

Rationale

- Approximately **25-50%** of adults with autism spectrum disorders (ASD) are employed (Hendricks, 2010).
- **Fewer than 5%** of individuals with complex communication needs are employed (McNaughton & Bryen, 2002). This finding may be related to the lack of effective alternative and augmentative (AAC) supports to meet the demands of real-world settings.
- **Visual scene displays (VSDs)** capture meaningful events in an integrated scene with language concepts embedded as hotspots within the scene (Light & McNaughton, 2012); however, current technology supports the integration of static VSDs.
- **Videos with integrated VSDs** capture the spatial and temporal contexts of communication opportunities by preserving the **dynamic** relationships and engagement cues found in real-world interactions which may more effectively facilitate participation and communication (Light, McNaughton, & Jakobs, 2014)

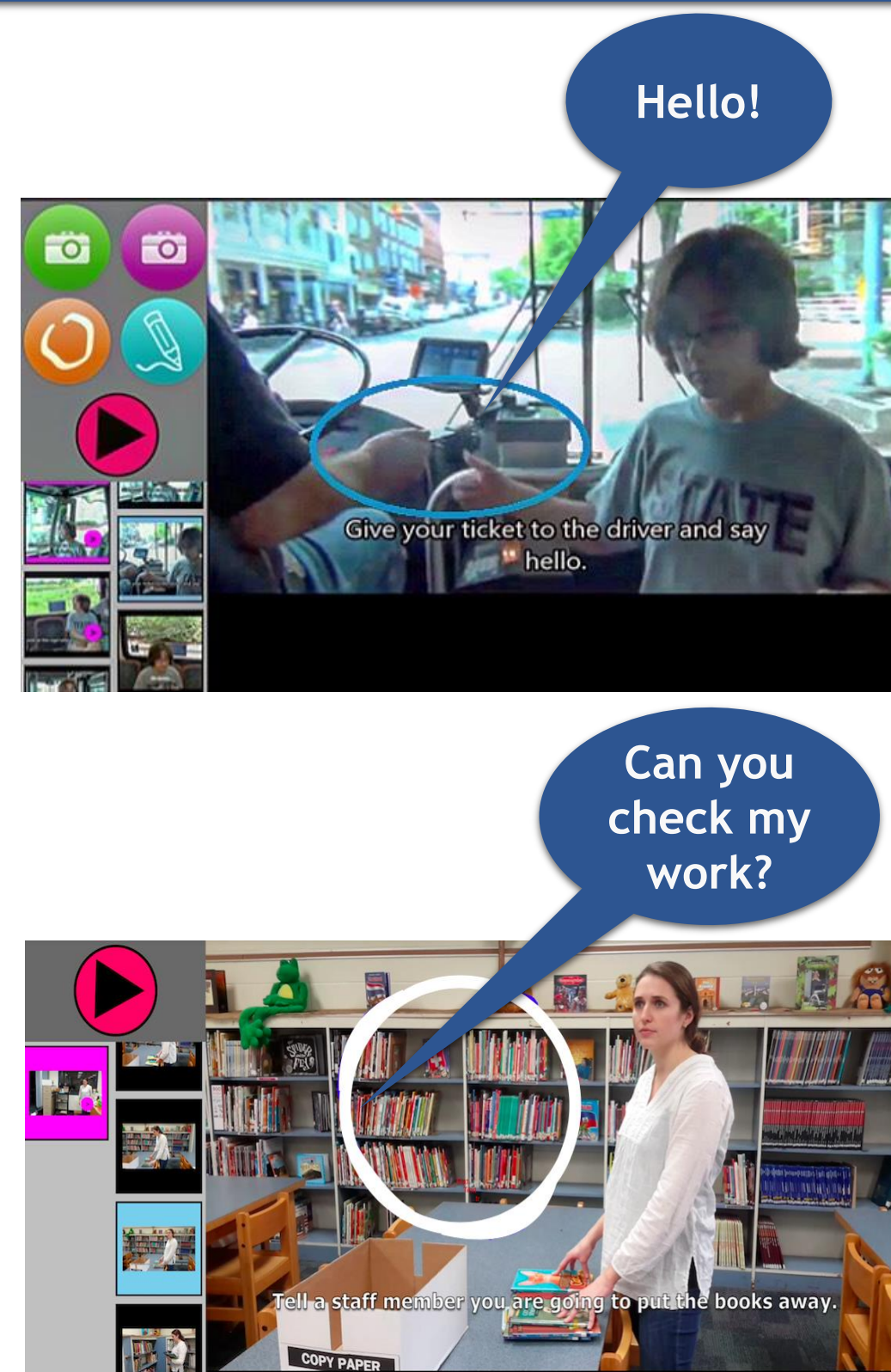
Purpose

To evaluate the effects of videos with integrated VSDs using the EasyVSD app (InvoTek, <http://www.invotek.org>) on (a) the percentage of steps completed and (b) the communicative opportunities fulfilled by high school students with ASD within vocational tasks

Materials

EasyVSD app housed on an Android tablet

- -10 second video clips depicting each step of the activity imported into the app for each activity
- When oral communication was required to complete the step, a hotspot was programmed containing speech output
- Automatic pausing of videos at key segues mark a communication opportunity
- Text captions presented during video model



Acknowledgements

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Case 1: Lena

Lena: a 16-year-old female with ASD who attended an inclusive high school program

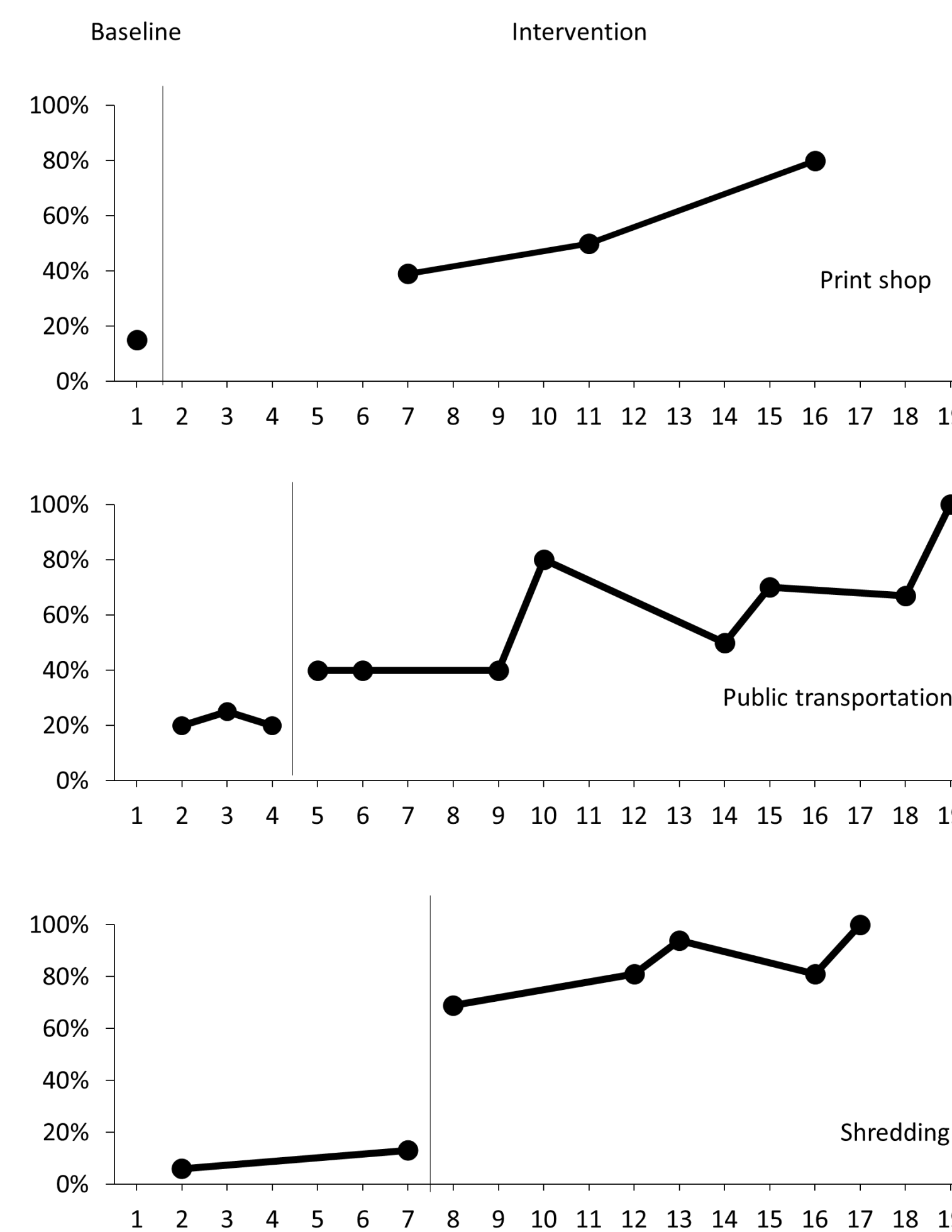
- Communication skills: used some speech which was characterized by echolalia and scripting
- Highly prompt dependent to complete daily tasks

Research Design: pilot case study, AB design

Procedures:

- Baseline Phase: Data were collected during target tasks as they typically occurred, without the use of the app
- Intervention Phase: Tasks were completed while using the EasyVSD app and a least-to-most prompting hierarchy. Video review was completed prior to each session.

Results:



Case 2: James

James: an 18-year-old male with ASD who attended a high school program

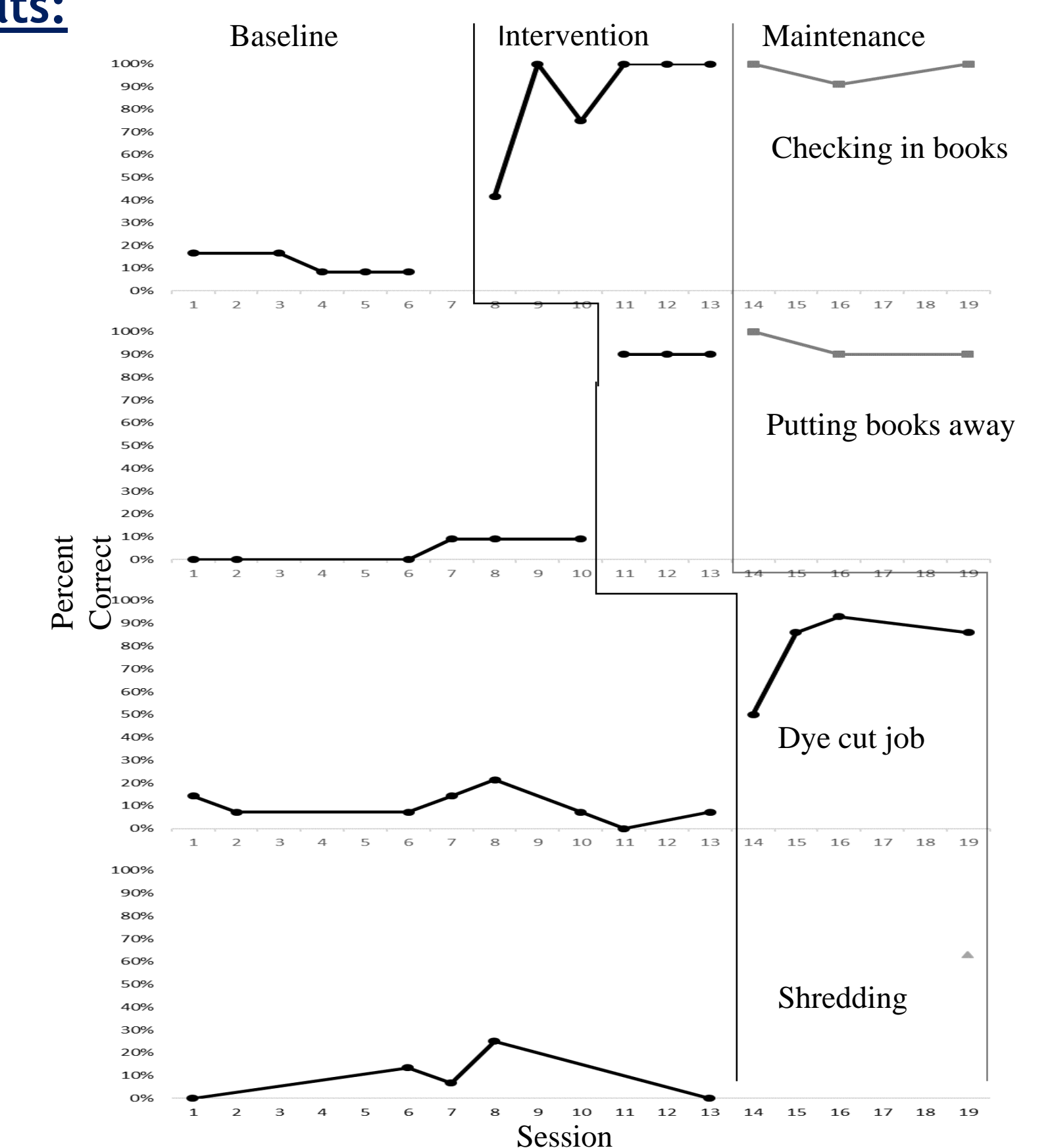
- Communication skills: did not use speech; expressed a few signs (e.g., yes, thank you)
- Highly prompt dependent to complete daily tasks

Research Design: Multiple baseline design across three activities

Procedures:

| Baseline Phase | Intervention Phase | Maintenance Phase |
|--|--|---|
| <ul style="list-style-type: none"> • No access to the tablet when completing the activity • Cue provided: "It's time to ___" | <ul style="list-style-type: none"> • Brief instructional session prior to probe to view the video models • Access to the tablet when completing the activity • Cue provided: "It's time to ___" | <ul style="list-style-type: none"> • Access to the tablet when completing the activity • Cue provided: "It's time to ___" |

Results:



Discussion

- Using the app, Lena and James completed each task with increased accuracy and 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 (a) with learners of different skills levels and diagnoses, (b) during multiple vocational and community activities, and (c) serving additional functions (e.g., social communication).
- Use of technology that provides videos with integrated VSDs may create increased opportunities for individuals with ASD and complex communication needs to more independently participate in meaningful vocational and community activities.