HOW MURSION IS LEVERAGING VIRTUAL REALITY TO IMPROVE OUTCOMES FOR CHILDREN WITH AUTISM

ORGANIZATIONAL BACKGROUND

Mursion is the virtual environment where people practice and master complex interpersonal skills. Mursion's immersive training simulator is used by a wide range of innovative organizations in the education, healthcare, hospitality and corporate sectors to improve interpersonal skills, through the delivery of customized training simulations that emulate challenging conversations people face every day.

Mursion's mixed reality platform uses a combination of artificial intelligence and live actors to deliver powerful simulations, where avatars simulate the most challenging professional exchanges that therapists, teachers and other professionals confront every day in their work. This blend of technology and human performance creates a fully immersive and challenging simulation environment where learners are forced to take risks, from which they can learn how to improve their day-to-day performance.

EMERGING WORK WITH STUDENTS WITH AUTISM SPECTRUM DISORDER (ASD)

Mursion's partners are exploring how virtual simulation can be used to both improve the communication and social skills of children with ASD, and train teachers, social workers and behavioral therapists who regularly work with them. What follows are examples of how Mursion's platform is being leveraged in this emerging field:
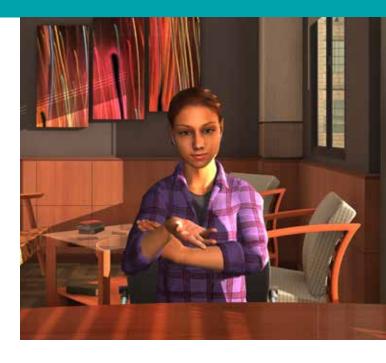
• **Alexandria City Public Schools:** In addition to using virtual simulation to improve instructional coaching, ACPS is also exploring how Mursion's virtual classroom can be used to embed social skills among middle and high school students. Middle and high school students with moderate to high-functioning autism were provided bi-weekly sessions in Mursion's virtual classroom. Each session provided students with two opportunities to interact with the avatars either

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as a group or by selecting specific peer avatars with whom to have extended interactions. Student performance was monitored with and without adult priming immediately prior to the sessions and in-session support was provided for targeted social skills during the session. Student goal areas were identified through baseline data collection in alignment with each student's Individual Education Plan (IEP). During this pilot program, data indicated increased use of comments and questions to learn more about their social partners and the ability to have extended conversational exchanges on preferred topics was observed across participants.

• **University of Central Florida:** Both virtual environments and peer-mediated interventions have been effective in increasing targeted social skills in adolescents with ASD. Simulation pilot studies are being conducted to combine peer-mediated interventions within virtual environments, and in these scenarios students with ASD interact with peer-avatars to examine the frequency of initiations, responses, and continuations of social interactions. Initial findings indicate that after 10-minute sessions in the simulator twice weekly for 10 -12 weeks, students with ASD increase their frequency of targeted social interactions.

• **Massachusetts Department of Secondary Education (DESE):** In 2016, Mursion received a subcontract from DESE to design a new virtual classroom with four new avatars, including one student who has ASD. As part of this project Mursion will facilitate an advisory board of experts to design the avatar and a set of simulations that will be used by educator preparation programs across the state to improve the use of inclusive pedagogies among preservice teachers.

• **Behavioral Therapy:** Mursion will be launching a project with a behavioral therapy organization that is licensing Mursion's software to train behavioral therapists to work with children and young adults with ASD.

POTENTIAL APPLICATIONS

Mursion seeks to partner other innovative organizations that wish to explore how live, virtual simulations can be leveraged to improve outcomes for children with ASD. Potential applications include:

- • **Interview skill building**
- • **Teacher training**
- • **Parent and/or caregiver training**
- • **Standardized patient training**
- • **Scientific research on the use of virtual simulation**
- • **Occupational therapy**

If you are interested in learning more about Mursion and its offerings by experiencing a live demonstration, please email info@mursion.com.

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