Applications of Video Visual Scene Display Technology in a Vocational Setting
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Rationale
- Approximately 25-50% of adults with autism spectrum disorders (ASD) are employed (Hendricks, 2010; Wehmian et al., 2012) with the majority of these individuals described as “high functioning” and using speech to communicate.
- 20-30% of individuals with ASD do not use speech to communicate and are described as having complex communication needs.
- Less than 5% of individuals with complex communication needs are employed (e.g., McNaughton & Bryen, 2002)
- For individuals with ASD and complex communication needs, challenges with speech may increase the communication and social interaction difficulties the workplace (Mirenda, 2014)

Research Questions
Do videos with integrated VSDs on the EasyVSD application increase the percent of steps completed (and communication opportunities fulfilled) during vocational activities for an adolescent with ASD and complex communication needs?

Design
- Research Design: Multiple baseline design across three activities
- Independent variable: EasyVSD application (InvoTek, http://www.invotek.org)
- Dependent Variable: Percent of steps completed (and communication opportunities taken as described in a task analysis for each activity)

Participants and Setting
James
- 18 year old male
- Diagnosed with Autism Spectrum Disorder
- High school student
- No verbal speech
- A few signs (e.g., yes, no, thank you)
- Prompt dependent to complete daily tasks

Local elementary school library
Four work activities:
1. Checking in books
2. Putting away/sorting books
3. Making dye cuts
4. Shredding

Materials
- EasyVSD app (InvoTek, http://www.invotek.org) housed on an Android tablet
- For each work activity: Video clips depicting each step of the activity was imported into the app. Each clip served as a video model.
- When oral communication was required to complete the step, a hotspot was programmed containing speech output to satisfy the requirements of the step

Procedures
- A task analysis was created for each step of each activity.
- Video models of each step of the task analysis were recorded and imported into EasyVSD.
- James met mastery criterion (i.e., >90% accuracy) for three tasks.
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Results
- James met mastery criterion (i.e., >90% accuracy) for three tasks.
- Using the app, James completed tasks with over 90% accuracy with decreased reliance on staff prompting.
- This investigation suggests that videos with integrated VSDs facilitate video prompting and communication opportunities within real world contexts to support the participation and communication of individuals with ASD and complex communication needs.
- Future research should evaluate use of videos with integrated VSDs facilitating video prompting and communication opportunities within real world contexts to support the participation and communication of individuals with ASD and complex communication needs.

Discussion & Implications
- Using the app, James completed tasks with over 90% accuracy with decreased reliance on staff prompting.
- This investigation suggests that videos with integrated VSDs facilitate video prompting and communication opportunities within real world contexts to support the participation and communication of individuals with ASD and complex communication needs.
- Future research should evaluate use of videos with integrated VSDs facilitating video prompting and communication opportunities within real world contexts to support the participation and communication of individuals with ASD and complex communication needs.
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Acknowledgements
The contents of this presentation were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number #90RE5017) to the Rehabilitation Engineering Research Center on Augmentative and Alternative Communication (AAC) in the Department of Speech, Language, and Hearing Sciences at Penn State University. The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.

In addition, the second author received funding from the U.S. Department of Education grant #H325K080333 during her graduate training at Pennsylvania State University.