

# Efficiency of Everyday Activities as Sources of Early Childhood Intervention

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# Premises of the Presentation

- The purpose of early childhood intervention with children with disabilities or developmental delays is to provide children learning opportunities and experiences to promote and enhance their development
- The purpose of parent-mediated early childhood intervention is to promote and strengthen parents' competence and confidence in providing their children learning opportunities and experiences that promote and enhance child development
- A universal aspect of young children's daily lives throughout the world is participation in everyday activities that are contexts for learning socially situated and culturally meaningful behavior
- Participation of young children with disabilities or delays in everyday activities that have development-enhancing characteristics can function as early childhood intervention that promotes and enhances child learning and development

# Purposes of the Presentation

- Describe a number of the factors that shape and influence child learning and development in the contexts of everyday activities
- Illustrate that the participation of young children with and without disabilities or delays in everyday activities is more similar than different
- Describe several of the activity-setting, child, and caregiver characteristics that “stand out” as particularly important in terms of influencing the learning and development of young children with disabilities as part of their participation in everyday activities
- Describe a parent-mediated activity-setting approach to early intervention that uses everyday activities as sources of development-enhancing child learning opportunities

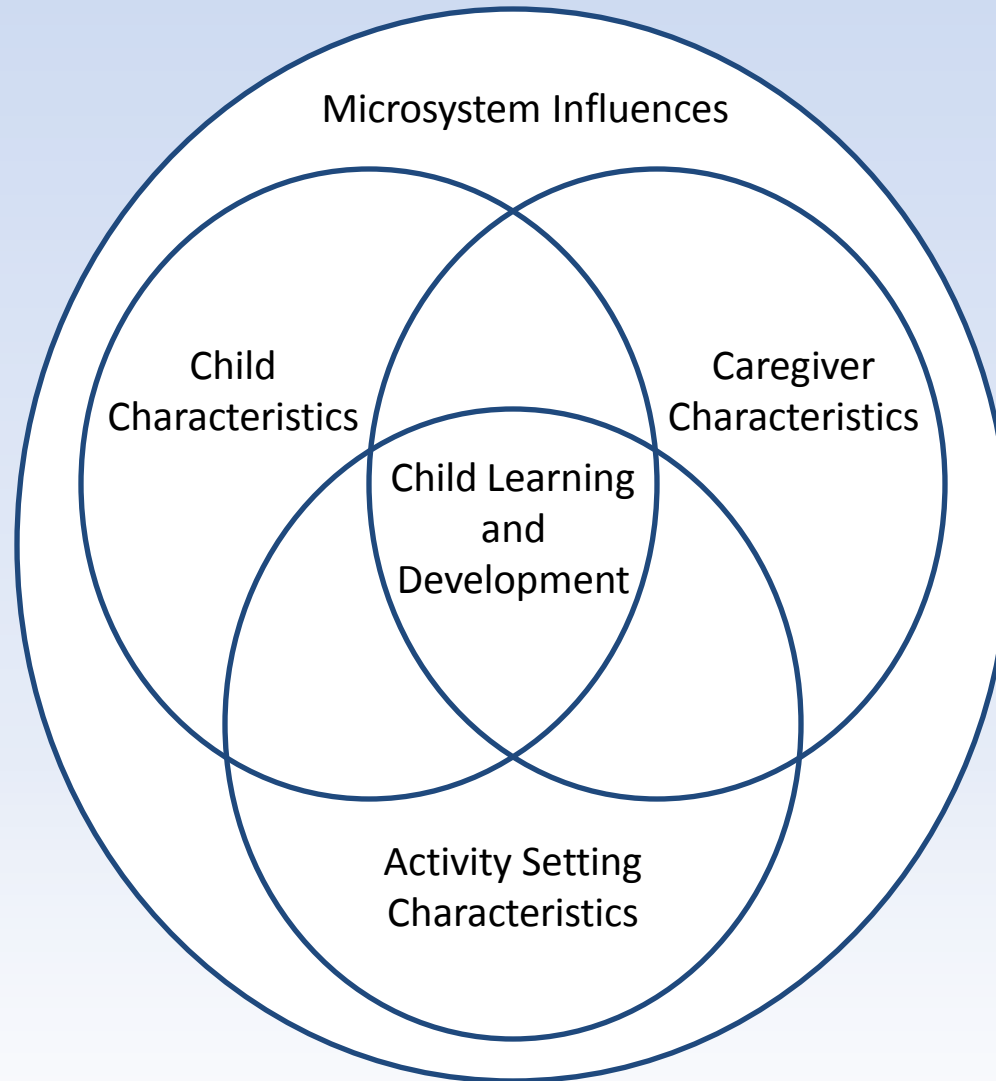
# Microsystem Framework for Conceptualizing Child Learning and Development

According to Bronfenbrenner (1993), “The ***personal characteristics*** likely to be most potent in affecting the course ... of development ... (include) those that set in motion, sustain, and encourage processes of interaction between the [developing] person and two aspects of the ***proximal environment***: first, the ***people present*** in the setting; and second, the ***physical and symbolic features*** of the setting that invite, permit, or inhibit engagement in sustained, progressively more complex interaction with an activity in the immediate environment.” (p. 11, emphasis added)

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Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozniak & K. W. Fisher (Eds.), *Development in context: Acting and thinking in specific environments* (pp.3-44). Hillsdale, NJ: Erlbaum.

# Framework for Conceptualizing Microsystem Influences on Child Learning and Development



# Examples of Factors Influencing Child Learning and Development

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Microsystem Influences    Development-Enhancing Characteristics

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Child Characteristics    Child temperament, ***child personal interests***, severity of child delay, type of child disability

Activity Setting Characteristics    Geography (activity locations), ***type of everyday activity, situationally interesting activity***, material availability, activity setting features

Caregiver Characteristics    Cultural beliefs and values, parenting attitudes, ***caregiver interactional styles***, acculturation and enculturation

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# Definitions of Everyday Activity Settings

- “Contexts in which collaborative interaction, intersubjectivity, assisted performance, and learning occur.” (Tharp & Gallimore, 1988)
- “Activity settings are made up of everyday experiences...that contain ordinary settings in which children’s social interaction and behavior occur.” (Farver, 1999)
- “Situation-specific experiences, opportunities or events that involve a child’s interaction with people, the physical environment, or both, and which provide contexts for a child to learn about his or her own behavior capabilities as well as the behavioral propensities of others.” (Dunst et al., 2002).

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Dunst, C. J., Bruder, M. B., Trivette, C. M., Hamby, D., Raab, M., & McLean, M. (2001). Characteristics and consequences of everyday natural learning opportunities. *Topics in Early Childhood Special Education, 21*, 68-92.

Farver, J. A. M. (1999). Activity setting analysis: A model for examining the role of culture in development. In A. Göncü (Ed.), *Children's engagement in the world: Sociocultural perspectives* (pp. 99-127). Cambridge, UK: Cambridge University Press.

Tharp, R., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge, UK: Cambridge University Press.

# **Examples of Child Participation in the Everyday Activities**

























## Case Studies of Young Children's Participation and Learning in Everyday Family and Community Activities

- Families of children with or without disabilities were visited on six occasions over a 5- to 6-month period of time to identify either the family or community activities that “made up” each child's life.
- The case studies were conducted with families in eight states (Alaska, California, Connecticut, Hawaii, New Mexico, New York, North Carolina, and Wisconsin). Children and families were selected as participants based on different background characteristics.
- Observations, interviews, artifactual evidence (e.g., photographs, physical objects) and other information were used to identify the children's everyday activities.

## Number of Case Study Participants

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Child Condition	Family Activities	Community Activities
Children with Disabilities	57	58
Children without Disabilities	46	45

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## Distribution of the Children's Ages

Child Age (months)	Children with Disabilities		Children without Disabilities	
	Family Activity	Community Activity	Family Activity	Community Activity
0 – 12	8	4	5	9
13 – 24	8	13	9	11
25 – 36	13	14	11	5
37 – 48	9	10	8	4
49 – 60	13	8	9	11
61 – 72	6	9	4	5

# Children's Diagnoses and Etiologies<sup>a</sup>

Typically developing .....	91
Developmentally at-risk .....	19
Motor impairments .....	19
Language impairments .....	15
Developmental delays .....	11
Autism spectrum disorders .....	9
Chromosomal aberrations .....	9
Medically-related disabilities .....	9
Sensory impairments .....	8
Multiple disabilities .....	8
Intellectual disabilities .....	4
Cranial disorders .....	4

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<sup>a</sup> All the children with identified disabilities or developmental delays were enrolled in U.S. Department of Education, Individuals with Disabilities Education Act Early Intervention or Preschool Special Education Programs.

# Family Activity Setting Case Study Results

Measures	Family Activity Samples	
	Children with Disabilities	Children without Disabilities
<i>Number of Activity Setting Locations</i>		
Mean	31.05	27.98
Standard Deviation	17.58	11.12
Range	7-98	13-64
<i>Number of Child Learning Opportunities</i>		
Mean	100.40	102.33
Standard Deviation	46.22	28.92
Range	36-262	39-205

# Community Activity Setting Case Study Results

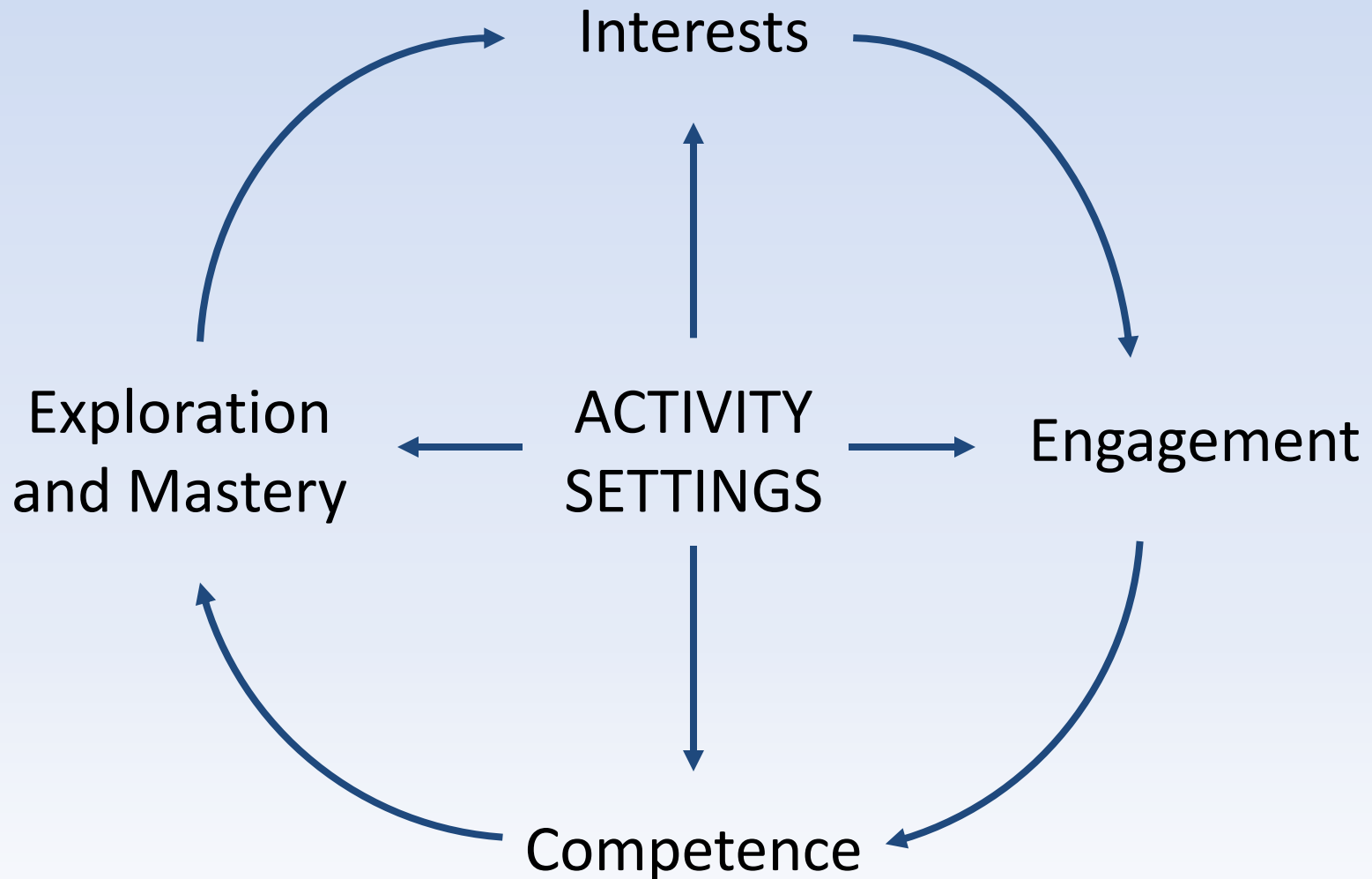
Measures	Community Activity Samples	
	Children with Disabilities	Children without Disabilities
<i>Number of Activity Setting Locations</i>		
Mean	30.59	32.91
Standard Deviation	12.98	10.91
Range	13-75	13-67
<i>Number of Child Learning Opportunities</i>		
Mean	70.21	86.49
Standard Deviation	31.64	32.31
Range	23-154	33-177



# Role of Children's Interests in Everyday Learning

- One child characteristic that has consistently emerged as a person factor influencing everyday learning as part of our research and practice is a child's personal interests (preferences, choices, desires, likes, etc.).
- One activity setting characteristic that has consistently emerged as a factor influencing children's everyday learning is the situationally interesting (engaging) features of everyday activity settings.
- Incorporating either personal or situational interests into everyday child learning has been found to be associated with optimal child benefits.

# Cycle of Interest-Based Everyday Child Learning



# **Examples of Interest-Based Child Participation in Everyday Activity**



“Intense Engagement”



“Preferred Activities”



“Challenging Activities”



“Excitement”

# Research Syntheses of Interest-Based Child Learning

Synthesis	Number of Studies	Number of Children	Child Characteristics	Outcomes
Dunst et al. (2011)	31	4,190	With or without disabilities	Language, literacy
Dunst et al. (2012)	24	78	Autism spectrum disorders	Prosocial behavior, communication, skill acquisition
Raab & Dunst (2007)	25	543	With or without disabilities	Prosocial behavior, child progress, child engagement
Raab et al. (2013)	41	4058	With or without disabilities	Language

Dunst, C.J., Jones, T., Johnson, M., Raab, M., & Hamby, D.W. (2011). Role of children's interests in early literacy and language development. *CELLreviews*, 4(5), 1-18. Available at [http://www.earlyliteracylearning.org/cellreviews/cellreviews\\_v4\\_n5.pdf](http://www.earlyliteracylearning.org/cellreviews/cellreviews_v4_n5.pdf)

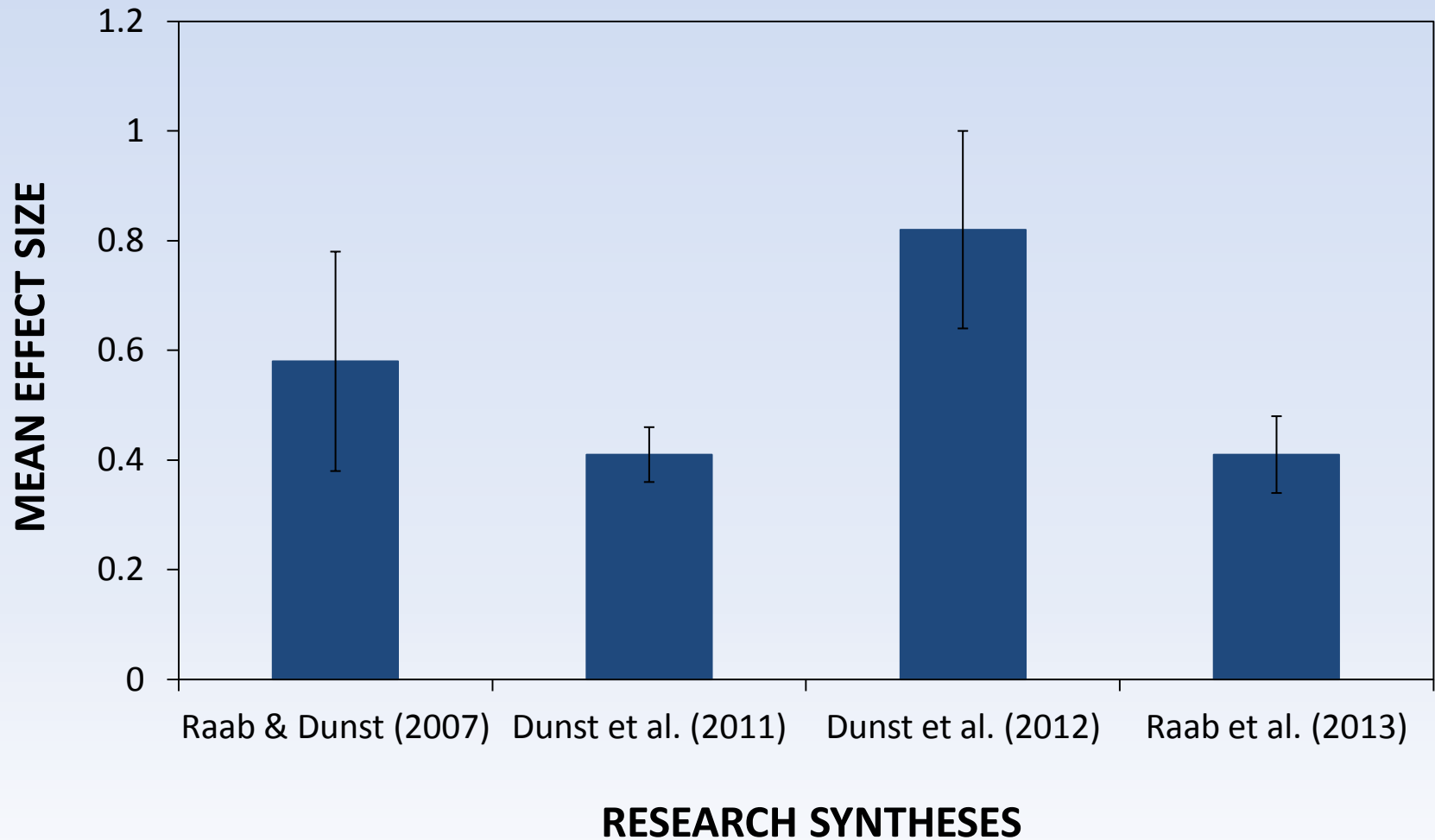
Dunst, C.J., Trivette, C.M., & Hamby, D.W. (2012). Meta-analysis of studies incorporating the interests of young children with autism spectrum disorders into early intervention practices. *Autism Research and Treatment*, 2012, 1-10.

Raab, M., & Dunst, C.J. (2007). *Influence of child interests on variations in child behavior and functioning* (Winterberry Research Syntheses Vol. 1, No. 21). Asheville, NC: Winterberry Press.

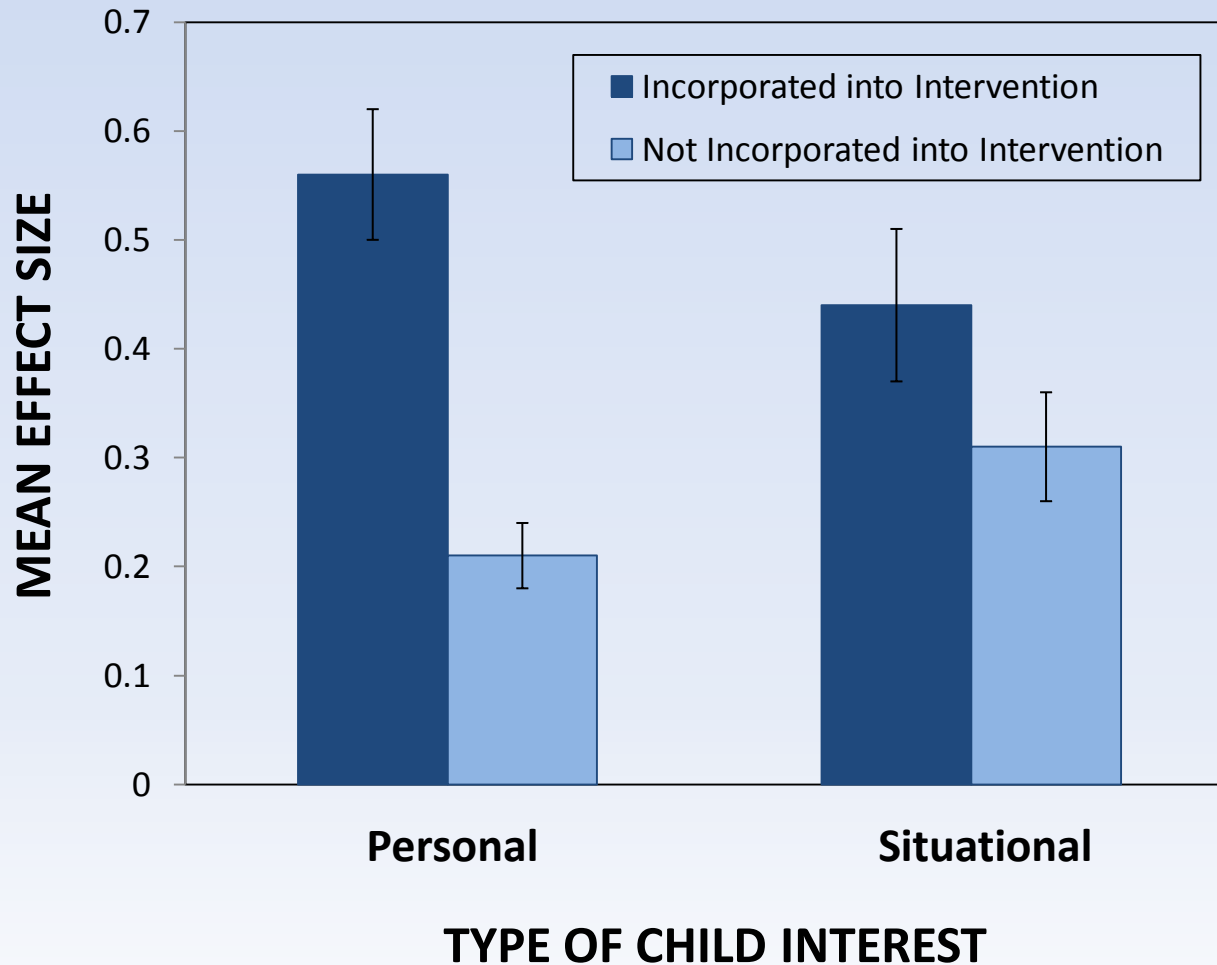
Raab, M., Dunst, C.J., & Hamby, D.W. (2013). Relationship between young children's interests and early language learning. *Everyday Child Language Learning Reports*, (5), 1-14. Available at [http://www.cecil.org/downloadECLLReport\\_5\\_Interests.pdf](http://www.cecil.org/downloadECLLReport_5_Interests.pdf).



# Average Cohen's *d* Effect Sizes and 95% Confidence Intervals for the Relationships Between Children's Interests and the Study Outcomes



# Average Effect Sizes and 95% Confidence Intervals for Incorporating or Not Incorporating Interests Into Child Learning Opportunities



# Role of Caregiving Styles in Everyday Child Learning

Linda Richter<sup>a</sup>, as part of a review of research and practice on caregiver-child interactions in many countries and cultures throughout the world, concluded (among other things) that:

- “***Sensitive*** and ***responsive*** caregiving is a requirement for healthy child development.”
- “***Nurturing*** and ***supportive*** caregiving relationships have universal features across cultures, regardless of differences in specific child rearing practices.”

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<sup>a</sup> Richter, L. (2004). *The importance of caregiver-child interactions for the survival and healthy development of young children: A review*. Geneva, Switzerland: World Health Organization, Department of Child and Adolescent Health and Development.

# Caregiving Styles and Naturalistic Teaching Practices

- Close inspection of the literature on caregiver styles of interaction and the naturalistic teaching literature finds considerable overlap in terms of the characteristics that are associated with optimal child behavioral and developmental outcomes.
- According to Richter (2004), interventions (both formal and informal) that promote caregivers' sensitivity and responsiveness to child behavior during everyday activities ought to positively effect child health and development.
- The intentional use of responsive and supportive interactional styles to affect child behavior has been described as incidental teaching, responsive teaching, and milieu teaching (among other descriptors).

# Selected Characteristics of Naturalistic Teaching Procedures

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## *Caregiver*

### *Characteristics*

- Sensitivity to child initiations
- Engagement-facilitating caregiver behavior
- Responsiveness to child behavior
- Positive caregiver affect
- Turn taking and joint attention
- Caregiver support and encouragement

## *Child*

### *Characteristics*

- Incorporating child interests into learning opportunities
- Incorporating child strengths into learning opportunities

## *Activity Setting*

### *Characteristics*

- Situationally interesting activities
  - Everyday learning opportunities
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Dunst, C. J., Raab, M., & Trivette, C.M. (2011). Characteristics of naturalistic language intervention strategies. *Journal of Speech-Language Pathology and Applied Behavior Analysis*, 5 (3/4), 8-16.

# **Examples of Responsive and Supportive Caregiver Interactional Behavior**













# Systematic Reviews of Caregiving Styles and Naturalistic Teaching Practices Studies

Systematic reviews and meta-analyses of studies investigating the relationships between the characteristics of either caregiver interactional styles and naturalistic teaching indicate that the behavior and development of young children with and without disabilities or delays benefit from these kinds of practices.

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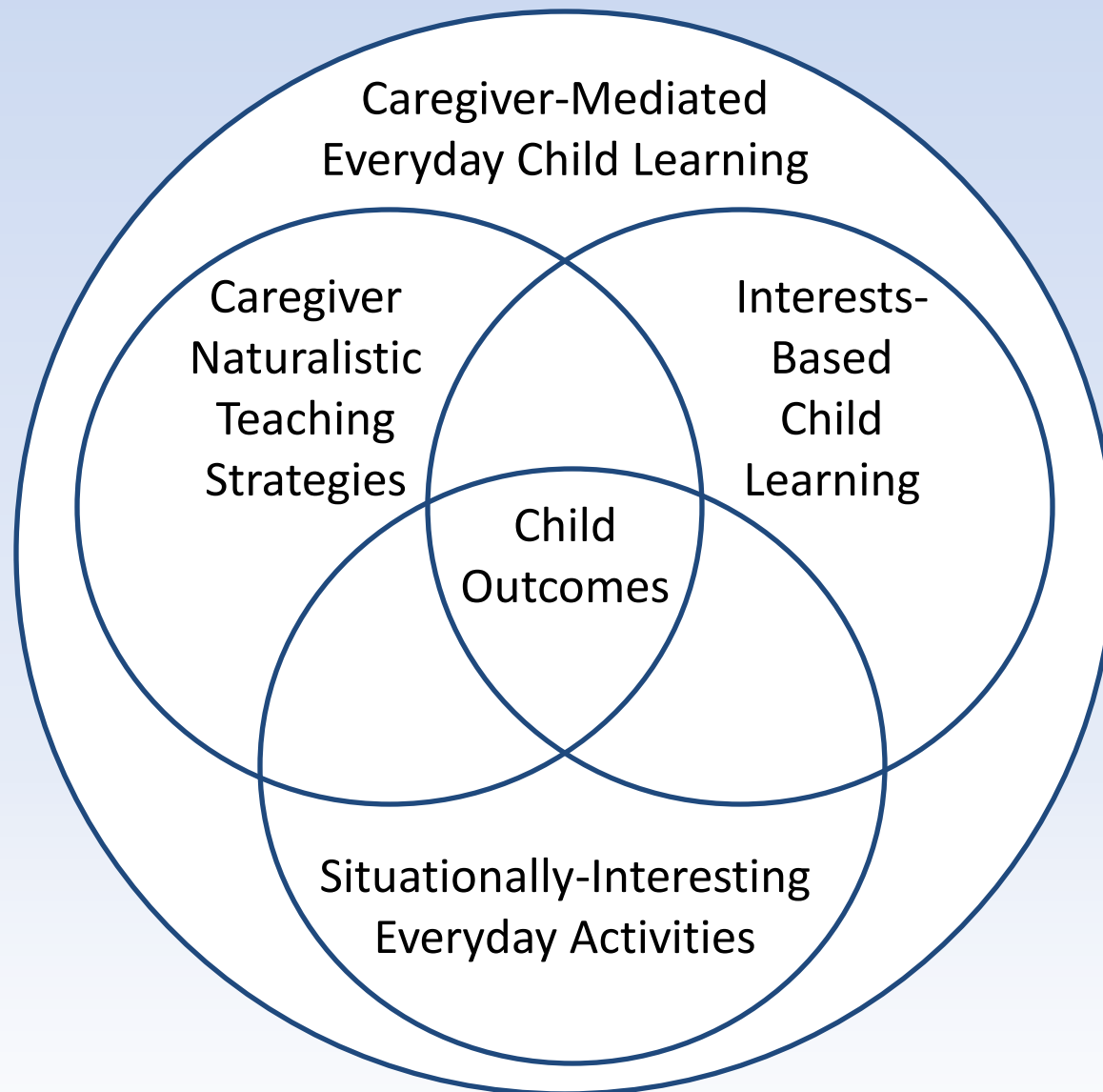
Dunst, C. J., & Kassow, D. Z. (2008). Caregiver sensitivity, contingent social responsiveness, and secure infant attachment. *Journal of Early and Intensive Behavior Intervention, 5*, 40-56.

Nievar, M. A., & Becker, B. J. (2008). Sensitivity as a privileged predictor of attachment: A second perspective on De Wolff and van IJzendoorn's meta-analysis. *Social Development, 17*, 102-114.

Raab, M., Dunst, C. J., Johnson, M., & Hamby, D. W. (2013). Influences of a responsive interactional style on young children's language acquisition. *Everyday Child Language Learning Reports, (4)*, 1-23. Available at: [http://www.cecll.org/download/ECLLReport\\_4\\_Responsive.pdf](http://www.cecll.org/download/ECLLReport_4_Responsive.pdf).

Trivette, C. M. (2007). Influence of caregiver responsiveness on the development of young children with or at risk for developmental disabilities (Winterberry Research Syntheses Vol. 1, No. 12). Asheville, NC: Winterberry Press.

# Caregiver-Mediated Model of Everyday Child Learning



# Contrasting Types of Intervention Increasing Participation in Everyday Activities and Child Development

**Purpose:** Compare the relative effectiveness of interest-based learning vs. non-interest-based everyday child learning

**Study Participants:** 50 infants, toddlers, and preschoolers with identified disabilities living in six United States

**Outcome Measure:** Developmental Observation Checklist Scales (Language, Cognitive, Motor, Social)

**Methodology:** Linear growth curve modeling was used to estimate child progress associated with the two types of intervention

# Two Types of Intervention

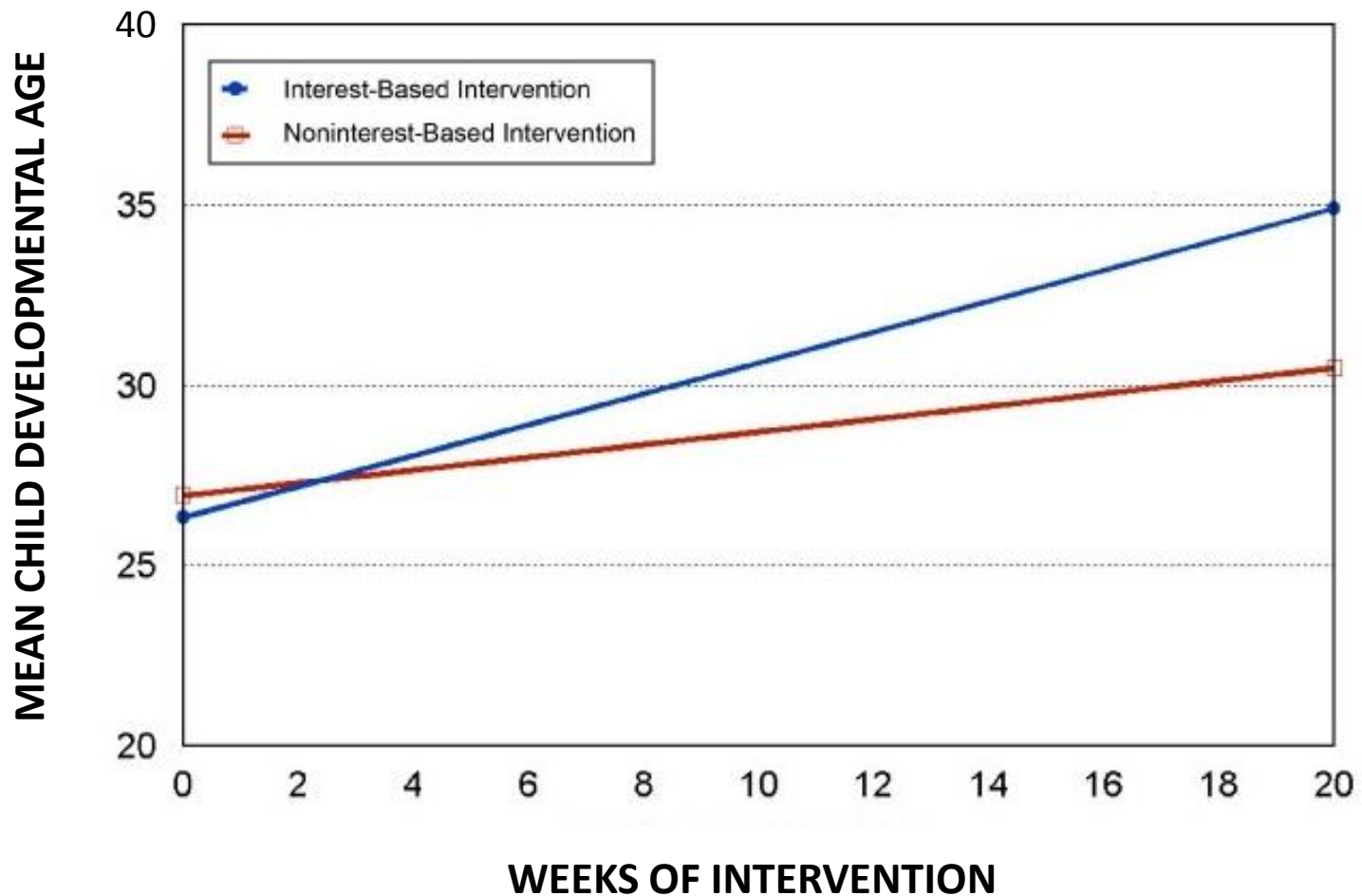
## Interest-Based Practices

Parents first identified their children's personal interests and the people, materials, and events that their children found situationally interesting. These interests were then incorporated into everyday activity settings that occurred on a regular basis and which provided the children interest-based learning opportunities.

## Non-Interest-Based Practices

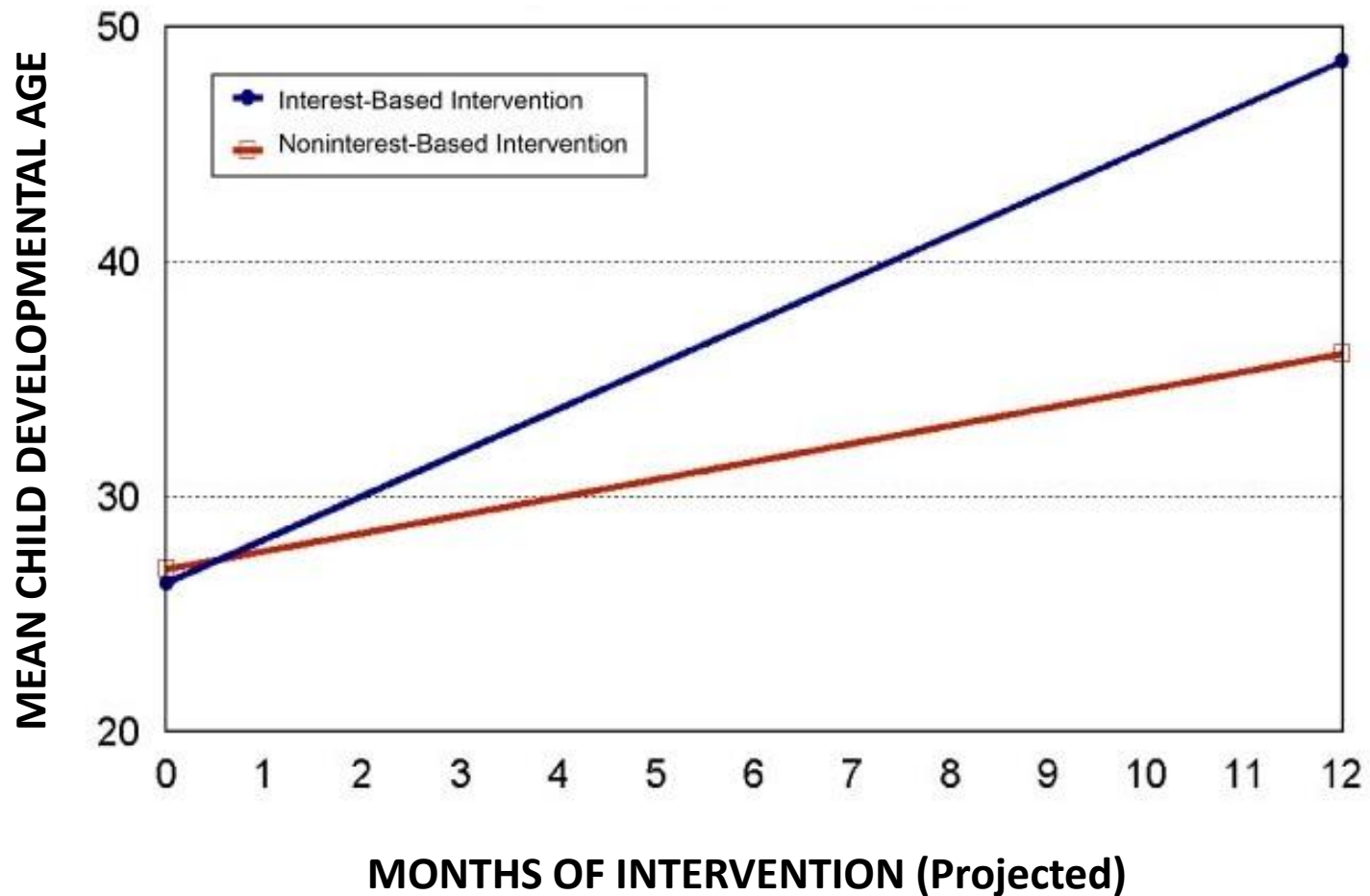
Parents first identified the behavior they wanted their children to learn. They then identified the everyday activities that were best suited for their children to learn the parent-identified behavior and increased their children's participation in the everyday activities.

# Relative Effectiveness of Two Contrasting Approaches to Activity Setting Intervention Practices





## Projected Benefits of Two Contrasting Approaches to Activity Setting Intervention Practices



# Why is Everyday Learning Warranted as Early Intervention with Young Children with Disabilities or Delays?

Comparative analyses of informal vs. formal early intervention practices indicate that everyday learning opportunities afford young children with disabilities or delays considerably more “instructional episodes” compared to traditional types of early intervention.

- Mahoney and MacDonald (2007) estimated that caregiver-child interactions that occur just one hour a day seven days a week would include **220,000** learning opportunities each year compared to 30 minutes of once-per-week therapy sessions that would provide a child just **7,500** learning opportunities each year.
- McWilliam (2000) estimated that promoting child skill acquisition in the context of everyday routines would provide a child considerably more learning opportunities per episode compared to once-a-week therapy or educational intervention sessions.

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Mahoney, G., & MacDonald, J. (2007). *Autism and developmental delays in young children: The responsive teaching curriculum for parents and professionals*. Austin, TX: PRO-ED.

McWilliam, R. A. (2000). It's only natural ... to have early intervention in the environments where it's needed. In S. Sandall & M. Ostrosky (Eds.), *Natural Environments and Inclusion (Young Exceptional Children Monograph Series No. 2)* (pp. 17-26). Longmont, CO: Sopris West.

# Contrasting Approaches to Everyday Child Learning

- Findings from research on infants' participation in everyday activities were used to estimate that if a child experienced only three activities every day this would mean more than 2,000 learning opportunities per year compared to less than 100 for once-a-week therapy sessions (Dunst, 2007).
- Dunst et al. (2005) compared two different approaches to young children's natural environment interventions and found that using everyday activities as sources of child learning opportunities resulted in 3 to 4 more learning opportunities per activity compared to implementing early intervention in everyday activities.

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Dunst, C. J. (2007). Early intervention with infants and toddlers with developmental disabilities. In S. L. Odom, R. H. Horner, M. Snell, & J. Blacher (Eds.), *Handbook of developmental disabilities* (pp. 161-180). New York: Guilford Press.

Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2005). Young children's natural learning environments: Contrasting approaches to early childhood intervention indicate differential learning opportunities. *Psychological Reports, 96*, 231-234.

# Implications for Early Intervention

I conclude with a number of questions that might provide guidance with regard to using everyday activities as both early intervention and sources of learning opportunities for infants and toddlers with disabilities:

- When is informal (everyday child learning) and formal (traditional therapeutic or educational) early intervention with infants and toddlers with disabilities warranted? And why?
- Is it reasonable to expect that informal early intervention can be used as an alternative to formal early intervention at least with a certain number of infants and toddlers with disabilities? Which children with which conditions and life circumstances might benefit from everyday learning?
- Which families with which kinds of cultural and personal beliefs and values are likely to view informal early intervention as appropriate? And why?
- Assuming that informal early intervention proves as effective or more effective than formal early intervention, what is the future of formal or more traditional early intervention?

**Answers to these as well as other questions will likely shape and influence how early intervention is practiced with infants and toddlers with disabilities.**

**PowerPoint available at:  
[www.puckett.org](http://www.puckett.org)**