been piloting it into classrooms, and also for administrators. My administrators are actually really wanting us to add additional information. For instance, my elementary principal has what we call a year at a glance. It’s basically, “OK, the first nine weeks you’re gonna cover all of these Texas [state standards], and the second nine weeks, you’re covering these [standards].” It’s how we keep you on track for testing.

So she wants her specific “year at glance” schedule to be ingested by Agnes, and that way, her teachers can go in and say, “OK, what am I supposed to be covering? Oh, that’s week one, week two, week three.” It keeps them on task for their lesson planning.

Jim: We actually called [Agnes] an onboarding tool, originally. Teacher turnover is what it is now in public schools. Our future daughter-in-law came and worked at the district, and we saw the challenge because she was freshly out of college, freshly getting into teaching. And she started two weeks late, so she missed all that beginning-of-the-year training. That was another thing we were trying to address with Agnes.

Maurie: “Where’s the copy machine?”

What was teachers’ feedback after they piloted the chatbot?

Jim: I have a group of teachers that I kind of focus on with new technology. They tend to be the seasoned teachers, and when you put something new in [front of them], there’s
somewhat of a learning curve. But there’s also, “Do I even want to mess with it right now? Because I’m busy.”

We actually sat down with some of those teachers. The feedback has been good. What’s been interesting is not whether or not they like it, it’s, “Can you add this to it?” Most of the documentation that Maurie was discussing earlier is created to be thumbtacked on a board. But when you give it to me, and it’s just an image, or it’s part of a PDF, sometimes the AI doesn’t do well with that. You have to massage it a little bit. It’s been challenging for us, but we’re getting past it now and figuring out the optimal way to take that data and get it in there.

We don’t want them to have to ask the question a particular way. We want it to be a completely natural language, because everybody asks questions differently.

Maurie: When I go into the different classrooms that we’re piloting it into, we pull up Agnes and I’ll say, “OK, ask.” And then I sit there, and I write down how they’re asking the question.

If I ask an AI, “Who is the payroll clerk?” the AI might not know the word clerk. It’s going to look for payroll, and it should give you a correct answer. But how else are they going to ask? “Who do I talk to about my paycheck?” A totally different way to ask the question. So we come back and test it to make sure that the AI is giving the correct answers, in multiple ways.

Were there any concerns from the district about privacy or security?

Jim: Both. We created it from day one where you have to authenticate to your Google account before you can see it. I have no intention of making it publicly available even though I’m not putting student information in it. [All the documentation] really is publicly available. But I have this thing about hackers—they always seem to be a little smarter than I am. If I figure, I’m just going to put it behind security, and that way I don’t have to think about all that right now.

Maurie: So you have to be an employee of Llano ISD [to access it]. Eventually, we might make portions of it available on our website, where a parent can ask questions. All Agnes is going to be able to have access to are things that are already posted on our website. It’s just a natural language interface.

Beyond onboarding and information-sharing, how else can AI make teachers’ jobs easier?

Maurie: Accommodations. [Say] I have a 3rd grade reading class. Some of those kids are already reading on a 3rd grade level, but some of those kids are still down at the 2nd grade level. I need to teach these kids comprehension. So I am trying to find leveled readers—basically the same story, but one’s at a little higher vocabulary versus the other one. Well, I have to go find that resource. ... Or I can go to an AI.

And we did this [with a teacher]. She was mind-blown. We asked the AI to write a story about a little girl and her dog on a 3rd grade reading level with specific guidance toward teaching comprehension. It wrote a little four- or five-paragraph story. The teacher took that and read it. She edited a couple of things. Then she put it back in an AI and said, “Please rewrite this story on a 2nd grade level.”

It rewrote the same story on a 2nd grade level, and then on a 1st grade level. She was able to literally, within 10 minutes, have a whole lesson with the materials, including a quiz attached to each one of the stories about comprehension covering this very specific Texas [standard].

Another thing that teachers really like about it is that it can take information and translate it. Now I know Google can do that, but for instance, if I have a student in my classroom that has made below a 70 [percent] three times in the last three weeks, and I need to compose an email to a parent about it, I can basically say, [without giving a student’s name], “Can you please do an email about a student who made below a 70 in my math class? I need it to be upbeat, and I need it to [say that] my office hours or my conference period is at this time.”

And it’s going to write a couple of paragraphs. We’re always telling teachers, underneath your signature, put “email assistance by ChatGPT.” Just let the parent know that you’re getting assistance with your email. But then I could say, please do this in Spanish. It’s enabling [teachers] to communicate better with language barriers.

Also, just lesson planning, brainstorming ideas. When I was [teaching] 4th grade, we covered verbs the same basic way every single year. There are so many different ways you can cover verbs. So it’s a really great brainstorming tool for [thinking about], how can I cover verbs with small groups? How can I cover verbs in centers?

[Teachers have said] they tried [AI] for lesson-planning, and it wasn’t that detailed. It’s because they’re not asking it the right way. They said, “Can I have a lesson plan on photosynthesis?” Well, it’s gonna give you a basic lesson plan.

But if I say, “I am a 5th grade teacher. May I have a lesson plan on photosynthesis using the Texas [standards] in the 3E model [engage, explore, explain, elaborate, and evaluate],” then it’s going to tell you the [standards], it’s gonna give you all the five Es. Teachers really like the fact that, then in the same chat, they can say for the explorer section, “May I have 10 more ideas?” Because maybe you don’t like all the ideas it gave you. We’re teaching them how to just keep querying it to get exactly what you want out of it.

The last thing that I think that teachers are really excited about is that [AI] creates rubrics for you. I can go in and say, “I need a rubric that’ll assess this on a 100-point scale,” and it’ll give me all the information.

Then I can take the paper from the kid and [without the student’s name] put it into ChatGPT or an AI and have it grade the paper based on the rubric that I had created. Even if I don’t stick with that grade, it still gives really constructive feedback—it gives me a way to help my student with specific areas of their writing.
Today’s students have grown up with smartphones, tablets, and virtual assistants. Most can comfortably navigate any new app or digital device and outsmart parental controls. That’s why adults often turn to them to understand how to use new technologies.

But educators have noticed that many students are missing basic technology skills and media literacy—such as typing on a keyboard, searching the web, determining if an online source is legitimate, or writing an effective email message—which are necessary for success, not just in school and careers, but in their personal lives too, experts say.

“In our digital classrooms, it’s all about giving students the tools they need to navigate and shape the world of tomorrow,” said Dyane Smokorowsksi, the digital literacy coordinator for the Wichita school district in Kansas. “By weaving these tech skills into our teaching, we’re unlocking doors for our students to a future filled with possibilities.”

Education Week asked educators on Facebook, LinkedIn, and X what tech skills every student should have. Here’s what they said:

1. Basic Computer Skills

Students should have foundational computer knowledge and skills, such as how to turn on a desktop computer (yes, some respondents noted this!), how to open a file with the right program, how to find a document, and how to save files on an external hard drive. They also mentioned that students should develop typing skills if they are going to be using computer keyboards regularly.

2. Digital Communication Skills

Educators said it’s important for students to be able to communicate their ideas clearly using technology, whether it’s through email, social media, video conference, or word-processing and presentation programs (like Google Docs or Microsoft PowerPoint). Students should also be able to work with others in a digital environment together in real time or collaborate at separate times with shared files.

3. Cybersecurity

Students need to have skills that will protect their sensitive information from cybercriminals, educators said, especially as cyberattacks become more sophisticated. They need to learn not to share personal information, should be able to recognize when a website is secure and legitimate, and know how to avoid email phishing attempts by hackers.

4. Media Literacy

Media literacy is about having the skills to access information, analyze and evaluate it, create content, and act on it using all forms of communication, whether it be through print, TV, or the internet. Ensuring students have this skill is even more important now with the rise of artificial intelligence and its ability to generate text, audio, images, and video, educators said. Students need to be able to think critically and evaluate the authenticity and reliability of any information they see and hear online.

5. Digital Citizenship

Similar to media literacy, digital citizenship is about teaching students how to use technology thoughtfully and empathetically. Students need to know how to be kind and respectful in online spaces, so that others feel safe and welcome to participate, educators said.

6. Research/Data Analysis

Having effective internet search skills is very important for students, according to educators. Students should be able to sift through the oceans of information available online and be able to analyze what’s valuable and worth using or sharing.

7. Problem-solving

Students should know how to use digital technology to find solutions to the world’s problems, educators said, whether it’s coding an app that will save lives or figuring out how to clean up the ocean. They should know how to troubleshoot problems, show persistence, and be able to learn from failures.

8. Creativity

Last but not least, students should have time for fun and games that will help foster their creative thinking skills. They need to learn to use digital tools with their imagination to express themselves and connect with others, educators said, whether it’s through digital art or podcasts or videos.
Empowering Educators and Engaging Students

Thinking About 'Gamifying' Your Classroom? Teachers Use These Tools

By Lauraine Langreo

Students have been much less engaged in school in recent years, according to survey results and anecdotes from educators. In response, schools have made boosting student engagement a top priority for the foreseeable future.

Many educators are increasingly turning to game-oriented learning to engage and motivate students. A growing body of research shows gamification and game-based learning can have positive effects on students’ cognitive, motivational, and behavioral outcomes.

Gamification is when teachers introduce game-like elements to an existing lesson or activity. For example, they might give out points or badges for correct answers or turning in assignments.

Game-based learning is when educational material is placed inside a game framework, or when the game’s goals center on the skills or concepts students are supposed to learn. For example, in a game about breeding dragons, students have to understand basic concepts about genetics in order to make choices about which dragons to collect and breed.

Education Week asked educators on Facebook, LinkedIn, and X (formerly known as Twitter) what tech tools they use to gamify their classrooms. Here’s what they said:

Tools for formative assessments and evidence of academic growth

“Blooket and Gimkit are awesome for formative assessments and even helping them understand using data as evidence of growth. They both have excellent banks available, and Blooket will let you import from a Quizizz.” Jennifer D.

“I only use two really but as study tools. Now that every kid has a Chromebook I try to be mindful of screen time. I use Quizizz and Kahoot, that’s about it. I also do analog games like Headbands, with cards, stuff like that. We also do a big March Madness battle with Medieval World Achievements putting them in a bracket and voting on the most impactful on our world today.” Rocky L.

“Quizizz and Blooket are easy to implement and enjoyed by students.” Maria P.

“My kids still LOVE Blooket.” Christine A.

“SumDog it’s very engaging and provides useful data.” S. R. E.

“Gameful.me. It leverages UDL to gamify your entire course.” Mick M.

“If you’re willing to build things… then Genially and Thinglink are great resources.” Ben B.

“Ixl.com, brainpop.com & 99math.com” Tammy C.

“Minecraft.edu” Benjamin A.

Not everyone is a fan of gamifying classrooms

“ Needless; kids need less tech and need more traditional learning skills.” Victor V.

“This focus on entertainment over academics is insane.” Jess C.
superintendent Christy Boyte has lost count of the number of messages she’s received from vendors promising a digital silver bullet to boost math achievement in her Louisiana school district. Most are quickly trashed.

“There is a lot of stuff out there that proclaims itself to be good, but it’s not aligned to standards and it’s not rigorous,” said Boyte, the head of the West Carroll Parish school district.

During the height of the pandemic, “people were crawling out of the woodwork with all these new programs that they were developing,” she said. “We probably got a thousand emails of people trying to sell us their online platforms. A lot of them have already gone by the wayside.”

It’s easy to see why vendors tried to seize a market opportunity in math, even now that in-person learning has resumed. Math scores for 13-year-olds fell 9 points between the 2019-20 and 2022-23 school years, as measured by the National Assessment of Educational Progress, “the nation’s report card.” In theory, digital tools can deliver engaging, personalized lessons to help reverse that trend.

And many educators do see benefits. Nearly two-thirds of educators said they are satisfied with the quality of math tools their districts use, according to a survey by the EdWeek Research Center of 1,156 educators conducted May 31 to June 9.

Fifty-one percent of those surveyed said the math tools they use are good, while another 10 percent described them as excellent. Just 5 percent said they find the math tools used in their classes to be poor, and 25 percent described them as mediocre. (Another 9 percent said they didn’t use tech tools to teach math.)

But finding the right tool for a district’s instructional philosophy, culture, and capacity is still a challenge, educators say. Education Week examined how three districts approached this challenge, at the high school, middle, and elementary levels.

How to use virtual reality for real-world math problem-solving in high school

Elizabeth Fagen, a former chemistry teacher who now leads the Humble Independent school district outside Houston, has long been frustrated that few digital math tools give students a clear picture of how the formulas and procedures they are learning function in the real world.

But this school year, her district will pilot a tool at the middle and high school levels that she thinks may be an exception. Prisms, a virtual reality platform, which launched in 2021, allows students to enter an immersive experience in which they are presented with a realistic problem to solve using math, science, or a combination of both.

In one scenario, for instance, students find themselves in a cafeteria. As they are paying for their food, someone sneezes. Suddenly, there’s an announcement that a virus is spreading. Students collect data and apply mathematical concepts—like multipliers—to determine how to slow its progress.

Back when she was a high school chemistry teacher, Fagen found that students often “don’t really conceptually understand some of the big ideas” underlying seemingly rote material, such as formulas and processes they were learning in chemistry. “They learn it for the test and then they move on with their life,” she said.

Fagen is hopeful that getting the chance to be immersed in a real-world problem that “requires you to construct the meaning of concepts and then use them to solve that problem will change the way that these students see and experience math in a way that creates long-term learning and understanding,” she said. “That would be huge.

Students who used Prisms have reported that the tool has increased their understanding and engagement in math and given them a better understanding of how the subject is used in the real world, according to a study conducted by WestEd. (Some products that compete with Prisms include Desmos, ClassVR, and Inspirit.)

The Humble district initially rolled out Prisms in a dozen schools this school year and is monitoring its effectiveness and implementation at campuses that serve a high percentage of children living in poverty and as well as schools that serve a wealthier population. So far, the district has trained more than 40 teachers who lead classes in biology, chemistry, Algebra 1, geometry, and 8th grade math.

Fagen praised the company’s extensive professional development, but she isn’t sure that every district is positioned to rapidly embrace a tool like Prisms. For one thing, VR-powered programs would likely frustrate educators in districts where connectivity is insufficient or choppy. And the tool is on the pricier side, about $16.29 per student, which may be a stretch for many districts.
Humble also has a lot of “infrastructure to support teachers and try new things,” Fagen said. “If you don’t have that, I think you could have one-off success with a teacher who’s just naturally inclined toward technology and is a naturally great teacher, but you’re probably not going to have a full implementation across your system.”

Putting accelerated learning to work in the middle school math classroom

Heidi Stephens teaches middle school math in the West Carroll Parish schools in Louisiana. Right now, her math instruction relies heavily on small-group work, a tried-and-true elementary strategy.

Whenever she teaches a lesson, Stephens divides her 7th grade students into two groups: One works on a concept with her, and the other half covers similar material through Zearn, a digital math tool used by about a million middle school students nationwide. District leaders often compare Zearn to math-learning tools like Eureka Math, Illustrative Math, Khan Academy, and iReady.

Zearn’s focus is on acceleration—reviewing information from a previous grade only to the extent necessary to support learning new, grade-level subject matter—as opposed to remediation, which typically means relearning content from a previous grade in greater depth in order to tackle new material. Remediation has its place, experts say, but an overreliance on it can keep students from advancing academically. (West Carroll offers a separate opportunity for math remediation for students who need it.)

The tool has research to back up its effectiveness. Elementary and middle school students who consistently used Zearn scored an average of 6 points higher on state assessments than peers who did not use the program, according to a study conducted by Zearn in order to tackle new material. Remediation, which typically means relearning grade-level subject matter—as opposed to reviewing information from a previous grade only to the extent necessary to support learning new, grade-level subject matter—as opposed to remediation, which typically means relearning content from a previous grade in greater depth in order to tackle new material. Remediation has its place, experts say, but an overreliance on it can keep students from advancing academically. (West Carroll offers a separate opportunity for math remediation for students who need it.)

The tool has research to back up its effectiveness. Elementary and middle school students who consistently used Zearn scored an average of 6 points higher on state assessments than peers who did not use the program, according to a study conducted by Zearn in partnership with the Louisiana education department. What’s more, about 70 percent of students at the lowest level of math achievement who consistently used the tool jumped to a higher achievement level, compared with 45 percent for students who did not use Zearn.

Using a combination of small group instruction and time on the tool—a hallmark of West Carroll’s implementation of Zearn—doesn’t necessarily make Stephens’ life easier, because she has to teach each lesson twice, according to Boyte, her superintendent.

But the model allows students to become much more familiar with the content so they can come to Stephens with questions or see it presented in a different way on Zearn that they might find more engaging or easier to grasp.

“They are listening to somebody else besides me,” Stephens said. “I’m not saying I’m boring, but [Zearn’s] lesson might point out something that I didn’t. Learning it twice is never going to hurt them.”

The digital component allows students to get content that’s at the right level for them, Boyte said. With Zearn, advanced learners “can fly through and go to the next lesson. We’re not going to hold them back,” she said. “Our students who are struggling, they may not quite be here yet. They might be still in a [prior lesson] on their independent practice. But all of these skills are leading up to mastery” of grade-level concepts.

Zearn helps students get more out of their small-group time with Stephens, Boyte said.

“Heidi is very intuitive. She’s gonna see exactly what those kids need while she’s working with them,” Boyte said. “The more she gets to know those students, the more she can tell if they’re being honest about what they understand, or the more she’s gonna see them struggle or see frustration on their faces. I don’t think there’s any program that’s ever going to replace a teacher.”

Helping elementary students practice math concepts

Back in the spring of 2020, with school building closures across the country, Ed Dunn was searching for a digital math program to use at home with his elementary-school-age son who “didn’t want to be tutored by his math supervisor dad.”

His solution: DreamBox, a digital tool that includes both math and literacy applications and supports about 6 million students in the United States and other countries. Dunn liked that the tool adapted easily to his son’s needs and seemed to engage him.

Shortly afterward, when Dunn became the math supervisor for the William Penn school district near Philadelphia, he helped pilot Dreambox. Unlike other platforms that might require a pretest to figure out where students are, Dreambox “starts in the middle, and then as you interact, they learn more and more about you, and that’s going to recraft your path” through the platform, Dunn said.

That’s important, Dunn emphasized, because “some of our kiddos, they have a tough time on test day or they get anxiety and they perform poorly, and that artificially puts them too far behind.”

The platform can also differentiate subject matter for a student who is at grade level in one subject—say, geometry—but needs help in another area of math, such as statistics, Dunn said.

A study conducted in the 2021-22 school year by LearnPlatform found that elementary students in Dunn’s district who completed at least 3.5 DreamBox math lessons—roughly an hour total on the platform—improved their overall math scores. Competitors to Dreambox include IXL Learning, ST Math, Lexia Learning, Curriculum Associates, and Khan Academy.

The district primarily uses DreamBox as a math “center” at the elementary level to give students the opportunity for more practice on concepts that have already been introduced, Dunn said.

He also likes that much of the content is presented in a way that gives students context about the topics they are learning. For instance, students can learn the number line by helping pirates figure out how far to move their ship. In that task, there’s more than one way to arrive at a correct answer. That jibes with the district’s push to put more of a real-world spin on math, a goal similar to what the Humble district is seeking to accomplish at the high school level with Prisms.

In choosing DreamBox, “we already had a strategy [for teaching math] that was comprehensive and we were looking for a piece to go into that strategy,” Dunn said. “But you know, if you don’t have that comprehensive strategy, you’re not going to be successful, regardless of what the tool is.”
What Podcasts Did for Student Engagement in These Schools

By Arianna Prothero

Podcasts aren’t just for indulging in true crime mysteries while commuting or cleaning, they’re also a powerful teaching tool: They can be used in project-based learning, to spice up lectures, and even improve school climate, say educators who incorporate podcasts into their instruction.

But the biggest benefit, said Daniel Nemerow, an instructional technology coach for Gainesville high school in Virginia’s Prince William County, is that podcasts help students find their voice.

“You have quiet kids who don’t speak in class, and they come in and they sit down in front of the mic and they just talk,” he said during a presentation on the topic at the International Society for Technology in Education’s annual conference in Philadelphia late last month. “I have found they have so many things to say, and they are gifted and smart and eloquent and articulate and so many other things that you wouldn’t see if you asked them to stand in front of the class doing a PowerPoint presentation. There’s a safety in being behind the microphone.”

There are many ways for teachers, administrators, and support staff to use podcasting in their schools, said several educators presenting on the topic at ISTE. On one end, schools can build an audio studio for students and faculty alike to create podcasts for the entire school to hear.

But for teachers who find the idea of having students create their own podcasts daunting, simply incorporating existing podcasts into instruction is an effective way to increase student engagement, said Donnie Piercey, a 5th grade teacher in the Fayette County school district in Lexington, Ky.

Listening to a podcast as a whole class provides variety in the routine. Piercey, who shares tips on using podcasts in the classroom on his website, said he has students shut down their devices and plays podcasts on YouTube so that students can read the closed captioning provided if they need to.

Lisa Highfill is a technology integration specialist for a new virtual academy in the Pleasanton Unified district in California. She uses the podcast “Iowa Chapman and the Last Dog” in her classes. It’s a story about a dystopian future that embeds lessons on a range of subjects in each podcast episode, such as sustainable farming, how dams work, and the history of dogs, said Highfill. Every episode ends with an interview with an expert on the topic.

That podcast is produced by the media company Gen-Z Media, which also provides companion instructional materials for each podcast, several of which have been created by Highfill.

Piercey and Highfill, who presented together at the ISTE conference, also have their students make their own podcasts. They say it helps students develop a range of important skills such as problem solving, creative thinking, working collaboratively, communication, and public speaking. And it helps get students engaged in school. Highfill started having students produce their own fan fiction podcasts, where they write stories about their favorite characters from books, TV shows, and movies.

“My students are really into fan fiction,” said Highfill. “I work with a lot of high school students, and I said, ‘Any of you write fan fiction? Well you could release it every other week in a podcast form.’ And they were like, ‘I could!’ It was really exciting for them.”

There are plenty of podcasting tools for teachers and students to use, such as freesounds.org to create free sound effects; Online Voice Recorder for recording; Descript, Soundtrap, GarageBand, or Audacity to edit audio; and Spotify for Podcasters to distribute the final product, to name several used by presenters at ISTE.

Teachers can go as high or low tech as they want, said Piercey.

“What do you need to record a podcast? My answer to that question is whatever you have,” he said. “If you have five iPads in your whole school, use those. If you have 30 Chromebooks in your class, they all have mics, use those.”

He said it’s often best to stick with technology that students already know how to use.

‘It’s like an on-demand library for families’

The adults in a school building can also produce podcasts. There are benefits to teachers, support staff, and administrators taking a turn at the mic, said William Watts, the instructional technology coach at Charles J. Colgan High School in Prince William County, Va. Those podcasts can help improve school-family communication, he said.

For example, recording a podcast series where each episode is dedicated to a different school staff member telling their personal story and talking about their interests gives families an opportunity to learn about the people educating their children in a way that wouldn’t otherwise be feasible.

“One of the big benefits for administrators that we’ve seen with podcasting is that those episodes don’t have to be heard at the moment...
that you publish them. It’s like an on-demand library for families,” Watts said. “And that was really big, our principal noticed that he would be at the grocery store and somebody would come up to him—he loves cruise ships—and have this deep conversation with him about cruise ships, and he would be like, ‘do we know each other?’ It was because he told his story on the podcast and that family felt like they could connect.”

Clair Handville is a counselor in the same school Watts works in, and she helps students produce podcasts as well as hosting her own. In one, she interviewed a group of juniors about research they presented at a medical conference—what the experience was like and what they hoped to do with that experience. She was surprised to hear from a parent.

“One mom reached out and said ‘I’m really grateful you did that, not because they got to talk about this accomplishment, but because I learned things about my son that he has never shared with me,’” Handville said. “We’re extending that partnership with families and helping them communicate as well.”

Handville and Watts said they always get parental permission before broadcasting a podcast outside of class or beyond the group of students who created it.

Podcasts can help make a school feel like more of a community to students and teachers as well, improving school climate, said Nemerow from Gainesville high school in Virginia.

He started a podcast with a counselor, teacher, and student at his school where they bring on guests to discuss different topics related to their campus—whether it be school meals, a recent concert, or an upcoming lacrosse game, he said. While podcasts can be used as class projects or to replace traditional assessments, that’s only tapping part of their potential, he said.

“We’re also going to impact the culture of our building—the area that our students live in and that our families send their kids to—by podcasting about the art projects that kids are working on and ‘did you see them in the hallway?’” he said. “That sounds like a silly little thing, but it changes how people feel, like they belong to a school community as opposed to just sending kids to a building.”

Nemerow said that about 95 percent of the podcasts he records with his students don’t get published anywhere. But, in the end, that’s not really the point.

“It’s the process of creating the thing where the learning happens,” he said. ■
The 3 keys to designing successful tech-enabled education

Classroom technology is a crucial element that supports the daily needs and plans of educators and students across the United States. With a wide variety of devices, platforms and applications assisting with information gathering, presentations, notes, textbook content, group work, remote learning, in-school messaging and alerts plus more, the focus is broadening. As we endeavor to design the future of K-12 classrooms to best serve today’s young students’, leveraging technology also ensures learning environments are relevant to students’ modern life experiences.

In order to maximize the educational returns on these technology investments, school districts and technology buyers should create consolidated plans that utilize future-ready solutions with a focus on boosting student achievement.

To learn more please visit lg-createboard.com
Educators have long understood that when education is fun, exciting or interesting for students, learning outcomes can improve. As technology use has increased, engagement has become a new way to describe classroom behavior, with increased engagement correlating with higher achievement.

According to a comprehensive 2020 report from the Brookings Institution, “...the evidence indicates that technology may accelerate student learning when it is used to scale up access to quality content, facilitate differentiated instruction, increase opportunities for practice, or when it increases learner engagement.” The report goes on to note that identifying how new technologies may alter interactions between educators, learners and content is crucial to successful implementation.

Add to that a growing body of evidence suggesting younger generations are exhibiting decreased attention spans, and it’s clear the role of technology in creating engaging K-12 educational environments cannot be overstated.

Still, investments in technology don’t automatically produce positive change and encourage greater engagement, so it’s vital that schools maximize the utilization of every technology’s capabilities. It’s not enough to simply add shiny new toys and expect same-day results without considering content, delivery and interactivity.

For example, adding a digital whiteboard, like LG’s CreateBoard, in a classroom doesn’t change experiences or engagement if it’s used the same way as a blackboard. Without utilizing advanced capabilities like screen sharing, digital annotation, presentation saving, file sharing or access to curriculum apps and multimedia resources, students are offered little in the way of engagement to connect their educational experiences with the rest of their highly digital modern lives.

To learn more please visit lg-createboard.com
If you make it simple, they will come

When people are asked to name the most important aspects of virtually any widespread technology, ease of use is at or near the top of the list. If a new device is even a little frustrating to use or has a steep learning curve, chances are it will soon be gathering dust, with little to show for the investment. In a K-12 environment, that effect can be even more pronounced since time is strictly scheduled and no teacher wants to deal with unforced interruptions or delays.

One way to enhance simplicity for IT staff, technology managers, educators and students is to choose a solution or brand and make it the standard, so experiences are the same throughout a school or a district. Using consistent equipment enables teachers and students to attain mastery and bring those skills with them as they move between schools, versus a non-coordinated system under which everyone must learn new procedures for different classes or different grade levels.

Standardized solutions can also improve backend processes and increase capabilities, such as enabling in-room displays to function as a centrally controlled digital signage network or adding new options like emergency message overrides and auto startup/shutdown across entire buildings. Additionally, standardization allows tech managers to troubleshoot issues, manage replacements, initiate software updates, deploy new features and ensure lesson compatibility for each room more easily.

Schools using flexible technologies such as whiteboards or projectors on moveable carts can maximize the value and use of each investment. What’s more, the easier they are to set up and use, the more teachers will want to employ them in their lessons. Of course, any solutions integrating with personal devices also need to be widely compatible with the most popular ecosystems including Android, iOS, Windows and MacOS to ensure devices can connect and utilize full functionality.

Finding value in the long view

We’ve established that technologies that are consistent, easy to use, offer increased engagement and provide value-added features can benefit schools, educators and students, but there’s one additional aspect that can affect all of these concerns: time. The accelerating evolution of technology can pose unique problems, as evidenced by the recent and ongoing explosion of artificial intelligence software used to draft essays. Individual organizations have scrambled to address changing capabilities and expectations while official standards have failed to keep up.

When thinking of a technology investment and what it means for the stakeholders and users, decision makers should attempt to maximize the flexibility and future capabilities of a system, which includes choosing the right components and partners. Buyers may be able to reduce total costs by using last year’s TV model or foregoing a wireless version, but those choices are likely to reduce usable lifespan and require more frequent replacements due to becoming incompatible with third-party technology advancements.

Procuring technologies from a trusted brand can also provide assurance that they will still be there in 5, 10 or 20 years, making it easier to service, upgrade and expand over time. As technologies continue to supplant textbooks, libraries and other staples of in-school education, having a trusted relationship with a supportive technology provider may become as important to daily business as having reliable electricity.
Ed Tech Can Be an Invaluable Tool For Teachers. Here’s How to Use It Best

By Larry Ferlazzo

A
ss with many things, using ed-tech holds benefits and disadvantages for our students.

‘Blended Learning’

Kayla Towner is a technology trainer/instructor for Utah Education Network (UEN) and a Utah Hope Street Fellow in Salt Lake City. Follow her on X @mrstowner9 or email her at kayla@uen.org:

The most effective way I have used ed-tech as a 5th grade teacher and educator to adult learners is through blending learning techniques. Meaning the technology is being used with a purpose, and it is meaningful to all participants.

As a 5th grade teacher, I saw my students pick up on technology very quickly. However, like everything else in elementary school, it needed to become a procedure. Therefore, one of the most effective ways I used ed-tech was Microsoft Teams. It was our way of communicating throughout the day, especially during the COVID pandemic. For example, students would see reading assignments in the language arts channel and be able to ask each other questions about the assignment.

Other times, students would read articles for science and hold discussions on the science channel. If I was holding small groups, students knew they could ask questions within the channels to get support if I wasn’t available. In general, Microsoft Teams purpose was to support daily communication, collaboration, and participation. My students loved it.

Another excellent blending learning tool I used in my classroom and with my adult learners is Nearpod. This tool is excellent for delivering lessons where participants can interact with their learning. Any learner can collaborate and take assessments without feeling like they are being assessed. Nearpod can immediately capture the attention of any participant. I often started with a poll to get my participants interacting right away. Another way I would capture their attention would be through a VR field trip where they could explore new places. They could see this wasn’t just some typical lecture. Next, I would hook my students with some kind of video or short reading so they understand what they would be learning. Afterward, they would be able to collaborate on a collaboration board where they ALL could comment.

Their ability didn’t matter; all students could answer somehow. Some students wrote the text, some students who struggled with writing could create a video or record an audio reply, and others got creative using gifs. Lastly, there were countless ways to assess my students without them feeling like they were being assessed. Sometimes, students would write or record their independent responses. Other times, students would color on a PDF or drag and drop on the slide. Their favorite way to check their learning was through Time to Climb. It was game-based, making the “test” more engaging and fun. Overall, Nearpod was being used to deliver learning that was interactive, collaborative, and fun. It was meaningful to all.

The power of Minecraft Education was the last ed-tech tool that was highly effective. Many educators think they must be experts to use it, but it’s unnecessary. My favorite ways to use Minecraft Education were through Minecraft Lessons/Challenges and assessment projects. For example, I was trying to teach the mathematical concept of volume but wanted my students to be engaged. Therefore, I came across a Minecraft lesson that helped my students learn the concepts of volume by being detectives.

They had to figure out what creeper (creature in Minecraft) represented each volume they came across. Students had to collaborate/communicate, think critically, and explore different possibilities. It was terrific seeing all of my students engaged and ready to learn.

Another way my students loved using Minecraft was through assessment projects. We were learning about different kinds of civil rights, and each group had a choice in how they wanted to share their knowledge. One group decided to learn about the Bandit Runner. This was about how girls were banned from running marathons because prescribed doctors said women would have serious injuries or death if they ran more than 1.5 miles.

They created a marathon road and characters in Minecraft as they told their story. It was amazing. This group learned more about this civil rights movement than they initially intended to because they wanted to create an authentic scene. By giving us a real experience, it captured everyone’s attention.

Overall, ed-tech tools that utilized blending learning techniques were the most effective because they significantly impacted students’ learning. There was a true purpose, and it was meaningful to my students.

‘Collaborative Projects’

Chandra Shaw has more than 24 years of experience in education, as a teacher, reading specialist, instructional coach, and now a literacy consultant at one of her state’s regional service centers. Chandra is a TEDx speaker and amateur YouTuber:

With today’s massive number of technological innovations, it’s important that teachers strive to effectively use ed-tech tools...
and resources in ways that enhance learning outcomes for all students. Two of the most important ways to use ed-tech in the classroom are for individualized practice on skills that students still need to master and for student-created collaborative projects.

Ask any teacher what their number one struggle in the classroom is, and they will likely mention the lack of time they have to meet the various needs of their diverse students. Teachers often share the frustration of trying to “reach” all students when there is such a wide spectrum of student capabilities in any given class. Using ed-tech programs that have the ability to personalize learning for students at any level can save teachers time and make learning more relevant for students.

Placing students, for limited times, in programs that help them to build skills in which they need extra help provides the additional practice and repetition students need for continued success. Using online quizzes, self-assessment tools, and automated grading systems can provide quick feedback to students, and using learning management systems can help teachers track and analyze student progress over time. It’s really a “win-win” for everyone involved.

Another effective use of ed-tech resources is when they are used by students to collaborate in the creation of projects or products that they can present to an audience or their learning community in some way.

For example, as a teacher, I had students create argumentative presentations during the 65th anniversary of the Universal Declaration of Human Rights. Students were given a scenario in which the U.N. was considering revising the document, and they were tasked with selecting a right which they felt must absolutely remain on the document and tell why.

Students worked in groups of three to four to research all 30 of the universal rights and then come to a consensus on which one they felt was the most important and why. They could present their speeches live in the classroom using multimedia presentation ed-tech tools such as Prezi, Canva, or Google Slides, or they could record their presentations using digital creation ed tech such as video editing and audio recording tools. What resulted was students giving brilliant dynamic presentations to our classroom’s mock U.N. while learning all about argumentative writing and speaking. Students were highly engaged, and all groups finished the projects on time. At the end of the year, many students noted this particular project among their favorite activities.

Ed tech can be powerful when used effectively to help all students meet their individual needs or to create engaging, relevant projects that have a profound impact on students’ learning and understanding of the world.

### Combating Misinformation

A full-time classroom teacher for 15 years, Jeff Wilhelm is currently Distinguished Professor of English Education at Boise State, the director of the Boise State Writing Project, and a teacher of middle or high schoolers each spring. He has authored 42 books about teaching and learning:

With the increasing presence of artificial intelligence in our lives and in schools, with the advent of ChatGPT and its variants, DALL·E and other video fabrication tools, I claim that we cannot effectively use ed tech unless we also create a culture of understanding and respect toward what Jonathan Rauch calls “the constitution of knowledge.”

We must ensure that our use of educational technology promotes the valuing of evidence-based worldviews and the related capacities to critically evaluate sources and judge the credibility of evidence. Without understanding what sources are most reliable and what data are most justified (this would include understanding how AI works, its uses and limitations), we cannot make the best and most profitable personal decisions, nor can we set useful public policy. We cannot truly understand nor effectively use math, science, history, or any other subject. And finally, “evidence” or “facts” (by which I mean justified understandings supported by patterns of reliable data from authoritative sources) are essential to democratic life, to justice, and to freedom.

All disciplines and content areas are based on time-honored and time-tested ways of developing, testing, revising, and refining what is the best of what is thought and known— and how to use it. I believe that every teacher from K-12-college and in any subject area must actively induct students into the process of how knowledge in their discipline is made, tested, revised, and justified (often with recognized limitations—because knowledge-making is complex, and knowledge is ever evolving).

It is not enough to teach the scientific method, we must involve students in using the method by developing experiments to test their evolving understandings, revising what they think based on evidence, and testing and justifying (while acknowledging limitations) what they think again and again.

ChatGPT is a large language model that scans the Internet without any truth or accuracy metrics. What could possibly go wrong when students use it for school assignments? (I acknowledge that it has other uses.) It’s an example of GIGO: Garbage In = Garbage Out. I tell my students that composing meaning of any kind is a way to develop their own competence and their own identity and to create new kinds of knowing. I work to create a value in knowledge-making processes and in taking our own evidence-based positions and meanings.

One hope of mine is that the emergence of AI will help us all develop more personally relevant and instructionally robust kinds of teaching, including:

- Teach the differences between reading linear vs. digital texts (and the roles of point of view, positioning, source, and narrator reliability in each).
- Also, use the Stanford History Education Group’s Civic Online Reasoning Questions whenever students read anything, especially online.

1. Who is behind this information?
2. What’s the evidence?
3. What do other sources say?
You can dig deeper into Question 1 by asking:
  Is the source(s) authoritative and credible?
How so?
  And into Questions 2 and 3 by asking:
  Is the evidence credible and “safe” (acceptable to all reasonable people)?
  Is the evidence from an authoritative source?
  Is the evidence repeated across other authoritative sources? (employ lateral reading!)
  Is the evidence relevant (i.e., on point for our current questions or inquiry)?
Second, teach students source evaluation, particularly of online content, and to understand what research really is (not just some talking head spouting opinions) and what constitutes strong research-based evidence. We can do so by supporting students to ask these questions of any supposed “research” study.

**Question 1**: Who’s doing the study?
**AUTHORITY OF SOURCE**

**Question 2**: Who are the participants and how representative are they?
**EVIDENCE SOURCE**

**Question 3**: What instruments are used?
**COLLECTION OF EVIDENCE/METHOD**

**Question 4**: What causes what?
**ANALYSIS OF EVIDENCE; CAUSALITY VS. CORRELATION**

In today’s world, these are essential learnings in any subject area and at every grade level.

*Larry Ferlazzo is an English and social studies teacher at Luther Burbank High School in Sacramento, Calif.*
AI Is Helping Us With Our Instructional Practice. Here’s How

By Larry Ferlazzo

Using ChatGPT With ELLs

Jan McClellan is currently a full-time virtual English-language-development specialist public school teacher in southwest Missouri supporting all students with their language needs:

There are lots of ways to utilize ChatGPT and AI that benefit educators and students. As ChatGPT and AI utilize technology to produce print and instructions, I can’t think of a better way than to utilize it to benefit our English-language learners in their English-language development (ELD). While none of what ChatGPT, ChatInstruct, or other AI produces is as authentic and intentional as human-to-human interaction, when it comes to developing and implementing instruction effectively and efficiently, ChatGPT is incredibly useful.

In my current role and in the roles I have had previously that support ELL/ELD students, I have often found myself learning their material before being able to differentiate and support their language. ChatGPT helps with that. Now, as I look for ways to explain Y=MX+B to 8th grade students, after having been removed from that class for over 20 years, I can use ChatGPT to give me discussion prompts, examples, and even help me solve the problems so that I can review these math problems to show my students.

As most ELD educators, I am tasked with supporting and collaborating with mainstream content teachers as well as sheltered instruction. With ChatGPT, I can easily take the text the students are assigned and ask it to help me pull out the tier 2 and tier 3 vocabulary with student-friendly definitions. I can also ask it to help me generate discussion questions surrounding the text we are reading, and if the text is accessible on the internet, it can give me an immediate starting point to personalize instruction. Instead of creating from scratch, it can give me a strong head start.

I also think that for ELD students who struggle with writing, especially when they get the dreaded blank-page anxiety, lowering our students’ affective filters is half that battle with writing. Giving them text already composed and having them break it down, add details, and/or add on to allow them to interact with the text and “learn” as they write is another useful way to utilize ChatGPT and other AI. While there are valid concerns about cheating with ChatGPT, I also think it opens up a great resource for students and educators. Supporting language is often creating language, and ChatGPT helps us do that without having to have a mastery of everything, as it utilizes the power of the information age to accomplish that, and we get to benefit from it.

Tips for using ChatGPT:

• Use specific language and add grade level or ages to the prompt. Example: What are some general discussion prompts for 12-year-old students.

• Copy and paste the text you are having students read into ChatGPT as part of the prompt when asking for assistance with vocabulary.

• Merge other tech with AI to support learning. Example: Use Photomath for images of solving the problem while using ChatGPT to generate discussion prompts.

• Double check and review anything generated prior to giving it to students.

Using ChatGPT in AP Classes

Pat Burns is a 15-year veteran high school English teacher with a B.A. in English education, M.A. in liberal studies, and M.A. in educational administration and leadership:

I teach juniors and seniors both at the AP and honors level and in our general curriculum. I use AI in all my courses.

Thus far, I have used ChatGPT and Dalle-2 to generate discussion questions, quiz questions, an assignment on script writing, and an assignment on creating an art gallery that focuses on the crossroads of literature and art.

For each assignment, students generally expressed interest in using AI for idea generation. There were varying degrees of success with its output, partly due to prompt generation, but also due to AI’s tendency to provide general (i.e., shallow) responses. For example, when my junior students prompted ChatGPT to make scripts that they were to then act out, they found that the scripts tended to be cliche and the characters were not particularly well-developed. They expressed interest in using Chat-GPT to get them started but would have preferred more time to insert their own voices into the script and to develop characters further.

When my senior students used Dalle-2, there was a range of responses from thinking that plagiarism was occurring to feeling liberated because AI could help them to create images that they did not have the skill to create on their own. Most appreciated using it. Although, again, students expressed the desire to cultivate their own voice and gener-
ally felt that AI generation did not currently allow for that.

Despite the criticisms they shared, they generally approved of using AI and felt that it could help them. However, due to the range of impressions with AI, I need to make sure that my classroom and students develop an agreement for when and how to best use AI, so that they may better develop their own writing, thinking, and creativity skills.

As for me, I find that using AI enhances my ability to critically think. I constantly come up with ideas and have done so for around 15 years in education. While I concede that issues of plagiarism can and do arise and, in fact, I have needed to confront students on this already, I find the AI allows me to think in new ways. For example, I use AI to help me better individualize student work.

It’s not that I am against shared experiences. I think there is a time and place for them. At the same time, I find that students perform best when I meet them where they are. So, rather than require students to always read the same text as everyone else, I allow for some choice texts in class. When I do that, engagement goes way up. Students can select and read topics of interest to them. Then, I can use AI to generate discussion questions, quiz and/or essay questions. I can also have students use AI to help locate other texts (e.g., short stories, poems, essays, songs, artwork, etc.) that are thematically related to their novel. Doing so allows students an opportunity to develop their synthesis skills. Plus, doing so helps to bring the novel alive and teaches cultural literacy.

Furthermore, I have shared how AI can be used for curriculum development/mapping at the district level. While my curriculum-mapping team is still in process with redeveloping our curriculum, AI gives us a starting place. It allows us to find common ground a bit quicker than merely sharing our individual opinions and takes the focus off of our own egocentric desires.

Using ChatGPT in Academic Writing

Brent Warner is a professor of ESL at Irvine Valley College in Southern California and the co-host of the DIESOL Podcast focusing on innovation and technology in English-language learning:

One of my early goals for introducing artificial intelligence into my academic-writing class for multilingual learners starting in January was to help students think critically about both their own writing and the content we were covering in class. We started the class by having ChatGPT analyze student writing then we immediately turned it on its head and asked students to analyze the analysis. They quickly got a sense of where this AI got things right and where it got things wrong, and in turn, they developed an understanding of how they can use it to guide their writing and thinking rather than how they might have used it to replace their writing and thinking.

As the semester unfolded and we explored more ways to integrate AI into the classroom, one technique that students found particularly compelling was to use ChatGPT to update the traditional character-analysis assignment. Our class novel was Ray Bradbury’s dystopian classic, Fahrenheit 451, and ChatGPT did a great job of helping students develop a deeper understanding of multiple characters’ motivations and attitudes. I developed a basic prompt that students could use to take on the role of a character and then to have ChatGPT interact as another character in the novel. Here is the prompt we started with:

Let’s role play. We live in the universe of the novel Fahrenheit 451 by Ray Bradbury. I will take the role of XXX. You will take the role of YYY. When I ask you questions or give you comments, you will respond only as YYY. You can respond to my questions and you can ask me questions, but you will not break the role. Please reply with “Hello XXX” if you understand these parameters.

As the students began taking on roles of different characters, they quickly found that they were interested in learning things like a given character’s backstory, their insights into how the society of Fahrenheit 451 came to be, or even simple things like where they’d like to go on vacation. Students worked in groups to discuss what responses they agreed or disagreed with, what ideas were clearly pulled from the text, what ideas were hallucinated by ChatGPT, and what ideas logically followed even if they weren’t explicitly written by Bradbury. All of these ideas, good and bad, helped students develop a deeper understanding of the novel in a way that was a lot more fun and engaging than the traditional stale character analysis.

Students also began to recognize that they could begin adjusting the prompt to ensure more accurate responses. One group of students got a response where ChatGPT, taking on the role of the character Faber, began to comment on observing the main protagonist’s neighbor, Clarisse. As the students were familiar with the book, they recognized that Faber and Clarisse never interacted, so he would be unlikely to have any insights on her. They told ChatGPT that this was a problem, and it corrected course. As we moved through our weekly readings, it became clear that ChatGPT’s failures were a boon to my students’ success and understanding of the novel. They began to push back on ideas presented to them, reconsider the way they talked to AI, and use their own insights to make informed decisions about Bradbury’s message.

While many teachers and students are fretting about how accurate large-language models like ChatGPT are, my students learned that it’s less valuable to think of it in terms of accuracy and more valuable to think of it as a way to reflect and develop their own critical-thinking skills. As a hidden bonus, they never even thought about the language learning that was inherent in the tasks: reading complex ideas in English, writing clearly, editing sentences, discussing deep literary concepts, and more.

Perhaps we can all benefit from the lessons my students learned: AI should not be viewed as a fire ladder that you go up and down, using it in ways that are “right” or “wrong.” Instead, it should be seen as a body of water that we can dip our toes into, splash into for a quick refresh, dive deeply to explore, and move any direction we are compelled to at any given moment. Come on in, the water’s fine!

Don’t Shut It Down

Caye Letizia is an English teacher at Horace Greeley High School in Chappaqua, N.Y.:

When Larry recently posted a tweet asking educators to share how we can harness the potential of ChatGPT or other artificial intelligence to enhance teaching and learning experiences for our students, I was super tempted to ask ChatGPT, or The Bot as we affectionately refer to our AI tool within my classroom.

Unsurprisingly, it generated five really good but super vague responses.

As a teacher resource:

Recently, we completed the Gothic novella The Strange Case of Dr. Jekyll and Mr. Hyde by Robert Louis Stevenson. As I do after each unit, I sat down to develop a post-reading Google Survey. This time, I paused and asked The Bot to complete the task. In under 30 seconds, I had 15 questions that included extended responses, Likert scale, and multiple-choice-type questions. I trimmed
these down, reworded a few, and had my 10-question post-survey ready to go in a fraction of the time. For teachers, time is a gift seldom received. Here, I now had time to focus on the results of my survey and future planning.

A colleague of mine recently generated four AI sample essays in response to four essay prompts the students would be responding to from a recent unit. Each table was assigned a different AI-generated essay in response to an essay prompt. Students annotated and worked collaboratively to apply the rubric to the AI-generated essays. Immediately, patterns began to emerge.

The essays were vague, lacked voice, lacked text evidence, and when they did have evidence, it was often miscited or incorrect. They also lacked sophisticated elaboration of the evidence. It was clear that the essays AI generated were lackluster. My colleague then moved the discussion to how the students could use the generated essays as starting points but stressed how important the students were to this process of generating, evaluating, rewriting, and editing.

**Teacher promise:**

I think about what AI can mean for feedback and planning instruction. Reading over 80 essays and responding with valuable feedback is part of the job. But I am hopeful that the technology will develop so that perhaps utilizing the analytic capabilities of AI in terms of pattern identification and trends may allow me to target skills. Take, for instance, an English teacher who reads over 100 essays. Perhaps AI would be able to quickly scan each essay to identify patterns in thesis statements or evidence use by course. The teacher could then get these results and create targeted and tailored lessons on specific skills for specific students.

So, as some school districts rush and panic to keep Pandora’s box shut tight from curious student fingers, they should be careful not to repeat history and lock hope away. The hope that a tool like AI could provide students to build deeper understanding, expand their knowledge, and improve their thinking skills. The hope it can provide teachers in recapturing the precious commodity of time, specifically time spent on conferencing and providing valuable and actionable feedback.

Larry Ferlazzo is an English and social studies teacher at Luther Burbank High School in Sacramento, Calif.