

Module: Peer-Mediated Instruction and Intervention (PMII)

**Evidence-Based Practice Brief: Peer-Mediated Instruction
and Intervention (PMII)**

This evidence-based practice brief on peer-mediated instruction and intervention includes the following components:

1. **Overview, which gives a quick summary of salient features of the practice, including what it is, who it can be used with, what skills it has been used with, settings for instruction, and additional literature documenting its use in practice**
2. **Steps for Implementation, detailing how to implement the practice in a practitioner-friendly, step-by-step process**
 - a. **Early Childhood**
 - b. **Elementary, Middle, and High School**
3. **Implementation Checklist, to be used to monitor fidelity of the use of the practice**
 - a. **Early Childhood**
 - b. **Elementary, Middle, and High School**
4. **Evidence Base Summary, which details the NPDC-ASD criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for this practice**
5. **Peer-mediated instruction and intervention data collection sheets that can be used with young children as well as older students**
 - a. **Early Childhood**
 - b. **Elementary, Middle, and High School**
6. **Additional Resources**
 - a. **Early Childhood**
 - b. **Elementary, Middle, and High School**

Module: Peer-Mediated Instruction and Intervention

Overview of Peer-Mediated Instruction and Intervention

Neitzel, J. (2008). *Overview of peer-mediated instruction and intervention for children and youth with autism spectrum disorders*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina.

Peer-mediated instruction is used to teach typically developing peers ways to interact with and help learners with ASD acquire new social skills by increasing social opportunities within natural environments. With PMII, peers are systematically taught ways of engaging learners with ASD in social interactions in both teacher-directed and learner-initiated activities (English et al., 1997; Odom et al., 1999; Strain & Odom, 1986).

Evidence

PMII meets criteria for being an evidence-based practice within the early childhood and elementary age groups for promoting communication/language and social skills. Only one study met criteria in the middle/high school age group.

With what ages is PMII effective?

PMII can be implemented with pairs or small groups of learners across the age range. With young children (i.e., 3 to 8 years of age), practitioners can use peer-initiation training to help learners with ASD acquire communication/language and social skills. Social networking strategies are more appropriate for older learners (i.e., 9 to 18 years of age). PMII has been shown to have positive effects on academic, interpersonal, and personal-social development, and may be the largest and most empirically supported type of social intervention for learners with ASD (Bass & Mulick, 2007; Maheady, Harper, & Mallette, 2001; McConnell, 2002).

What skills or intervention goals can be addressed by PMII?

PMII targets social skills that include the following: responding to others, reciprocity, understanding others, and interacting with others or in groups.

In what settings can PMII be effectively used?

PMII has been used effectively in clinical and school-based settings across preschool to high school age groups. PMII is intended to be used as part of the daily curriculum through a balance of teacher-directed and learner-initiated interactions and activities.

Evidence Base

The studies cited in this section provide the basis upon which this practice was determined to meet the NPDC of ASD's criteria as an evidence-based practice. This list is not exhaustive; other quality studies may exist but were not included.

Module: Peer-Mediated Instruction and Intervention

Preschool

- Garfinkle, A. N., & Schwartz, I. S. (2002). Peer imitation: Increasing social interactions in children with autism and other developmental disabilities in inclusive preschool classrooms. *Topics in Early Childhood Special Education, 22*(1), 26-38.
- Goldstein, H., Kaczmarek, L., Pennington, R., & Shafer, K. (1992). Peer-mediated intervention: Attending to, commenting on, and acknowledging the behavior of preschoolers with Autism. *Journal of Applied Behavior Analysis, 25*, 289-305.
- Kohler, F. W., Strain, P. S., Hoyson, M., Davis, L., Donina, W. M., & Rapp, N. (1995). Using a group-oriented contingency to increase social interactions between children with autism and their peers: A preliminary analysis of corollary supportive behavior. *Behavior Modification, 19*, 10-32.
- Odom, S. L., & Strain, P. S. (1986). A comparison of peer-initiation and teacher-antecedent interventions for promoting reciprocal social interactions of autistic preschoolers. *Journal of Applied Behavior Analysis, 19*, 58-72.
- Sainato, D. M., Goldstein, H., & Strain, P. S. (1992). Effects of self-evaluation on preschool children's use of social interaction strategies with their classmates with autism. *Journal of Applied Behavior Analysis, 25*, 127-141.

Elementary and Middle School Age

- Blew, P. A., Schwartz, I. S., & Luce, S. C. (1985). Teaching functional community-based skills to autistic children using nonhandicapped peer tutors. *Journal of Applied Behavior Analysis, 18*, 337-342.
- Garrison-Harrell, L., & Kamps, D. (1997). The effects of peer networks on social-communicative behaviors for students with autism. *Focus on Autism and Other Developmental Disabilities, 12*(4), 241-255.
- Haring, T. G., & Breen, C. G. (1992). A peer-mediated social network intervention to enhance the social integration of persons with moderate and severe disabilities. *Journal of Applied Behavior Analysis, 25*, 319-334.
- Laushey, K. M., Heflin, L. J. (2000). Enhancing social skills of kindergarten children with autism through the training of multiple peers as tutors. *Journal of Autism and Developmental Disabilities, 30*, 183-193.
- Lee, S., & Odom, S. L. (1996). The relationship between stereotypic behavior and peer social interactions for children with severe disabilities. *The Journal of the Association for Persons with Severe Handicaps, 21*, 88-95. (Previously published in Korean.)

Module: Peer-Mediated Instruction and Intervention

Lee, S., Odom, S. L., & Loftin, R. (2007). Social engagement with peers and stereotypic behavior of children with autism. *Journal of Positive Behavior Intervention, 9*, 67-79.

Thiemann, K. S., & Goldstein, H. (2004). Effects of peer training and written text cueing on social communication of school-age children with pervasive developmental disorder. *Journal of Speech, Language, and Hearing Research, 47*(1), 126-144.

Selected Additional References

Bass, J. D., & Mulick, J. A. (2007). Social play skill enhancement of children with autism using peers and siblings as therapists. *Psychology in the Schools, 44*(7), 727-735.

Carter, E. W., & Hughes, C. (2007). Social interaction interventions: Promoting socially supportive environments and teaching new skills. In S. L. Odom, R. Horner, M. Snell, & J. Blanche. (Eds.), *Handbook of developmental disabilities* (pp. 310-328). NY: Guilford Press.

Carter, E. W., & Kennedy, C. H. (2006). Promoting access to the general curriculum using peer support strategies. *Research and Practice for Persons with Severe Disabilities, 31*(4), 284-292.

Dugan, E., Kamps, D., Leonard, B., Watkins, N., Rheinberger, A., & Stackhaus, J. (1995). Effects of cooperative learning groups during social studies for students with autism and fourth-grade peers. *Journal of Applied Behavior Analysis, 28*, 175-188.

English, K., Goldstein, H., Shafer, K., & Kaczmarek, L. (1997). Promoting interactions among preschoolers with and without disabilities: Effects of a buddy skills-training program. *Exceptional Children, 63*(2), 229-243.

Goldstein, H., Schneider, N., & Thiemann, K. (2007). Peer-mediated social communication intervention: When clinical expertise informs treatment development and evaluation. *Topics in Language Disorders, 27*(2), 182-199.

Kamps, D. M., Leonard, B. R., Vernon, S., Dugan, E. P., Delquadri, J. C., Gershon, B., Wade, L., & Folk, L. (1992). Teaching social skills to students with autism to increase peer interactions in an integrated first-grade classroom. *Journal of Applied Behavior Analysis, 25*, 281-288.

Kamps, D. M., Potucek, J., Lopez, A. G., Kravits, T., & Kemmerer, K. (1997). The use of peer networks across multiple settings to improve social interaction for students with autism. *Journal of Behavioral Education, 7*(3), 335-357.

Maheady, L., Harper, G. F., & Mallette, B. (2001). Peer-mediated instruction and interventions and students with mild disabilities. *Remedial and Special Education, 22*(1), 4-14.

McConnell, S. R. (2002). Interventions to facilitate social interaction for young children with autism: Review of available research and recommendations for educational intervention and research. *Journal of Autism and Developmental Disorders, 32*(5), 351-372.

Module: Peer-Mediated Instruction and Intervention

- Odom, S. L., McConnell, S. R., Ostrosky, M., Peterson, C., Skellenger, A., Spicuzza, R., Chandler, L. K., McEvoy, C. A., & Favazza, P. C. (1993). *Play time/social time: Organizing your classroom to build interaction skills*. Tucson, AZ: Communication Skill Builders.
- Odom, S. L., McConnell, S. R., McEvoy, M. A., Peterson, C., Ostrosky, M., Chandler, L. K., Spicuzza, R. J., Skellenger, A., Creighton, M., & Favazza, P. C. (1999). Relative effects of interventions supporting the social competence of young children with disabilities. *Topics in Early Childhood Special Education, 19*(2), 75-91.
- Ostrosky, M., Chandler, L., Odom, S. L., McConnell, S. R., & Peterson, C. A. (1990). *Comprehensive intervention manual*. Vanderbilt-Minnesota Social Interaction Project, Minneapolis, MN: University of Minnesota.
- Pierce, K., & Schreibman, L. (1995). Increasing complex social behaviors in children with autism: Effects of peer-implemented pivotal response training. *Journal of Applied Behavior Analysis, 28*, 285-295.
- Rogers, S. J. (2000). Interventions that facilitate socialization in children with autism. *Journal of Autism and Developmental Disorders, 30*(5), 399-409.
- Sandall, S. R., & Schwartz, I. S. (2002). *Building blocks for teaching preschoolers with special needs*. Baltimore: Brookes Publishing Company.
- Sasso, G. M., Mundschenk, N. A., Melloy, K. J., & Casey, S. D. (1998). A comparison of the effects of organismic and setting variables on the social interaction behavior of children with developmental disabilities and autism. *Focus on Autism and Other Developmental Disabilities, 13*(1), 2-16.
- Strain, P. S., & Odom, S. L. (1986). Peer social initiations: effective intervention for social skills development of exceptional children. *Exceptional Children, 52*, 543-551.
- Thiemann, K. (2007). *Effective instructional practices for teaching students with ASD in the classroom*. Autism Spectrum Disorders-School Support Program, McMaster Children's Hospital, Ottawa, Ontario, Canada, July 9, 2007.
- Theimann, K. S., & Goldstein, H. (2001). Social stories, written text cues, and video feedback: Effects on social communication of children with autism. *Journal of Applied Behavior Analysis, 34*, 425-446.
- Timler, G. R., Vogler-Ellis, D., & McGill, K. F. (2007). Strategies for promoting generalization of social communication skills in preschoolers and school-aged children. *Topics in Language Disorders, 27*(2), 167-181.
- Utley, C. A., Mortweet, S. L., & Greenwood, C. R. (1997). Peer-mediated instruction and interventions. *Focus on Exceptional Children, 29*, 1-23.

Module: Peer-Mediated Instruction and Intervention

Evidence Base for Peer-Mediated Instruction and Intervention

The National Professional Development Center on ASD has adopted the following definition of evidence-based practices.

To be considered an evidence-based practice for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals using:

- *randomized or quasi-experimental design studies*. Two high quality experimental or quasi-experimental group design studies,
- *single-subject design studies*. Three different investigators or research groups must have conducted five high quality single subject design studies, or
- *combination of evidence*. One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups (across the group and single subject design studies).

High quality randomized or quasi experimental design studies do not have critical design flaws that create confounds to the studies, and design features allow readers/consumers to rule out competing hypotheses for study findings. High quality in single subject design studies is reflected by a) the absence of critical design flaws that create confounds and b) the demonstration of experimental control at least three times in each study.

This definition and criteria are based on the following sources:

Horner, R., Carr, E., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single subject research to identify evidence-based practice in special education. *Exceptional Children, 71*, 165-180.

Nathan, P., & Gorman, J. M. (2002). *A guide to treatments that work*. NY: Oxford University Press.

Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. D., Thompson, B., & Harris, K. (2004). *Quality indicators for research in special education and guidelines for evidence-based practices: Executive summary*. Arlington, VA: Council for Exceptional Children Division for Research.

Rogers, S. J., & Vismara, L. A. (2008). Evidence based comprehensive treatments for early autism. *Journal of Clinical Child and Adolescent Psychology, 37*(1), 8-38.

Using these criteria, the empirical studies that follow provide documentation for supporting peer mediated instruction and intervention as an evidence-based practice. This list is not exhaustive; other quality studies may exist that were not included.

Module: Peer-Mediated Instruction and Intervention

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- Garfinkle, A. N., & Schwartz, I. S. (2002). Peer imitation: Increasing social interactions in children with autism and other developmental disabilities in inclusive preschool classrooms. *Topics in Early Childhood Special Education, 22*(1), 26-38.
- Goldstein, H., Kaczmarek, L., Pennington, R., & Shafer, K. (1992). Peer-mediated intervention: Attending to, commenting on, and acknowledging the behavior of preschoolers with Autism. *Journal of Applied Behavior Analysis, 25*, 289-305.
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Elementary and Middle School Age

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Module: Peer-Mediated Instruction and Intervention

Lee, S., Odom, S. L., & Loftin, R. (2007). Social engagement with peers and stereotypic behavior of children with autism. *Journal of Positive Behavior Intervention, 9*, 67-79.

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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, Frank Porter Graham Child Development Institute, The University of North Carolina.

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.

Module: Peer-Mediated Instruction and Intervention (PMII)

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., 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).

Module: Peer-Mediated Instruction and Intervention (PMII)

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. 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) class wide 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 from Sandall, S. R., & Schwartz, I. S. (2002). *Building blocks for teaching preschoolers with special needs*. 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).

Module: Peer-Mediated Instruction and Intervention (PMII)

Steps for Implementation: PMII for Elementary, Middle, and High School

Neitzel, J. (2008). *Steps for implementation: PMII for elementary, middle, and high school*. Chapel Hill, NC: The National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina.

PMII for learners in elementary, middle, and high school includes the following steps.

Step 1. Selecting Peers

The first step in implementing peer social networks is to initially select peers who will provide social support to the focal student. Selected peers should:

- exhibit good social skills, language, and be well-liked by peers;
- have similar schedules or academic groupings as the focal child; and
- express a willingness to participate.

Teachers also should obtain parent permission, particularly if organized social events take place after school. At least six peers should be selected by teachers to participate so that peer/focal student dyads can be rotated. Teachers should plan to include one to two peers in the peer social network activities for a minimum of three to four months to promote acquisition of skills. After this time period, additional peers can be included to promote generalization of skills (Carter & Kennedy, 2006; Thiemann, 2007; Utley, Mortweet, & Greenwood, 1997).

Step 2. Training Peers

The specific content of the peer training sessions will vary according to the age of the students. The specific activities for training elementary, middle school, and high school students are provided below.

Elementary school. The initial training sessions with elementary school students should take place in an area of the classroom that is quiet and free from distraction. During the training sessions, peers learn specific behaviors that are used to facilitate social interactions during structured activities. They include the following:

- initiating interactions,
- responding to initiations,
- keeping an interaction going,
- starting and engaging in conversations (e.g., greetings, topics),
- giving and accepting compliments,
- taking turns and sharing,

Module: Peer-Mediated Instruction and Intervention (PMII)

- helping others and asking for help, and
- including others in activities (Kamps et al., 1992; Thiemann, 2007; Thiemann & Goldstein, 2001).

Appreciating individual differences. At the beginning of the training session, the adult trainer teaches the pre-selected peers to recognize and appreciate individual differences. For example, teachers engage the peers in a brief discussion about individual differences and similarities that exist between peers and the focal student. At this time, the teacher also provides descriptions of the focal students including their level of communication, likes, and dislikes.

Identifying preferred activities of focal student. Teachers then engage peers in a discussion about the specific games and activities that the focal student enjoys. Preferred activities will most likely become the activities in which peer support will be provided. Teachers can use a dry-erase board or chart paper to record a list of these preferred activities as well as the possible social interactions that could occur between the peers and the focal student.

Generating scripts for interactions with focal student. Teachers should encourage peers to generate words or phrases that they can say during these preferred activities that match the target skills (responding to peers, maintaining conversations and interactions with peers, initiating interactions) for focal students. These phrases are written on a skill sheet with a label of the target skill at the top, and a picture of two students with topic bubbles. The phrases or words are written in the topic bubbles. A list of prompts and models that might be necessary to promote social interactions also can be generated by teachers and peers at this time (Sasso et al., 1998). The target skill sheets can be placed in the activity area to provide a “script” for the interaction and provides peers and the focal student with information about what to do, what to say, and how to respond. Scripts can be particularly helpful with school-aged students because they help them organize social information while also providing continuous access to ideas, comments, and questions related to the activity.

After the initial brainstorming session, peers are taught to “look, wait, and listen.” This approach allows the focal student time to initiate and/or respond to a peer. The teacher then role plays with a peer to provide an example of how to use the skill in an activity. Peers also have the opportunity to role play with one another to further practice the use of the target skill. Following each role play, the teacher provides feedback and reinforcement for participating in the activity (Garrison-Harrell, Kamps, & Kravits, 1997; Haring & Breen, 1992; Pierce & Schreibman, 1995; Thiemann, 2007).

Middle and high school. Because middle and high school students do not remain in one classroom for the entire day and they often have different teachers for specific subjects, a special educator may be the most appropriate person to implement the peer support network interventions. Training middle and high school students involves less direct instruction by the special educator and more active participation in the development of peer network interventions. During initial training sessions, peers are provided with (1) the goals for this intervention and the rationale for their involvement in the intervention activities (to help focal student respond to peers, maintain conversations and interactions with peers, and initiate interactions with peers); (2) an overview of what is expected of them during their interactions with the focal student; and

Module: Peer-Mediated Instruction and Intervention (PMII)

(3) information about how students with ASD communicate, interact with their environment, and learn (Carter & Kennedy, 2006). The special educator also may provide descriptions of the focal student's likes and dislikes.

Next, special educators describe basic strategies peers can use to support the focal student during social interactions. These strategies include:

- providing frequent, positive feedback;
- modeling contextually relevant communication skills; and
- facilitating interactions with other peers (Carter & Kennedy, 2006).

Special educators should model the use of these strategies with peers at this time. Peers also can role play with one another to practice skills.

At the conclusion of the activity, the special educator and peers discuss when and where the focal student may need support from peers to engage in social exchanges with others. For instance, peers write down their daily class schedules and match them with the focal student's schedule. A schedule of interactions then is developed based upon the times the focal student needs additional support and when one of the peers is available to provide this support. The special educator and peers also identify methods for prompting and reinforcing the focal student's social interactions. Peers then are provided with a notebook that they will use to record anecdotal information following each intervention activity. The information that peers include in their notebooks will be used during weekly meetings to problem-solve how to further support the focal student as well as ways in which the intervention can be improved. The initial training may occur over two to four class periods, depending on the support needs of the focal student as well as the school activities that will serve as the context for implementing the interventions (Carter & Kennedy, 2006; Haring & Breen, 1992).

Step 3. Supporting Peers

Another important step in the implementation process is to provide ongoing support and feedback to peers. Similar to the training component of the intervention, follow-up support for peers will vary according to the age of the students. The following discussion describes how teachers and other professionals can support peers at different ages.

Elementary school. After the initial training sessions, specific strategies (providing frequent, positive feedback; modeling contextually relevant communication skills; and facilitating interactions with other peers) that can be used to support the focal student during social interactions are modeled during a planned activity involving peers and the focal student. Teachers also make any individualized curricular and instructional adaptations that are needed for the focal student to participate fully. For example, the teacher may provide the focal student with a "script" that was developed by peers prior to the intervention activity. As peers become more proficient at supporting the focal student during daily activities, teachers decrease their level of involvement. This allows peers to assume the primary role of providing social support to the focal student (e.g., clarifying instructions, offering choices, supporting participation at lunch

Module: Peer-Mediated Instruction and Intervention (PMII)

or recess). Peers may continue to need occasional prompting, however, to interact with the focal student during peer social network activities (Carter & Hughes, 2007).

Middle and high school. Weekly problem-solving meetings are the primary ways in which special educators provide ongoing support and feedback to peers. Classroom teachers also may be included if the peer support interventions are being implemented during their class period. The purpose of these activities is to encourage peer involvement and input as well as minimize the special educator's role in the scheduling and identification of interaction strategies. Special educators conduct the sessions; however, peers are actively involved through open discussion, problem-solving, and sharing of anecdotal information from their notebooks (Carter & Hughes, 2007). A standard format is recommended to help organize each session and includes the following:

- assess the previous week's interactions through an open discussion among the special educator, teachers, and peers;
- modify the interaction schedule as needed by peer written and spoken feedback;
- identify target skills for focal student that will be addressed;
- discuss strategies that can be used by peers to facilitate social interactions between focal student and peers;
- role play or model strategies as needed;
- assess informally the satisfaction of peers regarding the network meetings and responsibilities; and
- reinforce peers' participation through verbal praise, letters home, and occasional group social activities such as having pizza for lunch (Haring & Breen, 1992).

Step 4. Implementing in Classroom Settings and Throughout the Day

When planning and implementing peer-mediated interactions with older children and adolescents, several factors should be addressed to promote the success of peer social networks. They include the following:

- creating a supportive social environment,
- providing classroom learning opportunities,
- monitoring social interactions, and
- using prompts and reinforcement.

Supportive social environment. When implementing a peer social network approach in classrooms, teachers and other practitioners should focus on creating a social environment that supports peer to peer interactions. For example, teachers should keep peer social groups small (e.g., one to two peers), but continually rotate the peers included in the activities to promote generalization of skills. Seating trained peers next to the focal student during whole-class and small group activities increases the likelihood that interactions with peers will occur.

Learning opportunities. Peer social networking activities can occur throughout the school day; however, some activities are more likely to support positive social interactions than others. For

Module: Peer-Mediated Instruction and Intervention (PMII)

example, ongoing classroom activities that are particularly conducive to supporting social interactions include the following:

- small academic groups such as math and reading;
- class centers such as calendar and money activities, computers, puzzles;
- special areas such as physical education and library;
- card games such as memory and matching games, Go Fish, Uno; and
- board games such as Trouble, Kerplunk, and Don't Break the Ice (Kamps et al., 1997; Thiemann, 2007).

Lunch also is an appropriate time to incorporate peer social networks. However, specific materials and supports must be provided to the focal student and peers in order to successfully facilitate interactions. For example, peers can help teachers generate topic cards that they can use to start conversations with the focal student. Topics should be age-appropriate and focused on the interests of the focal student to promote optimal interactions. Other materials that can be used during lunch time to increase peer social interactions include the following:

- open-ended topic starters,
- funny photos or pictures,
- magazines,
- restaurant guides,
- photos taken by peers to use as topic starters, and
- school subject/events topic cards (Thiemann, 2007).

Peer social networks also can be used to promote social interactions at recess. Activities such as four square, basketball, Monkey in the Middle, Frisbee, and map games are very appropriate activities for supporting peer interactions.

Monitoring social interactions. As peers assume the responsibility of providing ongoing support to the focal student, teachers should frequently monitor interactions and provide periodic feedback and assistance. This support will ensure that the adaptations, assistance, and interactions taking place are appropriate and relevant for the focal student. Feedback should be provided to peers at the end of each activity, class period, or during weekly problem-solving meetings.

Use of prompts and reinforcement. The use of prompts and reinforcement is integral to the success of peer social networks and promotes sustainable social interactions across time. With the peer social network approach, prompting and reinforcement are primarily provided by peers to the student with ASD. As such, teachers must focus on teaching peers how and when to deliver specific prompts and reinforcement to the focal student when they are needed. For example, teachers instruct peers to observe focal students during an activity and provide the necessary prompts if they do not interact with a peer or respond to another student's social initiations.

Module: Peer-Mediated Instruction and Intervention (PMII)

During peer social network activities, prompting may involve cueing the focal student with general verbal prompts while pointing to a written-text or picture cue (e.g., “Mary, what can you say?”). Written-text and picture cue cards prompt social behavior by displaying pictures of students interacting through the use of controlled, short phrases written at the focal student’s reading and vocabulary level. The cue cards are functional, age-appropriate, and directly related to target skill for each activity. These prompts are particularly useful with this age group because they are portable and are available to peers throughout the activity.

As the focal student is better able to interact with others, teachers direct peers to withdraw their use of prompts. This withdrawal of prompts is done under the direct supervision of the teacher or special educator. If the focal student is engaging in relatively few social interactions, practitioners should instruct peers to temporarily increase the use of prompting and reinforcement to ensure that social interactions are occurring with a high level of frequency. 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 peer social networks across the day so that students with ASD can begin to generalize skills. Teachers should focus on extending peer social network activities across the day in activities that

- occur in natural settings (e.g., recess, lunch, centers, games),
- occur in a minimum of two to three different routines each day,
- contain a choice of two activities during each session (both peers and the learners with ASD should be given opportunities to choose an activity each day),
- use five to eight games rotated every three to four months to promote generalization,
- keep the same group of four to six trained peers to promote interpersonal connections and friendships,
- are social in nature, and
- last a minimum of 10 minutes (Kamps et al., 1997; Thiemann, 2007).

The sample activity planning form helps teachers and special educators organize the focal student’s daily schedule and identifies where additional support is needed by the student to engage in social interactions with peers.

Module: Peer-Mediated Instruction and Intervention (PMII)

Implementation Checklist for PMII: Early Childhood

Neitzel, J. (2008). *Implementation checklist for PMII: Early childhood*. Chapel Hill, NC: The National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina.

Instructions: The Implementation Checklist includes each step in the PMII process. Please complete all of the requested information including the site and state, individual being observed/interviewed, and the learner's initials. To assure that a practice is being implemented as intended, an observation is *always* preferable. This may not always be possible. Thus, items may be scored based on observations with the implementer, discussions and/or record review as appropriate. Within the table, record a 2 (implemented), 1 (partially implemented), 0 (did not implement), or NA (not applicable) next to each step observed to indicate to what extent the step was implemented/addressed during your observation. Use the last page of the checklist to record the target skill, your comments, whether others were present, and plans for next steps for each observation.

Site: _____ State: _____

Individual(s) Observed: _____ Learner's Initials: _____

Skills below can be implemented by a practitioner, parent, or other team member

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Planning (Steps 1 – 2)									
Step 1. Selecting Peers	Score**								
1. Recruit multiple peers as peer buddies (4-5 per classroom, using selection guidelines).									
Step 2. Training and Supporting Peers									
1. Arrange the training session in a quiet area of the classroom or building.									
2. Have all materials for the lesson organized and close at hand.									
3. Teach pre-selected peers to recognize and appreciate individual differences including similarities and differences of ASD.									
4. Introduce a skill or strategy (e.g., organizing play, sharing, providing assistance) one at a time.									

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 2. Training and Supporting Peers (cont.)	Score**								
5. After describing the skills, demonstrate one of them in a role play with a peer.									
6. Encourage the other peers to watch and identify when the teacher/practitioner uses the skill in the demonstration.									
7. Encourage peers to use the target skill in a role play with each other.									
8. Provide prompts or suggestions to the peers during the role play as necessary.									
9. Provide subtle reinforcement (e.g., pats on the back, thumbs up) during the practice session.									
10. At the end of the training session, provide more explicit reinforcement and feedback (e.g., "I liked the way you gave James a pat on the back when he handed you the block").									
<i>Intervention (Steps 3 – 4)</i>									
Step 3. Implementing a Structured Teaching Session									
1. Select 1-2 peers and 1-2 learners with ASD for the teaching session.									
2. Locate the teaching session in a specific area of the classroom/school with defined boundaries (e.g., sociodramatic play areas, block area).									

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 3. Implementing a Structured Teaching Session (cont.)	Score**								
3. Introduce the activity (e.g., describes ways to play, assigns roles if appropriate) to peers and learners with ASD.									
4. Provide prompts or suggestions to peers for using skills learned during the teaching session if the learner with ASD is not engaged in social interaction for a 30-second period.									
5. Conclude the activity after 5-10 minutes. Learners with ASD and peers can continue to participate in the activity if they want, but they also can go to other activities.									
6. Comment on peers' and learners' social engagement after the social interaction has ended (rather than during the social interaction, which tends to be disruptive).									
7. When peers and/or learners with ASD direct their social interaction and/or attention to the teacher/practitioner, redirect peers and learners with ASD to interact with one another.									
8. At the end of the session, review positive examples of peers' uses of the skill learned and/or other social behavior.									
Step 4. Implementing in Classroom and School Settings									
1. Plan daily opportunities for peers and learners with ASD to interact.									

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 4. Implementing in Classroom and School Settings (cont.)	Score**								
2. Plan for at least 15 minutes each day to implement peer-mediated intervention strategies.									
3. Peer-mediated activities take place at approximately the same time each day.									
4. Choose activities and materials that encourage social interactions (e.g., blocks, prop boxes, sand table) to implement peer-mediated intervention strategies.									
5. One staff member is consistently responsible for training peers, implementing peer-mediated activities, and observing learner progress.									
6. Prompt peers and learners with ASD to interact if there has been no interaction for at least 30 seconds.									
7. Prompts peers and learners with ASD to interact with one another when necessary by providing explicit instructions (e.g., "Try talking about what Taylor is doing with the cars") subtle verbal instructions (e.g., "It's your turn to talk"), picture cues, or gestures.									
8. Provide an initial prompt that is minimally intrusive. If the peer or learner with ASD does not respond within 10 seconds, the prompt is repeated or the intensity of the prompt is increased.									
9. Gradually fade of the use of prompts when peers and learners with ASD begin to interact spontaneously.									

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Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 5. Extending Initiations Throughout the Day	Score**								
1. Identify opportunities for the learner with ASD to engage in social interaction during natural activities and routines during the day.									
2. Assign different peers as peer buddies in 2-3 routines/activities during the day.									
3. Provide reminders to peer buddies to engage the learner with ASD in social interaction appropriate for the context (i.e., stay with your buddy, play with your buddy, talk with your buddy), when necessary.									
4. Provide the least level of support needed to promote students' social interaction.									

****Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable**

Module: Peer-Mediated Instruction and Intervention (PMII)

Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps

Module: Peer-Mediated Instruction and Intervention (PMII)

Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
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Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps

Module: Peer-Mediated Instruction and Intervention (PMII)

Implementation Checklist for PMII: Elementary, Middle, and High School

Neitzel, J. (2008). *Implementation checklist for PMII: Elementary, middle, and high school*. Chapel Hill, NC: The National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina.

Instructions: The Implementation Checklist includes each step in the PMII process. Please complete all of the requested information including the site and state, individual being observed/interviewed, and the learner’s initials. To assure that a practice is being implemented as intended, an observation is *always* preferable. This may not always be possible. Thus, items may be scored based on observations with the implementer, discussions and/or record review as appropriate. Within the table, record a 2 (implemented), 1 (partially implemented), 0 (did not implement), or NA (not applicable) next to each step observed to indicate to what extent the step was implemented/addressed during your observation. Use the last page of the checklist to record the target skill, your comments, whether others were present, and plans for next steps for each observation.

Site: _____ State: _____

Individual(s) Observed: _____ Learner’s Initials: _____

Skills below can be implemented by a practitioner, parent, or other team member

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer’s Initials								
Planning (Steps 1)									
Step 1. Selecting Peers					Score**				
1. Recruit multiple peers as peer buddies (4-5 per classroom, using selection guidelines).									
Intervention (Steps 2 – 5)									
Step 2. Training Peer									
1. Arrange the training session in a quiet area of the classroom or building.									
2. Have all of the materials for lesson organized and close at hand.									
3. Teach pre-selected peers to recognize and appreciate individual differences including similarities and differences of ASD.									

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

Observation	1	2	3	4	5	6	7	8
	Date							
	Observer's Initials							
Step 2. Training Peers (cont.)	Score**							
4. Talk with peers about the goals of and rationale for PMII as well as what is expected of them.								
5. Introduces target social skills for the learner with ASD.								
6. Engage peers in a discussion about specific games and activities that the learner with ASD enjoys. <i>For middle and high school students, the teacher/practitioner talks with peers about when and where learners with ASD may need support (e.g., at the beginning of class, during lunch, in the halls).</i>								
7. Encourage peers to generate scripts that can be used during activities that match the target skills for the learners with ASD.								
8. Teach peers how to look, wait, and listen. <i>For middle and high school students, the teacher/practitioner describes the basic strategies that can be used during social interactions.</i>								
9. Demonstrate the interaction skills in a role play with one of the peers.								
10. Encourage peers to use the skills in a role play with each other.								
11. Provide prompts or suggestions to the peers as necessary during the role play.								
12. Provide subtle reinforcement (e.g., pats on the back, thumbs up) during the training session.								

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 2. Training Peers (cont.)	Score**								
13. At the end of the training session, provide more explicit reinforcement and feedback (e.g., "I liked the way you gave James a pat on the back when he wrote his name on the paper").									
Step 3. Supporting Peers									
1. Provide ongoing support to peers by providing them with scripts, open-ended topic starters, and topic cards that can be used during social interactions.									
2. Engage peers in weekly problem-solving meetings.									
3. Gradually reduce the level of support as peers become more proficient at interacting with learners with ASD.									
Step 4. Implementing in Classroom and School Settings									
1. Assign numerous peers as peer buddies for the learner with ASD.									
2. Identify routines and activities where peer social networking can occur throughout the day (e.g., small academic groups, physical education, library, lunch, between classes).									
3. Monitor interactions and provides periodic feedback to peers at the end of activities, class periods, or during weekly problem-solving meetings.									

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

Module: Peer-Mediated Instruction and Intervention (PMII)

	Observation	1	2	3	4	5	6	7	8
	Date								
	Observer's Initials								
Step 4. Implementing in Classroom and School Settings (cont.)	Score**								
4. Teach peers how to prompt learners with ASD to interact during social activities (e.g., verbal prompts, written text and picture cue cards).									
Step 5. Extending Initiations Across the Day									
1. Identify opportunities for the learner with ASD to engage in social interactions during natural activities and routines during the day.									
2. Peer social networking activities occur in a minimum of two to three different routines and activities each day.									
3. Allow peers and learners with ASD to choose activities where peer-mediated instruction will occur.									
4. Implement peer-mediated instruction for at least 10 minutes.									

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Module: Peer-Mediated Instruction and Intervention (PMII)

Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
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Module: Peer-Mediated Instruction and Intervention (PMII)

Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
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Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps
Date	Observer Initials	Target Skill/Behavior, Comments, and Plans for Next Steps

Module: Peer-Mediated Instruction and Intervention

Sample: Pre-Assessment for Young Children

Child's name: _____

Date: _____

Activity: _____

Time: _____

Communication	
How does the child get his needs met?	
Verbal and nonverbal communication used	
Social Behavior	
Social behaviors used during play	
Inappropriate behaviors displayed (if any)	
Who does the child interact with most?	

Module: Peer-Mediated Instruction and Intervention

Sample Progress Monitoring Form: PMII Activity Observation for Young Children

Date: _____

Time: _____

Focal child/children present: _____

Peers present: _____

Activity: _____

Activity

	Yes	No
1. Did the children participate in the activity after your introduction?	<input type="checkbox"/>	<input type="checkbox"/>
2. Did the children seem to enjoy the activity?	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the activity contain materials that promoted social interaction?	<input type="checkbox"/>	<input type="checkbox"/>
4. Did the activity promote positive or negative social interactions? Give examples. _____		
5. Did the children use the toys constructively or in a repetitive, non-useful manner? Give examples. _____		
6. What changes should be made in the arrangement of the play setting to improve social interactions (e.g., materials used, introduction to the activity)? _____ _____		

Module: Peer-Mediated Instruction and Intervention

7. Do any changes need to be made to the peers included in the activity? Yes _____ No _____ If yes, please describe. _____

Social Interaction Behaviors

Time	Activity	Target Behaviors					
		Looking at peer	Parallel play	Taking turns	Exchanging materials	Requesting items	Asking to play

(Adapted with permission from Odom, S. L., McConnell, S. R., Ostrosky, M., Peterson, C., Skellenger, A., Spicuzza, R., Chandler, L. K., McEvoy, C. A., & Favazza, P. C. (1993). *Play Time/Social Time: Organizing your classroom to build interaction skills*. Tucson, AZ: Communication Skill Builders.)

Module: Peer-Mediated Instruction and Intervention

Sample: Pre-Assessment for Older Children and Adolescents

Learner's name: _____

Date: _____

Activity: _____

Time: _____

Observer: _____

Communication	
How does the learner get his or her needs met?	
Verbal and nonverbal communication used	
Social Behavior	
Social behaviors used	
Inappropriate behaviors displayed (if any)	
Who does the learner interact with most?	

Module: Peer-Mediated Instruction and Intervention

Module: Peer-Mediated Instruction and Intervention

Sample Progress Monitoring Form: PMII Activity Observation for Older Children and Adolescents

Date: _____

Time: _____

Observer: _____

Focal student present: _____

Peers present: _____

Activity: _____

Activity

- | | Yes | No |
|--------------------------------------------------------------------------|--------------------------|--------------------------|
| 1. Did the students participate in the activity after your introduction? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Did the students seem to enjoy the activity? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Did the activity contain materials that promoted social interaction? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Did the activity promote positive or negative social interactions? | <input type="checkbox"/> | <input type="checkbox"/> |

5. What changes should be made in the arrangement of the intervention setting to improve social interactions (e.g., materials used, introduction to the activity)?

Module: Peer-Mediated Instruction and Intervention

6. Do any changes need to be made to the peers included in the activity?

Social Interaction Behaviors

Time	Activity	Target Behaviors					
		Looking at peer	Starting conversation	Taking turns	Exchanging materials	Requesting items	Initiating interactions

Adapted with permission from Odom, S. L., McConnell, S. R., Ostrosky, M., Peterson, C., Skellenger, A., Spicuzza, R., Chandler, L. K., McEvoy, C. A., & Favazza, P. C. (1993). *Play Time/Social Time: Organizing your classroom to build interaction skills*. Tucson, AZ: Communication Skill Builders.

Module: Peer-Mediated Instruction and Intervention

Module: Peer-Mediated Instruction and Intervention

Sample: PMII Self-Monitoring Checklist

Name: _____ Date: _____

Activity: _____

Other children: _____

HOW DID I DO?	Yes	A Little	No
1. Did I start talking to my friend?			
2. Did I keep talking to my friend?			
3. Did I look, wait, and listen?			
4. Did I answer his questions?			
5. Did I say something nice to him?			

Adapted from Thiemann, K. (2007). *Improving social communication and peer interactions of school-age children with autism*. Child Language Proseminar, Child Language Doctoral program, University of Kansas.

Module: Peer-Mediated Instruction and Intervention

Sample Scripts: Peer Initiation Training for Young Children

Target skills: Sharing and persistence

Objectives/Checklist:

1. Present social skills lesson.
2. Set up “Building a Road with Cars and Trucks” activity to use during training and play group.
3. Each child will practice sharing and persistence during the play session.

Teaching Sharing

INTRODUCTION TO SHARING

Teacher

“Today we are going to talk about a way you can get your friends to play with you. You can share. What is a way to get your friends to play with you?” (Prompt the correct response as necessary.)

“Sharing is giving a toy. What is sharing?”
(Prompt the correct response as necessary.)

“Now say the whole thing.”

Child Response

“Sharing.”

“Giving a toy.”

“Sharing is giving a toy.”

GUIDED DISCUSSION ABOUT SHARING

Teacher

“When you share, look at your friend and say, ‘Here, _____,’ and put a toy in his/her hand. What do you do?”

Child Response

“Look at friend, say, ‘Here, _____,’ and put the toy in his/her hand.”

Module: Peer-Mediated Instruction and Intervention

TEACHER DEMONSTRATION OF SHARING

Teacher should focus on having the peer(s) answer his/her questions.

Teacher

“Now let’s practice. I am going to share with _____. Tell me if I do it right.”
(*Demonstrate sharing*). “Did I share with _____? What did I do?”

“Right. I looked at _____, said, ‘Here, _____,’ and put a toy in his/her hand. Now watch me. See if I share with _____.”
(*Use different materials for each example*).

With second child, just put the toy beside the role player.

Teacher

“Did I share?”

“Why not?”

“That’s right. I did not put the toy in _____’s hand. When I share this special way I have to look at _____, say, ‘Here, _____,’ and put the toy in his/her hand.”

Child Response

“Yes. You looked at _____, said, ‘Here, _____,’ and put a toy in his/her hand.”

Child Response

“No.”

“You did not put the toy in _____’s hand.”

Module: Peer-Mediated Instruction and Intervention

Now model the total correct response.

Teacher

“Did I share?”

“What did I do?”

Child Response

“Yes.”

“Looked at _____, said, ‘Here, _____, and put a toy in his/her hand.’”

Reinforce peers for participation so far by giving high fives, patting them on the back, offering verbal praise.

Teaching Persistence

INTRODUCTION TO PERSISTENCE

Teacher

“Sometimes when you play with your friends, they do not want to play back. You have to keep on trying. What do you have to do?”

“Yes, you can keep on trying.”

Child response

“Keep on trying.”

TEACHER DEMONSTRATION OF PERSISTENCE

Teacher

“Watch me. I am going to share with _____. Now I want you to see if I keep on trying.”

Child response

Teacher should choose a peer to be the role player. The adult should tell him/her what to do

Module: Peer-Mediated Instruction and Intervention

ahead of time. The adult role player will initially be unresponsive and the peer should be persistent until the role player finally responds.

Teacher

Child Response

“Did _____ get me to play with him/her?”

“Yes.”

“Did I want to play at first?”

“No.”

“What did he/she do?”

“Kept on trying.”

“Right. He/she kept on trying and shared a different toy with me. Watch. See if _____ can get me to play this time.”

You should be unresponsive at first. Prompt the peer to get you to take a toy once. When you are unresponsive, prompt the child to start playing with something else.

“Did _____ get me to play?”

“No.”

“What did he/she do?”

“Walked away.”

“Right. _____ walked away. If your friend says, ‘No,’ drops or throws the toy or doesn’t take the toy, *think of something else to share; try a new way*. What else could you share? What news ways can you try to get your friend to play?”

Module: Peer-Mediated Instruction and Intervention

CHILD-CHILD PRACTICE OF SHARING AND PERSISTENCE

Teacher

“Now, _____, I want you to share a toy with _____. What do you do to share?”

“Right. Now _____ try to get _____ to play with you. Remember that _____ may not want to play with you so you, may need to try a new way.”

For these practice examples, you should tell the role player how to respond. For the first model, the role playing peer should be unresponsive to the child’s sharing.

“Did _____ share with you?”

“What did he/she do?”

Child response

“Look at _____, say, ‘Here, _____,’ and put a toy in his/her hand.”

“Yes/No.”

“Looked at _____, said, ‘Here, _____,’ and put a toy in his/her hand.”

Repeat with other children so they can practice sharing and persistence. Provide praise and reinforcement to children for their participation in the training session (e.g., stickers, high fives, verbal praise).

STRUCTURED PLAY GROUP

After this training session have the children play in a structured play group with the play materials. The teacher should prompt high rates of sharing by both peers and the target child. He/she should remind them to keep on trying if they are unsuccessful initially.

(From Ostrosky, M., Chandler, L., Odom, S. L., McConnell, S. R., & Peterson, C. A. (1990). *Comprehensive intervention manual*. Vanderbilt-Minnesota Social Interaction Project, Minneapolis, MN: University of Minnesota).

Module: Peer-Mediated Instruction and Intervention

Sample Peer Initiation Activity for Young Children: Building a Road for Cars and Trucks

Materials: Blocks of various sizes and shapes, including curved blocks, 3 cars, 3 trucks

Play objective: Children will build a road, tunnels, and garage with the blocks and will use the cars and trucks on the roads.

Teacher Role

1. **Arrangement:** Place the blocks in the middle of the children and give each dyad two cars/trucks. Extra cars may be placed with the blocks.
2. **Introduction:** (to occur before the activity begins).
 - a. **GREETING ACTIVITY:** Have all of the children say “Hi” to one another, emphasizing the children’s names.
 - b. **PLAY:** Tell the children you want them to build roads, tunnels, and a garage for their cars and trucks. Show them how to make a tunnel, stack blocks for a garage, and how curved pieces can fit together. Suggest children drive their cars on the road, put them in the garage, through the tunnel, etc.
3. **Running the activity:** Teacher should remember that he/she is responsible for prompting toy plan and peer social interaction as necessary during the play session.

PROMPT SOCIAL INTERACTION:

1. Share
 - “_____, give this truck to _____.”
 - “_____, let _____ use the garage too.”
 - “_____, trade cars with _____.”
2. Share request
 - “_____, ask _____ to trade cars with you.”
 - “_____, you need a curved block; point to the one you want _____ to get for you.”
 - “_____, ask _____, ‘Can I have a truck, please?’”

Module: Peer-Mediated Instruction and Intervention

3. Play organizer

“_____, tell _____ to drive to the garage.”

“_____, say ‘_____, put your blocks right here.’”

4. Agreeing

“_____, say ‘I’ll follow you to the garage’.”

“_____, take the car that _____ gives you.”

5. Assistance/Assistance request

“_____, ask _____ to help.”

“_____, help _____ build a tunnel.”

“_____, tell _____ to help you with the road.”

(From Ostrosky, M., Chandler, L., Odom, S. L., McConnell, S. R., & Peterson, C. A. (1990). *Comprehensive intervention manual*. Vanderbilt-Minnesota Social Interaction Project, Minneapolis, MN: University of Minnesota).

Module: Peer-Mediated Instruction and Intervention

Sample: Planning Form for Peer Social Network Activities

Child: Connor

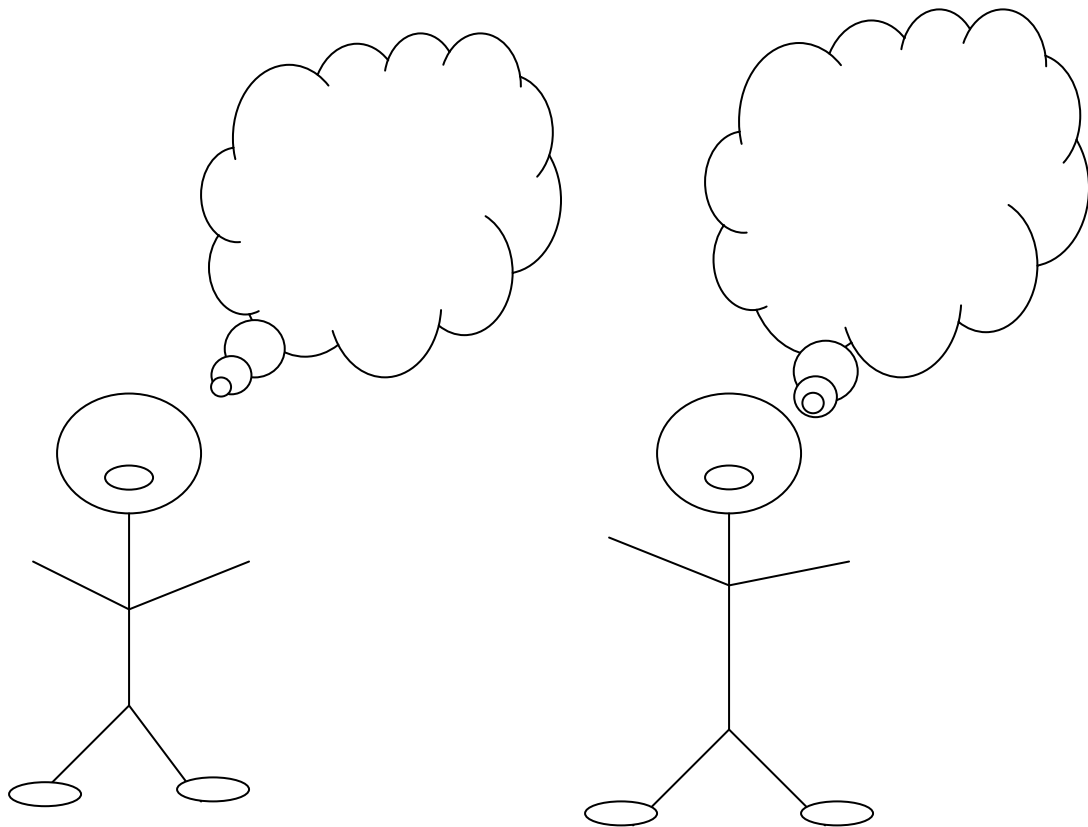
Date: 12/07/07

Activity	Target skills	Script Cuing System: Words & Pictures	Peers to be included
Recess	Turn-taking	Social scripts	Tom, Michael
Lunch	Using names; responding to initiations	Word and picture cards with responses	Tom, Michael
Centers	Turn taking	Word cards with activity rules; picture cards with sequence of game	Tom

Module: Peer-Mediated Instruction and Intervention

EXAMPLE SCRIPT FOR PEER SOCIAL NETWORK

Initiating Interactions



Module: Peer-Mediated Instruction and Intervention

**EXAMPLE WRITTEN-TEXT AND PICTURE CUE CARDS FOR
PEER SOCIAL NETWORK ACTIVITIES**

Skill: Make Suggestions

“Maybe we could _____.”

“How about we _____?”

Skill: Talk about turns

“It’s your turn.”

“It’s my turn.”

Skill: Talk nice, help, share

“Way to go.”

“Nice try.”

Module: Peer-Mediated Instruction and Intervention

Sample: PML Self-Monitoring Checklist

Name: _____ Date: _____

Activity: _____

Other children: _____

HOW DID I DO?	Yes	A Little	No
1. Did I start talking to my friend?			
2. Did I keep talking to my friend?			
3. Did I look, wait, and listen?			
4. Did I answer his questions?			
5. Did I say something nice to him?			

Adapted from Thiemann, K. (2007). *Improving social communication and peer interactions of school-age children with autism*. Child Language Proseminar, Child Language Doctoral program, University of Kansas.

Module: Peer-Mediated Instruction and Intervention

Sample: Pre-Assessment for Older Children and Adolescents

Learner's name: _____ Date: _____

Activity: _____ Time: _____

Observer: _____

Communication	
How does the learner get his or her needs met?	
Verbal and nonverbal communication used	
Social Behavior	
Social behaviors used	
Inappropriate behaviors displayed (if any)	
Who does the learner interact with most?	

Module: Peer-Mediated Instruction and Intervention

Sample: Pre-Assessment for Young Children

Child's name: _____

Date: _____

Activity: _____

Time: _____

Communication	
How does the child get his needs met?	
Verbal and nonverbal communication used	
Social Behavior	
Social behaviors used during play	
Inappropriate behaviors displayed (if any)	
Who does the child interact with most?	