Caregiver Coaching Strategies for Early Intervention Providers
Moving Toward Operational Definitions

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Early intervention (EI) providers increasingly coach and collaborate with caregivers to strengthen and support caregiver–child interactions. The EI providers learning to coach other adults benefit from knowing what, exactly, they should do to support caregivers. This article serves two purposes. First, it proposes an operationally defined, theoretically based, and reliably used set of definitions (behaviors) that describe coaching strategies that providers can use to support caregiver learning. Second, it suggests possible applications of these definitions for EI providers, administrators, and researchers. We discuss underlying theories of adult learning and the process by which the definitions were developed. Preliminary evidence regarding the utility of these definitions is presented by using videotape data of provider coaching practices in home visits from three different studies. Descriptive data from these programs and home visits illustrate how the coaching definitions can be used to distinguish implementation differences and how they could be used to support professional development efforts for EI coaching and consultation. **Key words:** *adult learning, coaching strategies, collaborative consultation, family-centered services*

SIGNIFICANT CHANGES have occurred in recent years in how the role of the early intervention (EI) provider is conceptualized and enacted. Historically, the field of EI has advocated the use of family-centered practices to promote the active participation of caregivers in prioritizing goals and in decision making related to their child's services and supports. However, in recent years, the field has witnessed a growing emphasis on caregiver-implemented intervention that extends the scope of family engagement and, in turn, broadens our conceptions of family-centered practice. The implication of this shift is that EI providers must now focus on what they need to do to strengthen the

caregiver–child relationship so that caregiver-implemented intervention produces positive outcomes for both the caregiver and the child. Greater attention is now placed on building the caregivers' capacity to promote their children's development within the context of their typical routines and activities (Campbell & Sawyer, 2007; Dunst, Hamby, Trivette, Raab, & Bruder, 2000; Woods, 2005). Researchers have asserted that capacity building occurs when the EI providers offer support to strengthen the caregiver–child relationship, build the caregiver's confidence and competence to enhance their child's learning, and accomplish family-identified outcomes (Hughes & Peterson, 2008; McCollum & Yates, 1994; National Early Childhood Technical Assistance Center, 2008; Sandall, Hemmeter, Smith, & McLean, 2005). To be effective, EI providers need to strengthen and broaden their specific knowledge and skills about how to collaborate with and coach caregivers during intervention sessions to build caregiver capacity. Unfortunately, research indicates that adoption and use of coaching in EI have thus far been limited and challenging for EI providers (Campbell & Sawyer, 2007; Fleming, Sawyer, & Campbell, 2011; Peterson, Luze, Eshbaugh, Jeon, & Kantz, 2007; Salisbury, Woods, & Copeland, 2010). Implementation science would suggest that this is due, in part, to the fact that providers often do not fully understand what behaviors constitute collaboration and coaching and, therefore, what is expected of them in practice (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005).

Survey and observational research indicates that EI providers struggle to work with caregivers and children as a triad (Campbell, Sawyer, & Muhlenhaupt, 2009; Center to Inform Personnel Policy and Practice in Early Intervention and Preschool Education, 2009; Fleming et al., 2011; Peterson et al., 2007; Salisbury et al., 2010). These investigations reveal that providers across several disciplines continue to rely primarily on direct interventions with children, rather than triadic interventions with the child and caregiver, and that they spend little time in coaching and supporting caregivers' interactions with their child.

In these studies, time with caregivers was primarily spent engaged in conversation and triadic interventions relied on modeling for the caregiver, rather than specific coaching and feedback (Campbell et al., 2009; Center to Inform Personnel Policy and Practice in Early Intervention and Preschool Education, 2007; Fleming et al., 2011, Peterson et al., 2007; Salisbury et al., 2010). Other research indicates that providers report a preference for child-focused intervention and that they had limited training in "how to" coach caregivers (Colyvas, Sawyer, & Campbell, 2010; Fleming et al., 2011). Studies also suggest that even with direct instruction during professional development activities, learning to implement strategies that entail feedback to others can be challenging for many professionals (Hemmeter, Snyder, Kinder, & Artman, 2011; Salisbury et al., 2010). However, emerging research indicates that providers can use a range of coaching strategies, vary their strategies within routines and across home visits, and adjust their strategy selection on the basis of caregiver responses when professional development and ongoing supports for using collaboration and coaching practices have been established (Basu, Salisbury, & Thorkildsen, 2010; Marturana & Woods, 2010; Salisbury, Cambray-Engstrom, & Woods, 2011).

When EI providers are uncertain about what constitutes coaching and what it looks like as a collaborative practice, it becomes considerably more difficult for them to understand what about their practice needs to change to effectively coach caregivers. Evidence suggests that, even with the best of intentions, discrepancies exist between what providers think they are doing and what they are in fact doing during home visits (Brorson, 2005; Salisbury et al., 2011). This disjuncture presents challenges for administrators, those involved in professional development, and practitioners themselves. Without consensus and clarity regarding the behaviors that comprise coaching, providers and those who support their professional development must rely on general guidance rather than specific information about what providers should be doing to promote caregiver learning. There is a need

to develop a well-defined and measurable set of coaching behaviors that can be used to evaluate performance with adult learners in both intervention and professional development contexts (Sheridan, Edwards, Marvin, & Knoche, 2009).

This article has a two-fold aim. First, we will propose definitions of a set of interrelated but differentiated coaching strategies relevant to service providers in EI. Second, we will illustrate the utility of these definitions by showing how they can characterize what happens during intervention sessions among providers who received professional development in family-centered intervention and coaching practices. The descriptive data in this study are not intended to evaluate the effectiveness of the professional development received by the providers. Rather, they are intended to provide illustrative evidence that these definitions are useful descriptors of what providers do to coach caregivers and how these coaching definitions might support professional development efforts.

CURRENT TOOLS TO ASSESS COLLABORATIVE PRACTICES

Creating a common lexicon that describes specific coaching behaviors is a necessary step toward strengthening providers' abilities to develop their own professional practice and build capacity among the families they serve. While several researched and validated tools describe the nature and quality of coaching practices in EI, few document the specific coaching strategies employed by the provider during intervention sessions. The Home Visiting Observation Form, for instance, offers details about the content addressed in intervention, interactions among participants, what role the provider played in the session, and what role the caregiver played during the session (McBride & Peterson, 1997). The Natural Environments Rating Scale determines whether intervention sessions are traditional or participation based, depending on whether the provider interacts with the

caregiver as a triad, uses the family's daily routines and activities as contexts for intervention, and whether intervention promotes the child's participation in those daily activities (Campbell & Sawyer, 2007). The Triadic Intervention and Evaluation Rating Scale (Basu et al., 2010) assesses the patterns of parent, provider, and child interactions during routines within EI sessions. Preliminary data suggest that the Triadic Intervention and Evaluation Rating Scale can reliably measure differences in providers' use of coaching strategies and caregivers' level of participation during EI sessions. These measures offer valuable descriptive indicators about the nature of intervention sessions, interactions between provider and caregiver, and the extent to which providers adhere to family-centered practices. However, none of these measures specifically define coaching strategies or behaviors within a collaborative interaction.

FINDINGS RELATED TO ADULT LEARNING, COLLABORATION, AND COACHING

Recent meta-analytic work has given new insight into the mechanisms that precipitate adult knowledge and skill acquisition. Findings from a large-scale meta-analysis study by Dunst and Trivette (2009) indicated that adult-learning approaches that include active-learner participation produced larger effect sizes than those that did not, substantiating the theoretical underpinnings of adult learning asserted by Knowles and Lindeman (Knowles, Holton, & Swanson, 2005). Adults learn best when they are actively engaged with the material and when their learning has an immediate context in which the content can be applied. In this meta-analysis, significant effect sizes were associated with elements of practice or the application of new knowledge and skills. Adults also need opportunities to try new skills to master their use. While having opportunities to practice are critical to an adult's acquisition of a new skill, engaging with the material at a

meta-cognitive level is an indispensable stage in the adult learner's development. Among the studies examined, the largest effect sizes were related to the use of evaluation strategies, such as encouraging the adults to think about the impact of their new knowledge, and reflection, in which the learners engage in self-assessment about the application of their knowledge and practice. These results also indicate that including multiple adult-learning strategies lead to greater effect sizes than including fewer strategies. Adults benefit from receiving information and practicing skills in multiple ways, and the more ways in which information is presented, the more likely it is that the adult will master the content (Dunst & Trivette, 2009). These data are consistent with the tenets of adult-learning theory and suggest that caregivers should be offered information, opportunities to practice, and, importantly, occasions to evaluate and reflect on their strategy use.

Coaching and collaborative consultation frameworks that facilitate the use of adult-learning theory are increasingly incorporated in EI practice (Buysse & Wesley, 2005; Hanft, Rush, & Shelden, 2004). These frameworks guide the process of coaching and collaboration and promote a plan of interaction and feedback between the coach or consultant and the recipient of the coaching or consultation. By establishing a common vocabulary of coaching strategies aligning with the components of adult learning that promote capacity building, the field will be better able to evaluate whether providers are actively coaching caregivers to embed intervention in everyday routines and activities, build caregiver's capacity to support their child's development, and determine whether professional development efforts are successful in improving providers' abilities to coach families. Clearly defined coaching strategies that include both relationship and help-giving practices, aligned with evidence about adult learning, will foster conversation among providers, supervisors, and researchers invested in supporting caregivers' attainment of child and family outcomes in the EI process.

CONCEPTUAL FRAMEWORK AND DEVELOPMENT OF THE COACHING DEFINITIONS

Conceptual framework

The coaching strategies proposed in this article can be conceptualized within a framework that reflects both principles of adult learning and family-centered practice. To successfully coach caregivers and build their capacity to support their child, EI providers must know how to teach and collaborate with other adults. Coaching within the context of the family's typical routines and activities is consistent with adult-learning theory that suggests that adults prefer to engage with material that is relevant to their lives and learn best when learning is organized in real-life contexts (Bransford, Donovan, & Pellegrino, 1999; Knowles et al., 2005; Lave & Wenger, 1991). If adults learn best when the content addresses their specific needs, EI providers who collaborate with caregivers will need to consider how to gather information about what the caregiver wants and needs to learn and how he or she can situate that learning in real-world contexts and typical routines in ways that support caregiver learning and the child's growth and development. Because adult-learning theories hold that adults tend to be self-directed and are capable of reflection and problem-solving, those capabilities should be reinforced when the EI provider work with caregivers (Knowles et al., 2005).

A major goal of EI is to strengthen the family's capacity to support their child's development. There appears to be general consensus that the provider's role is to share information and resources, suggest and demonstrate intervention strategies with the caregiver, support the caregiver's learning by gradually stepping back to let him or her practice and take the lead, and engage the caregiver in problem solving and reflection to increase the caregiver's deeper understanding of why, as well as what and how to do (National Early Childhood Technical Assistance Center, 2008; Sandall et al., 2005; Woods, Wilcox, Friedman, & Murch, 2011).

While general consensus exists regarding these roles, specific actions need to be identified to make clear what providers should do to coach and collaborate with caregivers. In most sessions, a predictable sequence of interaction would include (1) setting the stage (the caregiver and provider develop and/or nurture their relationship, provide updates related to the child and family, share information, and review the plan for the session), (2) application opportunities and feedback (caregiver practices in context with support from provider and repetition and discussion promote a deeper understanding and fluency of knowledge and skill), and (3) mastery (caregiver generalizes and problem solves the use of strategies that promote child learning and development across authentic settings and situations).

In this framework, we view the coaching process as developmental and dynamic in nature. The coaching definitions proposed here are not intended to be a script or a formula but rather a set of flexible strategies that provide the provider and caregiver with opportunities to share information, learn and practice strategies, and solve problems in a manner guided by caregiver-identified priorities. The process is informed by the priorities of the caregiver and the purposes of the interaction. For example, a caregiver new to EI may identify her needs for information about her child, resources to share with her parents, and suggestions for getting her son to sleep as priorities for a home visit. Coaching strategies used by the provider would match the caregiver's interests and emphasize conversation and information sharing. Coaching a parent of a child with significant challenging behaviors who wants the focus to be on intervention strategies to increase communication and emotional regulation skills during bath time, meals, and putting toys away—all times when meltdowns are likely to occur—would likely include emphasizing time on demonstration, joint interaction, guided practice with feedback, and problem solving and reflection. Alternatively, the provider may have a plan developed jointly by the caregiver and EI at the previous session in mind when the caregiver meets her at the door with other urgent needs, necessitating a change in the plan and some quick problem solving and reflection.

This flexible framework provides a foundation for our discussion of coaching strategies and their definitions and helps us situate the actions of providers within the context of their interactions with caregivers and children during home visiting. Table 1 depicts the elements of the framework and the relationship of the coaching strategies and definitions to each phase of learning.

Development of definitions

Initial development and refinement of the definitions and their associated coding protocol took place in two iterations between 2005 and 2007. First, using the original definitions proposed by Woods (2005), videotapes of home visits by speech language pathologists (SLPs) involved in research on family-guided routine-based intervention (FGRBI) over 12 months were rated by using a protocol containing 16 possible coaching behaviors. Results of those observation were used to refine the coaching categories. The videos revealed that providers conversed with caregivers about the information that was applicable to both child and family outcomes. This made the distinction between information sharing for child outcomes and information sharing to support adult outcomes indistinguishable. Providers also talked with caregivers in ways that appeared to promote relationship building and specific intervention ideas, making it difficult to discriminate the intent of the comments and limiting interrater reliability. Therefore, three more narrowly defined categories were collapsed into an inclusive category termed "Conversation and Information Sharing." Categories that described interfering situations such as pets getting loose, repairmen arriving unexpectedly, or video camera malfunctions were collapsed into a single category termed "Other." These revisions resulted in 12 operationally defined coaching behaviors.

Table 1. Caregiver Coaching Definitions

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
Setting the stage	CIS	CIS is a multipurpose, bidirectional conversational strategy used throughout the session, with a primary focus on establishing and maintaining the relationship between caregiver and EI provider. The caregiver and provider share information, make comments, ask and respond to questions about the early intervention program in general, and question or comment relevant to the child's and family's outcomes. CIS helps the provider learn about family goals, updates since the last visit, and new priorities while also responding to family requests from previous sessions. Caregivers use CIS to share ideas or family information, report progress, ask questions or make requests for resources or supports. CIS is frequently the starting and ending point for other specific coaching strategies and is also used within specific coaching and JI. CIS is not coded when the conversation shifts from the child and family's IFSP or the EI program into other conversations not directly related to the early intervention program. • The provider asks how the family's morning routine has been going and following up on last week's conversation about how to support the child as she gets dressed to go to her child care setting. The caregiver reports that the visual supports they made have been helpful and that her daughter even helped to choose a shirt this morning. Mom then proposes expanding the visuals to support getting in and out of the car seat as a new priority. • A mom tells the EI that she and her son went to a new playgroup at their church. The provider shares enthusiasm, asks how it went, and celebrates with mom when she responds that he greeted the other toddlers with a wave. Mom shares she also arranged pillows to help him sit with support alongside the other children during circle and then asks about how toddlers typically attend during circle time. • Carron's parents finish reading a story with her and initiate a discussion about using sign language after she transitions into a classroom setting. • Jose just finished helping his mom with sorting and stacking two big baskets of laundry. While putting the laundry away in the kids' room, the EI provider asks mom what chores Jose helps her with besides folding clothes. *(continues)*

Table 1. Caregiver Coaching Definitions (*Continued*)

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
Setting the stage	OB	OB occurs throughout the visit and is integral to the decision-making process for the EI and the caregiver. Generally, the caregiver interacts with the child, while the EI observes without offering any feedback or suggestions. OB gives the provider an opportunity to watch what typically happens during a routine, noting the supports the caregiver uses, the child's participation, and how the caregiver and child currently interact with one another. OB may last for a few seconds or for a few minutes depending on the situation. Data can be collected by the EI during OB. OB is likely to occur multiple times per session, is more frequently incidental than planned, and is most useful for building capacity if PS/R and feedback occur after. However, OB may be arranged specifically to precede PS/R as a collaborative strategy to gain information for development or revision of intervention within a routine or activity.
		• The provider observes a mom and her son as they sort and fold clothes in a laundry basket. She watches to see what steps happen in the routine, and she generates ideas on which IFSP goals may be embedded into the sequence to discuss with the mom.
		• The provider watches as a toddler pulls to stand by holding on to the arm of the living room recliner when mom is getting him a cup of juice from the kitchen. She watches to see whether he will continue to hold on with both hands or whether he will reach toward the book sitting on the chair. She is also waiting to see how he responds when mom comes back with the cup of juice.
		• Aaron's mom and EI observe him in the sand box to generate ideas of what could be done to improve his mobility so he can interact more with the other children.
	DT	The provider is intentionally scaffolding the caregiver knowledge or capacity for skill mastery by providing print, verbal, visual, and video information matched to their learning preferences on "how to" and "why" content about specific strategies, about child development, and about how to embed intervention into routines. Learning why a strategy helps to support the child may help the caregiver use the strategy more consistently. DT may be a brief verbal explanation followed by a demonstration. Handouts and video may also be used.
		• The provider explains how applying support on the bottom of the child's feet while she is on her hands and knees gives her a foundation to push off as a way to help her begin to crawl.

(continues)

Table 1. Caregiver Coaching Definitions (*Continued*)

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
		• The provider tells a grandmother that holding a large object, like a ball or teddy bear, gives her granddaughter an opportunity to reach with both arms together. Using small objects, she explains, might encourage her to reach with 1 arm at a time. • The caregiver and provider watch a brief video of a parent and child using a picture choice board to request a drink of juice.
Setting the stage	DEM	The provider narrates her actions while simultaneously modeling the strategy with the child and describes what she is doing while the caregiver observes. DEM offers caregivers an opportunity to watch the use of a strategy and an opportunity to notice how the child responds. Repetition or adaptations are often included to support learning. Often, GPF follows DEM as the EI passes the opportunity to the caregiver. • While shaking mom's car keys, the provider explains that when she moves them 45° off to the side, he must turn his trunk to reach out for the keys. • The provider shows dad how to use hand over hand assistance to help his son release a toy he grasped during bath time. • While rolling cars into the garage, the EI demonstrates how to follow the child's lead to support his continued interest.
Application opportunities and feedback	GPF	GPF and CPF align closely with situated learning theories and include opportunities for the caregiver to try out a strategy in a real-world context with differentiated support from the provider (Lave & Wenger, 1991). In GPF, the provider guides a caregiver as they work with the child, practicing strategies, using or adapting materials, or increasing opportunities. The provider offers specific recommendations or suggestions in the context of the routine to help the caregiver implement the strategy or maintain the child's engagement and participation. During GPF, the provider is positioned in a way that enables her to join in and offer hands on support to the caregiver or child as needed. The caregiver and EI may be jointly supporting the child or taking turns. CIS, DEM, or PS/R may occur between examples of GPF as the provider and caregiver work together with the child. GPF is most frequently used when the caregiver or child is acquiring a new skill or goal. *(continues)*

Table 1. Caregiver Coaching Definitions (*Continued*)

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
		• The provider suggests that offering the child a choice between juice or milk gives him a specific language model and also a little bit of control in the interaction. • The provider hands mom a cup and suggests that if mom holds it out in front of the child for a moment, Anna would have an opportunity to reach for it. • While playing ring around the roses, EI suggests to mom to not fall down until Mia "tells" them to . . . via either gestures or words.
Application opportunities and feedback	CPF	CPF reduces the hands on role of the provider and emphasizes the independence of the caregiver. During CPF, the caregiver is the primary partner with the child, and the provider offers encouragement and feedback to the dyad. Feedback may be specific to the child's or caregiver's participation, their performance, what went well, how the child responded or may offer a verbal suggestion on what could be done differently or a different material to use to keep the child's interest during the activity. Feedback can reinforce the specific actions of the caregiver, relate to the caregiver's ease of use of the strategy, or how the child responded. CPF is designed to increase the caregiver's competence and confidence by providing opportunities to practice with support matched to performance. CPF often morphs into PS and planning as the caregiver reflects on the interaction. It can also transition to CIS where identification of a new goal or strategy starts a new cycle of DT/GPF and JI in a different activity. • The caregiver offers his son a choice between two books and then waits for his son to respond. The provider simply nods to the caregiver until after the child has completed his choice and is looking at the book. Then the EI comments to dad that his pause gave the child enough time to look at the two books and then to reach for the one he wanted. • While the child drinks his juice, the provider shares with the caregiver that pausing for a moment before giving her the juice gave her enough time to reach for it. The provider also comments that mom's position was perfect, close enough for her daughter to reach and to share a giggle.
	JI	The provider and caregiver work as partners with the child. They may take turns interacting with the child or each other depending on the routine. Performance feedback is not provided. Joint interaction offers opportunities to practice within the routine, to ensure sufficiency of opportunities for skill acquisition, to gather performance data, and to evaluate the child's and caregiver's status to determine when to

(continues)

Table 1. Caregiver Coaching Definitions (*Continued*)

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
		"pull back" to increase the caregiver's leadership role or the child's independence or skill level. In JI, the EI's role is to support the interaction between the parent to accomplish the outcome or routine and to have fun.
		• A provider and caregiver take turns, pushing a child on a swing while responding as the child squeals. The provider does not offer specific suggestions to the caregiver but may occasionally offer an encourager.
		• Both mom and the provider help the child put on her shoes while preparing to go outside.
		• Mom introduces a favorite song and all join in. The child chooses the next song and everyone keeps on singing.
Mastery	PS/R	PS/R align with the adult learner's need to put the practice into his own language and everyday experiences that can be used functionally at a later time. In PS/R, the provider and caregiver jointly describe the child or routine status from their perspectives, seeking a variety of ideas and input from family members. Each idea is valued and contributes to the discussion. The caregiver with supports from the provider evaluates alternatives specific to the concern or planning purpose. PS/R encourages the caregiver to generate ideas for how to enhance strategy use and how to generalize strategies to new routines, and it helps the caregiver put words around the interaction and the context in a variety of formats. PS may also be an exchange that supports the caregiver's capacity to reflect on the interaction, answering questions such as "what do you think worked well," "how did this exchange feel," or "what was different?" The caregiver must take at least two turns in the PS exchange in order for the segment to be considered PS/R rather than CIS.
		• Dad has just finished reading the book that his son chose to everyone's applause. When asked how he thought it went by the EI, he responded that giving choices seemed to have increased his interest and decreased the battle over who was in charge. The caregiver and provider talk about ways to build in more choices into their routines and activities as a way to increase the child's choice making and his rate of communication. Dad says that his son has opportunities during playtime to choose which toys to use. They agree that would be great because there are several preferred toys he can pick from and dad usually has time before bath for play. The provider asks whether there are other types of routines like chores or caregiving where he can embed choices to offer more opportunities before they make the plan for next week. Dad responds that he will play and read this week and spend time thinking about what else he could try.
		(continues)

Table 1. Caregiver Coaching Definitions (*Continued*)

Stages of Caregiver and Coach Interaction	Coaching Strategy	Definitions and Examples
		• Mom tells the provider that she has a difficult time getting her son dressed each day. It was easier when he was a baby, but now that he is bigger, it is hard to help him to lay still or, if standing, to bend his knees enough to put on his pants, socks, and shoes. Since mom is due to deliver another baby in a few months, she is searching for some options. The provider asks how she positions him currently and mom responds. After listening to mom, the EI asks her what she thinks is working and mom responds that she does not know for sure. They proceed to try it together before starting a list of options and move to his bedroom for a diaper change.
No coaching	CF	The provider works directly with the child. The caregiver may or may not be present or engaged, and the provider's attention is directed to the child. No effort is made by the provider to coach or consult with the caregiver, if present. • The provider plays with the child by using a variety of toys to elicit multiple IFSP outcomes, while the dad watches across the room. The provider talks to the child. • The provider feeds the child by using a special protocol.
	Other	The provider and caregiver talk about topics unrelated to the child or family outcomes or early intervention program. They may also attend to a sibling and interact with other family members or visitors. The caregiver may be out of the room. Other is also coded when the video is not able to be coded because of poor audio or video. • Mom and provider talk about the recent bad weather hitting the area. • Mom talks to an older sibling, while the provider waits for her attention.

Note: CF = child focused; CIS = conversation and information sharing; CPF = caregiver practice with feedback; DEM = demonstrating; DT = direct teaching; EI = early intervention; GPF = guided practice with feedback; IFSP = individualized family support plan; JI = joint interaction; OB = observation; PS/R = problem solving/reflection.

In the second iteration, the 12 coaching behaviors were introduced to providers in an urban EI program in the Midwest. Examples of each coaching behavior were broadened to be relevant for multiple disciplines. After initial training on FGRBI, family-centered practices, and adult-learning strategies, observation of home visits were conducted by using the coaching behavior definitions and protocol for videotaping. Videotaping was used to evaluate the extent to which providers were engaging in coaching practices and as a means of self-study to help these providers implement caregiver-implemented intervention practices. Analyses undertaken at this stage revealed that two strategies

(competitive interaction and video review/reflection) were rarely used by providers. Insofar as these strategies were originally included for research purposes, we made the decision to delete them from the list of coaching strategies being emphasized with providers. Thus, 10 strategies were included in evaluation studies in which we found that the definitions and video coding protocol were generally effective in distinguishing the frequency and the nature of coaching and collaboration that occurred during home visits (Basu et al., 2010; Cambray-Engstrom & Salisbury, 2010; Salisbury et al., 2010, 2011).

Our current set of coaching strategies and their associated definitions reflects a recognition that adult knowledge is socially constructed and scaffolded through interactions with others (Rogoff, 1990), is contextually grounded (Bernheimer & Weisner, 2007; Lave & Wenger, 1991), and is experience based (Knowles et al., 2005; Kuhn, 1970). The set of coaching strategies includes the following: conversation and information sharing (CIS); observation; demonstrating (DEM); direct teaching (DT); caregiver practice with feedback (CPF); joint interaction (JI); guided practice with feedback (GPF); problem solving (PS); child focused (CF); and not coaching (NC). Their definitions and examples specific to EI are presented in Table 1. Later, we describe our current effort to further refine and evaluate the application of these coaching definitions in authentic EI settings.

METHODS

Design

A multisite, small-sample descriptive design was used to examine the utility of the coaching definitions in home visiting contexts. A convenience sampling strategy was used to gather data about the coaching behaviors of four providers in three EI programs located in different states. Each program expected providers to use the family's identified everyday activities and routines as intervention contexts and coaching practices as key mechanisms for promoting caregiver-implemented intervention. Providers from each program were included if they participated in a group training that addressed content on caregiver coaching, and if they provided three videotapes of home-based EI sessions with one family for analysis.

Participants

Program 1 included four providers (three early childhood special education [ECSE] and one social worker) with 5–20 years experience in EI from a Midwestern state. These participants were randomly selected from a wider pool of 25 providers who received initial and ongoing training in FGRBI (Woods, 2005). Providers in program 1 received two days of basic knowledge–level instruction in an interactive team training workshop. The training included content on family-centered practices, collaborating with families, using coaching strategies to help caregivers learn new ways to support the child's development, and using family routines as contexts for intervention. After the initial training, the providers received monthly coaching and feedback from the trainers on their implementation of FGRBI during videoconference calls.

Participants from program 2 included four EI providers representing speech language pathology (SLP), occupational therapy (OT), and physical therapy (PT) and early childhood special education (ECSE) disciplines. These providers had 3–13 years experience in EI and served children/families who were ethnically, culturally/linguistically, and economically diverse in a large urban city in the Midwest. Like providers in program 1, these providers received professional development on FGRBI within a group training and participated in reflective supervision via weekly team meetings to discuss their implementation of the approach with their families.

Providers from program 3 included four SLPs with 1–7 years experience who were affiliated with a model demonstration project on family-centered communication intervention in a southern suburban location. These providers received workshop-based training

Table 2. Provider and Program Demographics

	Training on FGRBI	Provider	Education Level	Discipline
Program 1	Initial two-day workshop and monthly feedback on coaching strategies during video conference calls	1	Master's	ECSE
		2	Bachelor's	ECSE
		3	Master's	ECSE
		4	Master's	MSW
Program 2	Initial 11-day training and weekly team reflection and feedback on coaching strategies	1	Master's	SLP
		2	Master's	OT
		3	Doctorate	PT
		4	Master's	ECSE
Program 3	Initial training on communication intervention and monthly feedback on coaching strategies	1	Master's	SLP
		2	Master's	SLP
		3	Master's	SLP
		4	Doctorate	SLP

Note: ECSE = early childhood special education; FGRBI = family-guided routines based intervention; MSW = master of social work; OT = occupational therapy; PT = physical therapy; SLP = speech language pathology.

on the content of the communication intervention model and monthly feedback on the ways in which they coached caregivers in daily routines and activities.

Procedure

Four providers from three EI programs contributed video data of home-based EI sessions for this investigation. These individuals represented different disciplinary backgrounds and varying levels of experience in EI and with family-centered intervention practices. These characteristics were considered important for establishing whether the proposed coaching definitions could be used by a range of EI professionals and were nuanced enough to detect differences between providers and programs. Table 2 provides an overview of the participants' demographic characteristics. Providers from all the three programs obtained informed consent from one caregiver/child with whom they worked to collect videotapes of home visit sessions.

Three videotapes, representing regularly scheduled home visit sessions in their entirety (generally 45–60 min in length), were collected once every 4–6 weeks on one family for the four providers from each of the three programs ($n = 36$ home visit sessions). These videotapes were coded in 30-s intervals to describe which of the 10 caregiver coaching strategies were observed during the EI session by using the taxonomy of definitions and strategies that emerged from our earlier development work. During each interval, undergraduate student observers coded which coaching strategy was used, and if more than one strategy took place in the interval, the coder selected the one that lasted at least 15 s (i.e., only one strategy coded per interval). These observers/coders were trained on the coaching protocol during five training sessions. During the first session, the coders and the first author discussed each caregiver coaching definition and watched sample video clips side by side to identify examples of each coaching strategy. Between training sessions, the coders practiced by watching several 10-min segments to establish reliability with the first author at subsequent training sessions. Between training sessions, coders practiced segments until they obtained five segments in which they reached at least 80% agreement with the first author. Reliability checks on each of the coding elements were conducted on 30% of the video data. One

videotape was randomly selected from the three videotapes for each provider–caregiver dyad to assess interrater reliability (calculated as number of agreements divided by agreements plus disagreements). Coders attained an average percentage agreement of 88% (range, 72%–96%). If coders did not obtain at least 75% agreement, each coder recoded the session and reliability was calculated again.

DATA REDUCTION AND ANALYSIS

Data reduction and analysis proceeded sequentially. Findings are based on the analysis of videotapes and are reflected as the percentage of intervals in which specific coaching strategies occurred during home visits. First, we analyzed the frequency with which the 10 coaching strategies were used by providers in one program to illustrate the variable nature of coaching strategy use across home visit sessions (Figure 1). Second, program-level comparisons were made by aggregating home visit data within programs and comparing the frequency of observed coaching strategy use across programs (Figure 2). In this analysis, descriptive data indicated that DT, DEM, CPF,

GPF, and problem solving/reflection were used infrequently as overall percentage of intervals during EI sessions. Therefore, these categories were collapsed and labeled "specific coaching strategies" (Figure 2). While these strategies were combined to make the graphs easier to read, each strategy was conceptually distinct and served different purposes for adult learners. The CIS, JI, observation, and CF accounted for sizeable percentages of intervention session intervals and were not aggregated. Finally, we examined one provider–family dyad before and after professional development to illustrate how the coaching definitions may be used to evaluate the effectiveness of training on coaching strategy use or as a means to offer a single provider feedback on her collaboration with families (Figure 3).

RESULTS

Disaggregated data

Disaggregated data offer one means of understanding how providers within a program distribute their efforts during home visits. To illustrate the variable nature of coaching behaviors, we selected one of our program
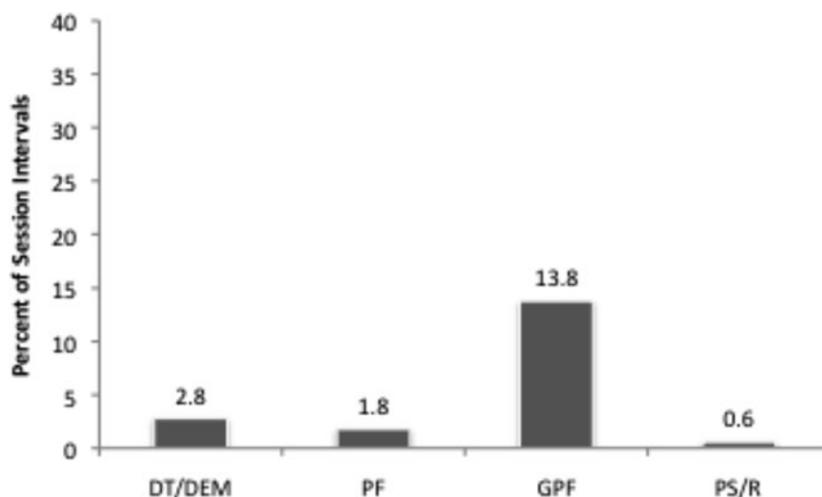

Figure 1. Specific coaching strategy use among providers in program 2. Disaggregated data from 4 providers were combined to determine the overall percentage of intervals spent using each coaching strategy.
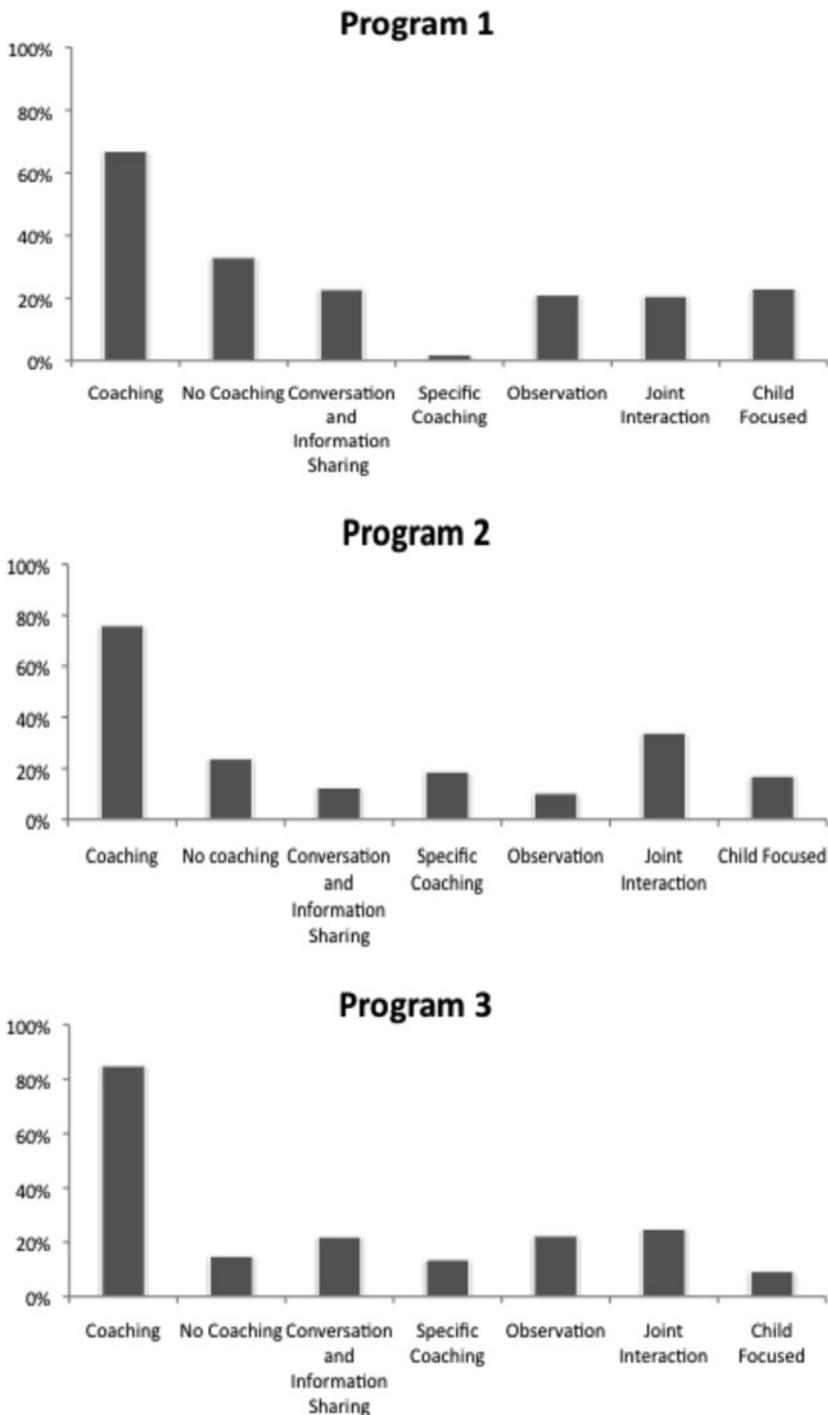
Figure 2. Aggregated coaching strategy use by program. Video data from four providers in each program were combined to determine the overall percentage of intervals spent using each coaching strategy. These charts also represent the total percentage of intervals spent in coaching versus no coaching across home visit sessions for each program.
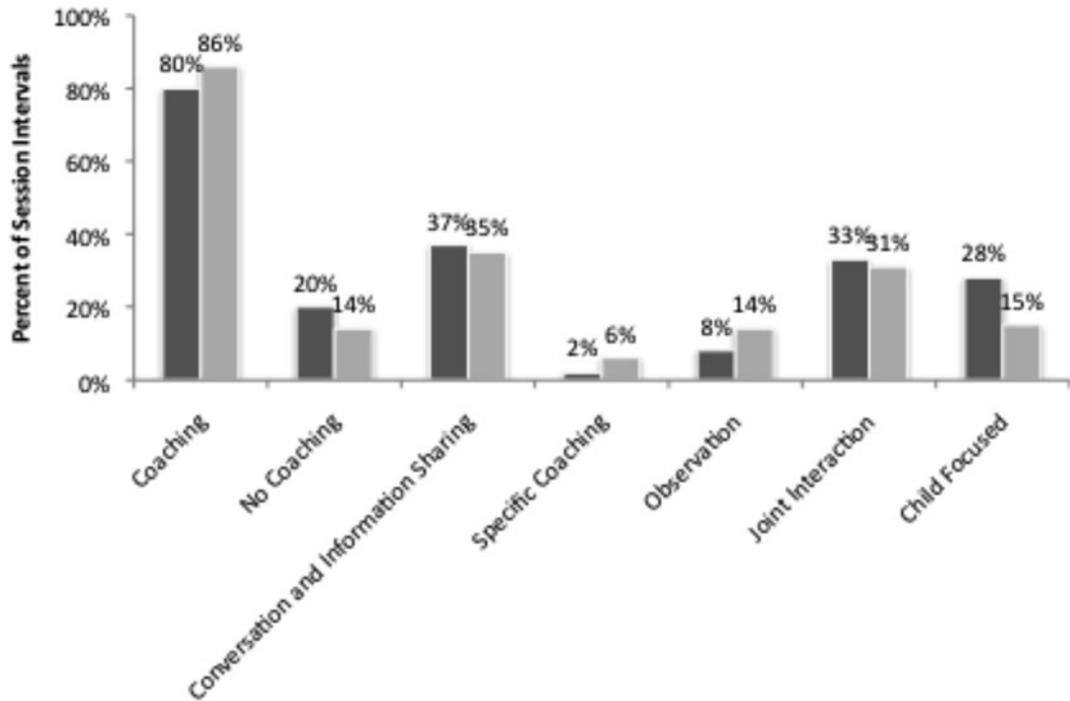
Figure 3. Individual provider's use of coaching strategies before and after training. These data show one provider's use of coaching strategies as a percentage of session intervals before and after training in program 1. The total percentage of session time spent in coaching versus no coaching is also represented pre- and posttraining.

sites and analyzed disaggregated data on the coaching strategies used by the providers in that program. These providers used JI during 34.0% of session intervals, CF during 17.2% of intervals, and CIS during 12.6% of intervals. In addition, these providers used specific coaching strategies regularly, but they accounted for a relatively small percentage of session intervals. We also noted that these providers used GPF during 13.8% of intervals and DT during 2.8% of all intervals. The problem solving/reflection was used during 0.6% of all intervals.

Coaching strategies by program

Program-level comparisons were made by aggregating data across home visits within programs and plotting the frequency of their occurrence as percentage of interval data. Visual inspection of the program-level graphs and an examination of the descriptive data re-

veal differences in aggregated coaching strategy use across programs. By combining CF and "no coaching" intervals to calculate the percentage of session time in which no caregiver coaching was occurring, it was possible to generate a reasonable estimate of overall coaching use during EI sessions. In doing so, we found that providers in our sample engaged in coaching practices for a majority of time during home visits (program 1 = 67%; program 2 = 76%; and program 3 = 83%). These implementation levels were comparatively greater than the one that had been reported previously (i.e., Peterson et al., 2007).

While our small sample size precluded statistical comparisons, descriptive data illustrated trends in strategy use across programs (Figure 2). Providers in program 1 predominantly relied on the strategies CIS (23%), observation (21%), CF (23%), and JI (21%) during their intervention session

intervals. That is, providers in this program spent most of the time either talking with the caregiver (CIS), watching the caregiver and child interact (observation), or interacting with the child themselves (CF). These providers rarely used specific coaching strategies that were designed to enhance a caregiver's ability to learn new strategies and embed them into their everyday routines (2% of intervals).

Providers in program 2 spent most of their EI sessions engaged in JI (34% of intervals) and used a greater range of coaching strategies more often than did providers in program 1. Specifically, program 2 providers spent 18% of session intervals using specific coaching strategies such as DT, DEM, CPF, and GPF, which are designed to enhance caregiver learning. The CIS (13%) and observation (10%) were also employed frequently. The CF interactions accounted for 17% of all intervals. Like providers in program 2, the program 3 providers used specific coaching strategies regularly in 14% of all intervals. They spent considerable time in conversation (22%) and in observing the caregiver interact with their child (22%). These providers used JI in 25% of session intervals and CF for 9% of session intervals.

Individual session data before and after professional development

Two sessions of one provider's home visits with one family in program 1 were chosen as an example of how the definitions might be used to evaluate changes in provider behavior after professional development (Figure 3). Before professional development on FGRBI, this provider used CIS (34%), observation (18%), JI (26%), and CF (23%) during a home visit session. After professional development, the percentage of intervals for CIS (37%) and observation (28%) increased while JI (17%) and CF (3%) decreased. After training, she used specific coaching strategies during 15% of the session intervals compared with no use before professional development.

DISCUSSION

The coaching definitions proposed in this article are intended to capture the range of teaching and support strategies that providers use when interacting with caregivers during family-centered EI sessions. These strategies reflect specific provider behaviors that were coded reliably to examine caregiver–provider interactions during home visits. The sample included providers from varying disciplines, children with a range of developmental levels and needs, and caregivers with diverse characteristics. The definitions were sufficiently distinct that coders used them reliably to identify occurrences throughout the home visit in a variety of different routines and activities. The specificity of these definitions allowed us to examine provider behaviors across programs and provides. The definitions were also effective in distinguishing the range of coaching practices used by individual providers before and after training within a specific program.

It is important to note the relationship between the coaching definitions and the videotape-coding protocol and our efforts to characterize both the levels and variability of strategy use within and across programs. It is possible to characterize sessions in terms of coaching versus noncoaching time by using the definitions and coding protocol described in this report. That is, providers in these programs employed coaching practices for a majority of session time. The descriptive data on coaching practices were not gathered to evaluate the professional development received by these providers. However, it seems reasonable to infer that implementation, as described by using our coaching definitions, was, in some measure, impacted by the targeted professional development and ongoing reflection and support received by these providers. In addition, within and across programs, variability may be attributable to differences in the length of time for which providers had been exposed to coaching practices or the complexities of the children or families with whom they were working. Although all of these providers received

initial training on FGRBI and adult learning strategies, the intensity of individual support and follow-up varied program to program and might account for differences in frequencies with which they used coaching strategies. As others have noted, learning how to scaffold another adult's learning in situ is challenging and the development of fluid use of consultative practices requires ongoing support to providers and considerable practice on their part. We believe that it is unrealistic to expect providers to enact coaching practices without training, support from peers and supervisors, opportunities for reflection and problem solving, and time for practice.

While the results noted earlier indicate that providers in programs 2 and 3 used specific coaching strategies more often and CF strategies less often compared with providers in program 1, the results are not intended to be evaluative. Though we cannot point to specific program or individual factors to explain why the differences occurred, it is possible that years of experience, disciplinary background, or type and duration of professional development experiences contributed to performance variations. Variability may also be related to features of the child or family circumstances or to the intervention approach ascribed to by the program. Providers from programs 2 and 3, for instance, may have had more practice with and exposure to caregiver-implemented intervention than providers in program 1. A provider's use of coaching strategies could also be influenced by the nature of their relationship with the caregiver, the caregiver's own learning style and culture, as well as the length of time for which the caregiver was involved in the EI program. The influence of such factors on the use of coaching strategies was not examined here but could be the subject of future research.

Implications for practice

The coaching definitions presented in this work can be used to support EI providers and may enhance services to families in several ways. The definitions can be used in professional development contexts to help providers learn the "how to" of coaching adult caregivers. These distinct definitions can help providers gain an initial understanding of strategies that they might use to share information and build capacity to embed intervention with their families. Using a common terminology for coaching behaviors will help professional development efforts to consistently support providers as they learn to coach.

The coaching definitions may also be used in professional development activities at the skill level. Administrators, coaches, or peer mentors can use the definitions to identify which strategies with what frequency were used in a particular activity and across the session. This concrete information offers an additional dimension regarding how a provider coaches a particular family (Marturana & Woods, 2010). Graphs of individual session data might support providers as they seek to diversify the ways in which they coach caregivers. Some providers might see that they excel at interacting jointly with the caregiver and child but that they offer few demonstrations or little practice with feedback to guide the caregiver's participation. Others may find that they provide frequent opportunities for CIS but that they spend little time observing to see what the family does naturally or engaging with them as they participate in routines and activities. Offering graphed feedback to providers is an evidence-based way to support the adult as they learn new skills (Barton & Wolery, 2007; Casey & McWilliam, 2008; Marturana & Woods, 2010), and these definitions could offer providers feedback about what strategies they used while coaching. Using the definitions for provider feedback may also set the stage for providers to reflect on what they are already doing and how they might broaden their use of coaching strategies to support caregivers.

These definitions also have utility at the program level. Part C program administrators may use the definitions to evaluate what strategies their providers use currently and whether there has been any change over time as a result of professional development activities.

The field is currently challenged by a lack of measures to evaluate the effectiveness of professional development efforts (Sheridan et al., 2009), and it is possible that these coaching definitions could be used as an outcome measure to assess whether or not providers make changes in their practice subsequent to professional development experiences. Without common metrics that specify what coaching is and how one might measure it, it is impossible to know whether providers in the field are acting in a way that will help families learn new ways to support their child's development.

Limitations

While these definitions mark a necessary step toward clarifying and measuring what coaching is in EI contexts, there are also limitations that must be recognized in this work. First, the data presented were not intended to reflect a specific study but rather illustrations from larger data sets to support the use of the definitions. The limited evidence presented here prevents statistical comparisons and any ability to make broader statements about the larger community of EI providers. Second, the data in this study were part of a convenience sample of participants who had received similar, though not identical, professional development on principles of family-centered services and FGRBI. A more random pool of participants would enable researchers to answer questions about current coaching practices in EI and would allow for further validation of the definitions.

Because the purpose of devising codes to analyze videotaped home visits was to develop unique behaviors, the definitions themselves are a limitation. They likely masked some of the relationships between behaviors while missing others. It was noted that most examples of DT took less than the 15 s needed to receive an independent code. It is likely that DT examples are included in CIS or JI. Frequency tallies have since been added to the coding protocol to identify each example of DT and also what coaching behaviors occur before and after to gain a more thorough

description of how and when DT is used. The definition of problem solving/reflection was developed to require a minimum of 2 turns by the caregiver to distinguish it from CIS. After watching hundreds of hours of video, it was clear that EI providers offered many suggestions and recommendations to caregivers but were much less likely to ask caregivers what they thought would work or to get the caregiver's evaluation of the suggestion. Most responses to caregiver questions or comments ended with the EI provider. Using the data on adult learning that emphasizes the importance of the caregivers reflecting on the information and applying it to themselves, we felt that minimum two turns were needed by the caregiver for metacognitive use to occur. A sequential content analysis would offer additional insights about the interdependencies among coaching strategies and caregiver responses. Guided and caregiver practices with feedback were defined individually to promote scaffolding for the caregiver. However, the key components of these definitions are the practice and feedback, and differentiation between the two definitions may not be warranted.

Directions for research

The definitions proposed in this report are intended to be a useful next step in helping those engaged in professional development, as well as in EI service delivery, understand the various "how to" strategies that may be used to coach caregivers. The terms presented here are not exhaustive and are likely to be further refined as more research is conducted with a larger sample of more diverse providers and families. These definitions may also be further delineated and may be merged with other coaching frameworks as they develop. Nonetheless, they offer a starting place for providers who are learning to coach and collaborate with families and for researchers seeking to compare and contrast other frameworks.

The data in this study were coded at 30-s intervals. Some of the strategies, though, did

not always last for the minimum period of time necessary and were "lost" when graphing the data. For instance, some episodes of GPF were just a few seconds in duration. If an interval contained a brief GPF preceded or followed by JI, it would be coded as JI. Changes to the way the definitions are measured may be necessary to fully capture each instance of intentional coaching.

While the coaching definitions describe behaviors that providers can use to coach caregivers, we know very little about the necessary dosage of each strategy required to facilitate adult learning. Is it possible that some caregivers can learn to use an intervention strategy by watching the provider demonstrate, or is guided practice an essential component for most caregivers? Are child-focused intervention strategies learned best through specific coaching strategies such as demonstration and CPF, while family out-comes necessitate the use of conversation and problem solving? Or does problem solving increases generalization of intervention strategies to other settings or other child outcomes? How do the cultural characteristics of the caregiver impact the selection and use of coaching practices? Which provider and family variables moderate the use of coaching behaviors in EI? Do caregivers whose children have certain characteristics prefer or adopt certain coaching behaviors over others? While adult learning theories and meta-analytic work seem to indicate that using a range of strategies appears to enhance adult learning, it is still unclear how much or when active coaching is necessary to enhance a caregiver's capacity to take the lead confidently. Further research will be needed to examine which strategies, and in which combinations, have the greatest impact on caregiver learning and behavior.

REFERENCES

Barton, E., & Wolery, M. (2007). Evaluation of email feedback on the verbal behavior of pre- service teachers. *Journal of Early Intervention*, *30*, 55–72.

Basu, S., Salisbury, C. L., & Thorkildsen, T. (2010). Measuring collaborative consultation practices in natural environments. *Journal of Early Intervention, 32*, 127–150.

Bernheimer, L. P., & Weisner, T. S. (2007). Let me just tell you what I do all day: The family story at the center of early intervention research and practice. *Infants and Young Children, 20*, 192–201.

Bransford, J. D., Donovan, S. M, & Pellegrino, J. W. (1999). *How people learn: Bridging research and practice*. Retrieved June 26, 2011, from http://csaweb111v.csa.com/ids70/view_record.php?id

Brorson, K. (2005). The culture of a home visit in early intervention. *Journal of Early Childhood Research*, *3*, 51–76.

Buysse, V., & Wesley, P. W. (2005). *Consultation in early childhood settings*. Baltimore, MD: Paul H. Brookes Publishing Co.

Cambray-Engstrom, E., & Salisbury, C. (2010). An exploratory case study of providers collaborative consultation practices with Latina mothers during home-visits. *Infants and Young Children, 23*, 262–274.

Campbell, P. H., & Sawyer, L. B. (2007). Supporting learning opportunities in natural settings through participation-based services. *Journal of Early Intervention, 29*(4), 287–305.

Campbell, P., Sawyer, B., & Muhlenhaupt, M. (2009). The meaning of natural environments for parents and professionals. *Infants and Young Children, 22*, 264–278.

Casey, A., & McWilliam, R. (2008). Graphical feedback to increase teacher use of incidental teaching. *Journal of Early Intervention, 30*, 251–268.

Center to Inform Personnel Policy and Practice in Early Intervention and Preschool Education. (2009). *Part C confidence and competence of practitioners working with children with disabilities*. Retrieved June 26, 2011, from http://www.uconnucedd.org/projects/per_prep/per_prep_resources.html

Colyvas, J., Sawyer, B. L., & Campbell, P. H. (2010). Identifying strategies early interventionist occupational therapists use to teach caregivers. *American Journal of Occupational Therapy, 64*, 776–785.

Dunst, C. J., Hamby, D., Trivette, C. M., Raab, M., & Bruder, M. B. (2000). Everyday family and community life and childre's naturally occurring learning opportunities. *Journal of Early Intervention*, *23*, 151–164.

Dunst, C. J., & Trivette, C. M. (2009). Let's be PALS: An evidence-based approach to professional development. *Infants and Young Children*, *22*, 164–176.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: Florida Mental Health Institute, University of South Florida.

Fleming, J. A., Sawyer, L. B., & Campbell, P. H. (2011). Early intervention providers' perspectives about implementing participation-based practices. *Topics in Early Childhood Special Education, 30*, 233–244.

Hanft, B. E., Rush, D. D., & Shelden, M. L. (2004). *Coaching families and colleagues in early childhood*. Baltimore, MD: Brookes.

Hemmeter, M. L., Snyder, P., Kinder, K., & Artman, K. (2011). Impact of performance feedback delivered via electronic mail on preschool teachers' use of descriptive behavior. *Early Childhood Research Quarterly*, *26*, 96–109.

Hughes, H., & Peterson, C. A. (2008). Conducting home visits with an explicit theory of change. *Young Exceptional Children Monograph Series, 10*(10), 47–59.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005). *The adult learner: the definitive classic in adult education and human resource development* (6th ed.). London, England: Elsevier.

Kuhn, T. S. (1970). *The structure of scientific revolution* (2nd ed.). Chicago, IL: University of Chicago Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York, NY : Cambridge University Press.

Marturana, E., & Woods, J. (2010, October). *Using performance-based video feedback in professional development: Applications to rural areas*. Presented at the Division for Early Childhood (DEC) Annual Conference, Kansas City, MO.

McBride, S. L., & Peterson, C. L. (1997). Home-based interventions with families of children with disabilities. *Who is Doing what? Infants and Young Children, 6*, 54–63.

McCollum, J. A., & Yates, T. J. (1994). Dyad as focus, triad as means: A family-centered approach to supporting parent-child interaction. *Infants and Young Children, 6*, 54–63.

National Early Childhood Technical Assistance Center. (2008). *Workgroup on Principles and Practices in Natural Environments (2008, February). Agreed upon practices for providing early intervention services in natural environments*. OSEP TA Community of Practice-Part C Settings. Retrieved August 5, 2009, from http://www.nectac.org.

Peterson, C. A., Luze, G. J., Eshbaugh, E. M., Jeon, H., & Kantz, K. R. (2007). Enhancing parent- child interaction through home visiting: Promising practice or unfulfilled promise? *Journal of Early Intervention*, *29*(2), 119–140.

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York, NY: Oxford University Press.

Salisbury, C., Cambray-Engstrom, E., & Woods, J. (2011). Providers' reported and actual use of coaching strategies in natural environments. *Topics in Early Childhood Special Education*.

Salisbury, C., Woods, J., & Copeland, C. (2010). Provider perspectives on adopting and using collaborative consultation in natural environments. *Topics in Early Childhood Special Education, 30*, 132–147.

Sandall, S., Hemmeter, M. L., Smith, B., & McLean, M. (2005). *DEC recommended practices: A comprehensive guide for practical application in early intervention/early childhood special education*. Longmont, CO: Sopris West.

Sheridan, S. M., Edwards, C. P., Marvin, C. A., & Knoche, L. L. (2009). Professional development in early childhood programs: Process issues and research needs. *Early Education and Development, 20*, 377–401.

Woods, J. (2005). *Family-guided, routines-based intervention project*. Tallahassee, FL: Florida State University, Department of Communication Disorders.

Woods, J. J., Wilcox, J. M., Friedman, M., & Murch, T. (2011). Collaborative consultation in natural environments: Strategies to enhance family-centered supports and services. *Language, Speech, and Hearing Services Schools*, *42*, 1–14.