



## Promoting Responsive Parent/Caregiver-Child Interactions During Natural Learning Activities

Frances A. Davis

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### ABSTRACT

This *CASEinPoint* provides a theoretical and evidence-based review of the developmental role of responsive parent-child interactions in child interest-based learning. The functional differences and effects of responsive strategies are characterized and defined under a three component natural learning model that invites, promotes, and facilitates the growth and development of children. Implications for parents and practitioners using a natural learning model of responsive strategies in everyday learning activities are discussed.

### INTRODUCTION

Responsive parent/caregiver and child interactions have been identified as necessary and significant mediators of healthy social relationships, the development of emotional regulation, social-emotional, cognitive, and language competencies (Crockenberg & Leerkes, 2000; Zeanah, Larrieu, Heller, & Valliere, 2000), as well as significant developmental deficits for children (National Scientific Council on the Developing Child, 2012; Osofsky & Thompson, 2000). The purpose of this *CASEinPoint* is to describe the characteristics of responsive parent/caregiver-child interactions that invite, promote, and facilitate the mastery of growth and development in children.

Additionally, this *CASEinPoint* includes a functional model of responsive strategies parents can use during natural learning activities to promote child development. The model is founded on an evidence-based framework for understanding parent-mediated, child interest-based learning and intervention (Dunst & Swanson, 2006; Kim & Mahoney, 2004; Shonkoff & Phillips, 2000; Zeanah, Berlin, & Boris, 2011); the role natural learning activities play in early childhood learning, development, and intervention (Chai, Zhang, & Bisberg, 2006; Dunst, Bruder, Trivette, & Hamby, 2006); and the role capacity-building practices and adult learning principles play in engaging parent learning and participation in responsive parent-child interactions (Rush & Shelden, 2011; Wilson, Holbert, & Sexton, 2006).

### CONCEPTUAL FOUNDATIONS

#### *Characteristics of Responsive Parent/Caregiver-Child Interactions*

Bowlby (1982) first described sensitive parenting as his observation of the quick response of the mother

to appropriately soothe her infant's distress. In ongoing exploration of his model of attachment, he characterized it as a goal-corrected partnership that maintained the infant's proximity to the mother while providing a sense of felt security for the infant. Ainsworth (1969) expanded on Bowlby's characterization of sensitive parenting to capture the importance of parent responses that were predictable and contingent upon child behavior. Responsive parent-child interactions are also key components of other developmental models. Vygotsky (1978), in his model of cultural learning, described how infants and toddlers acquire new communicative and social capabilities through the recapitulation of guided facilitation of more competent learners available to them in the course of everyday family and cultural activities. Bandura (1992) specified in his social cognitive theory of human development that social interactions affect the development of cognitive skills, social competencies, and positive self-efficacy. In all three of these developmental models, responsive caregiver-child interactions serve as the earliest facilitators of child development.

More current models of parent-child interactions characterize this relationship as a developmental process that is a mutually responsive interaction with bidirectional affects between the child and the parent (Kochanska, 2002) or a transactional developmental model of social communication (Warren et al., 2006). In these models, adult or parent responsivity during *reciprocal parent-child interactions* is identified as a primary mechanism of developmental change. In addition, both models propose that, as responsive interactions support developmental changes in the child, the child's changing competencies support changes in parent responsive strategies and in the relationship between the parent and the child.

Stern (1971) provided the first operationalized and detailed account of responsive caregiver-child transactional patterns that occur within the natural daily activities between infants and their caregivers. He identified parent-child interactions as interactions that allow caregivers to perceive and respond to infant cues for a variety of supports and guide infants to acquire additional and increasingly more mature communication competencies.

Forty years of subsequent research investigating parent-child interactions has consistently identified those strategies or responses that most effectively promote typical and healthy outcomes for children as contingent, sensitive, and associated with natural learning environments or contexts (Eshel, Daelmans, de Mello, & Martines, 2006; Kochanska & Aksan, 2004).

These three primary components of responsive caregiving have been operationalized in the literature as

- contingent responsiveness by the adult dependent on the child's initiation and intent;
- sensitive adult responses that are attuned to the child's individual temperament, mood, and regulatory needs; and
- occurring during the natural learning environment of the daily routines and activities in which parents and children participate (Crockenberg & Leerkes, 2000; Kim & Mahoney, 2004; Landry, Smith, & Swank, 2006; Trivette, 2003).

Trivette (2003) conducted a research synthesis of 13 studies examining the relationship between caregiver responsiveness and the cognitive development of children with or at-risk for developmental delay. She noted that successful parent responses were those that were also contingent upon the child's developmental level, at a level of response intensity that matched the child's developmental level and mood, and were reinforcing for the child. Trivette (2003) also noted that all studies reviewed demonstrated sensitive caregiver responses or strategies such as following the child's lead, interests, and moods positively influenced child cognitive and social-emotional learning and development for both children who are typically developing and children at-risk for or with developmental delays. Specifically, in this paper contingent will refer to two aspects: those parent/caregiver responses that occur immediately following child behavior and those parent/caregiver responses that are a developmental and/or facilitative match to child behavior. Sensitive interactions refers to the match between the parent's response and the child's affect, parent's perception of the child's emotions, and joint attention and/or engagement. Sensitivity refers to warm, positive emotional responses that provide an inviting context that further engages children in managing their emotions and learning interests (Crockenberg & Leerkes, 2000; Landry et al., 2006). Natural learning contexts refers to the numerous daily family routines and activities where multiple parent-child interactions occur and thus afford frequent opportunities for parents/caregivers to invite, promote, and facilitate development and growth (Dunst, 2006).

#### *Natural Learning Environments*

The context of the natural learning environment of home and community activities provides the information and experiences that culminate in a typical three-year-old child being capable of complex sentence construction, supported recall of the characters and the sequence of events in a story, riding a tricycle, drawing a simple representation of himself, and providing empathy and assistance for others (Greenspan & Lewis, 1999; Parks & Bradley, 1991; Spagnola & Fiese, 2007). Appreciating

the role of natural home and family activities as a milieu for child development requires the multiple consideration of parent-child interactions, activity characteristics, and culture as joint environmental mediators through which child development is expressed (Bronfenbrenner, 1999; Burke, 1998; Martini, 2002; Morelli, Rogoff, & Angelillo, 2003; Sameroff & Fiese, 2000). The typical people and objects found in the familiar routines and activities children participate in daily comprise children's natural learning environments and provide parents with multiple opportunities to engage in responsive strategies that influence children's level of engagement, interest, and present capability to participate in current activities, and to develop new competencies (Dunst, 2006; Dunst & Swanson, 2006; Humphry & Wakeford, 2008).

In a review of research related to the development of emotional regulation in children, Morris, Silk, Steinberg, Myers, and Robinson (2007) noted that child observation and modeling of parental emotional responses during family activity and social exchanges were initially important, while social referencing to parents for emotional guidance during ambiguous events becomes important later in development. The same typical people, objects, and parent-child responsive interactions, though not specifically academic in nature, promote child competencies that are important for school success and readiness. Tudge, Otero, Hogan, and Etz (2003) recorded the everyday activities of preschoolers including typical preschool academic activities and found the only significant correlation to school competency was that preschoolers who initiated and were more engaged in conversation with their caregivers across their daily activities were judged as more competent by their elementary school teachers. In a related study, Dodici, Draper, and Peterson (2003) found that everyday interactions of parents with their infants and toddlers were a stronger predictor of early literacy skills than parent-reported home literacy-specific activities. For children with disabilities or at-risk for disability, studies have demonstrated specifically that responsive parent-child interactive strategies are more effective in promoting child development than those same strategies implemented by early childhood practitioners (Mahoney, Boyce, Fewell, Spiker, & Wheeden, 1998).

#### DEVELOPMENTAL ROLE OF RESPONSIVE PARENT/CAREGIVER-CHILD INTERACTIONS

Developmentally, the establishment of social-interactive play routines that begins within the first few months of birth is informative for both the child's development and the parents' understanding of their role

in that process. Infants not only acquire emotional regulatory competencies through their early responsive and contingent experiences with caregivers (Sroufe, 2000), but also begin to form a sense of themselves and of their ability to change their environment and impact their own learning experiences (Crockenberg & Leerkes, 2000). The bi-directional communications and establishment of turn-taking patterns between caregivers and infants are the successful responsive parent-child interactions that form the basis of later successful peer relationships (Stern, 1974; Zeanah et al., 2000). Responsive strategies such as allowing a child to take the lead not only ensure the engagement of infant-toddler interests and/or motivations and promote the development of the child's self-concept, but also provide the parent with a successful experience promoting child learning and independence. In successful parent-child interactions, both child and parent experience enhanced self-efficacy (Brazelton & Cramer, 1990; Fey et al., 2006). The joint attention and facilitated emotional, social, and cognitive problem-solving activities that occur during parent-child interactions, not only promote functional competencies, (Landry et al., 2006) but also the recognition of parents, caregivers, and more competent peers as persons who enhance learning and provide emotional supports associated with Bowlby's goal-corrected partnership (Stern, Hofer, Haft, & Dore, 1985). Consistent, sensitive, and contingent parent responses to child behavior characterize the development-enhancing, parent-child interactions that are strongly associated with secure attachment relationships and social-emotional, cognitive, and motor competencies in young children (Ainsworth, 1969; Poehlmann & Fiese, 2001; Van Hecke et al., 2007; Zeanah et al., 2000). Early responsive parent-child interactions have predicted later successful child social interactions and emotional expression (Landry, Smith, Swank, Assel, & Vellet, 2001; Spiker, Ferguson, & Brooks-Gunn, 1993) and communication competency between children and others (Fey et al., 2006; Schreibman, Stahmer, & Pierce, 1996).

Although the contingent, sensitive, and natural environmental components remain constant across developmental-enhancing parent-child interactions, the nature and value of specific parent-responsive strategies change and are differentially associated with the context, timing, and function in their influence on child development (Mahoney, 2009; Trivette, 2003). For instance, parents who are deaf adapt to the nature of their daily functional interactions with their children who are deaf by demonstrating higher rates of interactions based on child focus and waiting for the child to respond than hearing parents of children who are deaf (Paparella & Kasart, 2004). As child competencies change, the content and focus of par-

ent/caregiver responses and interactions change in accordance with child developmental interests and competencies (Tamis-LeMonda, Bornstein, & Baumwell, 2001). Landry, Smith, Swank, and Miller-Loncar (2000) demonstrated that as infants become more competent in their sensory, motor, social, and cognitive behaviors, parents changed the focus and types of responses from social interactions to the objects and environment that engaged infant interests. Changes in parent responses are associated with different child competencies as well. Kochanska and Aksan (2004) observed that while parents were more responsive to children's negative/distress bids for attention than to their physical bids at 7 months of age, at 15 months, parents were also more responsive to children's positive bids than to their negative bids. As this change occurred in parents, the children became more competent at reading and responding to their parents'/caregivers' cues between 7 and 15 months.

Across the last two decades, research has documented that responsive parent/caregiver-child interactions are equally as important for promoting child learning for children who are typically developing, and children with identified developmental delays and/or disabilities or who are at-risk for developmental delay (Mahoney, 2009; McConachie & Diggle, 2007; Trivette, 2003). For example, maternal responsivity supports prelinguistic communication interventions that promote child intentional communication (Yoder & Warren, 1998). Several studies have demonstrated positive changes in social and cognitive function in children identified with autism spectrum disorder associated with parent training in responsive interactions (Dawson et al., 2010; Mahoney & Perales, 2005; Schertz & Odom, 2006; Solomon, Necheles, Ferch, & Bruckman, 2007; Wetherby & Woods, 2006). The promotion of responsive parent-child interactions is the primary focus of effective evidence-based infant-mental health treatments (Shonkoff & Phillips, 2000; Zeanah et al., 2011). For children with disabilities or at-risk for disability, studies have demonstrated specifically that responsive parent-child interactive strategies are more effective in promoting child development than those same strategies implemented by early childhood practitioners (Mahoney et al., 1998).

## PARENT-CHILD INTERVENTIONS

There are currently several evidence-base intervention models and strategies designed to support parents' development-enhancing responsive interactions. Some strategies are tied to specific outcomes and some are tied to specific models of intervention practices. None of the interventions and/or models reviewed are specifically

tied to natural environment intervention practices. Chai et al. (2006) proposed three critical elements of natural environment intervention practices: (a) naturalistic specialized instruction, (b) natural settings, and (c) parent-child interactions within daily routines and activities. Under this model, natural learning environment intervention practices include instructional approaches that are implemented by practitioners to support parents and other caregivers in using responsive interactions within everyday activities as the sources of infants' and toddlers' learning opportunities (Campbell, 2004; Campbell & Sawyer, 2007; Dunst, Trivette, Humphries, Raab, & Roper, 2001; Keilty & Galvin, 2006; Kellegrew, 2000; McWilliam, 2000). A primary shared component of all intervention models is a focus on promoting parents' capacity to be responsive to the child's cues and emotions and enhance the child's developmental interests. Parent competencies to recognize and respond to children's interests and strengths during everyday activities as child learning opportunities are also the primary focus of a model of early intervention called parent-mediated child interest-based learning (Dunst, 2006; Raab, 2005). Supporting parent competencies to recognize and respond to children's interests and strengths during everyday activities not only enhances developmental outcomes for children, but also strengthens parents' efficacy (Dunst, Bruder, et al., 2001; Leerkes & Burney, 2007). Kassow and Dunst (2004) in a secondary meta-analysis of a research synthesis originally conducted by Bakermans-Kranenburg, van IJzendoorn, and Juffer (2003) noted that the most effective parent interventions focused specifically on enhancing parental awareness of their children's behavior, accurate interpretation of these behaviors, and contingent social responsiveness to the children's behavior.

Mahoney (2009) reviewed parent involvement in intervention studies including approximately 700 children and their parents, and found that successful interventions are characterized by the parents' influence during early intervention, increases in parents' use of responsive parenting interactions, and the frequency with which parents use responsive strategies to interact with and promote their children's participation in real-life activities. Mahoney identified over 100 different strategies related to responsive parent-child interactions. A review of 11 evidence-based early intervention models that include responsive parenting strategies yielded 204 differently worded responsive strategies. The 11 programs reviewed and their respective targeted populations are listed in Table 1.

Based on their similarities, the 173 strategies were reduced to 18 different strategies that can be found in

Table 1

*Parent-Child Intervention Models by Target Population*

Behavior or attachment	At-risk for developmental delay	Developmental delay	Autism spectrum disorder	Language delay
Developmental Parenting (Roggman, Boyce, & Innocenti, 2008)	Developmental Parenting (Roggman et al., 2008)	Responsive Teaching (Mahoney, 2009)	Responsive Teaching (Mahoney, 2009)	Responsivity Education/Prelinguistic Milieu Teaching (RE/PMT) (Fey et al., 2006)
Circle of Security®Project (COS) (Marvin, Cooper, Hoffman, & Powell, 2002)	The PALS Infant and PALS Toddler curriculum (Landry et al., 2006)	It Takes Two to Talk – The Hanan Program for Parents (Girolametto & Weitzman, 2006)	The Early Start Denver Model (Rogers & Dawson, 2010)	It Takes Two to Talk – The Hanan Program for Parents (Girolametto & Weitzman, 2006)
Parent-Child Interaction Therapy (Eyebert, 2005)			The P.L.A.Y. Project (Solomon et al., 2007) Based on Greenspan, S., & Wieder, S. DIR®/Floortime™ Model ( <a href="http://www.icdl.com/dirFloortime/overview/index.shtml">http://www.icdl.com/dirFloortime/overview/index.shtml</a> )	
The Incredible Years, (Webster-Stratton, 2011)			Pivotal Response Training (Koegel, Koegel, Harrower, & Carter, 1999)	

Table 2. The second column in this table includes the number of similar strategies that were collapsed into each of the 18 strategies. For example, across all 11 programs, 16 similar strategies refer to ways to elaborate play activities to introduce new skills or information. The third column in this table provides information regarding the percent of programs that use this or a similar strategy. Even though 13 similar strategies described providing animated and exciting affect, only 73% of the programs contained a version of this strategy. In contrast, 21 similar strategies existed regarding following the child’s lead with 100% of the programs containing a version of this strategy.

*Natural Learning Model of Responsive Strategies*

Each of the 11 programs reviewed organized re-

sponsive strategies with functionally different foci. For example, Mahoney (2009) proposes a model that identifies five specific components of responsive parent-child interactions that mediate the development of key learning behaviors important for cognitive, language, and social development. Roggman et al. (2008) propose a model of four well-defined and validated domains of responsive positive parenting with 29 easily recognized indicators for both practitioners and parents to assess and consider to support responsive parent-child interactions during home and family activities associated with developmental parenting. Rogers and Dawson (2010) similarly describe eight important elements to supporting responsive joint activities for teaching/working with children with ASD that are sequenced

Table 2

*Eighteen Reduced Responsive Strategies*

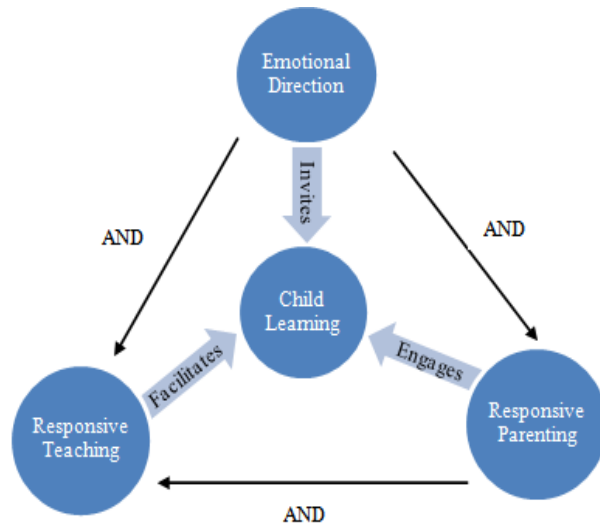
Strategies	Frequency of each strategy	Percent of programs including strategy
Engagement	11	73%
Turn taking	6	55%
Animated, excited affect	13	73%
Warm, comforting affect	10	64%
Developmental level	8	64%
Emotional regulation	13	73%
Joint action	6	55%
Acceptance, validation	17	91%
Contingent responses	11	73%
Direct information/instruction	8	55%
Facilitation/shared/guided	11	64%
Follow child's lead	21	100%
Expectant waiting	4	27%
Elaborating play	16	73%
Extending play	6	45%
Reciprocal communication	4	27%
Modeling	6	27%
Face-to-face interaction	2	18%

into two phases, first establishing presence by becoming a play partner, and second developing play into elaborated turn-taking and joint activities that follow the child's interests and capabilities.

Fey et al. (2006), in their model of pre-linguistic milieu speech intervention, provide responsive training to parents that is combined with appropriate and expert intervention strategies. Across all of these models and interventions, however, the strategies have the same common characteristics of sensitivity and contingent match to child developmental needs and interests. The Hanen model that is specifically focused on language promotion for toddlers employs a three component model of parent responsive strategies: (a) child-centered, (b) interaction promoting, and (c) language modeling (Girolametto & Weitzman, 2006). The strategies used across these models share three common functions of creating inviting opportunities for learning, engaging children in learning activities, and strengthening or elaborating children's skill development. These three functions are also a logically sound and a consistent fit to a parent-mediated child natural learning model

of intervention. This model of intervention promotes parents' and other primary caregivers' use of responsive strategies to recognize children's interests and strengths and engage children in naturally occurring everyday family and community activities as contexts to facilitate interest-based child learning (Dunst, 2006; Dunst, Bruder, et al., 2001; Dunst & Swanson, 2006).

The natural learning model of three functionally different types of responsive strategies and their interactive relationships is captured in Figure 1. *Emotional direction* strategies invite children to become involved in natural learning activities by setting and maintaining the emotional context of the activity. *Responsive parenting* strategies include contingent parent responses that engage children's participation or validate their current participation in natural learning activities once the inviting context has been established. As children and parents are engaged in a shared activity, *responsive teaching* strategies facilitate children's learning by extending, elaborating upon, and enriching the ongoing experience.



**Figure 1. Three Component Natural Learning Model of Responsive Strategies that Promotes Interest-based Learning**

#### *Emotional Direction*

Emotional direction strategies invite children into learning activities by initially establishing sensitive positive environments where supports for attention and emotional regulation are present in order to afford joint parent-child engagement and parent facilitation of child learning. This component is based on evidence that children actively seek and/or refer to caregivers for emotional supports and cues about their own state, other people, or objects in their environment (Moses, Baldwin, Rosicky, & Tidball, 2001). Parents who provide emotional direction in response to child emotions and inquiries establish the emotional connection and context for parent-child interactions and are effective in the prevention of behavior disorders for preschoolers who are at-risk (Webster-Stratton, Reid, & Hammond, 2004). For example, parental emotional responses to child behavior that are negative or intense discourage further parent-child interactions and the establishment of joint attention (Eisenberg, Fabes, & Murphy, 1996). On the other hand, positive affirmations that follow child vocalizations are important for children's acquisition of first words (Tamis-LeMonda et al., 2001). Evidence also suggests that positive emotional responses are correlated to children's capabilities to manage their emotions and refer to their parents for additional social and emotional information (Bocknek, Brophy-Herb, & Banerjee, 2009). Because a positive emotional environment is essential to child participation in learning contexts, inviting emotional direction strategies are employed before other responsive strategies can effectively be used to promote child interest-based learning.

#### *Responsive Parenting*

Responsive parenting strategies establish and support the parent and child being jointly engaged in the same interest during activities. Research supports that the benefits of using child interests as the basis for involvement in learning activities include, but are not limited to, positive child engagement or joint attention (Odom, Brown, Schwartz, Zercher, & Sandall, 2002; Woods & Goldstein, 2003). Establishing joint attention is a necessary component of parent mediation of child learning for all children and is associated with language and cognitive development (Kim & Mahoney, 2004; Tamis-LeMonda & Bornstein, 1989). A study by Siller and Sigman (2002) found children with a diagnosis of autism whose parents matched their attention and activity to their child's activity in high levels of joint engagement demonstrated more ongoing competency at joint attention and language than children whose parents did not match their attention and activity to their child's interests. Engaging with children through their interests during everyday activities creates opportunities to sustain learning to support current competencies and facilitate the development of new competencies (Spiker et al., 1993) within what Vygotsky (1978) referred to as the child's zone of proximal development. Furthermore, parent engagement with children with typical and atypical behavior during interest-based activities promotes children's reciprocal initiation of joint learning opportunities with their parents or others (Schertz & Odom, 2006; Vaughan et al., 2003). Functionally for child interest-based learning, employing effective responsive parenting strategies requires parents to first observe their child's interests within the current activity as well as across natural daily activities. After establishing the emotional context through the use of emotional direction strategies, parents can use their knowledge of child interests to engage their child in joint activities by acknowledging, validating, and matching the child's focus of attention and activity.

#### *Responsive Teaching*

Responsive teaching strategies facilitate child learning by affording children opportunities to practice and learn successful skills across a variety of child interest-based activities with parental support. Responsive teaching strategies include evidence-based scaffolding or guided supports, modeling, prompting, or direct instruction that require both the parent's and child's participation in activities that explore new information and extend and elaborate upon current child interests and developmental competencies. In recent studies, Landry and associates (Landry, Miller-Loncar, Smith, & Swank, 2002; Landry et al., 2006) demonstrated that the par-

ent responsive teaching strategy of verbal and physical facilitation of children’s skills at early ages is associated with children’s executive processing, memory retrieval, problem-solving, and independent directed play skills at 4 and 6 years of age. Responsive teaching strategies are dependent upon parents’ use of inviting emotional direction strategies and responsive parenting strategies that first engage children’s joint participation through the validation and/or acknowledgement of the child’s interests in an activity.

While current child capacities can be maintained when a parent uses emotional direction and responsive parenting strategies, enhancement of development through parent-child interaction requires the addition of responsive teaching strategies. When children are engaged in development-enhancing learning activities that are supported by parents or caregivers, those parents are using all three strategies in a moment-by-moment contingent process. For example, when Ruth prepares a bath for her 2-year-old daughter, Jenny, she includes bubbles and an extra wash cloth because Jenny loves to play with the bubbles and wash herself. Ruth sets an inviting emotional direction for the activity by playfully asking Jenny to take a bath. Once in the bathroom, Jenny starts to chant, “bubbas, bubbas, bubbas” and Ruth practices responsive parenting by saying “bubbles, bubbles, bubbles” in return and engaging Jenny by handing her the closed bottle of bubble solution. As the tub fills with

water, Ruth practices responsive teaching strategies by facilitating Jenny learning how to pour the bubble liquid under the streaming water. This pattern is repeated when Ruth offers Jenny a wash cloth and helps her learn to clean herself by taking turns scrubbing, naming body parts, and smiling interactively until Jenny is clean.

*Implications for Practice*

Reducing and organizing responsive strategies into the natural learning model described here provides practitioners and parents a clearly defined, three-step approach to supporting child development and learning. Table 3 specifies how emotional direction, responsive parenting, and responsive teaching components incorporate the 18 strategies identified in Table 2. In the upper section of the table, the strategies listed are functionally exclusive to the component. In the lower section, the strategies are functionally effective across more than one component. For example, modeling is a strategy to support children observing alternate appropriate emotional expressions from caregivers without the intent of the caregiver to teach the alternative method versus caregivers intentionally providing a model of a behavior for a child to observe and practice a new skill or competency under responsive teaching.

The exact style, language, actions, and context associated with these responsive strategies is based on the individual parents, children, and their daily envi-

Table 3

*Eighteen Natural Learning Model of Responsive Component Strategies*

Emotional Direction	Responsive Parenting	Responsive Teaching
<i>Strategies that are exclusive to one component</i>		
Animated, excited affect	Engagement	Direct information/instruction
Warm, comforting affect	Acceptance, validation, acknowledgement	Elaborating play
	Contingent responses	Extending play, frequency and duration
	Follow child’s lead	
	Expectant waiting	
<i>Strategies that fit in more than one component</i>		
Developmental level	Developmental level	Developmental level
Emotional regulation/Behavioral	Emotional regulation/ Behavioral	
Joint action	Joint action	
Reciprocal communication	Reciprocal communication	Reciprocal communication

ronments. Parents and practitioners can jointly use the natural learning model to consider what each of these components and strategies look like during a variety of the family's everyday activities and learning opportunities. Each component of responsive strategies can be observed and considered individually or in the sequenced process as they naturally occur. This model can also be used to promote parents and practitioners exploration of new and/or alternative responsive strategies to create individualized parent-child responsive interactions that fit a variety of child learning and developmental profiles and family environments.

## CONCLUSION

This CASEinPoint has described the characteristics, functional roles, and outcomes of responsive parent-child interactions specifically found during natural learning activities. Conceptual foundations include the characteristics of responsive parent-child interactions and their role in child development supported by developmental theory (Bandura, 1992; Bowlby, 1982; Vygotsky, 1978) and evidence-based research. This paper recognizes that the most important mediators of development are present within the everyday life, activities, and social relationships of children, and that development proceeds based on the opportunities children have to experience a variety of contexts and supportive strategies (Bronfenbrenner, 1999; Tudge et al., 2003). Although development proceeds from individually unique mixes of important developmental experiences, responsive parent-child interactions are a consistent and necessary component for enhancing typical and healthy developmental outcomes in children (Shonkoff & Phillips, 2000; Zeanah et al., 2011). Empirical support includes studies that demonstrate enhanced responsive parenting interactions associated with establishment of developmental milestones (attachment and language development) and improved developmental outcomes for children including those with high risk or developmental factors (Mahoney, 2009).

This CASEinPoint specifically focused on the importance of the role responsive parent-child interactions play in the context of everyday natural learning environments for child learning and for early intervention programs. Although previous descriptions of the role of parent responsiveness have been included in descriptions of naturally occurring interest-based child learning (Dunst, 2006; Dunst & Swanson, 2006; Raab, 2005), this CASEinPoint further explains and defines the functional differences and effects of responsive strategies under the natural learning model of responsive strategies. Pro-

viding a more in-depth and functional review of the responsive strategies parents use to promote child learning enhances the likelihood of both parent and practitioner competence and confidence mediating child learning and development (Korfmacher et al., 2008).

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#### AUTHOR

Frances A. Davis, M.A., LPA is a Research Associate at the Family, Infant and Preschool Program, and Investigator at the Center for Advanced Study of Early Childhood and Family Support Practices, J. Iverson Riddle Developmental Center, Morganton, North Carolina.