TECH SUPPORT

Assistive technology devices can be a game changer for special needs students and help them build confidence in the classroom.

These robots from Assistive Technology of Ohio give students a way to participate in classes they are unable to attend in person, as program director Bill Darling (onscreen) demonstrates.
Julia McDevitt has been a witness to the ups and downs of assistive technology.

In elementary school, her son, Luke, used items such as weighted blankets, "wiggle seats," "fidgets" and other gadgets to help overcome obstacles to his education. Some worked, some were counterproductive. Some were awkward and made Luke feel self-conscious.

"Every little bit helps when you have a child that struggles," McDevitt says. "It is trial and error."

Now 15, Luke attends classes armed with a wireless FM system that helps him overcome a hearing issue. The system, which consists of a lanyard microphone for the teacher and an earpiece for Luke, travels with him from class to class and lets him home in on what his teachers are saying while cutting out background noise in the classroom. It's one of the tools that have helped him become more confident and independent, says McDevitt (who is also a Columbus Parent advisory board member).

That system is just part of the growing array of assistive devices embraced by Central Ohio schools. "We have a lot of things that we use for our students," says Jake Guthrie, district intervention specialist consultant and assistive technology specialist for the Worthington City School District, where Luke is a student. "Obviously, a lot of it depends on their individual needs."

"There are way more tools now as compared to even five years ago. It just keeps getting better and better."

The Assistive Technology Industry Association, a trade group for device manufacturers and sellers, defines these tools as "any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities."

Guthrie says some of the more popular tools include smart pens, scanning pens, browser extensions that aid accessibility and even robots. The smart pens are equipped with audio recording devices and a camera that, when used on special paper, takes pictures of notes. "You can handwrite notes and while you're writing, you can bookmark where you're writing on the page," says Guthrie. "When you want to go back and listen to the notes, you just touch where you were writing and it will play back."

Scanning pens read text and convert it to speech. They can also save a digital version of a scanned page. "For students that struggle with reading, early readers, students with dyslexia, even students with vision difficulties, they can scan the page and have it read back to them," Guthrie says.

The Google Chrome browser extension Read & Write is available to all Worthington students. It features text-to-speech tools, a dictionary and a screen-masking tool that highlights portions of a computer screen to eliminate distractions and help with concentration.

"That's a really big tool that we use with a lot of kiddos that struggle with different print text and different learning because there's a lot of tools built into it," Guthrie says. "It's very user-friendly."

And then there's the robot. That was a device supplied by Assistive Technology of Ohio, a federally funded statewide...
program based at Ohio State University that maintains a large lending library of assistive tech that’s used throughout the region. “It’s technology that helps people with disabilities go to school, compete in the workplace or live a more independent and interconnected life,” says Bill Darling, the program’s director.

The group’s first robot was loaned to a Worthington school to help a student who wasn’t able to attend classes due to a health issue. After hearing about the student from his daughter, who was in the same grade at the school, it occurred to Darling that a telepresence robot might be able to help.

“You can put these robots into the classroom and then the kid, wherever he is—could be at home or in the hospital or wherever—can just ‘beam’ into the classroom,” he says.

The robot looks like a rail on wheels with an iPad mounted at the top. It’s controlled remotely with another iPad using a program similar to FaceTime. “He can see everything, he can hear everything that the iPad can see,” says Darling. “But it has the added benefit of being able to turn, move around the classroom. And if your next class is in some other part of the building, you just drive the robot down the hall.”

For a year and a half, the robot allowed the student to stay connected to his friends and school until he could physically return to classes. “He could move around the building and he could see out, and they could see him as well. It gave him more power at home to feel like he was involved,” says Guthrie. “That made a pretty big difference.”

Yolanda Johnson’s marching band students at the Ohio State School for the Blind use Lime Lighter devices to magnify notes on a score to make them more legible for students with low vision. They also use software that translates print music to Braille.

Everything needs to be memorized for their performances, such as the one on New Year’s Eve for the Outback Bowl parade in Tampa, Florida. “It was amazing,” she says of the event. “The kids had a great time.” But the best part of the experience for the students was finally seeing for themselves that they could do what other kids were doing, Johnson says.

“When you see a student that’s struggling with something and then you are able to provide them with a tool or tech that’s able to give them a path through that obstacle, where they’re no longer limited on what they’re able to do or learn, that’s a pretty cool thing,” says Guthrie.
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