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USING SIBLINGS AND PEERS AS THERAPISTS TO INCREASE LANGUAGE SKILLS, SPECIFICALLY PRAGMATICS

by

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A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
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USING SIBLINGS AND PEERS AS THERAPISTS TO INCREASE LANGUAGE SKILLS, SPECIFICALLY PRAGMATICS

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Melissa J. Watson

A Research paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Masters of Science

in the field of Communication Disorders and Sciences

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Introduction

Children learn language through their environment. For typically developing children, interaction with siblings and/or peers facilitates language development. Children not in school or daycare might rely more on social interactions with older peers while entrance into school or daycare increases the likelihood of peers as primary communication and play partners. This relationship allows the child to learn language and social skills from another, likely typically developing, child. However, this natural process of learning language from another individual (often a sibling or peer) may be disrupted when the communication partner has a developmental disability (Hancock & Kaiser, 1996). The learning problems exhibited by the child with the disability, can make it harder to pick up on the cues given by the older sibling's language model. Therefore, the older sibling may need to give the child additional support. Peers that are involved can be agents of intervention to the same degree of effectiveness as siblings, and peers become increasingly effective as the child ages. Subsequently, training siblings and peers to provide a child with additional language and social cues, has become an area of interest for researchers studying language learning. By using this model for children who have communication-based deficits, siblings and peers can help develop language with a variety of children.

While traditional teaching approaches have focused on the teacher-student relationship, more progressive strategies involve a peer relationship. Peer tutoring is a common example of such a relationship. A student who is

excelling in a specific area helps a student who may be struggling in that same subject. Whether it is formally or informally, peer tutoring is often practiced at all age levels. One particular study on peer tutoring revealed that “Overall, both tutoring and being tutored appear to increase students’ academic achievement and to foster other positive attitudinal and socio-emotional outcomes” (Robinson, Schofield, & Steers-Wentzell, 2005, p.357). It is findings such as this one that advanced the use of peers as facilitators for learning. Language especially (unlike a subject such as math or history), is dependent on social interactions. These interactions are best achieved through a functional approach which incorporates language facilitators such as a peer or other member of the child’s world.

While considering the concept of peer tutors in conjunction with the idea of a modeling, one can shape activities in order for peers and siblings to facilitate language development. This language developing strategy has proven efficacy for various populations with disorders including autism spectrum disorder, developmental delay, and specific language impairment. Executing this theory involves selecting an appropriate strategy or technique, and training the peer or sibling facilitator on how and when to implement the technique.

Efficacy of Peer/Sibling Training

Autism Spectrum Disorders

According to the Center for Disease Control, in 2010 the prevalence of autism was every 1 in 110 American children and 1 in 70 boys. Autism spectrum disorder (ASD) has become increasingly familiar to the field of speech-language

pathology as it affects a child's communication. Autism spectrum disorder is characterized by delayed or limited language, repetitive behaviors, and restricted interests. However, "social dysfunction is the single most defining feature of autism and arguably its most handicapping as well" (Rogers, 2000, p. 399). In addition to language delay, children with ASD commonly experience difficulty with joint attention which is one of the earliest emerging social behaviors (Tsao & Odom, 2006). These unusual pragmatic behaviors can have a negative effect on the language development of a child with autism.

Although, it may be significantly delayed, development for children with autism is not necessary static, and change can occur with adequate support. Knott, Lewis, and Williams (2007) examined interaction between siblings when one child has autism. The researchers observed interaction in the beginning of the study, and 12 months later. Although the sibling without autism initiated more frequently, both siblings' interactions increased over the 12 month period. Knott and colleagues demonstrated there is a natural inclination for siblings to interact with one another even when no intervention is taking place.

Older siblings, or typically-developing siblings, can be taught strategies that elicit and/or support interaction. Tsao and Odom (2006) taught siblings strategies to implement during a specific play time; these strategies included making eye contact, suggesting play activities, initiating conversations, offering or asking for help, and expanding the content of the target child's speech. While typically developing children tend to learn this naturally, those with disabilities may need the extra modeling and practice. Training siblings to play with and

support a child with autism improved overall joint attention, as well as social behaviors during play sessions (Tsao & Odom, 2006).

If the child does not have siblings, or is school age, using peers as interventionist can be equally as beneficial. A study by Bass and Mulick (2007) examined strategies such as integrated play groups and use of a peer buddy. In the integrated play group, children were split into small groups and a child with ASD was always placed with typically developing peers. The peers were taught to accept and include children with autism, along with encouraging the child's involvement in the game or activity. In the peer buddy approach, a typically-developing child was paired with a child with autism, and was instructed to stay, play, and talk with the child. The integrated play group model, "has been found to double the amount of interaction with peers involving common focus on an activity, resulting in decreases in manipulative repetitive and isolate play" (Bass & Mulick, 2007, p.731). While the peer buddy approach did not have as much success as the integrated play group, it did increase interaction when compared to a passive approach.

A study by Thiemann and Goldstein (2004) provided a combination of peer training with written text and pictorial cues during training sessions. The purpose of this training was to increase initiations and contingent responses in children with pervasive developmental disability (PDD) or autism. Peers were trained to use facilitative social skills, such as initiate conversation and give compliments/encouragement, when paired with children with PDD. Written text cues were implemented in the second phase of research. Although peer training

alone did not influence the target children's social strategies, it did increase the overall rate of interactions for some of the children and stabilized the rate of interactions for other children. When peer training was combined with providing written text and picture cues (i.e. written scripts corresponding to a planned activity) interactions continued to increase and improvements were perceived within the quality of these interactions (Thiemann & Goldstein, 2004). A separate study by Owen-DeSchryver, Carr, Cale, and Blakeley-Smith (2008), also trained typically developing peers to interact and prompt interactions with their peers with autism. In this study, the peers were provided with information about their classmates with autism as well as strategies for interacting with them. The trained peers were instructed to use these strategies whenever possible, especially during lunchtime and recess. When observing the children with ASD, data was collected on the number of social initiations towards peers and the number of responses to initiations made by peers. Initiations made towards a peer increased for two of the three children with ASD. However, responses to peer initiations increased for all three participants with ASD. The results of this study demonstrate that "peer training can be a viable strategy for increasing interactions between typical peers and students with ASD" (Owen-DeSchryver, et al., 2008, p. 22). Although, only a specified number of peers were trained, additional typically-developing peers also showed increased initiations towards the participants with ASD during the post intervention phase of the study. This shows how children will naturally follow what the others are doing.

The idea of generalization is that a child will be able to perform the targeted task in a setting other than the one where therapy took place. For example, being able to make requests at school and home both, or demonstrating turn-taking skills with family members and unfamiliar peers. The length of time it takes to generalize a skill can vary depending on the child's level of functioning. Generalization of targeted interaction behaviors to novel settings varied for interventions focused on peers and siblings as adjuncts. Tsao and Odum (2006) reported lack of generalization for interaction behaviors in play with siblings. However, in a study by Bass and Mulick (2007), "generalization was evidenced by each child with autism initiating and maintaining interactions to each new peer, a new playground, and with their sibling at home" (p.732). This shows that generalization is possible with peer training.

Developmental Delay

While typically developing children learn a large amount of their language skills from other siblings or peers, children with Down syndrome have less developed social skills and therefore may not be able to fully engage in these learning opportunities (Trent-Stainbrook, Kaiser, & Frey, 2007). Because the opportunity and ability to learn is not naturally there, it needs to be trained and presented. Using siblings or peers to provide this opportunity is an excellent substitute for nature.

According to a study by Trent, Kaiser, and Wolery (2005), typically developing siblings of children with developmental disabilities often assume the role of caretaker and helper during interactions rather than a more equal

participant. Although all interaction offers social opportunities, learning opportunities may be missed due to role asymmetry. Therefore, it may be imperative to train the sibling on appropriate play and communicative strategies when interacting with a sibling with a disability such as Down syndrome. Trent-Stainbrook et al. examined older siblings' ability to learn play strategies that facilitated pragmatic development as well as the effect it had on the younger siblings with Down syndrome. In this study, older siblings were taught to respond verbally to both verbal and nonverbal acts of intentional communication by the younger siblings. The older siblings were able to learn the strategies and continued to use them as shown by maintenance data of this same study. Although frequency of commenting for younger siblings only had a slight increase, "interactions between children with disabilities and typically developing children likely provide increased opportunities for the indirect teaching of communicative behaviors" (Trent-Stainbrook et al., 2007, p. 285).

Trent et al. focused on two specific strategies, mirroring and verbal responding, in an effort to increase the younger sibling's number of opportunities to initiate and respond. Results demonstrated that the targeted older siblings learned the interaction techniques quickly and used them with their younger siblings. The measure of communication performance of the children with Down syndrome revealed modest effects on their verbal behaviors. One child had an increase in verbal turns, initiations, mean length of utterance, and vocabulary, while another child demonstrated a significant gain in the percentage of initiations.

Incidental teaching has been successful for teaching language skills to children with developmental disabilities via peers. Farmer-Dougan (1994) explored a study with 6 male participants between the ages of 19 and 38 who resided in a home for individuals with developmental disabilities. The 3 men with the highest IQ and functional abilities based on clinical observations were chosen to be peer tutors for the other 3 participants. The chosen tutors were taught to use incidental teaching and appropriate prompting methods when helping their peers with lunch-making routines. “Incorporating peer-delivered incidental teaching into the lunch-making routine also increased the spontaneous use of incidental teaching during dinnertime, when it was neither required nor trained” (Farmer-Dougan, 1994, p.537).The peer learners in this study demonstrated increases in requesting and verbalizations, supporting the effectiveness of peer-delivered incidental teaching as an intervention method.

Additional strategies that have been utilized by peers are nonverbal mirroring (i.e. imitating gestures) and verbal responding (i.e. responding verbally to both verbal and nonverbal acts of intentional communication by the younger sibling); these strategies are often targeted because they promote reciprocal interactions. Research has shown that after using these strategies, communicative performance in children with Down syndrome did have a slight increase in the number of comments made each session (Trent-Stainbrook, et al., 2007).

Similar to children with ASD, children with Down syndrome may require additional time and support for generalization to occur. In the study by Trent-

Stainbrook, et al. the children made improvements when working with siblings, but did not generalize their skills. This could be due to the fact that they were only trained in one setting. “Training siblings across a variety of settings and situations in which sibling dyads often spend time together. . . might have facilitated the ability of the siblings to generalize their use of the responsive interaction strategies” (Trent-Stainbrook et al., 2007, p.284). In the study by Trent, et al. older siblings’ use of the interaction strategies, along with the verbal behavior of siblings with Down syndrome were maintained at the 1 month follow-up. The maintenance of change in both the older siblings and the siblings with Down syndrome is encouraging, and continues to support previous research in stating that siblings can be taught intervention strategies and implement them in intervention (Trent et al., 2005)

Specific Language Impairment

When working with children who have specific language impairment (SLI), other functional skills such as cognition and joint attention, are typically normal. If this is the case, the social interaction and reciprocity is already there and the therapist is able to focus on more specific or detailed aspects of language such as semantics or syntax. For instance, a child with specific language impairment may want to participate in an activity but will struggle with the instructions. Socio-dramatic play often facilitates language skills. However, children with SLI are at risk for the development of poor or idiosyncratic scripts due to deficits in organizing information, extracting patterns, and abstracting rules that contribute to deficits in linguistic abilities (Robertson & Weismer, 1997). Therefore they

have difficulty participating in group play or activities at the same level as their typically developing peers.

When selecting an additional support system for children with SLI, older siblings can be very effective choice. Children are constantly around their siblings and most likely look at them as models for behavior. According to Hancock and Kaiser (1996), the relationship between siblings provides an ideal content for learning social and language skills; this is especially evident during early childhood years. Older, typically-developing siblings can learn the children's language targets as well as how to implement them with minimal training. For example, siblings can be taught to target objectives as specific as colors, adjectives, prepositions, pronouns, and etc. This can be done in a variety of ways. Hancock and Kaiser (1996), used Milieu teaching techniques with siblings because of the proven success when implemented by parents. The researchers focused on teaching the older siblings how to use modeling and mand modeling for their younger sibling with a language delay. This technique was shown to be successful as each participant in the study met the criterion for learning their language targets (Hancock & Kaiser, 1996). While the Milieu teaching technique may be too unstructured for children with certain disorders (i.e., ASD or behavioral problems) it is very effective for children with SLI because it is used in a naturalistic, conversation-based environment; it is this type of functional environment that closely mimics natural learning. Learning in a naturalistic setting will encourage generalization to everyday life.

Robert and Weismer (1997) examined the effects of peer modeling on play scripts. In the study, children with SLI, in the experimental group, were paired with children with normal language development and placed into play groups. The researchers instructed the typically developing children to teach a younger child (in this case, the child with SLI) how to play house. The children with SLI in the control group were given the same opportunities with the play props, but did not receive peer modeling. Researchers observed the children with SLI for increases in the number of words in a script, number of different words, play-theme-related acts, and linguistic markers. There were varying increases in all areas, supporting the researchers' hypothesis. Specifically, Robert and Weismer (1997) reported the children with SLI increased play interactions when paired with a peer with normal language development to a greater degree than the children with SLI who were paired with other children who also had a language delay. This shows that interaction and play alone can serve as a model for increased language development. Although manipulation of the play activities can target specific goals and facilitate the results, it is not always necessary for improving overall language.

Although there are benefits of using siblings and peers with children with SLI, the amount and time period of training is still unknown. While certain studies (Hancock & Kaiser, 1996) have shown that some level of generalization occurs with techniques such as Milieu teaching, further research is needed in order to provide an understanding of the exact strategies or combination of strategies that aided in this improvement. Overall, it appears that sibling and/or peer training has

the ability to help children generalize skills. However, certain children may need to be trained in a variety of settings and/or for longer periods of time.

Implementation

Training

When integrating siblings and/or peers into a child's language therapy, training the agent of intervention (i.e. the peer or sibling) must be productive in order to achieve optimal results. When selecting a school peer, there are several things a therapist should consider. According to a study by Bass & Mulick (2007, p.733), "These peers should have regular school attendance, age-appropriate play skills, and no or a positive social history with the child with autism," or the child receiving therapy. Regular attendance ensures that the child receiving therapy will have consistent intervention. If using a sibling, attendance is not typically an issue; however, it is important that the sibling have age-appropriate play skills. A neutral or positive relationship between the child receiving therapy and the child interventionist is also imperative whether using a peer or sibling.

When actually training the sibling or peer, it is helpful if the sibling/peer understands his/her role in the intervention. In a study by Owen-Deschryver, et al. (2008), the researchers used three phases of training. In phase 1, students were given a rationale for developing friendships with students with disabilities. This phase was taught with a book, discussion, or other activity depending on the children's ages. Phase 2 consisted of a discussion that helped students to realize that all students (with or without disabilities) have specific abilities and/or areas of need. The final phase, phase 3, provided the children with more concrete

information and strategies for interacting with children with disabilities (this study focused on ASD). These strategies included what to play and how to talk to the child, what topics could be discussed successfully, activities to engage in with the child, how to help the child learn the activity being played, and what to do if in an unusual situation with the child. Providing this training was beneficial as the researchers found that the typically developing peers immediately initiated more interactions with their developmentally delayed peers (Owen-Deschryver, et al., 2008). The average number of initiations for the children with disabilities also increased in response to the trained peers' interactions with them.

Goldstein, Schneider, and Thiemann (2007), also used a series of phases for peer training and found it to be a successful approach. First, peers were introduced to the idea of playing/ interacting with the other children, and were taught strategies to use. The children then memorized the strategies they were given, and practiced them with adults. Specific examples of strategies from the above study include establishing eye contact or joint attention, initiating joint play, talking descriptively about play activities, and responding to children's communicative attempts. Verbal cueing was used by the researchers as the sibling/peer was still learning. For example, if a peer is paired with a child with a language delay during free time, the therapist would cue the child by saying "Play a game," or "Try talking about Billy's trains." Over time, the peer/sibling involved would learn to use these strategies without the cueing of the therapist. Overall, adequate training will teach peers to attend to, comment on, acknowledge and respond appropriately to the behavior of their peers with disabilities.

Strategies and Techniques

In addition to understanding their role in the intervention plan, it is best if the sibling/peer is given a specific strategy to use when working with the target child. Especially when working with younger trainers, a concrete strategy will allow the sibling/peer to memorize and rehearse the technique. Milieu teaching which has been discussed as an effective technique, provides a young trainer with concrete strategies that can be integrated into play. This technique uses naturally occurring behaviors, such as imitation and modeling, to improve interaction. Examples of these behaviors can be shown to a peer/sibling during the training period with clear examples. Also, the therapist can check for understanding of the strategy by asking the peer/sibling to demonstrate modeling, imitation, etc. This better allows the therapist to gauge when the peer/sibling is properly trained and ready to work with a child with a disability. Incidental teaching is an additional technique that can be used. This is done by withholding items in order to encourage requesting. Extended Reponses are then built off of the original request. For example, if the target child requested “drink”, the peer tutor would ask which drink. This forces the target child to expand on his/her original request by saying milk, juice, etc. Peer tutors can also teach and encourage polite and appropriate requests such as saying please (Farmer-Dougan, 1994).

Incidental teaching has also been used successfully in adults with developmental delay. According to a study by Farmer-Dougan (1994), peers used incidental teaching to instruct appropriate requesting in adults with

moderate to severe intellectually disability or autism. The procedure was used for appropriate requesting at meal time. This study reported results supporting the peer tutor's positive influence on the participants as seen by the participants increase in frequency of initiations that were successful and appropriate.

When working with children with developmental delays, responsive interaction, nonverbal mirroring, and verbal responding, are often selected strategies because of their foundational approaches for promoting reciprocal interactions (Trent-Stainbrook, et al., 2007). Mirroring requires the older sibling to attend to the nonverbal behaviors of the child with a disability and to respond/react to them instead of only responding to verbal comments. When training a sibling to use mirroring, the therapist should teach him/her to imitate the nonverbal behavior of the child with Down syndrome (Trent, et al., 2005). Not only does this engage the participant with a developmental delay, but it also helps the older/typically developing sibling to focus on and encourages more interaction. Verbal responding is the act of verbally responding/ commenting after a pause in turn-taking. In the study by Trent-Stainbrook et al., the older children were taught to respond by either repeating the initial verbalization of the children with Down syndrome or to describe the activities they were participating in. The purpose of this is to balance turns and give the child with a disability multiple opportunities to both initiate and respond. While these strategies have been used successfully in children, the outcome of using these strategies in adults with developmental delay is still uncertain.

Often a child with a disability and/or language deficit may not be ready for strategies that focus on specific and/or advanced language skills. In this case, techniques can be used to focus on social and reciprocal interaction as a foundation for language skills learned later on. Because these techniques are often conducted in a naturalistic setting, it may be necessary to train the peer or sibling on the difference between parallel play and interactive play (Rogers, 2000). Although the peer is still providing modeling in parallel play, if the goal is social interaction, then a more interactive play style needs to be implemented. Confirming that the peer understands this difference will ensure the interactions between peer and child are eliciting improvements. A study by Bass & Mulick (2007) found 3 strategies that facilitated social play in children with autism. The first, peer-mediated approaches, occurs when typically developing peers are trained to initiate, prompt, and reinforce social interactions made by the target children. The trained peers are to be in close physical proximity to the children with autism as much as possible for increased results. A second approach is integrated play groups (IPG). The teacher or supervising adult arranges the environment so that a child with autism is in a group with typically developing peers. “The IPG model places emphasis on increasing the motivation of a child with autism to socialize and play with peers. These peers are, in turn, taught to accept and include children with autism who may relate and play differently” (Bass & Mulick, 2007, p. 730). The third approach for increasing social skills in children with autism is called the “peer buddy” approach. In this approach, a typically developing peer is assigned to a child with autism. The peer is instructed

to stay with, play with, and talk to the child with autism (Bass & Mulick, 2007). The peer helps the other child with skills social skills such as requesting an item, getting someone's attention, waiting for a turn, and looking at/attending to a speaker. All three of these approaches are fairly simple to train the typically developing peer, and can have positive results when implemented.

When implementing these strategies, it may be difficult to gauge progress. Thiemann and Goldstein (2004) offer six appropriate social communication measures that were used for data collection during their study. These areas are: (a) securing attention, (b) initiating comments, (c) initiating compliments, (d) initiating requests for information, (e) initiating requests for actions/objects, and (f) contingent responses. These areas "Were selected based on a review of the literature on normal and disordered development of topic maintenance and pragmatic language skills, and based on the negative impact of the absence of these language skills on conversation interactions" (Thiemann & Goldstein, 2004, p.130). Therapists can use these six areas as measures of appropriate social communication when observing and evaluating a child's progress. If a specific area is weak, goals can be made to target that area.

Clinical Implications

Because the therapist often only sees the child for a few hours a week, involving the family can increase the child's success. This is usually geared towards the parents, but research is beginning to show us that using siblings and peers can be just as effective. "Interactions between children with disabilities and typically developing children likely provide increased opportunities for the indirect

teaching of communicative behaviors" (Trent-Stainbrook, et al., 2007, p. 285). Teaching siblings/peers to use strategies such as modeling and imitation provide a more natural learning experience for the child with a disability. Siblings are frequently chosen as trainers due to their close physical proximity to the child although peers can often be just as effective as a child's sibling. However, if a clinician is selecting a peer to serve as a model, then special attention should be paid to the selection of who will benefit the child most. Once a sibling or peer is selected, the clinician should spend some time training the sibling/peer on the language targets and the strategies in which to teach them. If it is possible, the clinician should involve the sibling/peer trainer in the child's therapy sessions.

The studies that have been discussed are part of a growing body of evidence that shows siblings/peers support the learning and development of children with disabilities. These studies give therapists evidence based practice to use for justification of integrating peers and siblings into therapy programs. Having strategies to use that have been proven to be helpful, aids the clinician in providing the best treatment possible. Evidence-based practice also ensures the clinician that using this technique should produce improvements in social behavior or language.

Suggestions for Future Research

Although there is a growing body of empirical evidence which shows the benefits of using siblings or peers in therapy, this topic is somewhat new to the field of speech-language pathology. Therefore, there are many opportunities for future research. Owen-DeSchryver, et al., 2008 suggests that future research

focus on evaluating the effectiveness of peer-mediated strategies in naturalistic school settings as well as activities. The researchers also indicate the need to evaluate the determining factors that contribute to the success or failure of these intervention techniques. Language therapy for children with ASD often targets social initiations. The child's goal criterion usually contains a number of desired initiations even though there is not a clear norm for a typical amount of initiations. "Future Research might assess the frequency of initiations made by students at different ages, as well as by both shy and extraverted students" (Owen-DeSchryver, et al., 2008, p.26). According to Rogers (2000, p. 406), "Interventions need to be solidly grounded in actual peer behavior, not in adult expectations of peer behavior." Social goals and objectives should be set accordingly. The concept of differentiating between social behaviors and qualities of relationships is important, and can be observed through generalization. A child may exhibit some appropriate social behaviors therefore meeting an objective, but the long term goal of social relationships is not necessarily met. Through observation of the child in a natural setting, the therapist can assess the quality of social relationships**.**

Many techniques have been established; however it would be of interest to know if the various techniques possess a mean length of time needed for training and generalization. A mean amount of reinforcement needed for generalization could also be included in such a study. This information could then be used as guidelines for therapists when planning and implementing intervention plans.

When selecting a peer trainer, recommendations have been made, however there is limited research on the effectiveness of various trainers. It would be both interesting and beneficial to discover if a child's functioning level, academic level, and social experience makes him/her a more effective peer trainer. In accordance to this, the research could look for any attributes that should be avoided when selecting a trainer. Another interesting component would be gender. Females are often thought of as nurturers but there is no empirical evidence for the field of speech-language pathology that says whether a male or female would serve as more effective trainer.

Future studies should also look at whether there are any long term effects to using a sibling or peer as a trainer. For instance, if the child and trainer's relationship improves, or if the child shows signs of resentment if the trainer is coming on too strong; these observations should be documented as it may influence parents' decisions regarding the use of this technique.

Conclusion

Researchers have demonstrated that siblings and peers can be effective trainers for a variety of children including autism spectrum disorders, Down syndrome, and specific language impairment. Because of their disability, these children do not learn by natural means as easily as their typically developing peers. Therefore, it is important to provide them with increased opportunities. These opportunities are best achieved through a functional approach which incorporates the language facilitators into an aspect of the child's everyday life**.** The studies discussed are part of a growing body of evidence that shows siblings

and peers support the learning and development of children with disabilities. Results of investigations indicated that sibling/peer training has had success that is comparable to that of adult trainers. Although a person may not rely primarily on the use of siblings and peers, they are a good adjunct to normal therapy as they provide the child with increased opportunities for language development.

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), 727-35.

Farmer-Dougan, V. (1994). Increasing requests by adults with developmental disabilities using incidental teaching by peers. *Journal of Applied Behavior Analysis*, *27*(3), 533-544.

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

Hancock, T., & Kaiser A., (1996). Siblings' use of milieu teaching at home. *Topics in Early Childhood Special Education*, *16*(2), 168-190.

Knott, F., Lewis, C., & Williams, T., (2007). Sibling interaction of children with autism: Development over 12 months. *Journal of Autism & Developmental Disorders,37*(10), 1987-1995. doi:10.1007/s10803-006-0347-z.

Owen-DeSchryver, J. S., Carr, E. G., Cale, S. I., & Blakeley-Smith, A., (2008). Promoting social interactions between students with autism spectrum disorders and their peers in inclusive school settings. *Focus on Autism & Other Developmental Disabilities, 23*(1), 15-28. doi:10.1177/1088357608314370.

Robinson, D., Schofield, J., & Steers-Wentzell, K., (2005). Peer and cross-age tutoring in math: Outcomes and Their Design Implications. *Educational Psychology Review, 17*(4), 327-362. doi:10.1007/s10648-005-8137-2.

Robinson, S., & Weismer, S., (1997). The Influence of peer models on the play scripts of children with specific language impairment. *Journal of Speech, Language, & Hearing Research, 40*(1), 49.

Rogers, S. J. (2000). Interventions that facilitate socialization in children with autism. *Journal of Autism & Developmental Disorders, 30*(5), 399-409.

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*, 126-144.

Trent, J. A., Kaiser, A. P., & Wolery, M., (2005). The use of responsive interaction strategies by siblings. *Topics in Early Childhood Special Education, 25*(2), 107-118.

Trent-Stainbrook, A., Kaiser, A. P., & Frey, J. R. (2007). Older siblings' use of responsive interaction strategies and effects on their younger siblings with Down syndrome. *Journal of Early Intervention, 29*(4), 273-286.

Tsao, L. L., & Odom, S. L. (2006). Sibling-mediated social interaction intervention for young children with autism. *Topics in Early Childhood Special Education, 26*(2), 106-123.

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