Reading to Engage Children with Autism in Language and Learning (RECALL) Paired with Play

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Abstract

This research study applies Reading to Engage Children with Autism in Learning and Language (RECALL) paired with play in order to gauge improvements on target vocabulary and retention rates. The children in the study will range in ages 3-5 and be separated into dyads. In this study, researchers will use RECALL paired with toys and playtime to see if the intervention aids children in learning these target words while playing with the toys. Previous research has been conducted with just the RECALL element where only shared intervention reading occurred in order to see if the children with Autism Spectrum Disorder (ASD) would learn the target vocabulary and baseline studies did show improvement in the children with ASD (Whalon et al., 2015). Therefore, the hope with adding the play element to the RECALL is to see target vocabulary utilized in appropriate play contexts. There are eight children - four with ASD, and four typically developing children - and they will be reading a series of books that highlight seven target words. After reading, both at baseline and with the intervention, they will play with corresponding toys and will be observed to see if target vocabulary is used in the appropriate context. While research has not been completed, researchers expect to see that children with ASD will learn these target words through their interaction with the words in the books and during playtime.
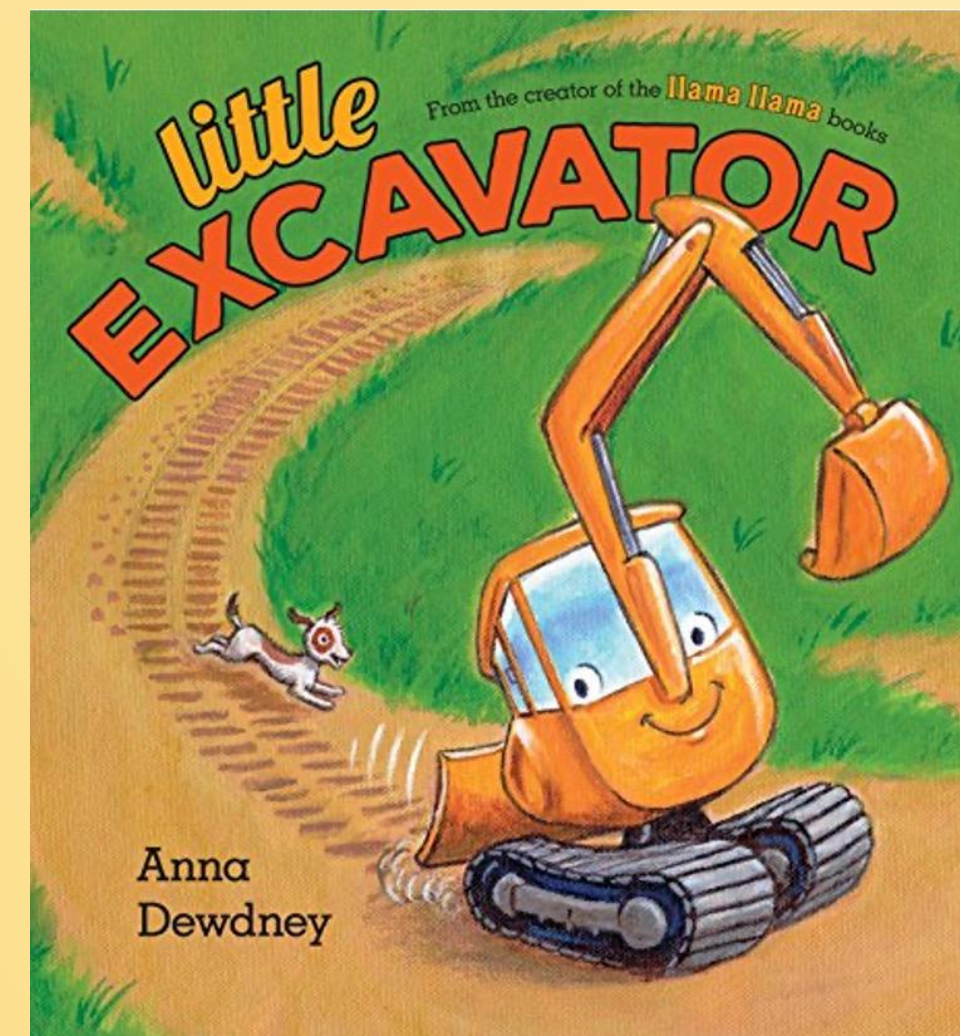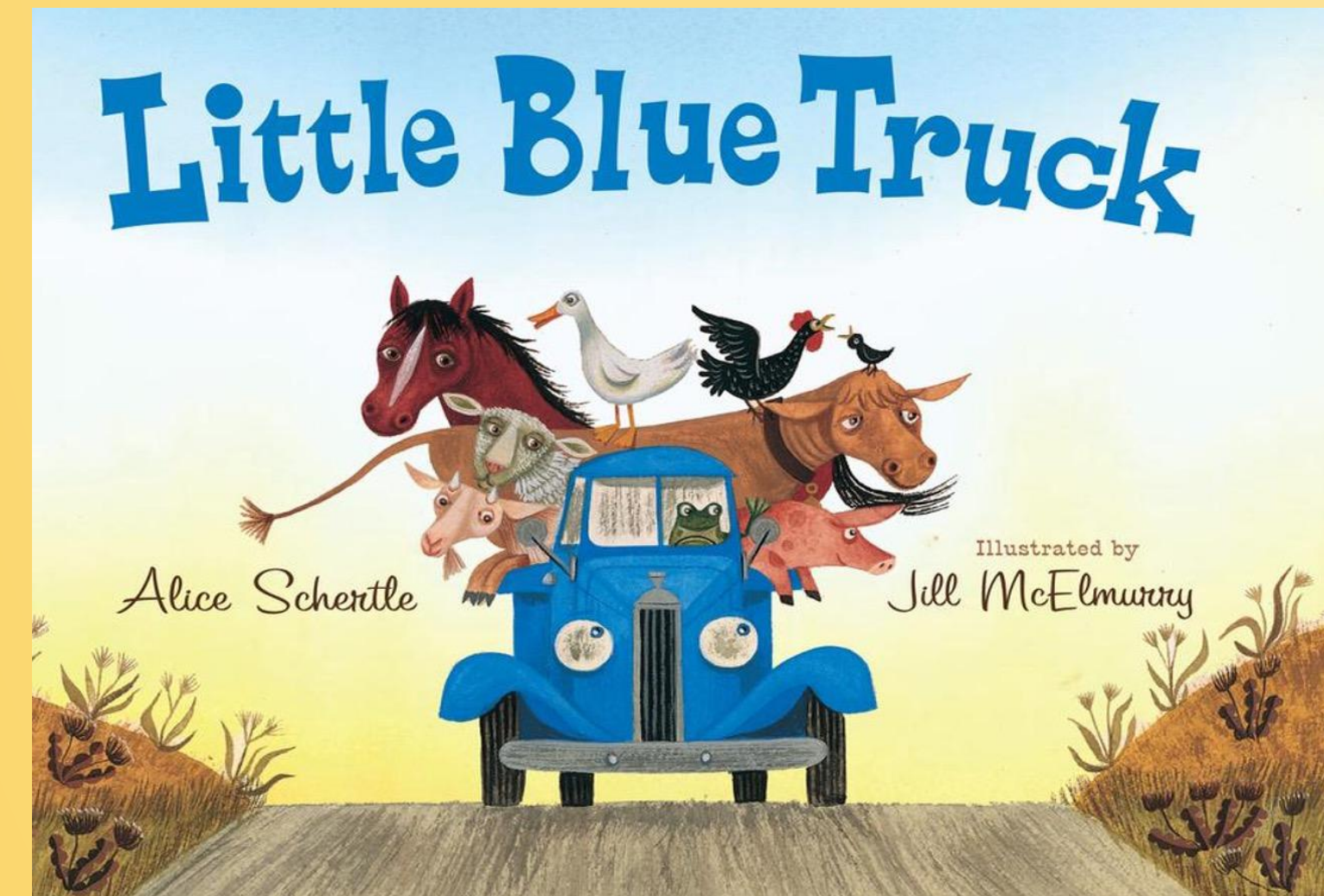
Background Research

- Dr. Kelly Whalon conducted previous research on the RECALL methods to see how interactive reading would improve participation in reading as well as questions asked about the readings.
- She found that there were improvements in the children's vocabulary as they were responding more with correct answers regarding the target vocabulary words(Whalon et al., 2015).

Research Question

- What is the effect of RECALL Play on the (1) vocabulary knowledge and (2) play skills of children with autism?

Methods

Participants:

- 8 participants, all between the ages of three to five years old
  - 4 children have ASD
  - 4 children are typically developing peers
  - The 8 children will be preschool students in Leon County, Tallahassee
- The children with ASD will must have been diagnosed with ASD prior to the study
- Parents must give informed consent for the children to participate in the study

Materials:

- 4 books for each theme being read to the children
  - Themes include: farming, baking, construction and trucks
- Toys that correspond to the target vocabulary words found within each book
- An iPad with the script for the interventionist to use during baseline and intervention phases of the study
- Video cameras to record each reading and playtime session

Design:

- A multiple baseline across 4 dyads will be used to investigate the impact of RECALL Play on vocabulary knowledge and play skills.
- This study will consist of 5 phases per dyad: (1) baseline theme 1 word set, (2) intervention theme 1 word set, (3) baseline theme 2 word set, (4) intervention theme 2 word set, and (5) maintenance.

Procedure:

- A pair of one student with ASD and one typically developing peer (dyad) is given a theme/set of books to read.
- In phase 1, the interventionist will read to the pair of participants and ask basic questions about the plot. This is the baseline. Then, the children have 10 minutes to play with the toys. Once all 4 books in one theme have been read, then the interventionist will move onto section 2.
- In section 2, the interventionist will read the children the same 4 books within their theme, but implement RECALL. In RECALL, the interventionist applies the RECALL instructional sequence : 1) prompts by asking the child a question, 2) evaluates the child's response and introduces a least to most prompting hierarchy as needed, 3) expands by adding 1-2 words once the child provides the target word/response and 4) asks the child to repeat the target word. Then, the participants have 10 minutes again to play with the corresponding toys. If the children do not engage in play or use any target words, the interventionist models the action and pairs the action with the target words.
- In section 3 and 4, the children go through baseline and RECALL intervention stages again, but with a second theme and set of books.
- Finally, there is a maintenance phase, where the children just play with the theme correspondent toys.
- The children during reading and play are recorded, and researchers code for target word use.

Acknowledgments

Expected Results

This study is ongoing and no data has been collected yet. Currently, researchers are developing the scripts that interventionists will use during intervention. Data on vocabulary retention will be collected and reported when gathered. When it begins, we expect that the interventionists' use of RECALL will increase vocabulary retention among children with ASD.
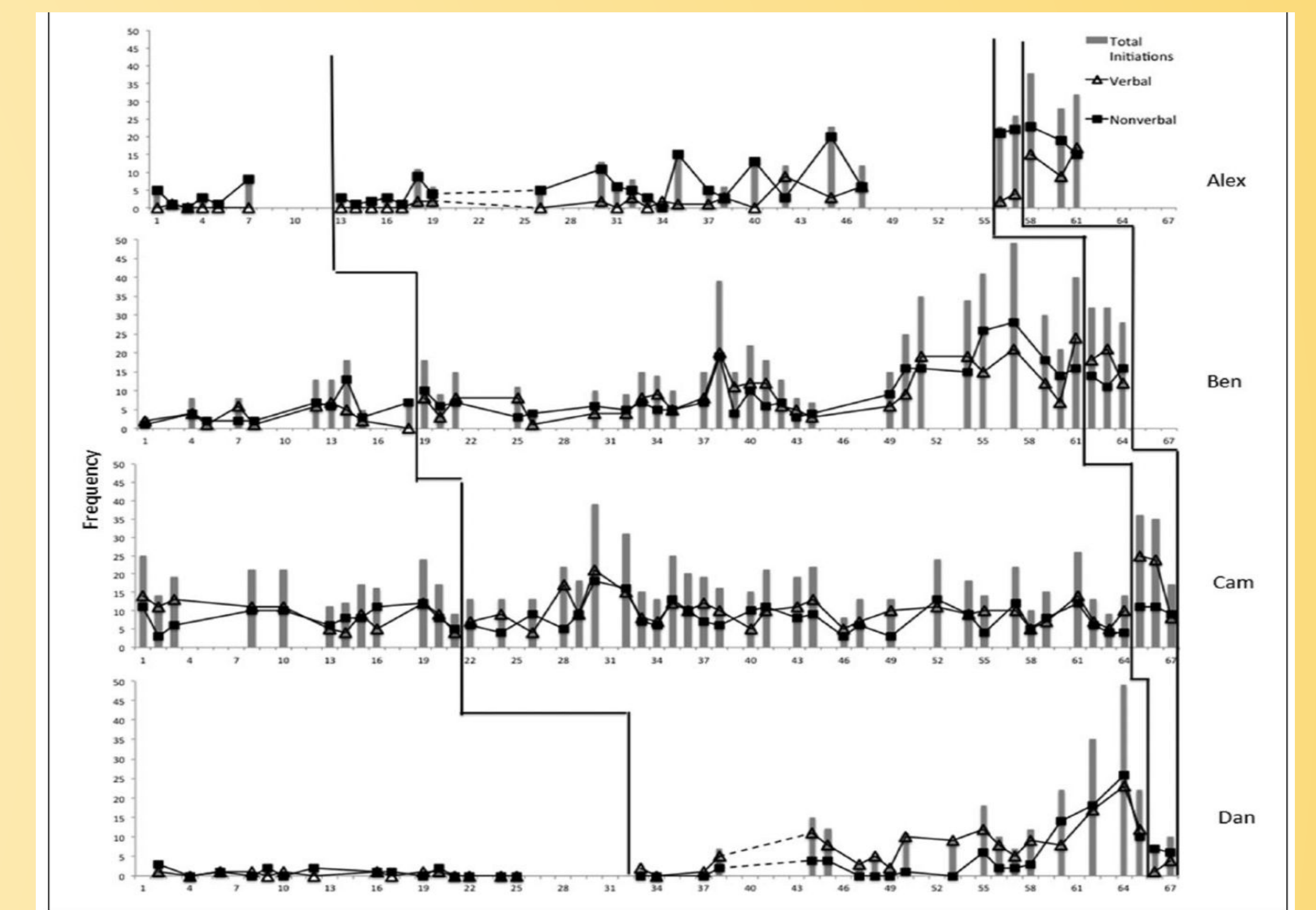
Displayed above is data from Dr. Whalon's previous study. It is expected that this study will yield similar results with an increase in the rate of target vocabulary used among children with ASD accompanied with correct play with toys that represent the vocabulary (Whalon et al., 2015).

Limitations

- This research is a single case study design, so the amount of participants are limited. This reduces the generalizability and external validity of the results, which means that we can only apply the results to certain groups of people.

Future Research

- In the future, if we want to apply the results to a broader population, we will need to conduct a study with more participants. It can also be applied in the future through special education teachers to measure its impact in a more natural setting.

References

Whalon, K., Martinez, J. R., Shannon, D., Butcher, C., Hanline, M. F. (2015). The Impact of Reading to Engage Children With Autism in Language and Learning (RECALL). *Topics in Early Childhood Special Education, 35*(2), 102-115.
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