

New electronic 'toys' can help track disabled students' progress.(Assistive Technology)

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Educators charged with helping disabled students better integrate into school settings may want to learn more about new 'toys' that help students better interact with their environment.

Currently, children with various impairments learn to use a range of software and high-tech devices that help develop muscle strength and coordination, as well as enhancing communication and their ability to control the immediate environment. But the adults supervising them, such as therapists or educators, are the ones who have to watch carefully how the devices are used and take notes--like counting the number of times a child pushes a certain button. This helps connect the dots between usage patterns and outcomes.

But new products like AnthroTronix's "CosmoBot" and "Mission Control," still under development, will take over the note-taking, the company's Charlotte Safos told ETN. Children who need the rote practice to build strength and coordination will get it. In the meantime, their therapists can apply their advanced degrees to something besides rote data-collection chores.

CosmoBot is a foot-high robot with arms that can lift objects, grab, clap or flap up and down and a head that can shake yes or no. A child controls its actions either through a control panel or via sensors worn on the head or hands.

Mission Control is a flexible computer interface with a microphone and four large pushbuttons of different colors, which can also be hooked up to a joystick or wearable sensors. A third product, CosmoWeb, is a collection of computer-based games that therapists can individually configure for each child's needs.

Getting a Scientific Backing

Besides saving time, the built-in measurement capabilities of these products will allow therapists to make their practice more evidence-based, something which until now has been sorely lacking, said Susan Dubroff, director of Rehabilitative Services for Mt. Washington Pediatric Hospital in Baltimore. Therapists will find it much easier to develop certain clinical standards, like exactly how many repetitions a child needs to establish a new movement pattern.

Children with physical impairments do not have the same opportunities as their

peers to engage in play, Dubroff said. But these new products can be readily used, fairly independently.

AnthroTronix, founded in 1999, calls itself "a human factors engineering firm committed to optimizing the interaction between people and technology." Its work to help disabled children gets funding from the U.S. Education Department's National Institute of Disability Rehabilitation and Research (NIDRR). Mt. Washington also received some NIDRR grant money to serve as a trial site.