

Module: Peer-Mediated Instruction and Intervention (PMII)

Steps for Implementation: PMII for Early Childhood

Neitzel, J. (2008). *Steps for implementation: PMII for early childhood*. Chapel Hill, NC: The National Professional Development Center on ASD, FPG Child Development Institute, UNC-Chapel Hill.

PMII for early childhood includes the following steps.

Step 1. Selecting Peers

The first step in implementing peer initiation training is to select the peer or peers who will be involved in the interactions with the focal child. Selected peers should:

- exhibit good social skills, language, and age-appropriate play skills;
- be well-liked by other peers;
- have a positive social interaction history with the focal child;
- be generally compliant with adult directives;
- attend to an interesting task or activity for 10 minutes;
- be willing to participate; and
- attend school on a regular basis (Strain & Odom, 1986; Sasso et al., 1998).

Step 2. Training and Supporting Peers

Peer training typically takes place in a quiet area of the classroom where all of the needed materials are organized and close at hand and involves a series of phases. *The first phase* (Step 2a) of the training process is to teach the pre-selected peers to recognize and appreciate individual differences. For example, practitioners talk to peers about similarities and differences (e.g., how we are the same and different in appearance, likes/dislikes, needs, abilities) and explain how we often learn from each other in the classroom (e.g., games, songs, movements). During this initial phase, peers also are given a brief overview of the similarities and differences of children with ASD. This discussion will vary in content based upon the ages of the peers. For instance, in preschool the discussion will be very concrete and will focus on observable behaviors (e.g., "Taylor needs help learning how to play with other kids, so we are going to teach him how."). For school-age children, more detail about the specific characteristics of children with ASD can be given; however, the discussion should continue to focus on providing examples and observable behaviors.

The second phase (Step 2b) focuses on training and supporting peers by introducing specific strategies one at a time and then practicing them with the adult trainer. Peers are taught to take part in the intervention during daily training sessions and may require four or five sessions to reliably learn the initiation strategies (Strain & Odom, 1986). Peers learn specific behaviors that are used to facilitate play and social interaction during learning activities. These behaviors include:

Module: Peer-Mediated Instruction and Intervention (PMII)

- organizing play (making suggestions for play activity, role, or other play for peers);
- sharing (offering, giving, or accepting a play material to/from focal child);
- providing assistance (helping focal child to complete a task, get on play equipment, or respond to requests for assistance); and
- providing affection and praise through hugging, putting arms around, patting, holding hands, shaking hands (Odom et al., 1993; Strain & Odom, 1986).

After the teachers describe the skills, they demonstrate the skill in a role play with one of the peers. Other peers watch and identify when the teacher uses the skill in the demonstration. The adult then has the child use the skill in a role play with one of the other peers in the group. Prompts or suggestions are provided to the peers as necessary. Adults also provide subtle reinforcements (e.g., pats on the back, thumbs up) during the practice session to encourage the peers' use of the strategies. At the end of the practice session, adults provide more explicit reinforcement and feedback (e.g., "I liked the way you handed me the block to put on the tower you were building") so that children are motivated to continue participation (Timler, Vogler-Elias, & McGill, 2007).

Step 3. Peer and Focal Child Interaction in a Structured Play Setting

In the initial training sessions, only peers are included. To help peers practice skills further, they then participate in structured play sessions with the focal child. In daily play sessions that last approximately five to eight minutes, the teacher introduces the play activity, provides prompts to the peer, and reinforces behavior as necessary. At the conclusion of the activity, children can then go on to another setting or remain in the activity if they wish. Once peers have become proficient, teachers implement daily activities with the focal child and peers with reduced prompting and reinforcement.

Step 4. Implementing in Classroom Settings

When planning and implementing peer-mediated interactions within classrooms, several factors should be addressed to promote the success of the activities: (1) classroom arrangement, (2) material selection, (3) identification of responsible staff, and (4) the use of prompts and reinforcement.

Classroom arrangement. Peer-initiated learning activities should be a part of the daily schedule and should take place at approximately the same time each day in a relatively quiet area of the classroom that is free from distractions. At least 15 minutes should be allowed for each play session, including the transition to and from the activity. Play activities should not take place during preferred activities such as outdoor play that could interfere with the peers' motivation to participate. Having a consistent time and place for these activities will help children with ASD transition to the activity more smoothly and will increase the likelihood that social interactions will occur because they will know what is expected of them. As children become more proficient and as interactions become more naturalistic, peer-initiation strategies can take place in all classroom routines and activities, both planned and spontaneous.

Material selection. One way to increase peer interactions and social engagement is to limit the play materials to items that (1) contain a specific theme for each play session (e.g.,

Module: Peer-Mediated Instruction and Intervention (PMII)

blocks, prop box), (2) include an element of sociodramatic play, (3) may require assistance in operating, and (4) are not normally available in the classroom. Specific activities and materials that promote social interaction between peers and children with ASD include the following:

- sand table,
- birthday party prop box,
- doll house and people,
- building a road with cars and trucks,
- car garage,
- doctor,
- farm animals and blocks,
- grocery store,
- play-doh,
- puppet show,
- puzzles, and
- zoo animals (Odom et al., 1993).

These types of activities encourage sharing, exchanging of materials, and other social behaviors that children with ASD often need to develop.

Identification of responsible staff. During the play sessions, one staff member in the classroom should be consistently responsible for running and supervising play. This adult will (1) train peers, (2) implement the learning activities, and (3) observe child progress.

Use of prompts and reinforcement. The use of prompts and reinforcement is essential to the success of peer initiation training. When prompting social exchanges, practitioners should use the following guidelines:

1. **Observe children to identify non-interaction.**
When there has been no interaction between the focal child and peers for 30 seconds, a prompt should be provided.
2. **Provide a prompt to the peer or the focal child to begin an interaction or respond to an initiation.**

Prompting often involves cueing the peers to use the strategies through the use of explicit instructions (e.g., suggest a game to play, "Try talking about Taylor's animals"), more subtle verbal instructions (e.g., "It's your turn to talk," "Try again"), picture cues (e.g., a drawing of two children talking), or gestures such as signaling the peer to move closer to the focal child (Goldstein, Schneider, & Thiemann, 2007). If the child does not respond to the prompt within 10 seconds, repeat the prompt again and provide physical guidance (Ostrosky et al., 1990).

As peers become more proficient at engaging children with ASD in play, practitioners can withdraw their use of prompts and reinforcement. If the peers and focal children are engaging in relatively few social interactions, practitioners should temporarily increase the use of prompting and reinforcement to ensure that social interactions are occurring with a high level of frequency.

Module: Peer-Mediated Instruction and Intervention (PMII)

Gradual withdrawal of prompts and reinforcement will allow practitioners to periodically assess the progress of individual children.

Step 5. Extending Initiations Across the Day

The final phase of the implementation process is to extend initiations across the day so that the focal children can begin to generalize skills. This can be accomplished through the use of two strategies: (1) embedded intervention and (2) classwide peer buddy system.

With an embedded intervention approach, instruction is provided within child-initiated, naturalistic, and contextualized interactions. For example, a teacher might seat a trained peer next to the focal child during a small group art activity with a limited number of materials to promote social interactions. The peer could be prompted to ask the child with ASD to pass the paint or assist the child in gluing. Practitioners should plan to include peer initiation strategies within at least three classroom routines and activities per day. The use of an activity matrix may help practitioners organize the activities and provides a structure for making sure that the learning opportunities occur.

Child Activity Matrix

Activity	Target Skills			
	Ask to play	Exchange materials	Greet peer	Request item
Arrival			Say "hi" to peer	
Free play	Say "Play, please" to peer when entering an activity	Take toy from peer when offered a turn	Say "hi" to peer when entering an activity	Say "Turn, please" to peer
Snack		Take juice pitcher from peer when offered	Say "hi" to peer when sitting down for snack	Say "Juice/snack, please"
Small group activities		Painting with cars – take car from peer	Say "Hi" to peer when sitting down to paint with cars	Painting with cars – Say "Car/turn, please"
Outside	Say "Play, please" in sandbox	Take shovel from peer in sandbox	Say "hi" to peer when going to play in the sandbox	Say "Shovel/bucket, please" in sandbox
Large group time		Take instrument basket from peer during music time		Say "Turn, please" to peer at music time to request instrument basket
Departure			Say "Bye" to peer	
Adapted with permission from Sandall, S. R., & Schwartz, I. S. (2002). <i>Building blocks for teaching preschoolers with special needs</i> . Baltimore: Brookes.				

Module: Peer-Mediated Instruction and Intervention (PMII)

A class-wide peer buddy system also can be used to increase the number of peers who interact with the focal child. With this approach, children in the class have different play partners each day. A chart can be created that displays pairs of children's names printed on individual cards. Each day, the cards are systematically rotated so that each child has the opportunity to buddy with a different peer. At "buddy time," children check the chart and find their name as well as the name of their buddy. During free play, children play with their buddies. Teachers prompt interactions as needed during this time. Prior to "buddy time," peers are taught the following skills:

- *Stay with your buddy.* Peers learn that they must stay with their buddy in the same area, playing and taking turns. However, they do not need to continually play with the same toys.
- *Play with your buddy.* Peers are taught to stay in the same area with their buddy and play with the same materials by joining in their buddy's activity, offering toys, and asking their buddy if they would like to play.
- *Talk to your buddy.* Peers are taught to (1) talk to their buddy about what they are playing with, (2) play pretend games, and (3) talk to each other while engaging in pretend play activities.

To increase motivation to participate, peers are told that if they stay with their buddy, play together, and talk to one another, they will be able to put their name in a box. Every day, a pair of names is pulled out of the box. The selected pair receives a special treat (e.g., candy, sticker, treasure, prize). This reinforcement strategy is withdrawn as children become more proficient at staying with their buddies (English, Goldstein, & Shafer, 1997; Laushey & Heflin, 2000).