Effect of VSDs with Dynamic Text in Social Interactions on Single Word Reading in Adults with Intellectual and Developmental Disabilities

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Rationale

- Unfortunately, many adults with intellectual and developmental disabilities who have limited speech do not have functional literacy skills
- While adults with intellectual and developmental disabilities should have access to appropriate literacy instruction regardless of their age, such opportunities are often limited
- Therefore, supports that supplement traditional instruction might be beneficial to these individuals
- AAC technologies designed to promote literacy learning may be one supplemental support option

Research Questions

- What is the effect of a VSD app with the Transition to literacy (T2L) feature used during social interactions on the single-word reading performance of adults with intellectual and developmental disabilities, limited speech, and early literacy profiles?

Method

- The study used a single-subject, multiple baseline across participants design
- The study had three phases:
  - Baseline, intervention, and maintenance
- A probe at the beginning of each session tested participants on their identification of 10 words chosen to be of high-interest to them (the dependent variable)
- Then, in the intervention phase, participants engaged in social interactions with the investigator using the app with the T2L feature (the independent variable)
- No literacy instruction was provided

Participants

- Six adults with intellectual and developmental disabilities who had limited literacy skills participated
  - Don (all pseudonyms), a 55 year old with ASD
  - Jim, a 32 year old with Down syndrome
  - Esther, a 44 year old with an ID
  - Tiffany, a 22 year old with Down syndrome
  - Tony, a 46 year old with Down syndrome
 - Ed, a 30 year old with Down syndrome

Materials

- EasyVSD (InvoTek, http://www.invotek.org) with the T2L feature enabled was used as the communication modality and context for interactions
- The app was loaded with VSDs of highly-motivating content individualized to each participant

Procedures

- During one-on-one social interactions between the investigator and participants, the investigator:
  - Navigated to photo VSDs representing target words that were meaningful and motivating to the participant,
  - Waited to allow the participant to select the hotspot for each VSD, enacting the T2L feature,
  - Responded to participants' activation and again waited for another selection from the participant, and
  - Expanded on that subsequent selection

Results
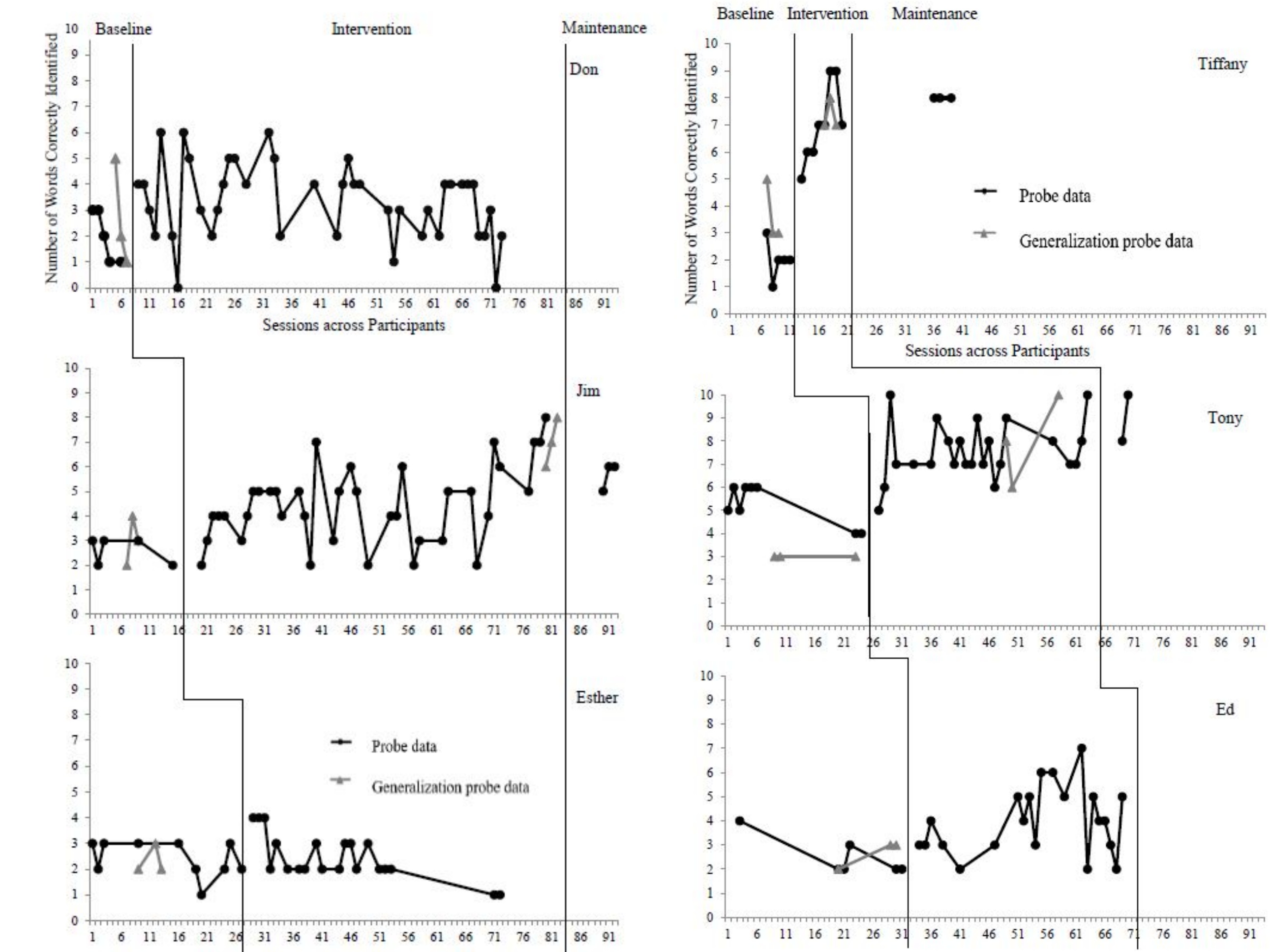
Discussion & Implications

- For three of the six adults – Jim, Tiffany, and Tony - interactions using EasyVSD (InvoTek) with the T2L feature enabled was a highly-effective intervention for supporting single-word reading
- Therefore, even into adulthood, individuals with intellectual and developmental disabilities can demonstrate increases in literacy skills through simple adjustments to AAC technologies
- Future research should gather more precise information about different interventions using T2L that may be effective for more adults
- Future research should also consider longitudinal effects of the T2L feature integrated within the unstructured, daily communication of adults with intellectual and developmental disabilities

Acknowledgements