

Eye tracking Technology and Cognitive Processing in Intellectual/Developmental Disabilities

Paper #1: Responses to visual communication displays by individuals with intellectual disabilities.

Authors: Krista M. Wilkinson^{1,2}, Tara O'Neill¹, Jennifer Nauss¹, Jennifer Thistle¹, & William J. McIlvane²

¹: The Pennsylvania State University, University Park, PA

²: The Shriver Center of the University of Massachusetts Medical School, Waltham, MA

Paper #2: Measures of receptive vocabulary in children with autism.

Authors: Nancy C. Brady and Christa Anderson

University of Kansas, Life Span Institute

Paper #3: Gaze during face processing in Down Syndrome

Authors: T. Mitchell¹, S. Meyer¹, Steven, K. Monk, & W. McIlvane¹

¹The Shriver Center of the University of Massachusetts Medical School, Waltham, MA

²Brandeis University

Paper #4: Gaze patterns during emotional face-voice matching

Author: Ruth Grossman

Emerson College

The Shriver Center of the University of Massachusetts Medical School, Waltham, MA

Discussant: William V. Dube, Ph.D., Associate Professor in Psychiatry, University of Massachusetts Medical School - Shriver Center, Shrewsbury, MA 01545



Eye tracking helps reveal mechanisms underlying responses to visual communication displays by individuals with and without intellectual disabilities

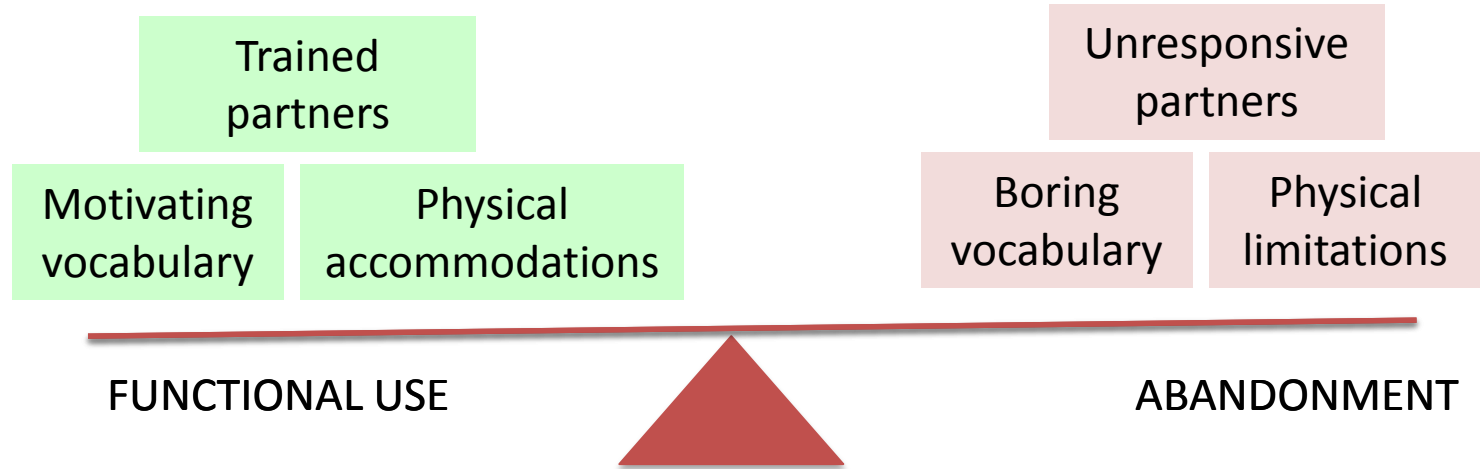
Krista Wilkinson, Ph.D.^{1,2}, Tara O'Neill¹, Jennifer Nauss¹, Jen Thistle¹, and William J. McIlvane²

¹Communication Sciences and Disorders, Penn State University

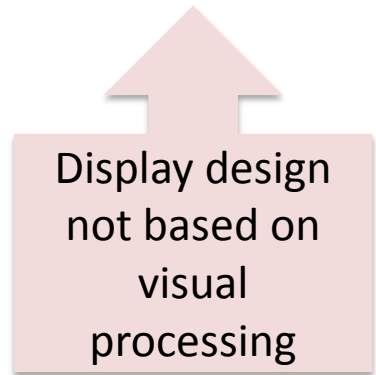
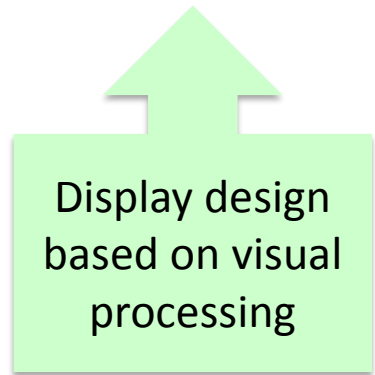
²The University of Massachusetts Medical School - Shriver Center

Funded in part by NICHD P01 HD 25995

In aided AAC, we have an evidence base concerning some of the things that contribute to successful functional use, as well as some of the factors that contribute to limited use or abandonment.



Our hypothesis is that....

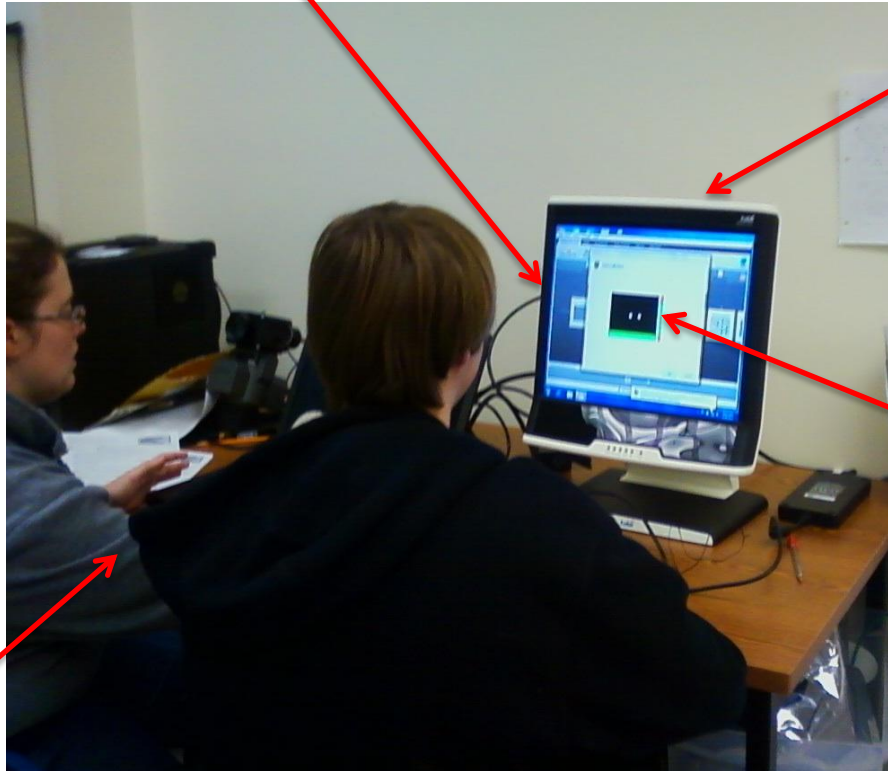


And we are using eye-tracking technology to figure out if we are correct

What is the technology like? Here we see the Tobii T60 technology.

a. The stimuli/task are presented on a monitor in front of the participant

b. An infrared light is projected from the technology onto the participant's eye. The light reflected back from the cornea is then recorded by the eyetracker.



d. Prior to beginning, a brief "calibration" is conducted to match the coordinates of the reflected light from the eyes (those two little white dots) to the locations of stimuli on the screen.

c. A dedicated PC computer (not visible) records the data on a moment by moment basis, and matches the eye gaze to areas of interest in the stimulus (defined by the experimenter).