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Physical and Verbal Strategies Peers use to Facilitate the Social Inclusion of Friends with Autism Spectrum Disorders

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Abstract

The purpose of the this study was to examine the impact that Responsive Classroom methodology had on the social inclusion of two elementary students with ASD in a public school setting. Varieties of educational programs to support students with ASD are in vogue; however, few investigate the influence the peers have on students’ motivation and desire to interact within an inclusive environment. This study, conducted over the course of a school year within two public elementary schools in the Midwest, explored how peer supports shaped by Responsive Classroom methodology provide the scaffolding students with ASD required to become part of the classroom community.

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Students with autism and their peers who are effective communicators do so because of the dynamic interplay of abilities involving domains of social-affective, cognitive, communicative, and
linguistic competencies in naturally reinforcing social situations (Kamps, Royer, Dugan, Kravits, Lopez, Garcia, Carnazzo, Morrison, & Kane, 2002; Veale, 1998). If affective skill training using focused interactive strategies is part of a daily curriculum, children with ASD learn the social norms essential to competent communication. Focused social interactive strategies promotes early attainment of essential pragmatic skills such as requesting, greeting, eye gaze, and joint attention in children with ASD. Direct instruction in pragmatics and social-affective skills provides the tools for children with Autism Spectrum Disorders (ASD) to interact effectively with their peers (Autism Task Force, 2003).

Peer-mediated intervention is an affective skill training strategy. In peer-mediated interventions, children help each other. Given this intervention, students with ASD have demonstrated an increase in ability to maintain joint attention, generalize communication skills across settings, and master the affective skills that foster friendship (Hwang & Hughes, 2000; Pierce & Schreibman, 1995; Whitaker, 2004). The Responsive Classroom methodology uses both peer-mediated intervention strategy and adult mediated social interactions within natural contexts to promote social engagement between peers. All students in the inclusive Responsive Classroom are encouraged to interact as they engage in partner work, small group activities, or large group share time. This atmosphere of open communication facilitates students’ interactions.

The Responsive Classroom approach is unique. Its routine activities facilitate students’ interactions. Within a Responsive Classroom, the development of an intervention plan supports social interaction in natural contexts while helping children with ASD to become productive welcomed members of the inclusive classroom. Although, most elementary classrooms do have routine events, the Responsive Classroom environment provides direct teacher prompting throughout the day from the morning meetings to the guided discovery lessons where students learn to respect the special gifts each child brings to the learning environment. The social curriculum represented by Responsive Classroom builds upon structured routines crucial to the social interaction and language development of children.
This program, used over a two-year period in an elementary setting, was very successful in promoting acceptance of a young person with ASD (Winterman & Sapona, 2002).

Vygotsky focused our attention on the social nature of learning (Whelley, 1993). He was particularly interested in the social dynamics of how culture influenced and shaped a child’s growth. The Responsive Classroom approach capitalizes on Vygotsky’s approach by weaving the facet of classroom dynamics together to create a learning atmosphere where guided discovery activities lead by the classroom teacher opens children to the possibilities that other ideas may exist. Peers work on activities together within predictable routine. These events open the children’s minds to the tasks at hand - interacting and exploring.

**Teaching the Tenets of the Responsive Classroom**

This study conducted over the course of a school year in two elementary schools in the Midwest used the implementation of the Responsive Classroom approach to investigate the social implications of including students with ASD in regular public elementary classrooms. After reviewing the strategies both teacher and typical peers employ to implement the Responsive Classroom methodologies, we applied a series of analytical passes through the data to develop a theory on the dynamics of the process of inclusion for two students with ASD.

Communication was our primary concern when establishing priorities for the inclusion of students with ASD within the regular classroom setting (Hart, 1995). Verbal communication, usually taken for granted in school settings, is a major component of educational programming for students with ASD. Research in special education brings language therapy out of the clinical setting into the school environment (Cafiero, 1998). The natural setting of school allows language to be learned where it will be used (Cadigan, Craig-Unkefer, Reichle, Sievers, & Gaylord, 2007). Children with ASD receive reinforcements that are natural and embedded in activity. Increasing communicative skills instead of
merely trying to increase verbal output is an educational goal for students with ASD. Children with ASD are often able to request objects or food without being able to participate in a conversation.

Peers play a vital role in acknowledging and responding to the communicative attempts of their friends with ASD. In the Responsive Classroom, the typical peers’ approach was binary based on the two broad categories of physical and verbal supports (Winterman, 2003). Peers have a unique perspective on the social milieu that faces the students with ASD within the classroom setting. As adults, we lack this unbiased perspective. Often times, the faintest physical prompt by a peer was more effective than adult interventions.

**Physical Strategies**

Peers utilized the following physical strategies to facilitate the social inclusion of students with ASD: **initiating, prompting, maintaining**, and **proximity**. The typical peers physically **initiated** interactions with their friends with ASD by gesturing and placing themselves in close **proximity** to their friend with ASD. Typical peers would act like coaches by demonstrating or **prompting peers** in how to participate in various activities. Peers **maintained** an activity physically by ensuring the action continued by taking the lead role. The verbal methods typical peers incorporated consisted of **initiating**, **prompting**, and **questioning**. Through these interactions, typical peers were able to reinforce their interactions with their peers with ASD. The typical peers would verbally **initiate** conversations with their friends with ASD as a means for including them. The verbal **prompting** or coaching occurred in natural context such as when peers would guide their friends to “run to second base!” **Questioning** was a means of continuing a conversation through thoughtful inquisitive probing.

Students appeared to have an innate sense of how to **initiate** interactions with their friends with ASD. This interaction occurred naturally without teacher initiation of directives or prompts. Researchers believe peer-initiated social interactions toward target students are the most effected models in developing spontaneous interactions (Odom, et. al., 1984; Roeyers, 1996). In past research, teachers
trained the peer to act as tutors. In this study, peers self-selected based on true friendship; a natural uncontrived situation resulted. The naturalistic setting in combination with the Responsive Classroom proved very effective (Gresham, 1998). The examples below provide a vivid picture of how the Responsive Classroom strategies of respecting each other and learning permeated the students’ day. Students quickly learned that they all had a role in the learning environment.

Example 1: Mr. Randall begins to play, “I Don’t Care if the Rain Comes Down.” Students are told to get a partner. Molly runs to Matthew. They hold each other’s arms as the music begins.

Example 2: The teacher pairs all students. Aiden hugs Josh in anticipation that they will be partners. Aiden and Josh stand together. Aiden has his arm around Josh’s shoulder.

Example 3: The children sing along and make the hand motions. The first song ends and the next one begins. “My Grandma is a Tickler” begins to play. Children tickle each other. Chuck tickles Matthew and Matthew laughs. The song ends and the children fall to the floor.

Example 4: Aiden puts his arm around Josh’s back. Aiden rests his head on Josh’s back. Then Aiden cracks his knuckles in Josh’s ear. Josh asks Aiden, “How’d you do that?”

The typical peers initiated interactions with their friends with ASD. This type of reinforcement appeared to have a strong influence in the focal students’ acceptance in the classroom setting as well as increased their motivation to remain engaged in large group activities. In examples one, two, and four, Molly and Aiden approached Matthew and Josh by physically hugging or touching them. How reassuring it must have been to have a peer want them as their partners so badly that they ran up and hugged them. These situations brought back memories of the previous year when Matthew did not have any friends at school and Josh often played alone. These were not patronizing friendship but a true love for their peers.

The typical peers of included students with ASD physically prompted appropriate behaviors as well as increased their attention to tasks. In these situations, the focal students remained engaged in collaborative activities and required less adult facilitation to maintain their attention. According to Wolery (1994), prompts are used to engage the target student in a specific behavior. They may be a
subtle as a nudge or point. **Prompts** assist the target student in achieving the desired skills or behaviors necessary to be successful within the classroom setting. The peers in a sense become Disney’s “Jimmy Cricket” to the students with ASD. They help heighten students’ with ASD awareness of social rules and classroom expectations. These instances below provide clarity as to how peers gently redirected the focal students’ behavior.

Example 1: Students are alphabetizing words on the chart. The teacher leads the students through the alphabet to determine which word comes next. Most students raise their hands to be called on. **Matthew** does not. He looks towards the chart. Matthew swings his right hand and arm back and forth over his lap continuously. Molly gently places her hand on Matthew’s arm. He stops swinging his hand and arm.

Example 2: Nicki joins **Matthew** and Molly in the book area. Mrs. Patrick tells the class that they need to be in their desks by the count of five or no recess. When Mrs. Patrick states, “No recess by the count of five,” Nicki grabs Matthew’s hand and they run back to their desks hand in hand.

Example 3: Everyone is standing on the group carpet. Students are standing in a circle. Molly is next to **Matthew**. They have their arms around each other’s waists. Matthew steps off the carpet and Molly gently touches his arm and he returns to the rug.

Example 4: Cory holds **Josh** by the arm and they walk to the desk and begin to cut the chicken wing together. Both have knives and begin to cut the chicken wing.

Example 5: Brandon asks Mr. Randall if they can play “The Old Gray Cat.” The children pretend to be mice crawling on the floor as the music begins. **Matthew** lies on the floor. The rest of the class is crawling over to the “safety” rug. Molly crawls to Matthew and grasps his shirt to redirect him to the safe area so “The Old Gray Cat” won’t catch him.

Simple physical **prompting** is a faint yet gentle guidance to students with ASD. Typical students often have a better understanding of what constitutes appropriate assistance. Furthermore, peers often have a better understanding of unwritten social rules that govern the classroom, rules such as staying on the area during circle time or where you must crawl to avoid capture by the “Old Gray Cat.” In our scenario, Nicki assisted Matthew in staying out of trouble and missing recess time. These peers acted as “social

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coaches’ prompting when their friends needed the support and fading until the need arose again. Molly was an “expert” at prompting Matthew’s appropriate group-time behavior.

Peers provide physical scaffolding by maintaining interactions with their peers with ASD.

Providing and receiving social support is a critical component in relationship development and maintenance (Kennedy & Itkonen, 1994). High degrees of reciprocity are required for relationships to develop and maintain over time. The physical maintenance peers provide allows the students with ASD to reciprocate the interaction. According to Kennedy, Horner, and Newton (1989) typical peers often feel overburdened by the unilateral nature of the interactions and the relationship end. In this study, the physical reciprocity between the students provided students with ASD a means for uphold their friendships. The scenarios below illustrate how peers maintained their interactions with Matthew and Josh.

Example 1: They hold each other’s arms and the music begins again. They know the dance—right foot forward and back twice then the left foot forward and back twice. Then they lock arms and dance in a circle then stop and go in the opposite direction. The dance starts again at the beginning with the footwork. Matthew is beaming. The music stops. Molly hugs Matthew.

Example 2: Aiden, Josh, and Dylan make a triangle by standing shoulder-to-shoulder facing each other. They are making broad hand motions. Josh points to the ground. Aiden and Dylan look at the ground. Josh makes hand motions like he is a super hero. Aiden appears to freeze. They laugh and talk some more. Josh then falls to the ground grabbing his chest as if he has been shot. Then he stands and smiles.

Example 3: Josh and Aiden are sitting side by side. Josh starts rocking side by side. Aidens joins in. They both continue to rock from side to side for 5-7 cycles of left to right movements. Once I come closer, the rocking stops. Aiden puts his hand on Josh’s back.

Students with ASD appear better able to continue an activity if their peers physically maintain the activity. Molly, Aiden, and Dylan provided a vehicle for the play activity to continue by leading and preserving the activity. In the three examples above, Matthew and Josh provided their peers with immediate, frequent reinforcement to sustain the interaction. Matthew’s need for walking around the perimeter of the playground limited his opportunities to interact with his peers. Later in example two,
Caroline handed Matthew a piece of mulch as he walked past her and an interaction began. This spontaneous interaction was unique for him.

The proximity approach to the social inclusion of students with ASD was originally a form of the “osmosis treatment” in which students with ASD were to learn by the natural transmission of social skills from watching and interacting with typical peers (Roeyers, 1996). The proximity methodology practiced in the classrooms studied consisted of a more complicated underpinning. The typical students instigated the support of their peers with ASD by their mere presence. Proximity between two individuals allowed for the possibility of interaction. However, for an interaction to occur the individuals involved must mediate each other’s behavior. By positioning themselves in close proximity to their friends with ASD, peers provided the gentle encouragement to participate in-group activities. The supportive nature of the interface set the foundation for interactions. The following scenarios depict the artful manner in which peers positioned themselves in close proximity to their friends with ASD.

Example 1: Molly is sitting perpendicular to Matthew. She is directly facing him as she looks toward Mrs. Patrick.

Example 2: Josh and Dylan sit side by side. They watch Mrs. Thomas and Amy practice reflective listening. Cory tall kneels behind Josh.

Example 3: Garry comes and sits next to Matthew. The entire red team is standing except Matthew and Garry.

The simple gift of belonging to a community of learners is the purpose of inclusion (Koegel, Koegel, and Dunlap, 1996). Through proximity, typical classroom peers set the tune for accepting their friends with ASD as just a way of life within that learning community. Molly sits beside Matthew during a group-time lesson. Molly’s mere presence supported Matthew’s attention to the learning task. If he were to stray, it is predicted she would prompt his attention back to the learning task. In example two, Cory and Dylan shared their presence with their friend during a mini-lesson on reflective listening. Finally, in example three, Garry joined Matthew while they were waiting their turn to kick in a kickball game during gym.
They typically do not interact. However, it was within this type of intermittent reinforcement that Matthew generalized his social skills to interaction with new peers.

**Verbal Strategies**

According to Potter and Whittaker (2001), the lack of communicative skills taught to children with this disability might be a direct result of current beliefs that children with ASD lack the desire/motivation to communicate. Because of this misconception, students with ASD often respond instead of initiate verbal interactions. The use of peers and relationship building represents a shift in the way professionals view the factors that contribute to communication motivation (Koegel, Koegel, & Dunlap, 1996). Peers exercise a variety of verbal strategies that not only encourage the inclusion of their peers with ASD but also scaffold verbal communication. Typical students’ endless attempts to pull their friends with ASD into their activities prevailed over the focal students need to retreat into their own worlds. The reinforcement peers provided motivated students with ASD to communicate verbally.

Laushey and Heflin (2000) conducted a study to determine if peer-initiated interactions would produce more effective results in the generalization of social skills of students with ASD than merely proximity of typical peers. In our scenarios, generalization of the social skills resulted from the reinforcement provided by a variety of peers who continued to demand their interactions. By incorporating verbal techniques of **initiating**, **prompting**, and **questioning**, the typical peers were able to fortify their interactions with their peers with ASD. Through verbal **initiating**, peers were able to engage the focal students in class activities and maintain their attention. In the following example, Molly masterfully initiates and prompts Matthew’s interactions.

Example 1: Molly and **Matthew** are sitting side by side. Mrs. Patrick tells the students to finish up. Molly states, “Okay, Matthew its time to tell about the story.”

Example 2: During a science experiment, Cory states, “This chicken bone can’t be repaired.” **Josh** responds, “I’m trying to saw it.”
Example 3: It’s Matthew’s turn to kick in an interclass game of kickball. Gary states, “Matthew kick it hard!” Nicki calls out, “Go, Matthew!” Matthew kicks the ball and runs to first. Molly who is playing first base states, “Good job!”

Peers are more successful in initiating and maintaining focal students’ attention to the group activity than their adult counterparts. The focal students appeared more motivated to participate and maintain the interactions when peers initiated the interaction than when adults attempt to engage them in classroom activities. In example one, Molly encouraged Matthew to participate in a sharing of the story the group has read. This was an illustration of how peers effectively support the ongoing participation and learning of their friends with ASD.

Peers provided verbal prompting to encourage and redirect the focal students’ behavior towards either an academic or a behavior goal. Peers can be valuable coaches to their friends with ASD. They can provide verbal reinforcement and encouragement. In a study conducted by Handlan and Bloom (1993), peers who prompted interactions with students with ASD were able to increase the interactions with students with ASD. This prompting or coaching also continued outside of the confines of the study to include the playground, cafeteria, all educational settings and home. Our examples provide similar portrayal of how peers prompt their friends with ASD.

Example 1: Matthew puts his head down on the carpet. I tell him to sit up. He does not listen. Molly tells Matthew to sit up. He sits up. Matthew looks at Molly and she looks back at him. They continue to look at each other and they smile.

Example 2: Shelly states to Josh, “It’s your turn.” Josh takes the ball and prepares to roll it. Shelly states, “Josh, go ahead and roll it!” Josh rolls the ball down the ramp and it hits the yardstick.

Example 3: Gary kicks the ball and it is caught. Matthew runs to second base. Shelly calls to Matthew, “Go back to first!”

Example 4: The children continue to take turns reading page thirty-seven aloud. Molly is called on to answer a question. Matthew sits and touches the wall as she answers. When Molly finishes, she says, “Come on, Matthew here.” She points to the page as Shelly reads aloud.

Peer provided guided intervention to their friends with ASD through timely verbal prompting which enhances their engagement in the learning process. The goal should always be to enable communication
between peers based on environmental cues rather than adult prompting (Potter & Whittaker, 2001). Halle (1987) states spontaneous communication occurs in response to naturally occurring cues in the environment. These naturally occurring opportunities occurred in the four examples above. In examples one and four, Molly’s friendship had a strong influence on Matthew. She was better able to get Matthew to abide by classroom expectations than adult prompting. Given her prompting, he was able to attend to the instructional content and be more academically available to learn.

Bruner (1975) defined scaffolding as the systematic expansion of an activity or routine. In this study, questioning was a tactic peers and adults employed to engage their friends with ASD. Typical students challenged their peers with ASD by asking unique questions that demand novel, unprompted responses. Peers as an attempt to maintain the interactions incorporated questioning. The focal students remained engaged and motivated to continue the interaction. Matthew and Josh’s responses indicated that they understood the purpose and meaning of the social dynamic of the interaction.


Example 3: Mrs. Thomas asks, “Josh why did I ask questions?” Josh responds, “Because you really wanted to know the information.”

Peers’ questioning supports the focal student’s attention on the academic curriculum. Matthew remained engaged in the lesson while the teacher was instructing another child. Through her questioning, Molly was able to maintain his attention to the learning task until the teacher was ready to continue with the lesson. Molly employed this technique in a variety of classroom activities. Molly had witnessed the special education team using this as a technique to maintain Matthew’s attention and spontaneously implemented this tactic. Her assistance enabled Matthew to remain actively learning instead of resorting to his customary avoidance strategy of fleeing the group. Questioning was not a strategy used outside of the classroom setting.
Conclusions

The Responsive Classroom approach provided the focal students with scripted, practiced routine events. Scripted interaction initially afforded children an opportunity for reciprocity. Like Gray’s (1995) social stories in which children have repeated guided practice with routine events and language, the routine scripts of a Responsive Classroom enable children the opportunity for structured practice. Predictable social events in school such as routine classroom meetings, opening greetings, and cooperative games provide children with a secure environment. Within each activity is an inherent routine structure, which provides internal scaffolding and predictability that enables students to participate. Through daily routines and rituals, children gain a sense of stability and trust in their classroom community (Wood, et. al., 1996).

Prizant and Schuler (1987) define children with autism's discourse as stereotypic and routinized with situation specific language. Such views of children’s language problems focus on the child’s lack of skills instead of the interactive nature of language. Simpson (1991) determined social-communicative problems were due to incongruent social situations and social partners. The Responsive Classroom approach provided children with practice in routine scripted events and the opportunity for meaningful reciprocal interactions.

Routines assist children in understanding their role in social dynamics (Quill, 1995). Predictable social events in school such as morning meetings that include opening greetings and cooperative games that foster peer interaction provide children with a secure environment to test their social skills. We found that for our students, language skills and social behaviors developed readily within the context of established interactive routines. This scaffolding of routine social interaction enabled peers to support the communication of their classmate with autism. Our study confirmed that peers have the potential to effect change in the pro-social behaviors of children with ASD (Laushey & Heflin, 2000).
The importance of social relationships cannot be understated. Given the significance of social interactions, the placement of students with autism in regular classrooms serves to provide variety and quality of structured social interaction. Such structure is essential to sustain a child’s social emotional development. Students’ social inclusion is not only vital to their happiness and state of mind but also essential to their academic growth and development.

Varieties of educational programs to support students with ASD are in vogue; however, few investigate the influence of peers on motivation and desire to interact within an inclusive environment. This study demonstrated how implementation of the Responsive Classroom methodology provides the scaffolding necessary for students with ASD to become valued members of the classroom community.

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