

Engaged Scholarship with Rural Educators: Improving Teacher Fidelity in Social Communication Instruction for Students with Autism

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BACKGROUND

Many individuals with autism spectrum disorder (ASD) experience delays in social communication which can lead to challenging behavior and difficulty accessing instruction. Special education teachers are a primary source of instruction in communication for children with ASD. This community-engaged project trained teachers to implement strategies to support communication skills for students with ASD in an on-campus summer camp and translate skills to their classrooms.

METHODS

Participants

- Six were special education teachers
- 7 students ages 3-7 years old with an ASD and limited communication skills as reported by caregivers

Setting

- Five-day summer camp at the TTU Burkhart Center
- Large group classroom, individual therapy rooms and the gym/playground.
- Each setting was arranged with minimal distractions to allow for clear observation and data collection.

Materials

PowerPoint for research assistants prior to beginning the study. The training included understanding the structure of the goals for CST, daily schedules and location assignments, how to collect data for teacher/dyad pairs and learning to provide feedback and coaching during sessions.

Dependent Variable:

- Teacher fidelity of implementation:* all-or-nothing percent correct implementation of seven strategies
- Child vocalizations:* total number of target and non-target by session

Independent Variable:

- PowerPoint Training:** group training on social communication teaching strategies

- 1.Imitation
- 2.Descriptive talk
- 3.Ask questions
- 4.Provide wait time
- 5.Prompting language
- 6.Communicative temptations
- 7.Reinforcement

- Hands-on-Practice:** 1:1 observations of play with students while implementing trained strategies. Trainers provided feedback using checklist (1) constructive feedback and (2) positive feedback statement.
- Data Review:** Lead instructor reviewed data with teachers from first 3 days of camp.

PowerPoint Training
(Day 1)

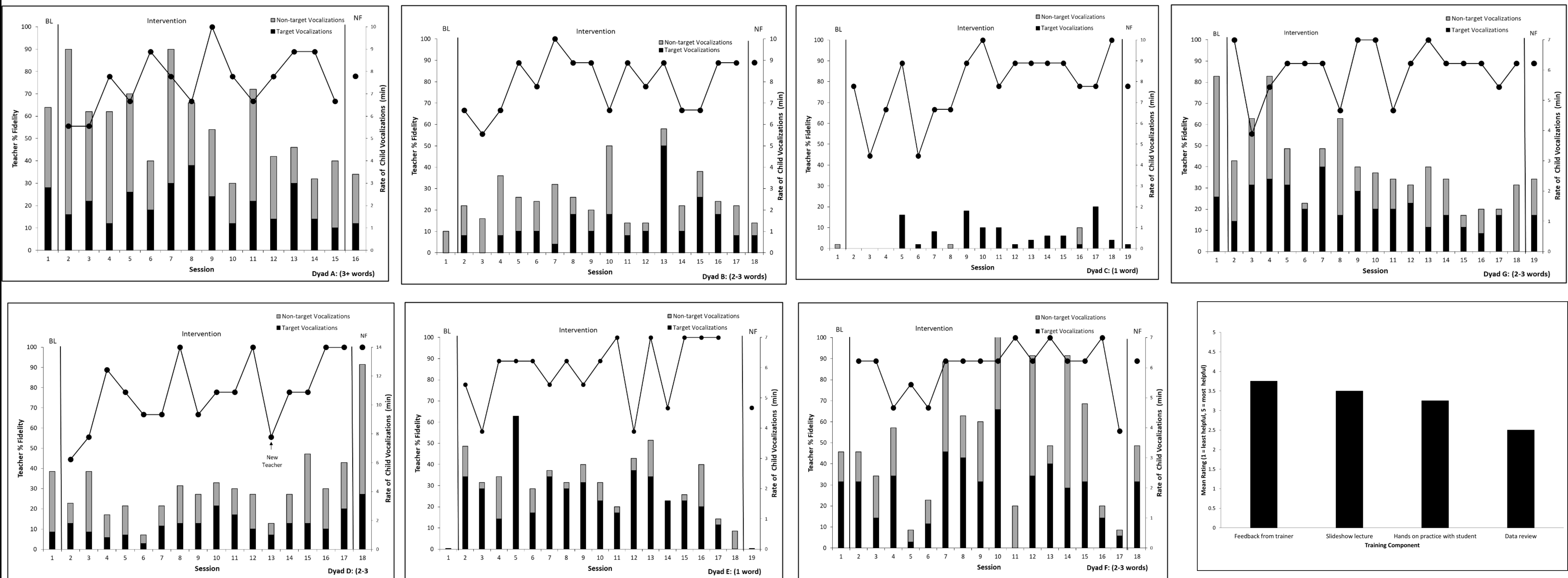


Hands on Practice
(Days 2-4)



Hands on Practice +
Data Review
(Day 5)

Behavioral skills training effectively improved and maintained teachers' implementation of communication strategies, and while student communication outcomes varied, teachers reported high satisfaction and confidence in using the strategies.



Note. Figures 1-7 depict non-target vocalizations and target vocalizations responding for teacher/student dyads. NF = no feedback

Note. Figure 8 depicts the social validity survey results and what training component was most helpful.

DATA ANALYSIS/RESULTS

- Teacher's fidelity of implementation increased following behavioral skills training and was maintained after in-vivo feedback was removed.
- Child outcomes while participating in camp were mixed. Seven students demonstrated increase in overall vocalizations following training
- Social validity survey outcomes show that teachers reported feeling satisfied with the training, proficient in the strategies and comfortable

DISCUSSION

- Project methods were socially valid for teacher participants and provided an opportunity for hands-on-practice of trained skills
- While outcomes were mixed, increases in shared engagement and teacher use of skills in sessions could have reduced opportunities for child vocalizations.
- More research is needed on effective, efficient, and socially valid training methods to support teachers in teaching social communication.
- Teachers requested training in challenging behavior management.

Key takeaways for engaged scholarship:

- Collaborate with community partners frequently and early to identify meaningful goals and support social validity as it is central to success
- Engaged stakeholders allows interventions to be responsive and feasible.
- Behavior change intervention have a better success rate when they are developed by interpreters to meet the needs of individuals and use them in daily routines.
- Community engaged scholarship emphasizes the ongoing improvement and data-based decision making.