Special Ed Connection®

Program spotlight: District creates 'immersive' special education classroom

Imagine transforming a classroom into a virtual, interactive playscape at the switch of a button. Teaching a science unit on nature is now set beside the rolling waves of an ocean or inside a camp in the middle of the woods. Like magic, the classroom changes to a new scene that students can see and touch.

Last year, Mountain Brook Elementary in Birmingham, Ala., received a $15,000 Institute for Innovation grant to create such an experience through an immersive special education classroom.

"There's so much you can do with it -- go to seaside locations or camping in the woods -- some of our students who are medically fragile might not normally be able to go to those places," said Missy Brooks, director of instruction and special education for Mountain Brook Schools.

The room uses a combination of wall-mounted sensors, projectors, and a software program to turn two walls and the floor into an interactive, touch-sensitive experience.

"The really cool thing is that when you dim the lights, you are completely immersed in whatever is being projected. We're creating shared experiences for all the learners there," said Betsie Kennedy, a special education teacher at the school.

Students will begin using the immersive classroom this spring. Below, Brooks and Kennedy discussed how they plan to use the technology and general tips for implementation.

Designed for cross-curricular use to meet a range of student needs

"The software includes a number of activities and allows you to design your own programs and lessons," said Kennedy. The team already has several cross-curricular ideas for how to use the technology including:

- **Addressing students' fine, gross motor skills.** An occupational therapist plans to use the technology to address fine and gross motor skills through interactive activities that encourage student movement, Kennedy said. For example, one activity includes bubble wrap that's projected on the wall and the students must pop the bubbles by tapping the floor and the wall. That type of movement, which can be small or large, can be beneficial for students with motor functioning needs, Kennedy said.

- **Creating shared, interactive experiences to aid communication.** A speech-language pathologist will be using the technology to help create new communication patterns for students, Kennedy said. "There are stories that can be made interactive, and you can immerse students and have them respond to those experiences," she said.

- **Increasing access to content for students with visual impairments.** The stark light and dark contrast created by the projections will be beneficial for students with visual impairments who require more defined contrast, Kennedy said.

- **Making math 'come alive' with interactive games.** The software also includes interactive games where students can solve math problems by jumping or tapping a bubble that they think contains the correct answer to the problem, Kennedy said. "Math comes alive," she said. "I think this is going to be

really beneficial for students with behavioral issues as a reward that's still very educational," Brooks added.

Get implementation tips and pointers from Brooks and Kennedy.

See also:

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Jennifer Herseim covers Section 504 and education technology as it relates to special education for LRP Publications.

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Immersive classrooms: Implementation tips and pointers

Mountain Brook Elementary in Birmingham, Ala., initially planned to have its immersive special education classroom up and running by the start of the 2019 school year. Several technological issues pushed that plan to the spring 2020 semester. "It's been a lot of trialing," said Missy Brooks, director of instruction and special education for Mountain Brook Schools. The classroom was made possible by a $15,000 Institute for Innovation grant.

She and Betsie Kennedy, a special education teacher at the school, provided these tips for implementation, based on those trials:

✓ **Designate a separate room.** Rather than installing the technology in a classroom that's already in use for instruction, install it in a separate room that's only used for this purpose, Brooks said. "Because the technology has to be mounted in a specific way and you need a specialized computer to run this, we created a separate room for this. Rather than putting it in a classroom and relocating those students every time someone wants to use it, we designated a space, so students move into that room," she said.

✓ **Build in time for trial-and-error testing.** Plan to have ample time and a separate "[research and development] room" to let staff play with the technology and figure out what works best with it, Brooks said. "This is very sophisticated technology. You can't just set it up in a classroom and expect it to work," she said. "You need a place to figure out where the bugs are," she said. For example, some of the tweaks the team have made include repainting the walls a light gray from white to reduce reflectivity that interferes with the sensors and replacing higher-price projectors with cheaper ones that work better with the software.

✓ **Start small, then scale up.** This pilot focuses on the special education population, but ultimately, the plan is to identify how to scale to other schools and student populations, Brooks said. "We're starting small, figuring out the tweaks, and then ideally, we'd be able to use this with everyone."

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