NEED
Autism is on the rise and now affects 1 out of 88 children in the United States. Around 66 percent of the 2 million children on the autism spectrum are functionally nonverbal and will not develop sufficient natural speech or writing to meet their daily communication needs.

SPEAKall!®, SPEAKmore!™, and SPEAK MODalities

INITIATIVE
Oliver Wendt, a faculty member in the departments of Speech, Language & Hearing Sciences and Educational Studies, has developed SPEAKall!® and SPEAKmore!™, two mobile applications for speech and language intervention in nonverbal learners with severe autism or developmental speech and language disorders. With programming assistance from students in the EPICS (Engineering Projects in Community Service) program, his sensory-friendly communication app, SPEAKall!®, allows users to construct and speak simple sentences via graphic symbols. A second product, SPEAKmore!™, targets vocabulary learning and enhances the complexity of utterances in people who communicate via tablets or other speech-generating devices.

Many tablet apps are available to provide a substitute voice for nonverbal children with autism. Few of them recognize that there is a learning opportunity for the child. SPEAKall! is crafted to be sensory friendly to individuals with autism, minimizing cognitive load while increasing the chance that the learner will use the device as a voice and also develop natural speech and language without the device.

Wendt, who received a 2013 Focus Award for helping to further Purdue University’s commitment to disability accessibility, contributes his success to a number of factors: participation in the Entrepreneurial Leadership Academy; funding from the Organization for Autism Research, the Indiana Clinical and Translational Sciences Institute (CTSI), the Purdue Center for Families, the Purdue Innovation and Commercialization Center, the Purdue Research Foundation, and mentoring from the Silicon Valley Boilermaker Innovation Group (SV BIG) and the Purdue Foundry.

IMPACT
After completing four clinical research studies to show the effectiveness of his app in clinical, school and home settings, Wendt launched SPEAKall! in 2012. The app was quickly adopted by the autism community, yielding more than 10,000 iTunes downloads within the first year.

The early success of SPEAKall! led to a demand for support and advanced features that could no longer be delivered from a research lab. With the help of the entrepreneur-in-residence program, Wendt formed a startup company, SPEAK MODalities, LLC. Wendt has key partnerships with leading clinical institutions and autism centers at the University of Central Florida, San Jose State University, Children’s Hospital Boston, and the Class Clinic in Seattle.

“We take feedback from our end consumers very seriously, and we fine-tune our products around the needs of clients, parents, caretakers, teachers and therapists,” he says. “It's important to make them partners.”

SPEAKall! is adopted in environments ranging from research universities to school districts. Jason Butcher, Speech Language Therapist at Grant County Public School in Kentucky commented, “...I really think this is going to be my go to app for communication activities. It has everything I need in features and functionality, and now I can focus more on techniques and activities instead of struggling to get an app to do what I want.”