RoboKind

Octorara Primary Learning Center Case Study
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Elementary Autism Program Livens Social Skill Instruction with Humanoid Robot

Octorara Primary Learning Center adopts humanoid robot Milo and Robots4Autism curriculum, boosts generalization in interactions

As an autism training and consultation (TaC) provider with the Chester County Intermediate Unit in Pennsylvania, Amy Fichter does her research when introducing new intervention methods to staff members. She is responsible for providing guidance and information on the topic of autism to all 12 of the Chester County school districts.

When acquiring humanoid robot Milo for K-2nd grade students in the autism support classroom at the Octorara Primary Learning Center (PLC), Fichter's first measurement of student engagement was the amount of "smiles and laughter" that filled the classroom.

The Octorara PLC added one Milo to her intervention repertoire through a district grant application. Fichter and her colleagues chose Milo because of the robot's distinct range of facial expressions, scope and sequence of its accompanying research-based curriculum, Robots4Autism, and the school's emphasis on early-intervention.

Fichter's purpose for introducing Milo was to extend opportunities for young students to not only acquire social skills using Milo, but also to be able to generalize acquired skills outside of the autism support classroom, independently.

"I wanted to provide an innovative, evidence-based approach to teaching," Fichter said. "Milo immediately brought excitement and motivation to the classroom among both students and staff."

Building Generalization Step-by-step, hand-and-hand

Fichter and the TaC staff at Octorara PLC are continuously developing and revisiting individual instructional programs to meet the needs of students. The team initially selected four students to attend 15-20 minute 1:1 instructional periods with Milo, twice per week.

Each 1:1 session is individualized based upon student need. A teacher or staff member introduces or revisits a provided Robots4Autism lesson not yet mastered by the student.

"The scope of available lessons gives students the opportunity to practice critical skills, like making introductions and greetings, initiating conversation and identifying expressions," Fichter said.

Once students have completed lessons in 1:1 session, they build upon acquired skills in a group setting with Milo. A facilitator and up to seven students work with Milo together in 15-20 minute sessions, also twice per week.

"Our goal for incorporating Robots4Autism is for students to acquire skills in a 1:1 setting and apply those skills in group sessions with Milo by role playing those interactions with their peers," Fichter said.

Fichter and staff incorporate lessons learned with Milo into existing curriculum by leading group games and walking through corresponding social narratives, following the completion of a group session.

Since Milo resembles and behaves like a human, integrating Robots4Autism lessons into a variety of in-classroom interpersonal interactions encourages students to generalize learned skills to peers interactions.

Fichter explained, "One parent shared that her daughter responded to an adult's affective greeting with the correct body position, smiling and verbal greeting that she initially learned with Milo."

How Moments of Success All Add Up

Fichter's work as a TaC means she keeps a close eye on what's working with interventions like Robots4Autism.

While introducing Milo over the course of the school year, Fichter and her staff have noted decreased transition time when beginning 1:1 instructional sessions. She says students are eager to begin working with Milo.

The autism support classroom staff has seen an increase the number of completed lessons within each session, while seeing a decrease in the number of trials it takes a student to complete each lesson.

Fichter has been most pleased when witnessing how her students apply the lessons they learned with Milo outside of the classroom.

"Teachers in the school are excited to share when students with autism access coping strategies during periods of frustration at the lunch table or at recess," said Fichter.

Initial success with Milo in the youngest subset of the district population of students with autism has Fichter planning to acquire a second robot. Additional Milos would give students across schools and age levels the opportunity to engage with the new learning tool.

"Milo and the Robots4Autism curriculum have filled our classroom with laughter and smiles," Fichter said. "We want that same level of excitement in all of the schools we work with."

About RoboKind

RoboKind, the world leader in social robotics, designs and builds a series of robots that enable people to engage with robots on a personal level. Through Robots4Autism RoboKind leverages these advanced social robots to supplement autism therapy and special education. The programs use humanoid robots that feature life-like facial expressions, natural social interaction and comprehensive curriculum to assist educators and therapists in helping students learn and grow. For more information, visit www.robots4autism.com.