

State of South Carolina robots4autism Pilot Program Year 1: Executive Summary

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The South Carolina Department of Education recently initiated a three-year pilot program to address the needs of their K-12 students with Autism Spectrum Disorder (ASD). The primary focus of the pilot was to identify ways these students could successfully improve their human-to-human interactions and executive functioning. Specifically, the pilot targeted social and emotional understanding, communication and self-regulation, and how best to achieve generalization of those behaviors with peers and family members.

Through a six month approval process the department selected **robots4autism** (from RoboKind LLC) as the program that would best fit the objectives of the pilot. The robots4autism program was created specifically to help children with ASD in the development of social and emotional understanding, conversational dynamics and self-regulation (calm down).

The first phase of the pilot included 15 South Carolina school districts with a variety of sizes, geography, and demographics (i.e., ethnicity, social-economic status, etc.). A total of 47 educators facilitated the program with 305 students from October 2017 through June 2018. The facilitators included special education teachers, specialists, and paraprofessionals.

OBJECTIVES

The objective of year one of the pilot was to achieve generalizing or transference to human-to-human interaction of targeted behaviors in 1) social and emotional understanding, 2) communicational dynamics, and 3) self-regulation or executive functioning. To measure these outcomes, both quantitative and qualitative data were collected and analyzed.

The quantitative data consisted of 1) lessons attempted and completed, 2) modules attempted and completed, 3) accuracy of response, and 4) time to respond. Lesson mastery was achieved when a student gave no more than one incorrect response during an individual lesson. Correlating accuracy with time to respond demonstrates a generalizing relationship and was deemed an important consideration.

RESULTS

The results of the first year pilot met or exceeded the objectives of the program. The collected data confirmed the successful impact on the two focus areas with respect to utilization, lessons attempted and completed, and the level of mastery achieved by participating students. Specifically, there were 13,769 lessons employed to develop and advance social and emotional learning, conversational dynamics, and self-regulation. Ninety percent (90%) of students demonstrated mastery resulting in observable generalizing, transference to human-to-human interaction.

The observational and subjective analysis affirmed that students were, in fact, generalizing at a very high percentage rate (90%). To achieve that number, staff and students utilized repetition of lessons to ensure and validate targeted behavior mastery. The data showed that 70% of students demonstrating mastery achieved that level by repeating a particular lesson multiple times, a featured benefit of the robots4autism program.



Consistent with the primary focus of the pilot, 42% of the total lessons completed were from the Social and Emotional Modules and 26% of total lessons completed were from the Conversational Dynamics Module. However, in the area of self-regulation, the number of lessons repeated was significantly lower than those in either the social and emotional modules or conversational dynamics modules. These findings are consistent with other studies showing that students achieve mastery and quickly generalize these self-regulation behaviors without having to repeat calm down lessons. This further validated the instructional design of the program in this critical area.

PROCESS

A robust process guided the identification and selection of pilot districts. Program criteria, including expectations for commitment to program fidelity, progress monitoring, training, etc., were provided to all South Carolina school districts. Interested districts were asked to submit an application in order to participate. Applications were screened against criteria and selected districts were notified of their acceptance into the pilot program. District staff participated in training facilitated by the State Department of Education. Weekly, monthly and quarterly monitoring was conducted during the pilot period and included data reviews and on-site visits.

NEXT STEPS

With guidance from the State Department of Education, several districts not selected for the pilot opted to adopt the program which now includes over 50 districts from across the state. The success of the first year has resulted in expanding the number of schools and districts that will participate in year two with plans to continue expanding the program across the state. This will ensure that the State of South Carolina is providing effective and efficient early intervention for children with ASD.

For More Information

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