

Value-Added Benefits of the Interest-Based Learning of Young Children with Developmental Disabilities and Delays

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Purpose of the Presentation

- Describe the role child interests play in promoting and enhancing child learning and development
- Illustrate the value-added benefits of interest-based child learning beyond those associated with noninterest-based learning
- Summarize findings from a number of studies that evaluated the child benefits of interest-based everyday child learning opportunities

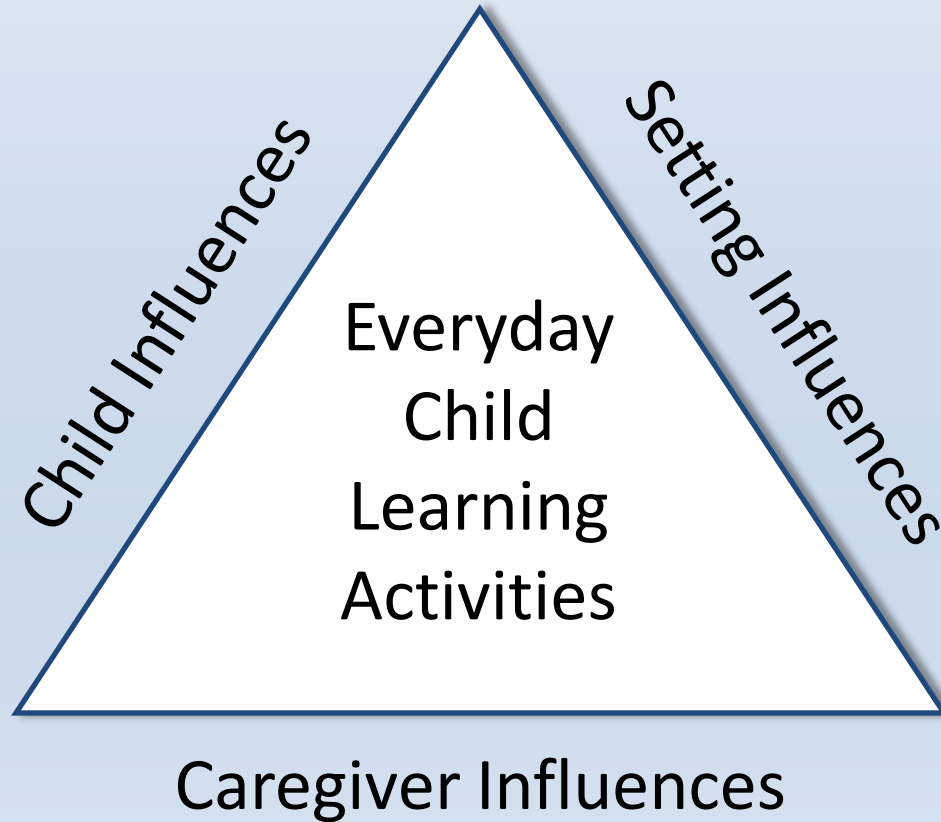
Four Guiding Principles of Early Childhood Intervention

- Everyday child learning opportunities should strengthen children's self-initiated behavior and children's recognition of their own capabilities
- Family members need the necessary supports to have the time and energy, and knowledge and skills, to be able to engage their children in everyday child learning
- Family member provided everyday child learning should benefit not only young children but should also strengthen family member confidence and competence
- Practitioners need to use family member capacity-building practices to strengthen family member confidence and competence

Development-Instigating and Development-Enhancing Characteristics of Everyday Child Learning Opportunities

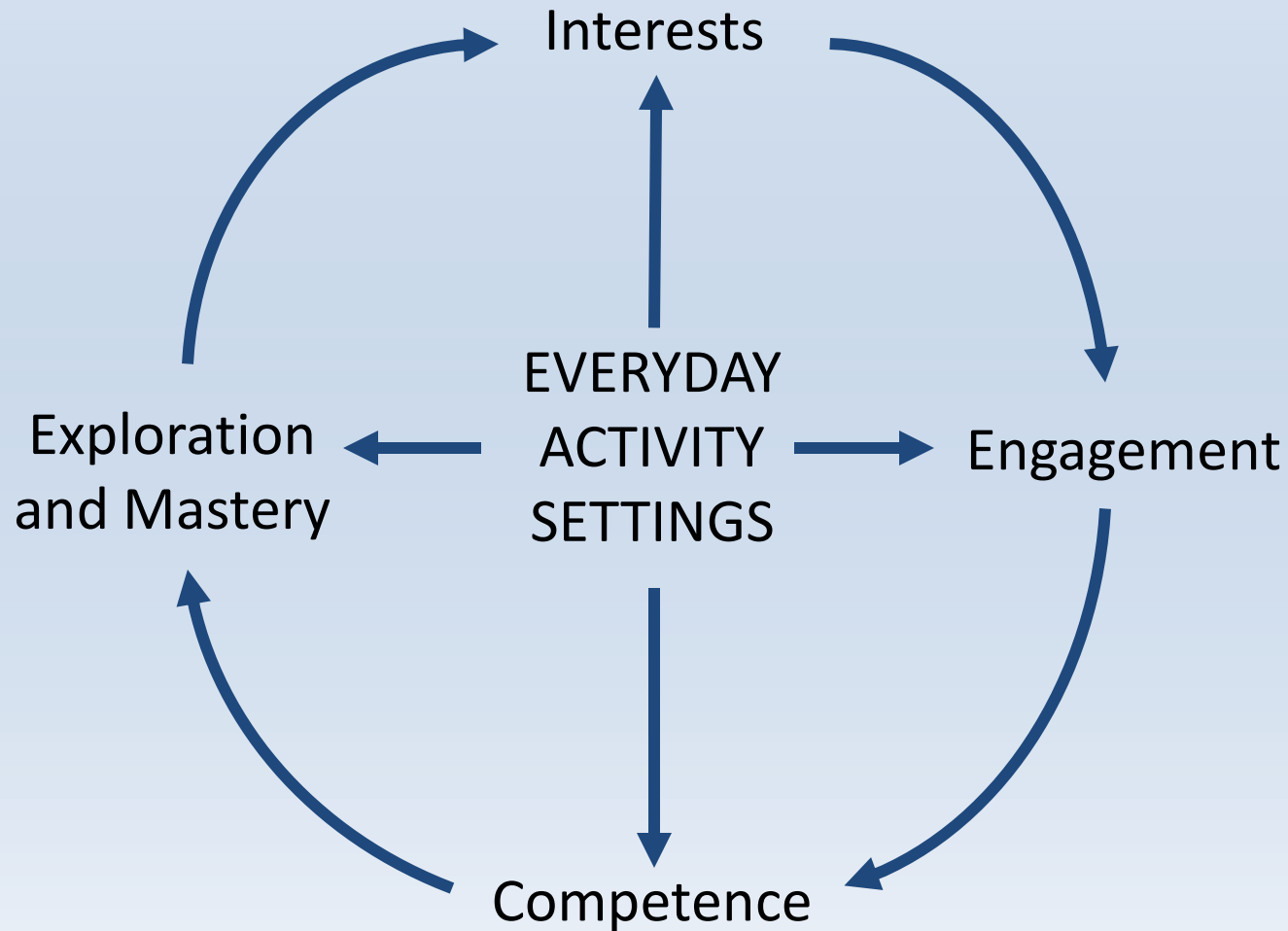
- Personal characteristics of the developing child
- Characteristics of everyday activities that invite child engagement in interactions with the social and nonsocial environment
- Behavior of caregivers in everyday activities that encourage or discourage child learning and development

Adapted from U. Bronfenbrenner (1992). Ecological systems theory. In R. Vasta (Ed.), *Six theories of child development: Revised formulations and current issues* (pp. 187-248. Philadelphia: Kingsley.



Sources of Development-Instigating and Development-Enhancing Child Learning Opportunities

Interest-Based Everyday Child Learning Cycle Process



Strengths-Based Early Childhood Intervention

- Interest-based early childhood learning is part of an intervention paradigm that emphasizes the use of existing behavior propensities as the building blocks for strengthening existing capabilities and promoting acquisition of new competencies
- Interest-based early childhood intervention is considered an alternative to needs-based and deficit-based paradigm intervention practices that focus on identifying delayed or missing behavior or skills and facilitating child acquisition of these behavior or skills

Types of Child Interests

- ***Personal Interests***

Personal interests include the likes, preferences, choices, desires, etc. of a child that influence participation or engagement in different activities, events, or behavior

- ***Situational Interests***

Situational interests refer to the “interestingness” of people, objects, and events that gain and maintain a child’s attention, and “draws” the child into engagement or participation in activities

Personal Interest



Example of a Situational Interest



Interest-Based Child Participation in Everyday Activities



“Intense Engagement”



“Preferred Activities”



“Challenging Activities”



“Excitement”

Caregiver-Facilitated Child Engagement in Interest-Based Everyday Activities



Caregiver-Child Lap Games



Encouraging Child Confidence



Encouraging Everyday Participation



Encouraging Joint Activity

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 and literacy development
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 development

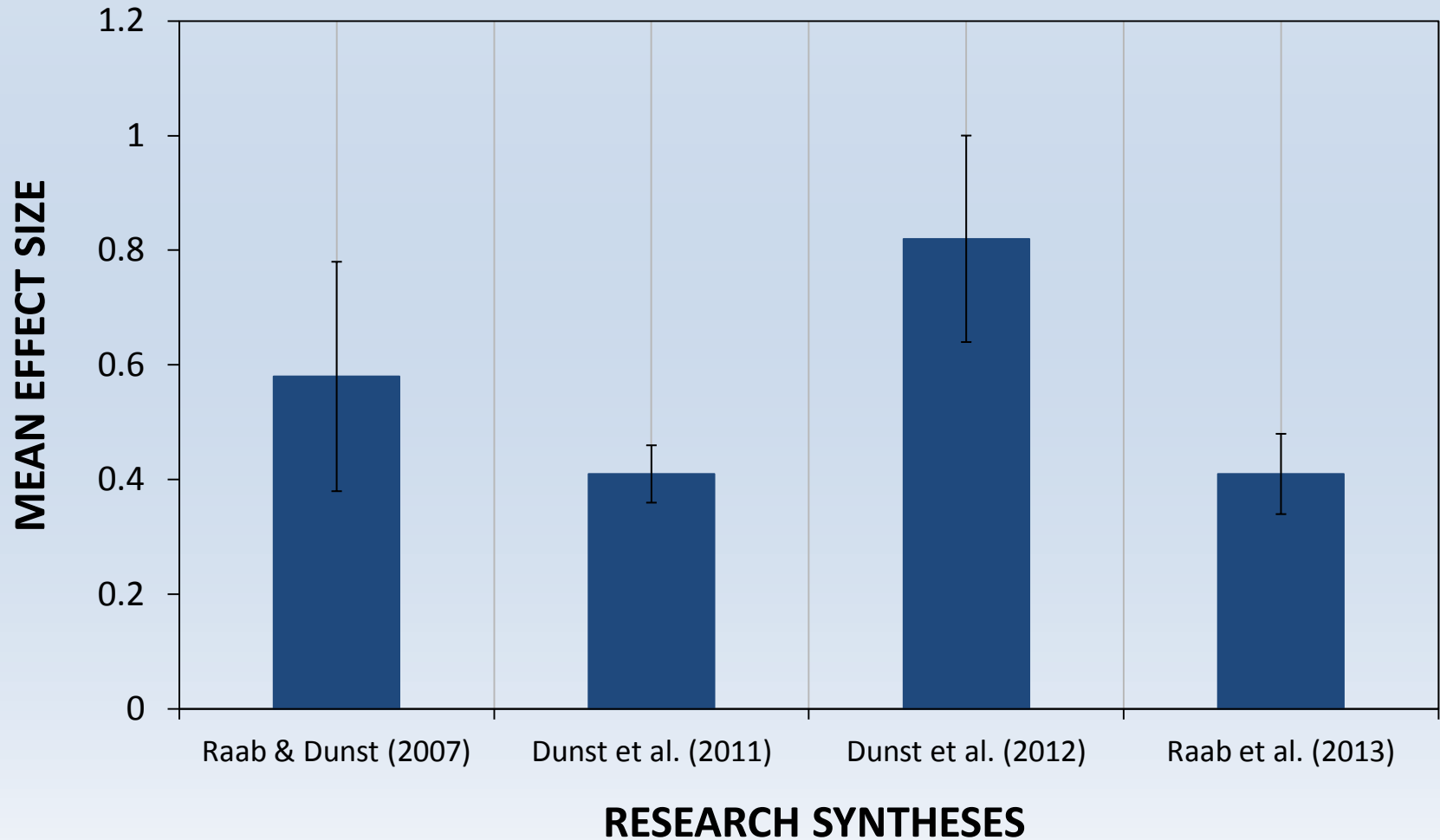
Dunst, C.J., Jones, T., Johnson, M., Raab, M., & Hamby, D.W. (2011). Role of children's interests in early literacy and language development. *CELLreviews*, 4(5), 1-18. Available at http://www.earlyliteracylearning.org/cellreviews/cellreviews_v4_n5.pdf

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.

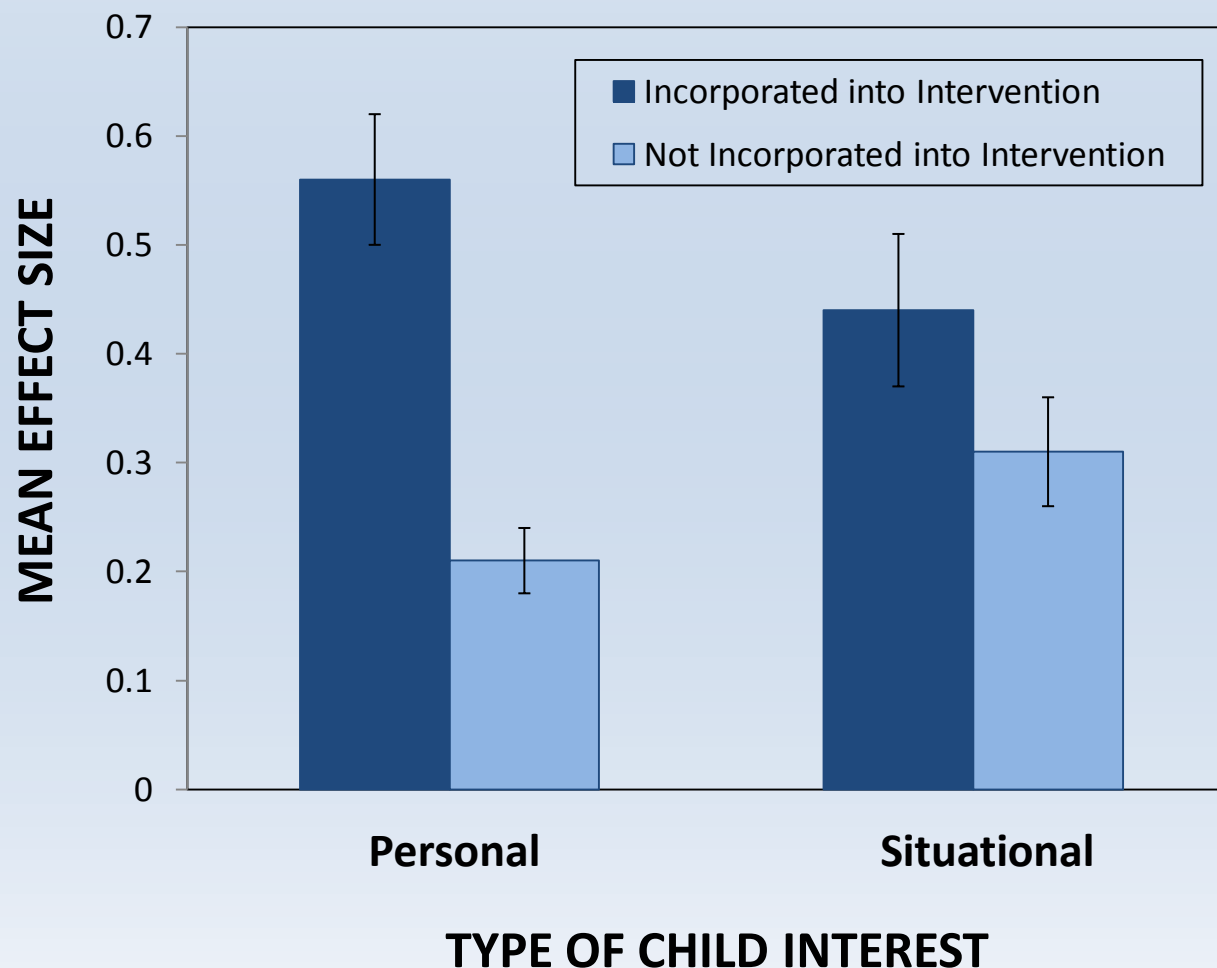
Raab, M., & Dunst, C.J. (2007). *Influence of child interests on variations in child behavior and functioning* (Winterberry Research Syntheses Vol. 1, No. 21). Asheville, NC: Winterberry Press.

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.

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



Contrasting Approaches to the Response-Contingent Learning of Young Children with Significant Developmental Delays and Multiple Disabilities

- Randomized controlled design study comparing the relative effectiveness of two contrasting approaches to early contingency learning
- Asset-based vs. needs-based approach to early contingency learning
- 71 children with significant developmental delays and multiple disabilities
- Hierarchical linear growth curve modeling was used to measure child learning over the course of 8 weeks of intervention

Raab, M., Dunst, C. J., & Hamby, D. W. (2017). Efficacy trial of contrasting approaches to the response-contingent learning of young children with significant developmental delays and multiple disabilities. *Journal of Educational and Developmental Psychology*, 7(1), 12-28.

Characteristics of the Children at Entry into the Study

Background Characteristics	Asset Group		Needs Group		<i>t</i> -test	<i>p</i> -value	Cohen's <i>d</i> Effect Size
	Mean	SD	Mean	SD			
Chronological Age (months)	17.61	12.57	17.36	8.70	0.95	.924	.02
Developmental Age (months)	4.56	2.99	4.41	2.46	0.23	.817	.06
Developmental Quotient	36.33	26.23	30.48	18.69	1.09	.282	.31

Contrasting Types of Intervention

Asset-Based Practices

An investigator-developed checklist was used to record the occurrence and frequency of child behavior, including, but not limited to, head, body, arm, leg, fist, and hand movements; vocalizations; and directed gaze and visual fixation but not used intentionally to produce reinforcing or interesting effects. Behavior that a child produced frequently or for considerable durations of time were selected as intervention targets.

Needs-Based Practices

The children in the needs-based group were administered the birth to 3-year-old *Assessment, Evaluation, and Programming Systems Scales* to identify missing skills operationalized as behavior at or just above the ceiling level in each domain on the scale. Results were used to select different child behavior in each domain as the intervention targets.

Response-Contingent Learning Games

- The same types of response-contingent learning games for children in both intervention groups were used to promote the children's use of targeted behavior to elicit or produce interesting or reinforcing consequences.
- Learning games included targeted operant behavior that either resulted in reinforcing consequences (e.g., swiping at a mobile producing movement or sound) or were reinforced by a caregiver (e.g., an adult talking to a child each time he or she looked at the adult's face).

Linear Growth Curve Average Rates of Change (Slopes) for the Contrasting Types of Interventions

Child Learning Measures	Asset Group		Needs Group		Cohen's <i>d</i> Effect Size
	Average Slope	SE	Average Slope	SE	
Child Learning Opportunities					
Number of Learning Games	0.33	0.04	0.46	0.05	0.81
Number of Learning Trials Per Game	1.94	0.23	1.09	0.25	1.13
Child Response-Contingent (RC) Behavior					
Number of RC Behavior	5.60	0.53	1.67	0.57	1.45
Number of RC Behavior Per Game	1.73	0.20	0.49	0.21	1.48
Child Learning Efficiency					
Percent of Trials with RC Behavior	8.70	0.93	4.99	1.00	0.86
Average RC Behavior Per Minute	0.34	0.08	0.06	0.08	4.87

NOTES. The average slopes are adjusted for two non-time varying covariates (child DQ and parent education). SE = Standard error of the slopes.

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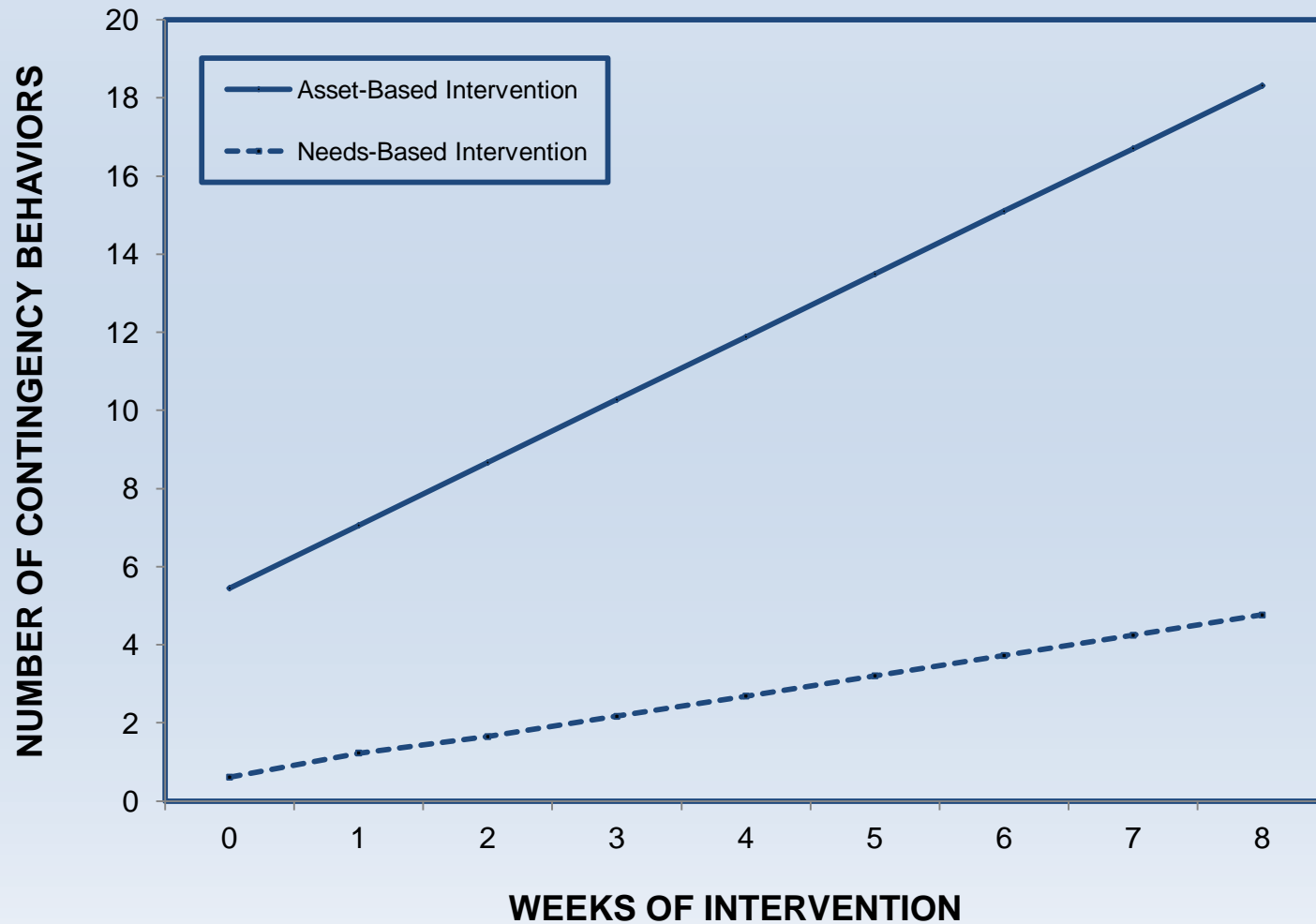
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Average Number of Child Response-Contingent Behavior Per Game



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Summary and Conclusions

- Interest-based child learning opportunities for young children with disabilities have value-added benefits beyond those associated with more traditional early childhood intervention practices
- The use of child interests as the “building blocks” for child learning requires a paradigm shift in terms of conceptualizing and operationalizing child learning opportunities
- The benefits of interest-based child learning “spill over” and influence caregivers who provide children those types of learning opportunities

PowerPoint available at
www.puckett.org/presentations.php