Introduction

- Many preschoolers from low-income communities have reduced vocabulary skills, placing them at-risk for academic difficulties.  
- *Story Friends* has been effective in teaching at-risk preschoolers vocabulary through storybooks.
- Previous studies show that children receiving *Story Friends* instruction learn approximately 50% of words taught, a rate higher than similar curricula.  
- Reinforcing the word learning that occurs in the classroom at home could make the effects of *Story Friends* more effective.
- Recruiting reinforcement has been shown to be effective, when children play a role in their learning by prompting adult feedback.
- Few studies have investigated effective ways of bridging instruction between the school and home.

Objective

The goal of this project is to highlight the iterative development of a home program that reinforces the learning of words in *Story Friends* by applying family-engagement strategies.

Development of the Home Program

Home programming was developed iteratively over four studies using *alternating treatments designs*. Vocabulary instruction is extended through a recruitment of reinforcement strategy that encourages children to take responsibility for their learning by eliciting adult feedback.

Curriculum: *Story Friends*, an oral language curriculum for preschoolers.

Iterative Development Process:

1. **ITERATION 1**
   - Researchers: Letter sent home to explain the intervention.
   - Stickers: Limited. Only sent home weekly practice logs.
   - Effects of the Home Program: Parents reported enjoying the stickers, but they did not practice the words at home.
   - Social Validity Results: Parents: Reported enjoying the stickers, but they did not practice the words at home.

2. **ITERATION 2 and 3**
   - Researchers: In-person training that incorporated video-modelling.
   - Stickers: Provided parents with options for contexts, number of times, and a flexible schedule.
   - Effects of the Home Program: Iteration 2: 8 out of 6 children made positive gains, but coding effects made it difficult to attribute effects to the home program.
   - Iteration 3: Home program was effective for 7 out of the 13 children. Six differences observed.
   - Social Validity Results: Parents: Enjoyed recruitment materials, text reminders, and in-person training. Parents with significant stressors had a harder time implementing home program.
   - Teachers: Noted daily practice being cumbersome.

3. **ITERATION 4**
   - Researchers: Automated training video was disseminated via e-mail.
   - Stickers: Portable weekly, log to tally number of words practiced at home.
   - Effects of the Home Program: Limited data made it difficult to discern the effects of the home program; however, promising preliminary findings were noted for 3 out of the 6 children.
   - Social Validity Results: Teachers: Enjoyed training centers. Reported preferring in-person parent communication over phone.
   - Parents: Some children used words at child care, dinner, and a flexible schedule.

Conclusions

- Strategies that increased parent engagement included:  
  - Promoting two-way communication between the school and home.
  - Conducting in-person trainings addressing participation barriers (e.g., childcare, transportation).
  - Sending daily reminders via text messaging applications.
  - Encouraging voluntary teacher engagement.
  - Using video modelling to show parents how to incorporate vocabulary instruction to their daily routine.

- A higher number of risk factors affecting families decreased the likelihood of parent engagement and responsiveness to the program.
- These studies highlight the benefits of applying an implementation science framework to build effective and feasible early childhood home programs.

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References