The Power to Empower

By Kim Hamill

"There's instructional technology, which is using a variety of teaching tools to improve student learning, and there's assistive technology, which is any equipment that is used to increase, maintain or improve capabilities. And I think the SMART Board has the ability to be both."

– Christine Southard, Technology Integration Specialist, Denton Avenue School, Hyde Park, New York

A bridge to learning

If you've ever been to an educational technology conference, attended software training or searched for #edtech on Twitter™, you've probably been part of conversations about how classroom technology can engage students in lessons or how it helps them learn important technology skills.

But for educators like Jill Gierach, who has turned her passion for classroom technology into a career, it can be more than engaging – it can be the bridge to a fuller life for many students.

"The value of being able to use a [technology] tool to accomplish something you couldn't do without it, and feeling that sense of empowerment, is not just a privilege, it should be the right of every student," Gierach says.

According to the National Center on Universal Design for Learning, assistive technology includes "devices or services that are used to increase, maintain or improve the functional capabilities of a student with a disability."

Gierach has worked in education for 33 years. Formerly a classroom teacher, she is now in private practice as an educational consultant in assistive technology. Gierach is also the director of two regional assistive technology services and volunteers with a Wisconsin-wide group of assistive technology consultants.

From district-wide training to student needs assessments to evaluating a school's current classroom technology setup, Gierach helps schools "ask the right questions" about assistive technology and sort through the available options. She also provides support as they implement the assistive technology.

But sometimes, Gierach has found that assistive technology isn't necessary – that some universally designed *instructional* technology products can enable students with special needs to access learning and demonstrate their knowledge.

She believes one such product is the SMART Board interactive whiteboard. With its touch capabilities and flexible mounting systems, Gierach says the interactive whiteboard can remove barriers to learning and improve accessibility for students.

"The SMART Board brought students together, it did not isolate," Gierach says, remembering when she was first introduced to the

interactive whiteboard five years ago.

"Prior to this, a student who used a touch screen was put on a computer that was separate from the class. Now we had a tool that had potential to bring groups of different-ability students together. It leveled the playing field," she adds.
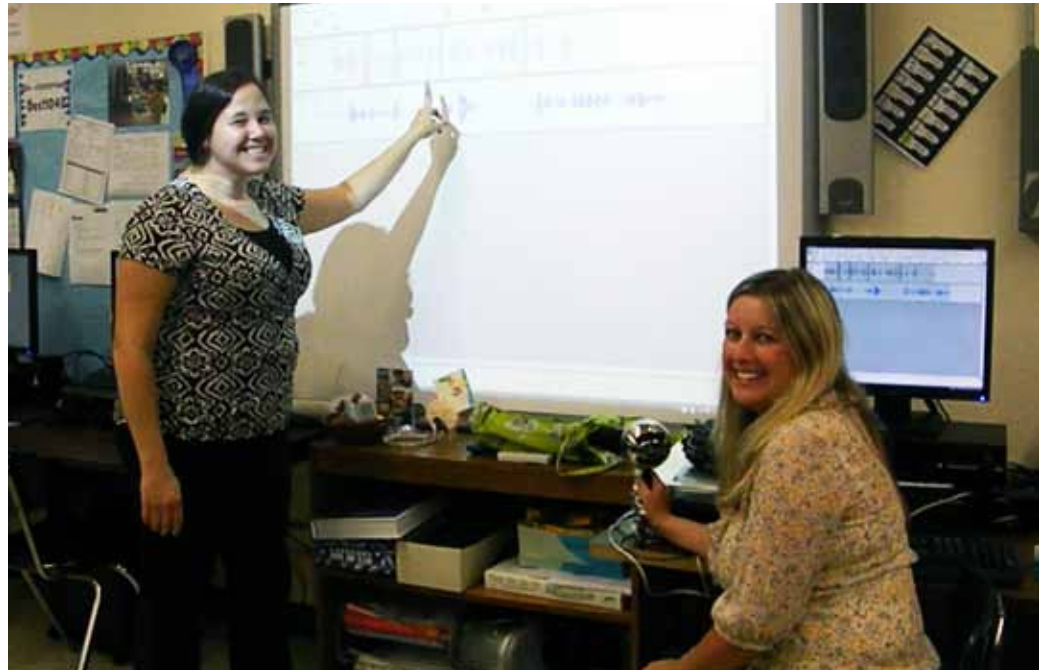
Universally accessible

The SMART Board interactive whiteboard has had the same effect on students at Denton Avenue School in Hyde Park, New York.

Christine Southard, a technology integration specialist at the school, has found that the interactive whiteboard's touch capabilities combined with the interactive features and tools of SMART Notebook collaborative learning software enable many students with special needs to access, understand and participate in lessons in the same way as students without special needs.

Before pursuing a second master's degree in educational technology, Southard co-taught in an inclusion classroom and found that the SMART Board interactive whiteboard helped her and her co-teacher make their lessons universally accessible.

"There's instructional technology, which is using a variety of teaching tools to improve student learning, and there's assistive technology,

which is any equipment that is used to increase, maintain or improve capabilities. And I think the SMART Board has the ability to be both," says Southard, who is a member at large in the ISTE Special Education Technology Special Interest Group.

According to Southard, SMART Tools, such as SMART Recorder and the On-Screen Keyboard, and SMART Notebook software features, including the magnifier, spotlight and highlighter pens, make lessons more accessible for students with special needs – without isolating them from the group.

The SMART Board interactive whiteboard also enables her to represent lessons in multiple ways, which is one of the pillars of a universally designed classroom.

"Using the SMART Board, it can be assistive technology, but it's a technology that's universally designed that can provide multiple means of representation," Southard says, adding that the SMART Board interactive whiteboard allows teachers to bring graphics, animations and videos together into lessons to meet the needs of all students.

In her role as technology integration specialist, Southard ensures that other teachers in her school can use SMART products to create universally accessible learning environments where everyone can participate.

"There are so many different ways to represent the information, and it's my job to teach teachers how to be able to adapt to the needs of their students by providing

multiple means of representation, by using tools like the SMART Board," she says.

Cohesive classrooms

Over the course of her career, Gierach has used a number of assistive technology devices. She says that when she first started working in this field, there were about three assistive technology software programs that were commonly used. Now, it seems like there's new assistive technology software every day.

What Gierach has found is some assistive software applications can be used in combination with a SMART Board interactive whiteboard, and this combination creates an inclusive and engaging environment.

"I have observed that with the SMART Board, students are more visually focused and attentive to the instruction. It allows for easy manipulation and customization of a lesson to adapt to the learning needs of specific students. This is not true of other instructional media," she says.

Some of the assistive technology software that Gierach has used with the SMART Board interactive whiteboard includes PixWriter™ and Picture It from Slater Software for picture-assisted reading and writing, Read&Write GOLD from Texthelp for literacy skills development and Vizzle by Monarch Teaching Technologies for visual learning.

Check out the *EDCompass* blog for a more complete list of the resources Gierach recommends.

And software is not the only technology that can help students with special needs access learning.

Megan Elder, a special education teacher at Kenmore Middle School in Arlington, Virginia, recently starting using Apple iPad in combination with the SMART Board interactive whiteboard to meet the needs of her students with autism spectrum disorder.

Elder works in her district's Multiple Intervention Program for Students with Autism (MIPA), and her classroom is a structured environment that focuses on communication and behavior as readiness skills for learning. She uses a total communications approach, incorporating pictures, gestures, words and visuals throughout her lessons.

It's this approach that makes the SMART Board interactive whiteboard ideal for her classroom. Elder says she uses the interactive whiteboard not only for whole-class instruction but also to help with classroom activity transitions and as a way for students to express their feelings.

"My students are usually very good at understanding what you are saying, but expressing how they feel is the most difficult part, so if they can go up to the SMART Board and make a choice or even use the markers to write down some words about how they feel, it's a way for them to express themselves," Elder says.

In February of this year, Kenmore Middle School, which is the first SMART Showcase School of the Year, decided to use iPad on a trial basis in its MIPA program, so Elder, another teacher in the program and each of their students were given iPad.

Elder's initial reaction is that iPad was a motivater and intuitive for students to use. She soon realized that she could also incorporate her SMART Board interactive whiteboard and SMART Notebook lessons into her students' iPad use.

She has found that the SMART Board interactive whiteboard helps her promote collaboration and create a social setting for her students, while iPad offers her opportunities to personalize instruction.

For instance, when she's teaching a lesson on the SMART Board interactive whiteboard, she'll

first load a SMART Notebook file or Microsoft® PowerPoint® presentation onto each student's iPad, using an app called Keynote, to help her students follow along with the lesson.

But one of her favorite iPad apps is iBooks. She uploads PDF articles into iBooks from News-2-You, a symbol-supported newspaper website. Her students can follow along with the story as Elder projects it on the interactive whiteboard.

"A lot of times, people with autism have a really hard time focusing, and when they can have the visual right in front of them and follow along, I think it keeps them more on task," Elder says.

Elder uses the SMART Board interactive whiteboard and iPad throughout the day. Sometimes she'll create a scavenger hunt – she puts questions on the interactive whiteboard, and her students use their iPad to find the answer on a particular website, such as National Geographic Kids. Students then write the answer on the SMART Board interactive whiteboard for the rest of the class to see.

Elder has found that there are tons of iPad apps that can be used to help her students enhance their communication and organizational skills – from an augmentative communication app like Proloquo2Go™ to timer apps that help students with productivity and staying on task.

Elder has also noticed the impact of iPad and the SMART Board interactive whiteboard on her students' social skills. She has found iPad apps that help her students with skills such as eye contact and imitating sounds, while the SMART Board interactive whiteboard provides a place where everyone can interact.

"I think the SMART Board just helps create a more cohesive group, because they are all going up and they are doing similar things and watching one another. And the fact that it has cause and effect and you can manipulate things just makes it way more engaging and fun," she says.

When products such as iPad or the SMART Board interactive whiteboard help create inclusive environments where all students can demonstrate their knowledge, it proves that classroom technology truly has the power to empower.

The interactive whiteboard and iPad

Elder supports her students' needs by using the SMART Board interactive whiteboard for whole-class learning and iPad to enable students to explore lessons on their own. Following are some of the iPad apps that Elder uses to complement and extend her interactive whiteboard lessons:

- **The Conover Company** – Functional skills apps, including those with videos

- **The GAMeS Lab** – Apps developed by Radford University and New River College students that are based on the Virginia state Standards of Learning

- **Mobile Education Store** – Apps that help students learn how to converse with others and build language skills

- **Reading A to Z** – Books can be downloaded as a PDF and added to iBook

- **Apple iWork apps** – Elder finds these apps, particularly Keynote and Pages, helpful

Learn more about using iPad and other devices with SMART products on the *EDCompass* blog.