

# Modeling use of communication tools may help children, adults be more successful

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Children and adults who use tools to help them communicate due to autism, Down syndrome, cerebral palsy or other developmental disabilities may have more success when family members, teachers and

others around them model how to use the tools, according to a Penn State meta-analysis.

The findings are applicable to more than four million Americans who have such complex disabilities that they cannot meet their communication needs through their own speech. These individuals require assistance through Augmentative and Alternative Communication (AAC) and assistive technologies, often including computers, tablets or mobile devices.

The findings are particularly significant for young children because the main way young children learn how to communicate with others is through hearing and observing speech, according to Tara O'Neill, a doctoral student studying communication sciences and disorders at Penn State, who conducted the meta-analysis.

Children without communication barriers observe a flood of communication examples on a daily basis from loved ones and teachers who use speech to communicate with them. However, children who use AAC tools to communicate rarely interact with loved ones or teachers using the same tools to communicate back.

"Often children are given an iPad with a communication app or another AAC technology and just expected to use it without any modeling or teaching," O'Neill said.

While working as a speech-language pathologist with children using AAC systems, O'Neill said, she tried to always model the use of the child's communication tool, believing it had a positive impact. Now her own study shows there is scientific evidence to support her instinct.

"I felt like modeling was effective and I thought I saw positive gains in my students when I was doing it," O'Neill said. "Now, this piece of

evidence tells clinicians, parents, teachers and others that they should incorporate modeling because we know it's effective and we know it's going to help children and others who use AAC improve their communication skills."

O'Neill's meta-analysis examined the findings of 28 other studies involving more than 200 participants, all of which looked at the effectiveness of aided AAC modeling, which is when loved ones and support team members use the AAC technology to communicate in order to better demonstrate to the patient how to communicate and express themselves using that technology. The analysis looked at studies involving both children and adults and found that the effectiveness of the modeling was "very large," the highest level of success in a meta-analysis.

"This provides some powerful evidence for speech-language pathologists and other communication partners. Now, it's not just that we think we should model use of AAC technologies because we think it works; instead, this provides evidence that it is effective, so we should do it as much as we can," O'Neill said. "Modeling helps [children](#) and adults who use AAC to express their wants and needs, interact socially, and understand language. Ultimately, it should improve their participation in society and overall quality of life."

The findings appear in July 2018 edition of the *Journal of Speech, Language and Hearing Research* published by the American Speech-Language-Hearing Association.

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