

# Impact of Peer-Implemented Milieu Teaching Strategies on the Communication Skills of Young Children with Autism Spectrum Disorder

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The Shape of Behavior

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## Introduction

- In a joint position statement, the Division of Early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC) stated that early childhood inclusion "reflects a reaction against previous educational practices of separating and isolating children with disabilities (DEC/NAEYC, 2009, p.1)
- When participating in effective inclusive programs, many children with disabilities achieve IEP objectives, gain skills across all developmental domains, and interact with peers with disabilities (Cross, Traub, Hutter-Pishgahi & Shelton, 2004).
- However, in the absence of intentional and individualized instructional strategies, child gains in skill developmental as well as increased social interaction may not occur (Bricker, 2000; Brown & Bergen, 2002; Hamilton, 2005; Hanline & Correar-Torres, 2012).
- Educators can create an effective inclusive environment by implementing intensive instruction in the natural environment through the use of naturalistic teaching strategies (Etscheidt, 2006; Harrower & Dunlap, 2001; Odom, 2000).
- Milieu teaching represents one example of naturalistic teaching. Milieu teaching is a package of behaviorally-based strategies (model, mand-model, time delay, and incidental teaching) that address communication skills and are implemented by natural partners in normally-occurring daily routines (Kaiser & Grim, 2006).
- Milieu teaching has been effectively implemented by parents (Alpert & Kaiser, 1992; Hemmeter & Kaiser, 1994; Kaiser, Hemmeter, Ostrosky, Albert, & Hancock, 1995; Peterson, Carta, & Greenwood, 2005), teachers (Rodi & Hughes, 2000), and siblings (Hancock & Kaiser, 1996).

## Research Questions

1. Do peer-implemented milieu strategies positively impact the communication skills of young children with ASD?
2. Will improvements in communication skills of young children with ASD be maintained over time?

## Method

- **Design**  
Single-subject multiple-baseline design across three participants
- **Participants**  
KB, 5yrs. 2 mo., GARS-R 30, AI 100  
BN, 5yrs. 6 mo., GARS-R 36, AI 113  
DN, 5yrs. 9 mo., GARS-R 41, AI 124
- **Setting**  
Charter school serving children, ages 3-6, with disabilities, and children, ages 4-5, participating in a state-funded voluntary preschool program
- **Materials**  
Therapy room  
2 sets of age-appropriate toys
- **Independent Variable**  
Milieu teaching strategies:  
model, mand-model, time-delay, and incidental teaching
- **Dependent Variable**  
Prompted and spontaneous requests to peer
- **Timeline**  
2 observations per week for 10 minutes, across baseline and intervention phases.  
Maintenance data was collected 4 weeks following the intervention phase.

## Discussion

- Peer-implementation of milieu strategies appeared to have a positive impact on spontaneous requests made to peers.
- In addition, the use of milieu strategies by children without disabilities appeared to increase the opportunities for social interaction between those children and children with ASD.
- Peer-implemented milieu strategies may be an effective means of providing individualized instruction to children with ASD in an inclusive early childhood setting as well as providing opportunities for interaction between those children and their peers without disabilities.

### Limitations of this research include:

- Researchers measured only one general communication objective;
- Researchers collected data in only one setting, a therapy room, rather than the classroom, a more natural environment; and
- Researchers did not collect generalization data.

### Future research related to this topic may include:

- The elements of effective peer training regarding milieu strategies;
- The effectiveness of peer-implementation of milieu strategies within the classroom and across multiple daily routines; and
- The generalization of both the peer-implementation of milieu strategies and the spontaneous demonstration of communication targets by participants with ASD.

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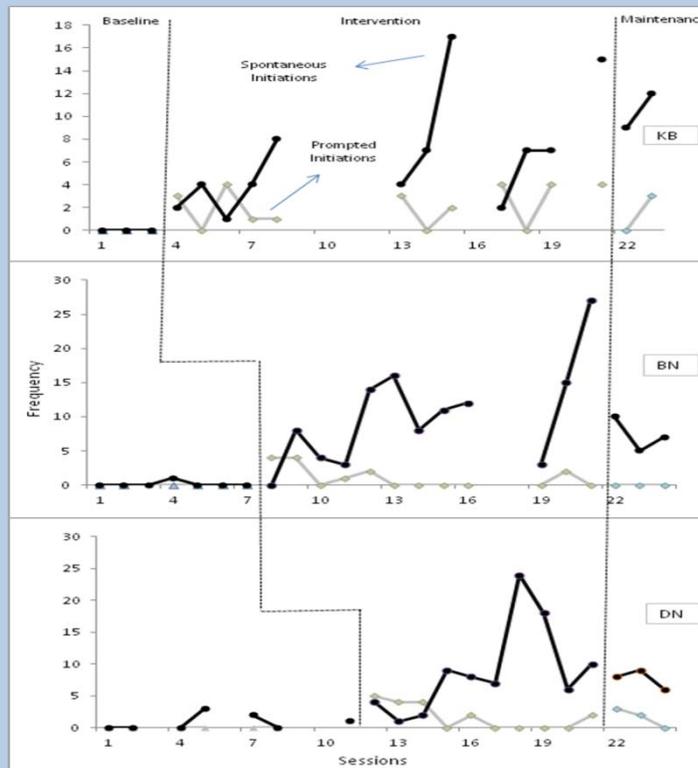


Fig. 1. Number of Spontaneous (black circles) and Prompted (grey diamonds) initiations across participants during Peer-Implemented Milieu Teaching

## Results

- Given brief training, children without disabilities were able to implement milieu strategies when interacting with a peer with ASD.
- After implementation of the intervention, the participants with ASD increased the rate of spontaneous requests directed at a peer.
- Four weeks following the intervention, participants with ASD maintained these results.