Integrating Family Capacity-Building and Child Outcomes to Support Social Communication Development in Young Children With Autism Spectrum Disorder

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The focus of this article is on the transactional relationship of research and practice for speech-language pathologists serving infants and toddlers with and at risk for autism spectrum disorder in Individuals with Disabilities Education Act supported early intervention. Specifically, information is provided on (a) the relationship between parent-implemented social communication interventions for young children with autism spectrum disorder and family-centered practice; (b) the importance of family-centered practice to capacity building with families within their natural environments; and (c) adult learning principles that build the family’s capacity to meet their child’s social communication needs. Examples from previous and current research, as well as implications for future research, are provided. Key words: autism spectrum disorder, communication development, embedded intervention, family capacity-building, family-centered supports and services in the natural environment, parent-implemented intervention

MULTIPLE research initiatives and nationwide collaborations are rapidly increasing the knowledge base on intervention effectiveness for young children with autism spectrum disorder (ASD); resources include Autism Speaks Treatment Initiatives, High Risk Baby Siblings Research Consortium, and the Autism Intervention Research Network on Behavioral Health. The result can be a staggering abundance of new information for parents and providers to process. Although the research progress is remarkable, the needs continue to increase.

The most current overall prevalence rate of ASD is one occurrence for each 110 children nationally (Centers for Disease Control and Prevention, 2009). In a recent study in South Korea by Kim et al. (2011), in which a total population sample was screened and the researchers conducted comprehensive assessment for all positive-screen children, prevalence estimates increased to 1 in 38. Although the specific number of infants and toddlers with or at risk for ASD enrolled in Individuals with Disabilities Education Act (IDEA), Part C (2004) early intervention (EI) programs in the United States is difficult to determine because of differences in early identification and diagnostic requirements across states, the impact is significant.

Demands made by such high prevalence numbers clearly are beyond the capacity of
current Part C service delivery programs; thus, many potentially eligible children and families may not have access to effective, evidence-based programs (National Research Council [NRC], 2001). Research has shown that EI can increase the developmental trajectory for children with ASD (Boyd, Odom, & Humphreys, 2010; Wetherby & Woods, 2008) and may serve to prevent the full unfolding of symptoms of ASD by minimizing the associated secondary abnormalities in brain development (Reznick, Baranek, Reavis, Watson, & Crais, 2007; Zwaigenbaum et al., 2005).

Multiple systematic reviews and meta-analyses have highlighted the active ingredients instrumental for intervention and can serve to guide service delivery (e.g., McConachie & Diggle, 2007; McConnell, 2002; NRC, 2001; Zwaigenbaum et al., 2009). For example, intervention that begins before the age of 3.5 years shows the most promise for language and academics (e.g., Boyd et al., 2010). Developmental and combined developmental–behavioral approaches designed specifically for toddlers are showing positive outcomes in core deficit areas, such as joint attention (e.g., Kasari, Gulsrud, Wong, Kwon, & Locke, 2010; Schertz & Odom, 2007; Vismara, Colombi, & Rogers, 2009). Other research supports the need for adequate dosage of intervention with familiar communication partners (Dawson et al., 2010; Wetherby & Woods, 2006). For example, in a carefully designed randomized control trial study, Dawson and colleagues found that, after 2 years of intervention that included both clinician and family participation using the Early Start Denver Model, child diagnosis changed from autism to pervasive developmental disorder—not otherwise specified for significantly more children than in the control group. In a review of 27 studies focused specifically on ASD intervention for children from birth to 3 years of age, Schertz, Baker, Hurwitz, and Benner (2011) identified the family as the primary implementer of intervention in approximately half of the studies included in the review.

PART C SERVICE DELIVERY

Speech–language pathologists (SLPs) providing EI services and supports under the provisions of the IDEA, Part C (2004) are serving an increasing number of children with and/or at risk for ASD diagnoses because of their impairments in communication and social interaction. Identification is occurring earlier and more consistently nationwide as Part C systems initiate focused directives to address the needs of this population (Henderson, 2009). Many parents of toddlers with a new diagnosis quickly gather information about interventions and request services that meet the dosage recommendations and emulate the research studies or treatments posted on advocacy Web sites. However, many of the service delivery practices in the published studies do not align with the natural environment guidelines or the intention of supporting caregivers to embed intervention within everyday activities and routines typical of the family. The disconnection between research and practice can become frustrating for families seeking what is described as optimal; that is, child focused and clinician delivered and for providers offering participation in a consultative, parent-implemented intervention (O’Brien & Daggert, 2006).

Schertz et al. (2011) highlighted several challenges that underscored the current gap between EI policies of family-centered services in natural environments and the evidence-based practices for interventions specifically targeted to infants and toddlers with ASD. On the basis of the Part C legislation (IDEA, 2004), national recommendations from the Division for Early Childhood of the Council of Exceptional Children (Sandall, Hemmeter, Smith, & McLean, 2005) and the National Association for the Education of Young Children (Copple & Bredekamp, 2009), Schertz et al. identified the following four EI principles as key: family-centered practice, natural environment, active child learning, and functional systematic practices.

Although many of the 27 ASD intervention studies included in the review addressed
some of the EI principles, only five studies addressed all four principles as defined by the authors (Schertz et al., 2011). In addition to these four principles, Part C stipulates that services should “enhance the family’s capacity to meet the developmental needs of the family’s infant or toddler” (IDEA, 2004, section 1436). Therefore, SLPs are faced with the task of providing EI services that not only meet the child’s targeted outcomes through the aforementioned principles but also enhance the family’s capacity to meet their children’s developmental needs (American Speech–Language–Hearing Association [ASHA], 2006, 2008; IDEA, 2004).

The gap between the implementation of current research interventions and the Part C guidelines raises several interesting questions. For instance, can services and supports that meet the family capacity-building definitions for Part C also effectively impact child outcomes? Can the use of natural environments including the family’s typical daily routines and activities address both child and family outcomes, especially generalization and maintenance of social communication behaviors? Can the combination of capacity-building strategies for the family incorporated into natural routines adequately address the dosage issue? In other words, could the Part C guidelines be a facilitator to high-quality services rather than present barriers? Practitioners and parents often focus on the limitations of the Part C system, especially its ability to provide adequate services to children and families. That focus may obscure important implications for research on empirical questions such as these about the nature of services and the role for the caregiver’s participation.

Evidence-based practice in this area requires expanded research on practices that systematically manipulate the key variables: family-centered practices, developmentally appropriate, embedded instruction in daily routines and child interests, and especially family capacity-building. In order for SLP practitioners to meet the needs of the increasing number of infants and toddlers with and at risk for ASD and their families in EI, there is a need for research aimed at developing a deeper understanding of (a) the relationship between parent-implemented social communication interventions for young children with ASD and family-centered practice, (b) the role of family-centered practice in building capacity with families within their natural environments, and (c) adult learning principles that build the family’s capacity to meet their child’s social communication needs. This article is intended to offer a thoughtful discussion on what current research shows, how it relates to Part C service delivery, and implications for future research-to-practice questions.

PARENT-IMPLEMENTED SOCIAL COMMUNICATION INTERVENTIONS

Parent-implemented interventions have consistently been found to promote gains in children’s social communication skills. Within a review of focused interventions and comprehensive treatment models for infants and toddlers with ASD, Boyd et al. (2010) demonstrated support and promise for parent-implemented intervention. For example, parents effectively implemented focused interventions on functional communication training (Moes & Frea, 2002), joint attention (Schertz & Odom, 2007), and comprehensive treatment models (Dawson et al., 2010; Wetherby & Woods, 2006).

Within the realm of parent-implemented social communication intervention, a variety of approaches for both intervention and parent involvement have been used. Developmental (e.g., Schertz & Odom, 2007; Wetherby & Woods, 2006) and behavioral intervention approaches (Rocha, Schreibman, & Stahmer, 2007), and blended approaches (e.g., Dawson et al., 2010; Kasari et al., 2010; Kashinath, Woods, & Goldstein, 2006), along the continuum, are represented in the literature. Within these intervention approaches, the parents’ role varied from being trained to implement a scripted intervention to being a team member in collaborative family-centered interventions.
that were individualized on the basis of their identified priorities and activities. The training settings varied but were most frequently clinical; the focus of the intervention was on child outcomes; and the context for intervention was primarily play. Not all studies carefully examined generalization.

TARGETING JOINT ATTENTION

Joint attention intervention implemented by parents has been a recent focus of researchers (Kasari et al., 2010; Rocha et al., 2007; Schertz & Odom, 2007); however, there is still much to learn. For example, Rocha et al. and Kasari et al. used different blended approaches to teach joint attention strategies to parents. In a multiple baseline single-subject design, Rocha et al. (2007) used a blend of traditional and contemporary behavioral approaches to teach parents how to use behavioral analytic techniques to target five phases of response to joint attention bids in play contexts in the clinic. In a randomized control trial, Kasari et al. (2010) studied the effects of teaching parents strategies that fell along the continuum between contemporary behavioral and developmental approaches to improve their children’s joint attention and play skills. As a part of the 8-week intervention, parents in the intervention group were taught facilitative and responsive strategies in the clinic. This study provides support not only for the effectiveness of parent-implemented intervention but also for the ability of parents to learn skills that influence child development in a relatively short period of time. Although both clinically-based studies demonstrated change in the children’s joint attention, generalization to natural contexts was not shown. Kasari et al. (2010) reported generalization in the clinic but did not examine home generalization, and Rocha et al. (2007) found minimal generalization in the home setting.

These studies highlight that although there is evidence to support parent-implemented intervention, there is a need for further examination of intervention implemented outside of a clinical setting. Schertz and Odom (2007) studied a home-based parent-implemented developmental approach to joint attention. The parents implemented the strategies in primarily play-based home activities and maintained or improved their implementation of strategies after the intervention. It was reported that the parents implemented intervention into other settings (e.g., backyard, kitchen, restaurant) and into other natural routines; however, specific data were not provided on the types or frequency of strategy use in these settings or routines.

USING SOCIAL COMMUNICATION TO INCREASE PARTICIPATION AND ENGAGEMENT

Aligning closer to the practice of Part C services, other studies have provided intervention for joint attention in addition to broader social communication targets in natural routines in home contexts (Dawson et al., 2010; Kashinath et al., 2006; Wetherby & Woods, 2006). To support the use of interactional exchanges, communication, and engagement in natural activities, Dawson et al. (2010) studied the effect of parents implementing the manualized Early Start Denver Model in a randomized control trial. Parents identified outcomes from the curriculum that were a priority for their child, and they were taught a combination of behavioral and developmental strategies to support their child’s development in everyday activities. The children demonstrated increased scores on the Mullen Scales of Early Learning (Mullen, 1995) after the intervention; however, information on maintained functional use of skills in natural contexts was not provided.

In a study designed to be congruent with Part C practices, Kashinath et al. (2006) examined the effects of systematically coaching parents to use blended developmental and contemporary behavioral strategies in a variety of family identified and preferred home routines including feeding, hygiene, books, and music, in addition to indoor and outdoor play. Following a multiple baseline design,
parents learned to use two different teaching strategies in target routines to synchronize with their child's attentional focus and address individualized communication objectives. All five parents demonstrated proficient use of teaching strategies and generalized their use across routines.

Wetherby and Woods (2006) found evidence supporting parent-implemented intervention in varied natural routines for social communication outcomes through a quasi-experimental contrast group study on Early Social Interaction (ESI). Early Social Interaction was designed to extend the recommendations of the NRC (2001) to toddlers with ASD using a parent-implemented intervention embedding naturalistic teaching strategies in everyday routines compatible with IDEA, Part C. Similar to the intervention context in Kashinath et al. (2006), intervention was provided within family-identified routines across multiple routine classes. Intervention goals were individualized and selected from a developmental framework targeting social interaction, joint attention, communication, imitation, play, and emotional regulation (Prizant, Wetherby, & Rydell, 2000). Results indicated significant improvement with large effect sizes on 11 of 13 social communication outcomes measured with the Communication and Symbolic Behavior Scales Developmental Profile (Wetherby & Prizant, 2002). It is particularly noteworthy that significant changes were demonstrated in both initiating and responding to joint attention.

FAMILY AND CHILD OUTCOMES WITHIN DAILY ROUTINES AND ACTIVITIES

Studies that showed maintenance and generalization of the parents' strategy use in the setting and context in which intervention occurred (although not necessarily in generalization settings) have used developmental features blended to varying degrees with contemporary behavioral strategies (Kasari et al., 2010; Kashinath et al., 2006; Schertz & Odom, 2007; Wetherby & Woods, 2006). The findings of these studies offer important preliminary data for developmental interventions on the basis of the following forms of evidence: (a) evidence that naturalistic teaching strategies lead to improvements in core social communication deficits in children with ASD; (b) evidence that parents of children with ASD can learn multiple strategies to synchronize with their child's attentional focus and generalize use of these strategies across routines in natural environments; and (c) evidence of the impact of parent-implemented strategies on communication outcomes for children with ASD.

When intervention has been provided in home settings with natural materials and parents as collaborators, researchers have found that parents implemented the intervention in routines outside of the play contexts targeted directly in the studies (Kashinath et al., 2006; Schertz & Odom, 2007; Wetherby & Woods, 2006). Parents have used targeted intervention strategies in coached and uncoached play, caregiving, and literacy routines when parent teaching has been systematically incorporated into parent-identified home routines across routine classes, and when parents have been involved in the development of child goals and adult learning preferences (Kashinath et al., 2006; Wetherby & Woods, 2006).

Incorporating intervention within natural activities is a key component of Part C services. Therefore, it is important not only to examine the effectiveness of parent-implemented intervention but also to examine settings and contexts in which parents used the strategies. When parents use strategies throughout a variety of daily routines, as opposed to being taught to use them exclusively in play interactions, it is logical that the child's opportunities for practice increase (Woods & Wetherby, 2003). This is beneficial to both parents and children. Children can learn to participate as members of the family in a variety of activities and events throughout the day, supporting functional use of communication skills rather than completing specialized therapies or lessons. In such
contexts, families are accomplishing their life chores and are participating with their child in meaningful contexts that facilitate generalization.

Research has shown that the caregiver’s role in intervention must be emphasized. Siller and Sigman (2002) found that parent synchronization was a predictor of joint attention skills that ultimately predicted language outcomes. In a longitudinal study of 25 children with ASD, Siller and Sigman (2002) found that children who had caregivers with higher synchronization levels on initial samples developed better joint attention skills 1 year later and better language outcomes 10 and 16 years later in comparison with children of caregivers who showed lower levels of synchronization initially. Both verbal and nonverbal synchronized behaviors were found to have a relationship with the children’s development of joint attention and language. The strongest predictor of the child’s increase in initiating joint attention was the caregiver’s initiation of joint attention that is synchronized to the child’s attentional focus. For example, when a parent recognizes that her child is looking at the buckle on his highchair, picks up the ends, and pushes them together saying “snap,” the parent has initiated a joint interaction between herself and the child by focusing on the buckle, which already is the child’s focus of attention. In another example, the parent could follow the child’s attentional gaze to the milk on the counter and ask the child if he would like milk.

Learning to initiate joint attention (and to pair it with language) is a generic skill useful in multiple situations that can promote a child’s outcome, attainment of a family priority, and increase the caregiver’s active participation in the intervention. The strongest predictor of gain in language found by Siller and Sigman (2002) was caregiver utterances that followed the child’s attentional focus and allowed the child to continue the ongoing material engagement. These findings have important implications for targeting social communication in intervention by enhancing the child’s skills and the partner’s ability to support shared attention. They also support recommendations for intervening early to establish or enhance synchronization by caregivers as a foundation for developing bidirectional interactions in typical routines and activities.

Collectively, the studies reviewed here offer evidence of the feasibility of parent-implemented interventions and demonstrating changes in core social communication deficits with treatment. Parents increased their use of specific intervention strategies and children made progress on the targeted social communication skills in each of the studies presented. Although the collective results of the reviewed research support the practice of parent-implemented intervention, the use of individual methods has not been translated completely to align with the Part C mandate and recommended practices of building the family’s capacity for supporting their child’s development (IDEA, 2004; Sandall et al., 2005).

**CAPACITY-BUILDING INTERVENTION IN NATURAL ENVIRONMENTS**

Family capacity-building involves increasing the parents’ competence in implementing strategies to enhance their children’s development while increasing their confidence that they are able to do so (Swanson, Raab, & Dunst, 2011). The caregiver’s role in the intervention must go beyond scripted activities, homework, carryover sessions, or carefully planned and practiced routines. In addition to coaching on what the strategy is and how to use it, the SLP must emphasize the caregiver’s deeper knowledge of “why” the intervention works and how to support generalization and adaptations in other settings. The SLP also should promote the caregiver’s ability to generate learning opportunities as they occur throughout the day. This *intentional* component of family capacity-building appears to be a gap in current research and practice.

Key principles of family-centered intervention can serve as a guide in building
capacity of families of young children with ASD to support social communication development. Addressing the family’s informational needs and using their natural environments as the intervention context can support family capacity-building, as can engaging parents to be active participants in the intervention process through effective communication and use of adult learning principles. The interlocking thread between these principles is establishing and maintaining a collaborative relationship between the SLP and caregivers. The bidirectional nature of skills and self-efficacy within capacity building extends beyond traditional parent-implemented interventions focused primarily on skill attainment. Although less research has been conducted on strategies for teaching caregivers than has been conducted on strategies that caregivers can use to teach their children, there is a growing body of literature on adult learning principles, coaching, and consultation. Family-centered principles guide practitioners on what to do, and adult learning theory facilitates how to do it.

**ADULT LEARNING PRINCIPLES THAT BUILD FAMILY CAPACITY**

As the SLP extends attention to the caregiver’s (adult) learning needs, it may be perceived by both the caregiver and the SLP as a distraction from the focus on the child’s intervention. Building capacity in caregivers can be presented in a manner that will not decrease the impact or emphasis on child outcomes but can mediate the process (Trivette, Dunst, & Hamby, 2010). When caregivers gain confidence through informational and resource supports and competence through active practice with coaching, including specific feedback and reflection about how to support their child’s social communication development, evidence suggests that the child’s outcomes improve (Kashinath et al., 2006; Mahoney & Perales, 2005; Schertz & Odom, 2007; Wetherby & Woods, 2006). In addition, the need to meet the recommended dosage of 25 hours of active engagement for children with ASD (NRC, 2001) can be met as caregivers increase their confidence and competence in supporting their child’s development in everyday natural activities. The challenge lies in finding effective ways to engage caregivers in the intervention process as collaborators so their confidence and competence can be increased to meet their child’s needs through intervention at this recommended dosage.

**ADDRESS THE INFORMATIONAL NEEDS OF CAREGIVERS WITH TODDLERS WITH ASD**

Families of all young children have multiple information priorities. Parents of children with ASD have even more. They are often anxious to learn about the disorder, various interventions, and the probable impact of each on their child’s overall growth and development. Parents may focus on how the disorder has changed their expectations for their child, how their child is currently participating in their family activities, and/or what the future may hold for their child. It is typical for parents to have different emotions and reactions to the disorder, their child’s actions, and the role they want from interventionists and teachers.

Speech–language pathologists need to offer a steady and consistent approach to information sharing. A relationship can be established that will support the child’s development that includes listening to the parents, sharing information that will assist them with their decision making, discussing options honestly and respectfully, inquiring about how they are currently doing with the understanding that it may be highly variable, and acknowledging their emotions. This relationship is the foundation for providing information that the parents need in a manner that meets the parents’ learning styles and emotional states (O’Brien & Daggert, 2006).

To develop competence in any area, adults need to have a deep foundation of factual knowledge, to be able to place the facts within
their own experiences and beliefs, and to organize the information in ways they can retrieve it easily for application (Donovan, Bransford, & Pellegrin, 2000). Gaining competence to use information is rarely achieved through a single exemplar, in only one communication format, or without time to process, especially if the information does not fit in previous experiences or expectations. It should not be a surprise to SLPs in EI that caregivers do not understand their roles as partners in the intervention process with the SLP as a consultant. For most caregivers, the expectation would be the delivery of direct services to their child by the SLP. The SLP’s first priority, therefore, would be to learn the caregivers’ expectations and their understanding of the EI process. This offers the SLP an opportunity to build on the caregivers understanding while acknowledging the differences between the expectations of the caregiver and the program.

The SLP may offer video, print, or Internet resources to caregivers that explain how young children learn throughout the day within meaningful activities. The SLP also could suggest another family to share their intervention story, join into a favorite turn-taking game to demonstrate the various intervention opportunities, or initiate a problem-solving discussion around a challenging behavior that limits family access to community outings. Through focused or in-depth teaching of a few of the guiding principles for EI, caregivers can begin to gain a deeper understanding of the meanings rather than a repetition of the words. Suggestions about how to do so are presented in the following sections.

**EMBED INTERVENTION INTO NATURAL ENVIRONMENTS**

It should not be a surprise that research shows that generalization and maintenance of parent-implemented social communication intervention occurs at the highest rates when the intervention contexts not only are selected by the caregivers but also are preferred natural activities and routines of the child and family (Dawson et al., 2010; Kashinath et al., 2006; Schertz & Odom, 2007; Wetherby & Woods, 2006). Natural environments are the designated context for Part C services (IDEA, 2004), but concepts about what this means may be too restricted. They are more than just the home or early care and education setting; they have been defined by the context of intervention as well. In other words, intervention provided in the natural setting environment of a home or early care and education center meets only a portion of the requirement. The context portion of natural environments includes everyday experiences with familiar people (e.g., parents, teachers, siblings, and other caregivers) in everyday routines and activities (Workgroup on Principles and Practices in Natural Environments, 2007).

At this time, the integration of the basic tenets of intervention in natural environments is incomplete for toddlers with ASD, but it includes the following: (a) children learn functional and meaningful skills that enhance participation and independence; (b) learning occurs throughout the day in typical caregiving, play, and social interactions; and (c) caregivers mediate the teaching and learning process for the child as it occurs using interventions they are competent and confident embedding in the routines (Dunst, Hamby, Trivette, Raab, & Bruder, 2000; Schertz et al., 2011).

The use of everyday settings and contexts is extremely important to the capacity building of the adult learners as well. The use of typical routines and settings facilitates the development of an organizational framework for the caregiver that supports embedding intervention within familiar and predictable sequences of behavior.

Embedded intervention is the intentional use of specific intervention strategies to address identified targets within the context of activities and routines in which the child needs to use those targets. The embedding of intervention within typical daily routines and community activities focuses on the generalization of skills for the child, while
reducing the stress of specialized training activities on the parents (Woods & Kashinath, 2007). The caregiver who has learned how to pause and wait expectantly for the child to gesture a request for the milk on the counter has the framework to use the strategy to support the child’s requesting for a toy or to go outside. Transitioning embedded intervention from a noteworthy concept to an ongoing reality in the family’s life requires an integration of the parent’s knowledge and skills of social communication development and intervention with family capacity-building principles.

ENGAGE PARENTS AS ACTIVE PARTICIPANTS

Engaging caregivers in the intervention process begins long before the first intervention session and continues throughout the process. Continuing to support relationships that promote caregiver participation is integral to the delivery of family-centered services. Defining characteristics of family-centered services include (a) seeking out and respecting caregivers’ views; (b) ensuring equal participation of family members in the decision-making process; (c) recognizing caregivers’ rights to make decisions even when decisions are contrary to the professionals’ views; and (d) affirming the role of culture, values, and family beliefs in their community (Bernheimer, 1999; Dunst, Trivette, & Hamby, 2007). Additional information about engaging caregivers as active participants in planning and implementing intervention for young children with ASD on the basis of principles of information sharing, natural environments, and adult learning as a means to build the family’s capacity can be found at http://tactics.fsu.edu.

What, when, and how caregivers learn about EI services and supports, their roles, and the roles of the team, impacts their beliefs in the value of and participation in the program. Research has shown that two types of caregiver beliefs are likely to influence their participation in the EI process: (1) the extent to which caregivers feel they have been involved meaningfully in the planning and decision-making process and (2) the extent to which the learning opportunities afforded a child result in the expected or desired child outcomes (Trivette, Dunst, Hamby, & O’Herin, 2009). Caregivers and providers both are motivated by a desire to improve child outcomes.

The use of adult learning principles contributes to successful engagement of caregivers in early social communication intervention by guiding interactions with the caregivers. Adult learning theory promotes the SLP’s knowledge of the ways in which caregivers engage in learning and how they gain and use knowledge and skills to support their child’s learning. Adults learn by adding new information to their already-existing knowledge, and they see the benefits of knowledge when it impacts their typical daily experiences (Knowles, Holton, & Swanson, 2005). In other words, adults learn best by being actively involved in their own learning, making decisions, and problem solving about what works best for them, and practicing in meaningful, daily events, and activities (Donovan et al., 2000; Knowles et al., 2005). Using information about how adults learn, the SLP encourages the caregivers to relate new information to their everyday experiences to enhance their understanding and application.

In a series of single-subject studies in which the first author participated (Kashinath et al., 2006; Woods, Kashinath, & Goldstein, 2004; Woods & Kashinath, 2007) and in a larger quasi-experimental early social interaction study (Wetherby & Woods, 2006), caregivers provided feedback through participant evaluations and exit interviews to measure their perceptions of the effectiveness of the intervention. Although similar questions and interview procedures were used across the studies, not all children involved in the single-subject studies had a diagnosis of ASD. Eighteen caregivers ranked the most important components of the coaching or consultation process as the following: problem solving with the clinician; clinician, and/or video
demonstration of the practice or intervention strategy; discussion of the pros and cons to make a good match between strategy and outcome; routine and child’s interests; time to talk about the data; and practice with feedback.

Caregivers, as adult learners, have vast and varied experiences. Learning new skills is enhanced when their experiences and existing knowledge are valued and connections from old to new information are made. In addition, adults attach more meaning to active experiences than to passive experiences (Knowles et al., 2005). Therefore, intentionally using teaching strategies such as problem solving, video demonstration, and active practice with feedback can assist the caregivers in learning how to support their child’s social communication development. In our studies, the caregivers told us that the strategies they believed built their capacity. However, without the knowledge of adult learning, we would not have been able to recognize their importance and connect them to a cycle of teaching and learning that could be used intentionally to support other caregivers’ capacity building.

SUPPORT CAREGIVER’S REFLECTION AND SELF-EVALUATION

The key information caregivers shared about the importance of problem-solving, discussing pros and cons about the match between the context and strategies, and reviewing data are illustrations of how adults learn when they collaborate with the SLP in planning and providing their child’s intervention. They need to manipulate the information shared, put it into their own actions and words, and finally make it their own by talking about it, evaluating it, and assessing their own success and gaps in implementation with team members they trust and respect. There are many coaching strategies SLPs can use to engage caregivers on the basis of this essential adult learning principle, and yet, data collected to date on coaching in EI offer a paucity of exemplars (Campbell & Sawyer, 2009; Peterson, Luze, Eshbaugh, Jeon, & Kantz, 2007).

The metacognitive and metalinguistic ability of adults to manipulate knowledge and applications assists them to transfer their learning and generate novel examples for its use (Donovan et al., 2000). The act of planning routines through reciprocal problem-solving facilitates caregivers’ learning through their active participation and decision making; by placing it in their preferred and familiar context; and by providing opportunities to examine what should work and why, as well as what could go wrong, and alternative strategies. The supports from the SLP’s reflective and interpretative questions guide the caregiver’s deeper knowledge and capacity to assess the effectiveness of the strategy use on their child’s communication. Parents do not have to become a therapist or a cointerventionist. The goal is to improve their role as their child’s parent and communication partner.

IMPLICATIONS FOR NEXT STEPS

Although research has provided foundational information on methods for family-centered capacity building to support the social communication needs of young children with ASD, additional research is needed on methods of coaching parents within these collaborative approaches. Evidence-based methods and strategies specific to approaches congruent with Part C practices are needed to fully translate the principles into practice of meeting the families’ informational needs, actively engaging caregivers, and embedding intervention into natural routines.

It is an exciting time to be a clinical researcher with a focus on EI for young children at-risk for or with ASD. There is so much to be learned. It is also a time to examine research supported practices, and to integrate that information into planning services and supports in collaboration with families to achieve outcomes that build the capacity of both child and family for the future.
REFERENCES


