



CYFS SUMMIT ON RESEARCH IN  
**EARLY CHILDHOOD**

CREATING CONNECTIONS BETWEEN RESEARCH & PRACTICE

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# Translating Early Childhood Research to Practice: Focus on School Readiness



Karen Bierman, Ph.D.

Child Study Center

The Pennsylvania State University



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## Kindergarten, Circa 1960

Adjusting to school: Show-and-tell, play-time, nap-time, story-time

# Kindergarten, Circa 2010

Learning to Read:

Students will know about letters, words, and sounds. They will apply this knowledge to read simple sentences.

Kindergarten Learning Standards  
State of California, 2009





# Accelerated Early Learning Expectations: Implications for Early Childhood Research and Practice

- The hope: Greater attention to early learning will promote high-quality programs and practices that will address early learning delays by promoting competencies and thereby reduce the substantial and persistent achievement gap associated with poverty
- The fear: A focused attention on early school achievement outcomes will undermine developmentally appropriate early learning practices and increase the achievement gap by targeting content without sufficient attention to developing learning skills and processes.

# Key Research Questions for School Readiness Research and Practice

Can we reconcile the goals of instructional approaches:

- 1) Designed to promote content knowledge in literacy/math, with teacher-directed lessons & systematic practice activities VS.
- 2) Focused on promoting motivated, socially-connected, self-regulated, goal-oriented learning, with child-directed, spontaneous, guided discovery?



# Goals of this Presentation

- 1) Describe research on the developmental foundations of “readiness to learn” and the developmental impact of poor quality early learning experiences
- 2) Review research on “what works” in early childhood education and intervention
- 3) Consider the implications for policy and practice, especially for promoting school readiness among children growing up in poverty

# Why focus on children living in poverty?

- High prevalence: 21% (1 in 5) children in the US live in poverty.
- Long-term impact on school success and beyond:
  - ◆ SES achievement gap at school entry widens over time
  - ◆ 50% drop out of high school (vs 10% nationally)
  - ◆ Corresponding risk for young adult unemployment (55% vs. 81%); and 3.5 times the risk for incarceration
- Hope that effective, high-quality early education can reduce this gap, with child & societal benefits



# Goal 1

- Describe research on the developmental foundations of “readiness to learn” and the developmental impact of poor quality early learning experiences

# Early disadvantage & adversity delays cognitive readiness for school

- Attention skills

(Sustaining attention, following instructions)

- Language skills

(Vocabulary, grammatical understanding)

- Memory skills

(Working memory, memory)

- Delays in emergent literacy & math skills



# Early disadvantage & adversity delays behavioral readiness for school.

- Poor impulse control

(acting before thinking,  
difficulty waiting for turn)

- Emotion dysregulation

(irritability, negative reactivity)

- Disruptive-oppositional

(poor social skills)

- At school entry, 17 – 21% have behavior problems that warrant mental health referrals



# Developmentally Linked in Early Childhood: Cognitive & Behavioral Self-Regulation

- What is expected at age 2-3...



- Diminishes with developing self-control (ages 3-7)
- Learning experiences & individual differences affect pace



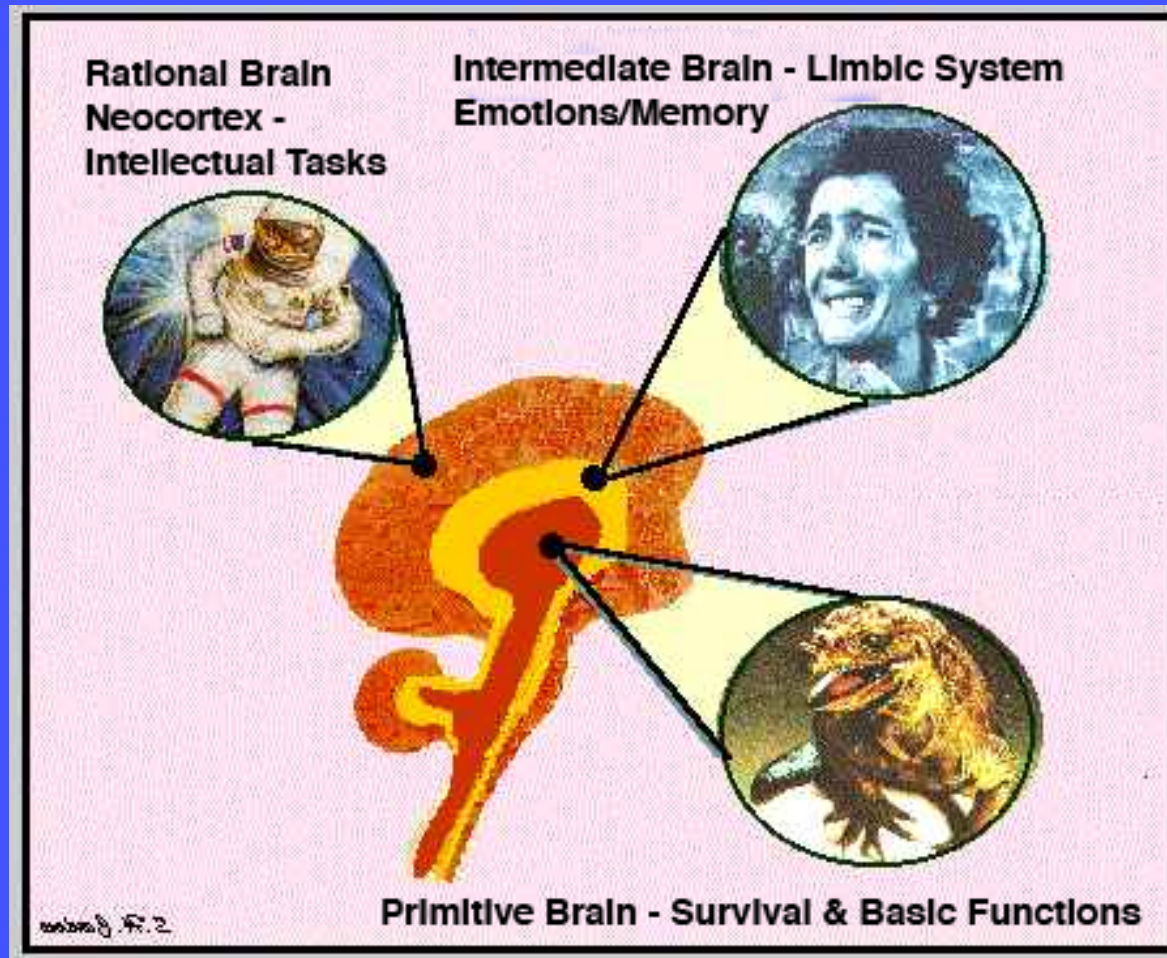
## By School Entry, Kindergarten Teachers Expect...

- Interest in learning (76%)
- Can follow directions (60%)
- Is not disruptive in class (60%)
- Is sensitive to others' feelings (58%)
- Takes turns and shares (55%)
- Pays attention (42%)



National Center for Educational Statistics: KTSSR 1993

# Triune Brain



Adapted from Paul M. Clean, "A Mind of Three Minds: Educating the Triune Brain." in Education and the Brain edited by J. Chali and A. Mirsky (Chicago University of Chicago Press).

# Pre-frontal Cortex Development

Rapidly developing ages 3-7

## Key Competencies

**Executive Control:**  
Working memory  
Inhibitory control  
Attention flexibility

Getting Along  
With Others

Engaging in  
Learning Tasks

Following Rules

Anger Management

Managing conflicts  
Problem-solving



# Developmental Roots of Self-Regulation are in Social Interaction

## ◆ With Parents...

- ◆ Attachment processes
- ◆ Joint attention & sensitive responding

## ◆ With peers ..

- ◆ social imitation & reciprocity
- ◆ negotiation & collaboration



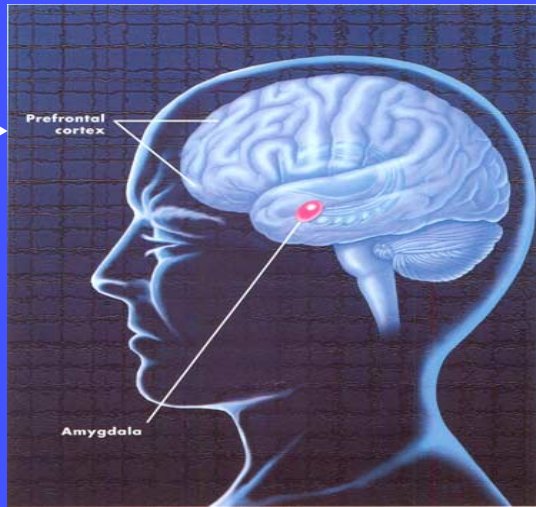
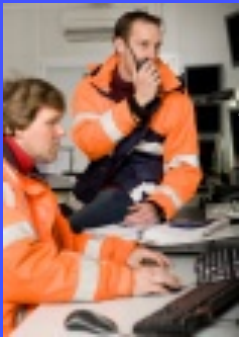


# Developing self-regulation is impaired by..

- Insecurity & unpredictability
- Stress & threat
- Crowding
- Lack of sensitive-responsive language

.. Which are characteristics of poor learning environments, associated with early disadvantage & adversity

# Weak Executive Control & Emotional Distress



Emotional Distress –  
“Hijacks” thinking; fuels  
self-protective behavior

# At School Entry: A Negative Cascade with Increased Stress

Poor Self-Regulation  
Inattention  
Hyperactivity  
Impulsivity



Learning difficulties & interpersonal conflict

Demoralization, Anxiety,  
Loneliness, Frustration,  
Anger, Boredom



# High Quality Preschool Experiences Can Prevent or Reduce this Negative Cascade

- Some programs and practices are more effective than others.
- Evaluation research, particularly using randomized designs, identify effective programs and practices.



# Dual Preschool Priorities to “Close the Gap” in School Readiness

- Enhance instructional support to promote emergent literacy & math skills (cognitive readiness)
- Enrich emotional support for positive socialization & motivated, goal-oriented learning (behavioral readiness)



## Goal 2

- Briefly review research on “what works” in early childhood education and intervention



# What Works: Research-based Preschool Practice



## 1. High-quality Curriculum

- ◆ Language & emergent literacy
- ◆ Emergent math

## 2. High-quality Teaching Practices

- ◆ Instructional & emotional support
- ◆ Support for self-regulatory development

## High Quality Curriculum: Intentional vs. Incidental Instruction

Child-driven, incidental learning is of value,  
but not sufficient to “close the gap”

Intentional instruction, based on an organized curriculum that provides learning activities with scope and sequence to teach skills in a particular content area adds value.

# Complex Skill Acquisition Builds upon Components: Strands of Literacy Development

## Comprehension

Background Knowledge

Vocabulary

Grammar

Verbal Reasoning

Literacy Knowledge

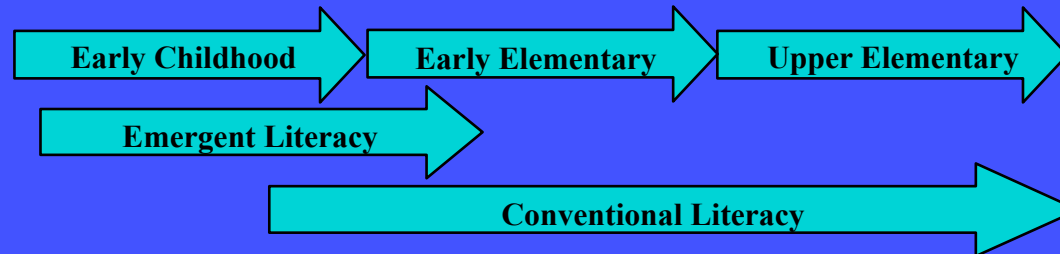
## Decoding

Phonological Awareness

Alphabets (Phonics)

Sight Words

**Skilled Reading**





# Skill Acquisition Requires Repeated Practice



Incidental exposure is often insufficient to drive acquisition.

Repeated exposure with multiple, distributed practice opportunities are required.

**Aware**

**Awkward**

**Automatic**

# Improve Curriculum Quality for Emergent Literacy

## ■ Empirically-effective emergent literacy programs:

- ◆ Improve oral language skills with dialogic/interactive reading
- ◆ Teach phonological awareness
- ◆ Teach print concepts including letter knowledge



# Improve Curriculum Quality for Emergent Math

- Empirically-effective emergent math programs:
  - ◆ Use small group learning activities to foster core math concepts and reasoning, including enumeration and number sense, arithmetic reasoning, spatial concepts, classification



# High-Quality Teaching Practices

**Concern:** Avoid the “push down” of elementary teaching styles; promote active engagement with developmentally-appropriate learning centers and activities, instructional and emotional support.

# Classroom Organization & Teacher-Student Relationships

*Classroom Assessment Scoring System (CLASS; LaParo & Pianta, 2003)*

- *Emotional Support:*

Positive, warm climate

Sensitive responding to child needs and behaviors

Proactive and supportive behavior management

- *Instructional Support:*

Organized, engaging learning formats

Rich language use and feedback quality

Promoting child concept development & understanding



# Enriching Support for Self-Regulatory Development

Range of approaches:

1) Positive & predictable behavior management

(Ex: Incredible Years Teacher Training)

2) Explicit social-emotional lessons & support

(Ex: Preschool PATHS)

3) Embedded structures, activities & scaffolds

(Ex: Tools of the Mind)

# Incredible Years Teacher Training: Focus on Positive Classroom Management



1. Support positive behaviors with teacher attention, praise, incentives.
2. Prevent behavior problems with proactive planning & routines.
3. Decrease students inappropriate behaviors with clear limit-setting.
4. Build positive teacher-student relationships & problem

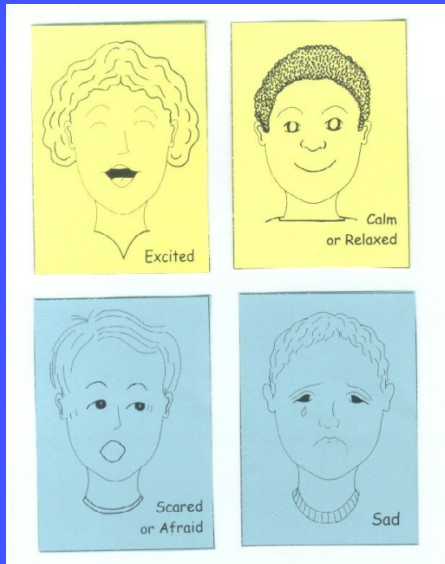
solving.

# Preschool PATHS

## Promoting Alternative Thinking Strategies

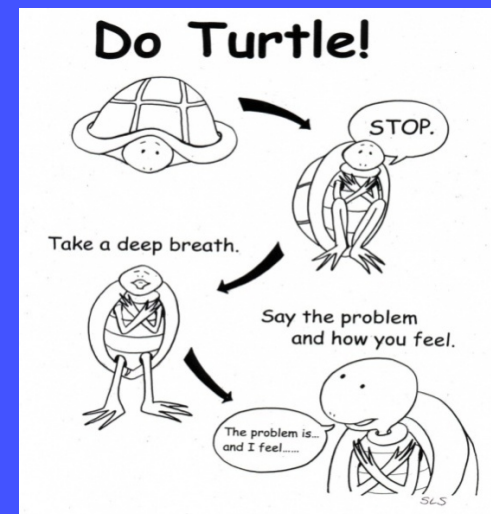
### Lessons & Activities:

1. Emotional understanding
2. Friendship skills
3. Intentional self-control
4. Social problem-solving



**Compliment List**

★	From My Teachers:	★
★		★
★	From My Friends:	★
★		★
★	From Myself:	★
★		★
★	Other Family Members:	★
★		★



# Tools of the Mind

Teacher scaffolding, play plans  
Dramatic collaborative play  
Cooperative paired learning  
Inhibitory control games





## Evidence for Synergism: Preschool PATHS plus...

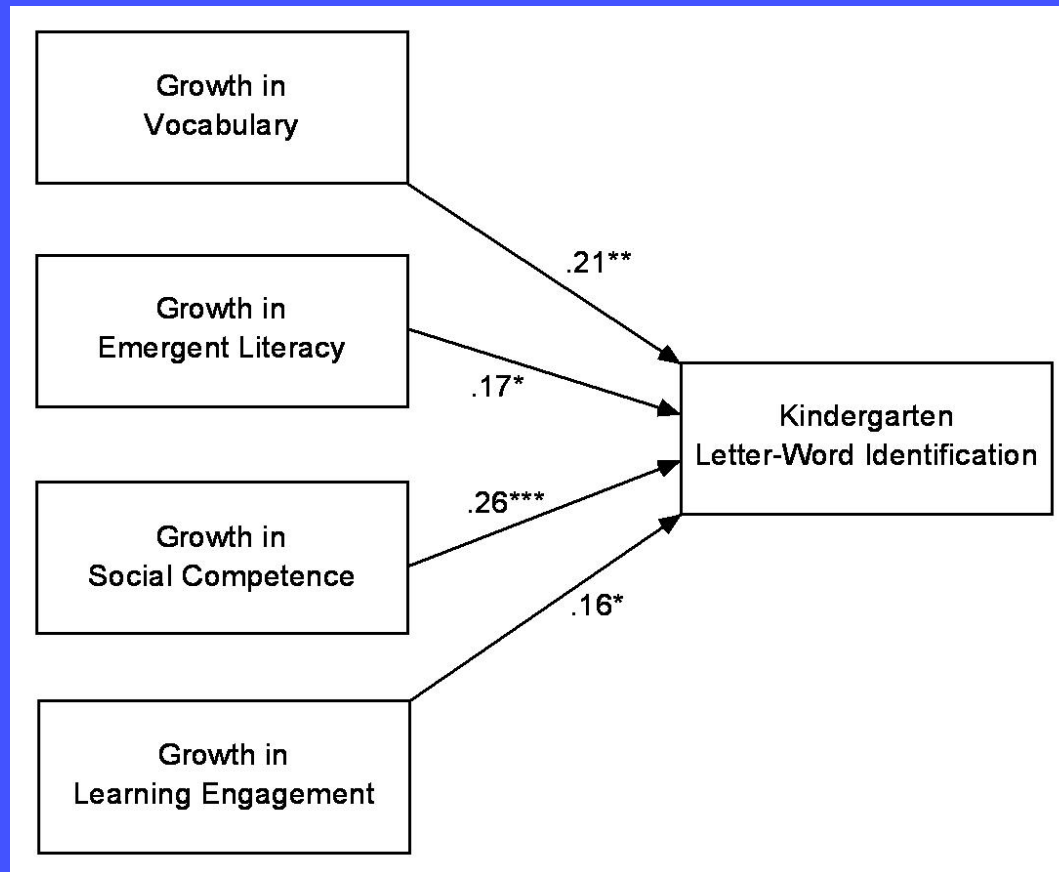
	<b>Head Start REDI Language &amp; Literacy Curriculum</b>			
	<b>Alphabet Center</b>	<b>Sound Games</b>	<b>Language Coaching Strategies</b>	<b>Dialogic Reading &amp; Extension Activities</b>
<b>Decoding</b>	Letter identification	Phonological awareness		
<b>Comprehension</b>			Vocabulary, Grammar	Vocabulary, Grammar



# Head Start REDI Evaluation Design

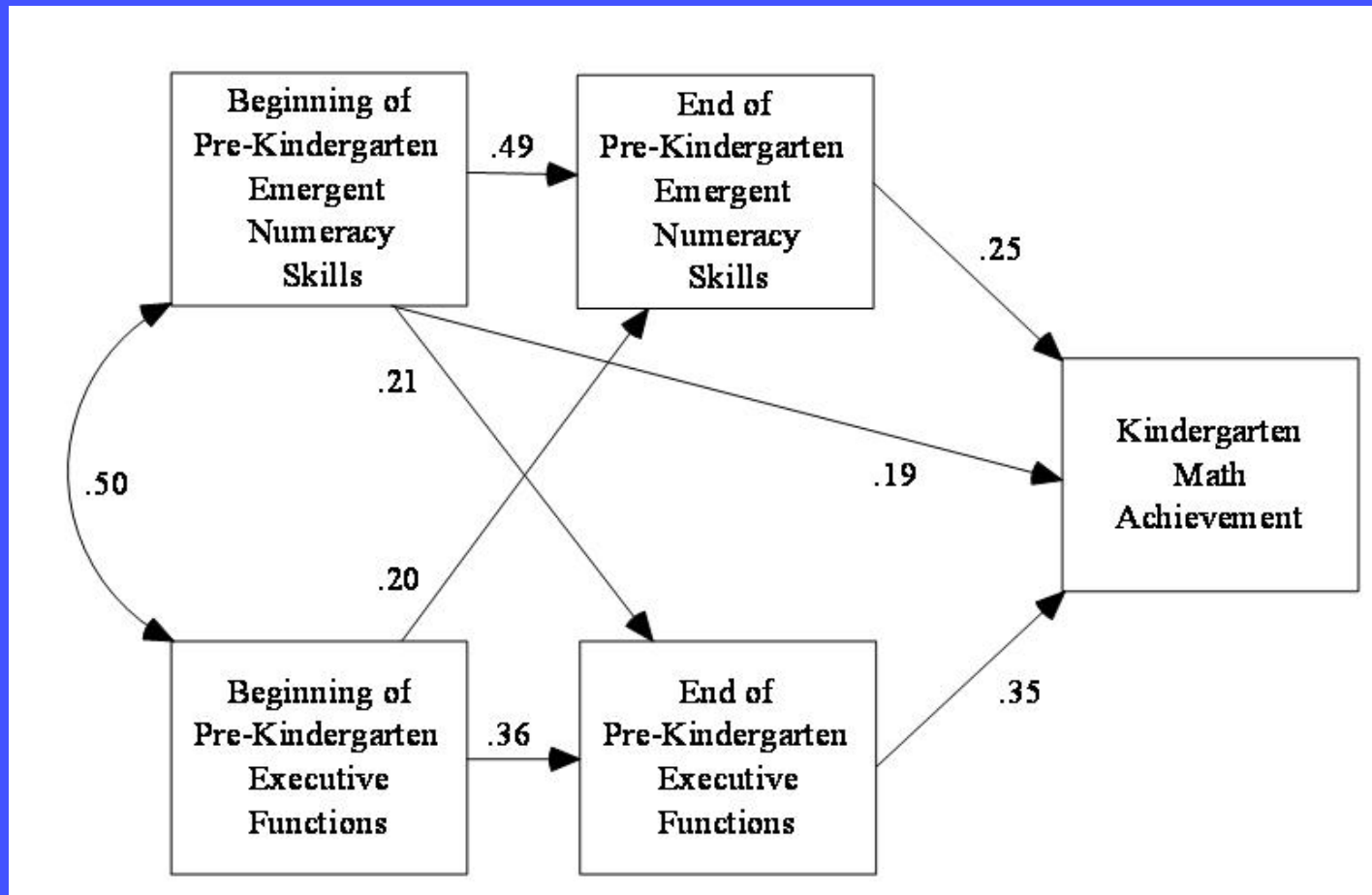
- 356 4-year-old children in 44 Head Start classrooms
- Classrooms stratified on location, demographics, length of day & randomized to intervention or “usual practice”
- Assessments at the beginning and end of the Head Start pre-kindergarten year.
- 94% completed follow-up assessments (in 204 kindergarten classrooms)

# Developmental Cross-over Facilitation: Behavioral and Cognitive School Readiness



REDI project data, in preparation

# Developmental Cross-over Facilitation: Content Learning and Approaches to Learning



## Goal 3

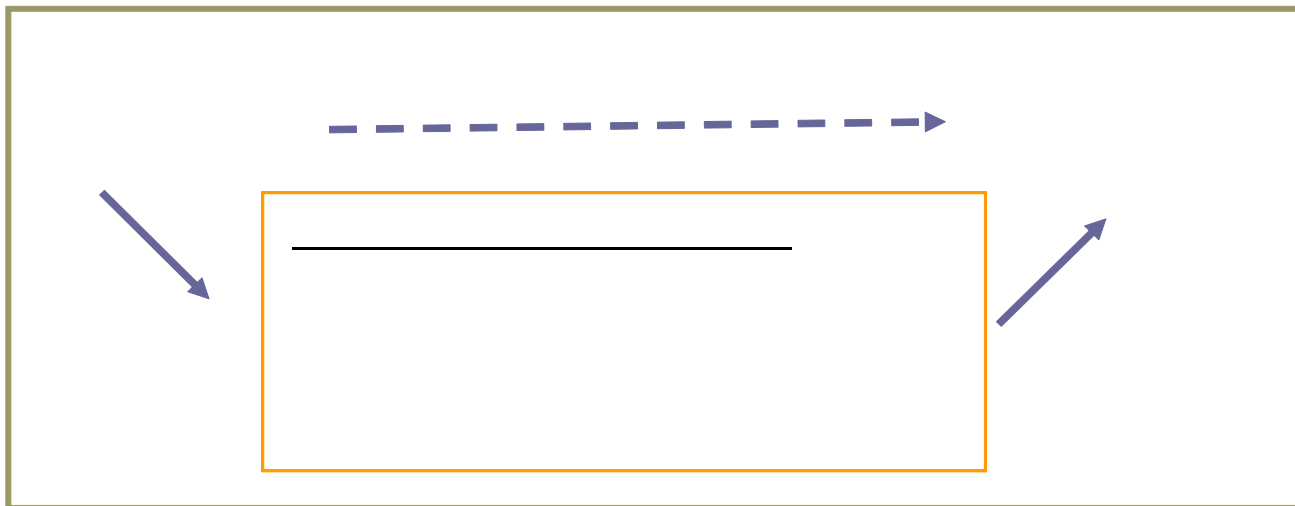
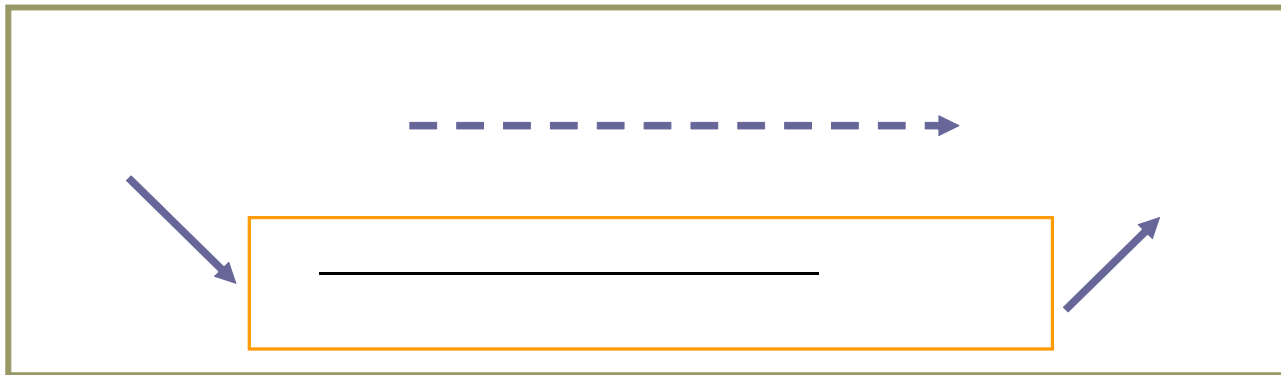
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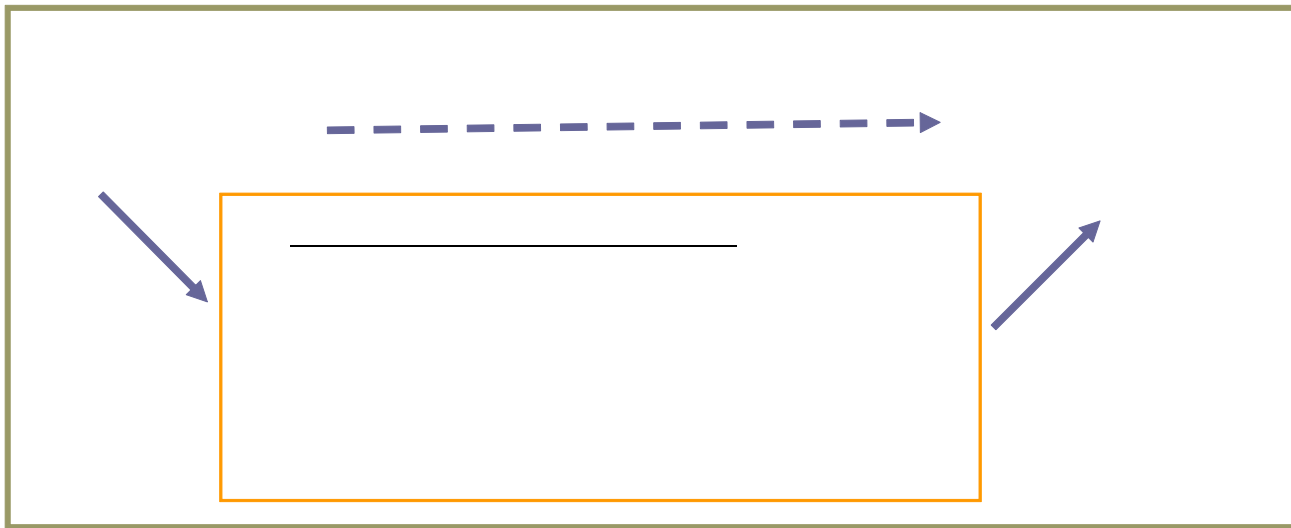
## High-quality Curricula and Beyond...

- Exposure to systematic learning activities organized with a developmental scope and sequence improve the acquisition of cognitive skills
- The acquisition of self-regulated learning benefits from supportive, responsive, and communicative adult-child interactions and positive peer experiences



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# Invest in Professional Development

- Single workshop model is insufficient
- Additional strategies:
  - ◆ Mentoring and ongoing support
  - ◆ Web resources
  - ◆ Videotape feedback & reflective practice
- Importance of administrative leadership:
  - ◆ Supporting quality practice in supervision & performance evaluation assessment

# Reaching out to Parents

- To inform
- To involve
- To extend child learning opportunities & support

## Research-based Examples:

- ◆ Home visiting to promote language & cognitive skills
- ◆ Dialogic reading to promote language skills
- ◆ Behavioral parent training to promote positive interaction and discipline practices



## Take Home Points



- Focus on the dual domains of school readiness:  
**cognitive & behavioral**
- Enrich curriculum, use intentional instruction to foster **emergent literacy & math skills**
- Promote high-quality teaching practices:  
**instructional & emotional support**
- Add focused efforts to **promote self-regulation**
- Use strong **professional development models & provide administrative support**



# Questions & Comments

