The Effects Of a Video Visual Scene Display Application on Communicative Turns For a Child with Autism Spectrum Disorder

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BACKGROUND:
- Individuals with ASD may have difficulties in communication and social skills (Tuchman, 2003)
- Visual Scene Displays (VSDs) have been shown to be an effective AAC intervention to increase communication for individuals with ASD (Wilkinson & Light, 2014)
- Children with ASD are noted to have an interest in stimuli that is dynamic in nature, like videos (Mazurek & Wenstrup, 2013; Geiger, LeBlanc, Dillon, & Bates, 2010; Mechling & Moser, 2010).
- Video VSDs integrate benefit of video stimuli with communication supports.

RESEARCH QUESTIONS:
1.) What is the effect of a video VSD application on communication turns, during a ten-minute interaction focused on a preferred video, for an individual with autism spectrum disorder (ASD) and complex communication needs?
2.) Will the number of turns expressed spontaneously (after the video VSD and hotspots appear) increase? (i.e., no clinician prompting)
3) What is the participant’s amount of engagement with the communication partner?

PARTICIPANT:
- 15-year old Caucasian male with ASD;
- Several challenging behaviors
- Prompt-dependent for communication of wants/needs
- Preference of watching short videos

RESULTS:

Communicative Turns
- Baseline, and baseline generalization: 0 turns
- Intervention: +23 average positive gain, across 5 sessions
- (range: +14-27 turns)
- Generalization post-intervention: +11 turns
- Maintenance (2 and 7 weeks after intervention): +20 turns

Engagement
- Baseline: engaged average of 5% during session
- Intervention: average 16% (range: 12%-19%)
- Post-Generalization: average 7.5%
- Maintenance: average 15% (range: 11%-19%)

DISCUSSION:
- Increase in communicative turns with video VSD app, including spontaneous turns initiated
- Engagement: low throughout study – due to wanting to select videos to watch. Should expand to desired communication partners as well (compared to researcher, school aide)
- Overall, video VSD app promoted communication as it enhanced opportunities to communicate
- “Advancing opportunities for children and young people to participate in society in ways that match their own motivations and aspirations is a cornerstone of intervention philosophy” (Clarke et al., 2012, p. 44)

CONCLUSION:

MATERIALS

EasyVSD application
- Hotspots above: blue circles
  Output might be “The Wiggles drive the Big Red Car!”
- Able to program videos, photos, and hotspots (orange button) within the videos/photos
- User can navigate through different videos (green button; left bar) or different parts of one video (purple button; right bar)
- User can chose to take or decline communication turn by selecting hotspot, or continuing to play video.
- Can draw on the screen (blue button)
- Other features: play/pause video (JIT accessible)

METHODS:

DESIGN
- Single case (AB) design
- Part of a larger research study that used a single-subject across participants multiple probe design

PROCEDURES
- Participant’s classroom; twice/week, for ten weeks
- Baseline, intervention, generalization, and maintenance phases
- Intervention:
  - Researcher introduced video VSD app
  - Video VSD app had embedded hotspots, or communication opportunities, which paused video
  - Researcher would comment every 60 seconds, or if a communicative turn was made
  - Just-in-time programming used to create new hotspots if participant demonstrated interest in specific stimuli (Caron, Light, & Drager, 2016)

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