

Visual displays help children develop communication skills

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Credit: AI-generated image ([disclaimer](#))

When designing tools for children with communication disorders, minor details matter significantly.

That's why Jennifer Thistle, as a doctoral student at Penn State, and Krista Wilkinson, professor of communication sciences and disorders at

Penn State, studied the ways [speech-language pathologists](#) (SLPs) design visual displays for children whose speech does not adequately meet their communication needs. Such children use augmentative and alternative communication systems (AAC), which often include computers, tablets or mobile devices. These AAC systems help children better communicate with their families and peers.

SLPs, who help these children build alternative communication skills, design AAC displays featuring images or symbols that represent words. The children select particular images to convey their thoughts or feelings. Due to the visual nature of the displays, image features can vary in a number of ways. For instance, images can include a colored background, such that nouns are placed on backgrounds of one color, and verbs are placed on a different background color.

SLPs design the displays, including choosing the various features of the images. However, there is great variability in the actual way that the displays are constructed. That's where Thistle and Wilkinson come into the picture. With a goal of developing research-based evidence to support optimal design practices, Thistle and Wilkinson knew they first needed to study current practices used by SLPs to obtain a baseline.

The pair surveyed 112 SLPs about their decisions related to vocabulary representations, what their symbols look like and how they prioritize decisions about size, number, color, etc., which influence how the display appears for children who use AAC.

"We needed to develop a sense of what speech-language pathologists are doing now," Thistle said. "Most said we should be, for example, using a color-coded system for verbs and nouns, even though there is no evidence-based research behind it. The next step is to explore whether this is helpful for children. Ultimately, the goal is to provide research-based guidance so that SLPs can design displays that best benefit the

user from a visual perspective."

Thistle and Wilkinson's resulting paper, "Building evidence-based practice in AAC display design for young children: Current practices and future directions," appeared in a 2015 issue of *Augmentative and Alternative Communication*.

In August, Thistle and Wilkinson received the AAC Editor's Award for the best student paper at the biennial conference of the International Society of Augmentative and Alternative Communication in Toronto, Canada.

"For the [children](#) we work with who have difficulty speaking, we need to give them the tools to help them communicate in some way and my goal is to do research that helps the field identify best practices to help that child communicate, otherwise they are missing out on a whole host of opportunities and connections," Thistle said.

Wilkinson said, "Jen's work is important because she has laid out in detail the existing practices with regard to display design. By mapping out the design features and choices that clinicians believe are important, this study can now provide guidance for the research program in terms of which features should be the focus of the research."

Provided by Pennsylvania State University

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