

# The Engagement Classroom: Description and Findings

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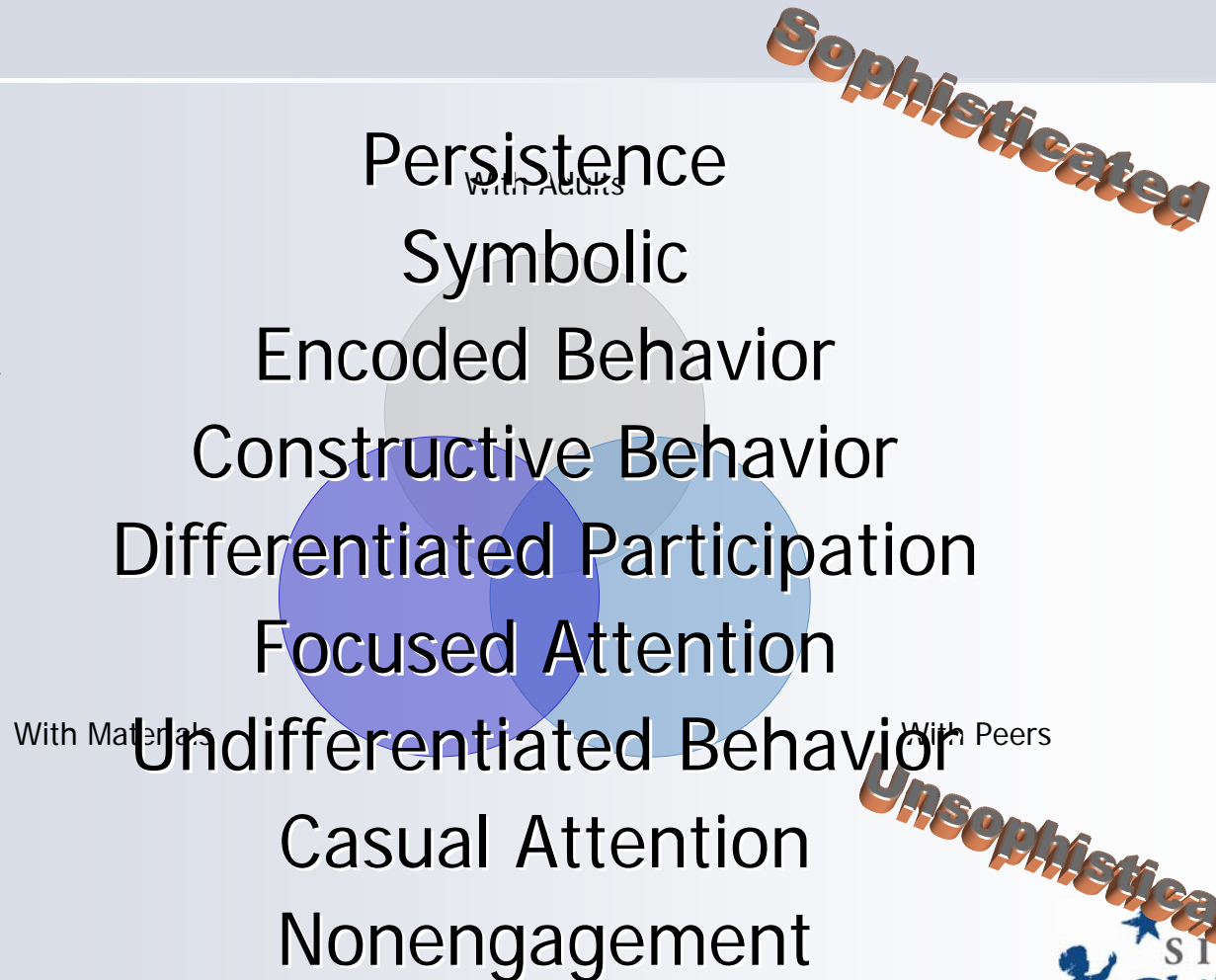
# Introduction

- How much can we improve the engagement of preschoolers with disabilities, by taking a classwide approach to intervention?
- What predicts amounts of different levels of engagement?

# What is Engagement?

- The amount of time children spend interacting with the environment (adults, peers, materials) in a developmentally and contextually appropriate manner, at different levels of competence

# Engagement Complexity



# Overview of Study

- Design: Randomized control trial
- Experimental group: Engagement Classroom package
  - Functional goals through RBI
  - Embedded intervention through incidental teaching
  - Integrated services through individualized within routines
  - Zone defense schedule
  - Teacher awareness through STARE data collection

# Training of Experimental-Classroom Staff

- Lead teachers attended 2-4 hour workshop
  - To introduce them to the concepts
  - To explain data collection procedures, especially what data they were to collect
- Implementation fidelity checks included feedback, to shape and maintain desired teacher behaviors

# Participant Groups

- Group 1
  - 7 experimental classrooms
  - 6 contrast classrooms
- Group 2
  - 3 experimental classrooms
  - 6 contrast classrooms
- Group 3
  - 5 experimental classrooms
  - 4 contrast classrooms

# Settings

- 15 experimental classrooms
  - 7 classrooms in 4 community programs
  - 8 classrooms in 4 elementary schools
- 16 contrast classrooms
  - 7 classrooms in 3 community programs
  - 7 classrooms in 5 elementary schools
  - 2 classrooms in separate Head Start centers

# Participants

	Experimental	Contrast
Total Staff	39 F, 1M	37 F, 0 M
Lead Age	28.6 yrs	38.8 yrs
Lead Experience	4.1 yrs	9.7 yrs
Class Size	11.2	11.5
Disabilities	5.5	4.0
Children Observed	9 F, 21 M	8 F, 23 M
ABILITIES M ( <i>SD</i> )	2.12 ( <i>0.90</i> )	1.65 ( <i>0.54</i> )

# Engagement Measures

- Individual Engagement
  - Scale for Teachers' Assessment of Routines Engagement (STARE; McWilliam, 2000)
  - Engagement Quality and Incidental Teaching for Improved Engagement (E-Qual-ITIE; McWilliam & Casey, 2004)
- Group Engagement
  - Engagement Check II (McWilliam, 1999)

# Other Measures

- Battelle Developmental Inventory, 2<sup>nd</sup> Edition (Newborg, 2005)
- Child-Child Contacts and Interactions subscale of the Quality of Inclusive Experiences Measure (Wolery, Brashers, Pauca, & Grant, 2000)
- Engagement Quality and Incidental Teaching for Improved Engagement (E-Qual-ITIE; McWilliam & Casey, 2004)
- Incidental Teaching Checklist (McWilliam, 2005)

# Incidental Teaching, DQ, and Peer Interactions

- Sample
  - All 61 children
- Variables
  - Each of the 5 categories of engagement
  - Children's receipt of incidental teaching
  - Children's developmental quotient
  - Children's Child-Child Contacts and Interactions scores

# Incidental Teaching, DQ, and Peer Interactions

- Each of the 5 standard regression analyses was statistically significant
- The total variance accounted for was
  - 40.8% for nonengagement
  - 23.4% for unsophisticated engagement
  - 15.9% for focused attention
  - 13.3% for differentiated engagement
  - 41.6% for sophisticated engagement

# Incidental Teaching, DQ, and Peer Interactions

- Children's receipt of incidental teaching
  - Best predictor of sophisticated engagement (14.8% of unique variance)
- DQ and peer interactions
  - Both were noteworthy and statistically significant predictors of nonengagement, unsophisticated engagement, and sophisticated engagement
  - Child-Child score was the best predictor of nonengagement (11.4%) and unsophisticated engagement (18.2%)

# Group Engagement and Individual Engagement

- Sample
  - 30 children from experimental classrooms
- Variables
  - Each of the 5 categories of engagement
  - Children's engagement complexity
  - Children's Child-Child Contacts and Interactions scores
  - Teachers' use of incidental teaching
  - Group engagement

# Group Engagement and Individual Engagement

- The model successfully predicted the extreme levels of engagement, accounting for
  - 58.2% of the variance in nonengagement
  - 52.5% of the variance in sophisticated engagement

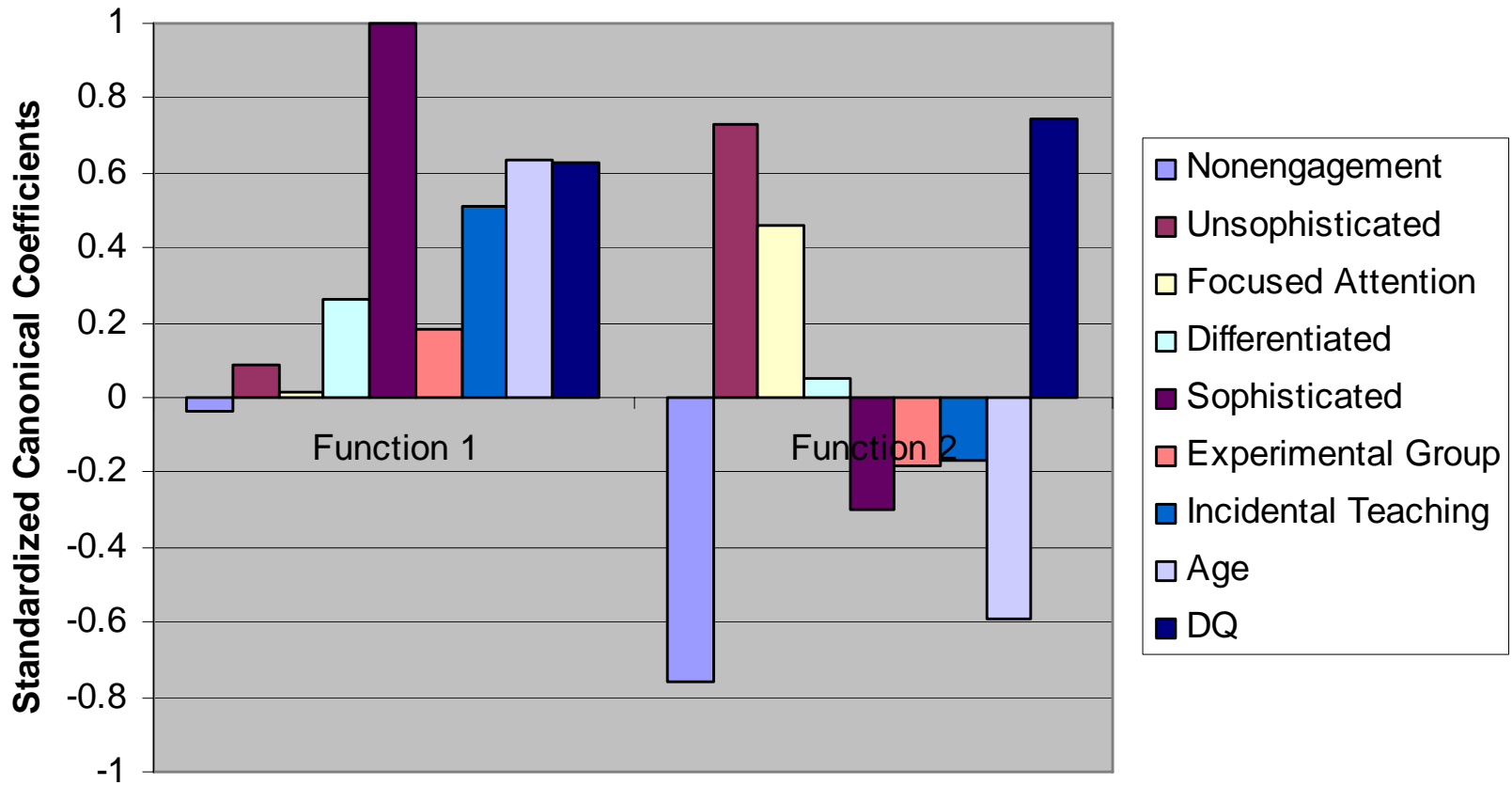
# Group Engagement and Individual Engagement

- With class-level variables in the model (group engagement and teachers' use of incidental teaching), group engagement predicts the extreme levels of engagement for an individual child
- When child-level variables are added (STARE ratings and Child-Child scores), teachers' STARE ratings become the best predictors

# Canonical Correlation

- Sample
  - All 61 children
- Variables
  - Each of the 5 categories of engagement
  - Children's receipt of incidental teaching
  - Children's developmental quotient
  - Children's age
  - Group assignment

## Canonical-Correlation Solution



# Solutions

## ■ Function I

- Sophisticated Engagement Associated With Incidental Teaching, Age, and DQ
- Not associated with Engagement Classroom approach

## ■ Function II

- Unsophisticated and Attentional Engagement (but Low Nonengagement) Associated With High DQ and Young Age
- Not associated with Engagement Classroom or IT

## Function I: A Competence Latent Variable

- Not to be confused with strictly linear relationships ( $N = 61$ )

	1	2	3	4	5	6	7	8
1 Noneng	1.0							
2 Unsoph	.32	1.0						
3 FocAtt	.01	.15	1.0					
4 Diff	<b>-.68</b>	<b>-.57</b>	<b>-.57</b>	1.0				
5 Soph	-.35	-.06	.06	-.15	1.0			
6 ExpGrp	-.11	-.07	.08	.07	-.02	1.0		
7 IT	-.25	-.09	-.27	.17	.42	-.35	1.0	
8 AGE	-.01	-.30	-.18	-.02	<b>.53</b>	-.20	.17	1.0
9 DQ	-.48	.21	.29	-.03	.43	.19	-.01	-.15

# Function I: A Competence Latent Variable

- Incidental teaching might produce sophisticated engagement, but vice versa also possible,
- ...when children are older and smarter.

# Function II: A Young Unsophistication Latent Variable

- Smart, young children spend time in unsophisticated engagement and focused attention
- And little time nonengaged

# Engagement Classroom Model

- Incidental teaching (embedding) + zone defense schedule + teachers' collecting E data + RBI & functional goals + integrated services
- Doesn't make a lot of difference to engagement levels of individual children with disabilities
- But incidental teaching is promising.
- Why? Little training, some good contrast classrooms, not enough intensity with our kids
- But back to our main point: **We have "discovered" two new phenomena requiring further testing**

# **The Competence “Function” and the Young Unsophistication “Function”**

# Research to Practice

1. Promote child-child interactions
  - Room arrangement
  - Materials and activities
  - Interventions
2. Use incidental teaching
  - Elaborate on or expand children's existing engagement
  - Incidental Teaching Checklist (McWilliam, 2005)

# Research to Practice

## 3. Collect data on engagement

- STARE (McWilliam, 2000)
- In each routine, rate who or what the child was engaged with and how complex the child's engagement was
- Casey, A. M., & McWilliam, R. A. (2007). The STARE: The Scale for Teachers' Assessment of Routines Engagement. *Young Exceptional Children, 11*(1), 2-15.

# Additional Information

- McWilliam, R. A., & Casey, A. M. (2008). *Engagement of every child in the preschool classroom*. Baltimore, MD: Paul H. Brookes Publishing Company.
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