



## Response to Intervention in Early Childhood


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## Handouts

- All slides will be available at
- <http://tinyurl.com/ECInnovation-RTI.pdf> or
- <http://www.rtinetwork.org/professional/webinars>



## Today's Presentation

- Brief definition of Response to Intervention (RTI)
- Development of a Joint Position Statement on RTI
- Emerging RTI models in early childhood
  - Recognition and Response
  - Center for Response to Intervention in Early Childhood
- Questions & Answers, Discussion



## Definition of RTI

## What is Response to Intervention (RTI)?


- RTI is a systematic problem-solving process designed to
  - allow for earlier identification of students' difficulties
  - provide students with a level of instructional intensity matched to their demonstrated response to intervention
  - provide a data-based method for evaluating the effectiveness of instructional approaches and changing/improving them

## Assumptions of Rtl

- Intended to reduce the need for special education by improving and providing services early
- Services are individualized and based on evidence-based strategies.
- There is a high quality of "general" intervention, and resources and services are added as needed.

### RTI as Education's Population Based Approach

- Response to Intervention as a public health model
  - Common outcome(s) for all children
  - Universal screening
  - Differentiated, dynamically allocated (or "tiered") intervention
- RTI assumes
  - Access to all members of group
  - Reliable, valid, and useful assessment
    - Eligibility or appropriateness for varying tiers of service
    - Progress monitoring, and movement to different tiers
  - Validated interventions at varying levels of intensity




### EARLY CHILDHOOD 2010: INNOVATION FOR THE NEXT GENERATION




## Joint Position Statement

### OESEP/NHSA Joint Position Statement on RTI in Early Childhood

- Develop/validate a definition and identify defining features of RTI
- Create opportunities in multiple formats for knowledge exchange



### Steering Committee

Sarah Mulligan DEC	Peter Pizzolongo NAEYC	Camille Catlett NPDCI
Jerlean Daniel NAEYC	Angela Smith NHSA	Heidi Hollingsworth NPDCI
Virginia Buysse NPDCI		



### National Experts

Sue Bredekamp Consultant	David K. Dickerson Vanderbilt	Scott McConnell University of Minnesota
Judith J. Carta Juniper Gardens	Linda M. Espinosa University of Missouri	Rollanda O'Connor University of California at Riverside
Douglas H. Clements SUNY	Mary Louise Hemmeter Vanderbilt	Ellen Peisner-Feinberg UNC
Marijata Daniel-Echols High Scope	Gail Joseph University of Washington	Carolyn Webster-Stratton University of Washington



### Listening Sessions

Date	Session Location
12/8/09	OESEP <sup>3</sup> National Early Childhood Conference, Washington, DC
5/6/2010	NHSA Annual Conference, Dallas
5/16-18/2010	National Inclusion Institute, Chapel Hill
6/6-9/2010	NAEYC National Institute for Early Childhood PD, Phoenix
7/19-21/2010	OSEP Project Directors' Conference, Washington, DC
10/14-17/2010	DEC Annual Conference, Kansas City
11/3-6/2010	NAEYC Annual Conference, Anaheim



## Timeline

Date	Activity
Fall 2009	Obtain board approval from DEC, NAEYC, NHSA
Spring-Fall, 2010	Convene meetings of national expert panel & workgroups
Fall-Winter, 2010/2011	Seek feedback on draft from targeted national groups
Winter 2011	Seek national validation from the early childhood field
Spring-Summer, 2011	Request board approval from DEC, NAEYC, NHSA
Fall 2011	Create final formats for widespread dissemination



## Recognition and Response

Virginia Buysse, Ph.D.  
Ellen Peisner-Feinberg, Ph.D.



## Objectives

- Understand the conceptual framework for R&R
- Describe the purpose of universal screening and progress monitoring
- Identify responses within each tier



## A Closer Look at R&R



## Background

- R&R is a tiered instructional model based on the principles of RTI
- Mounting evidence for effectiveness of RTI; emerging evidence for R&R
- R&R uniquely addresses the use of RTI for academic learning in pre-k



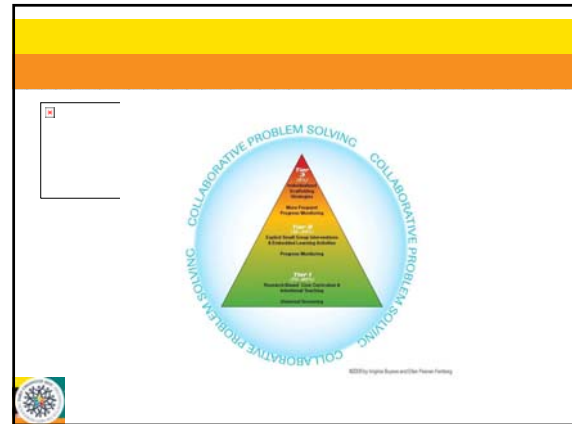
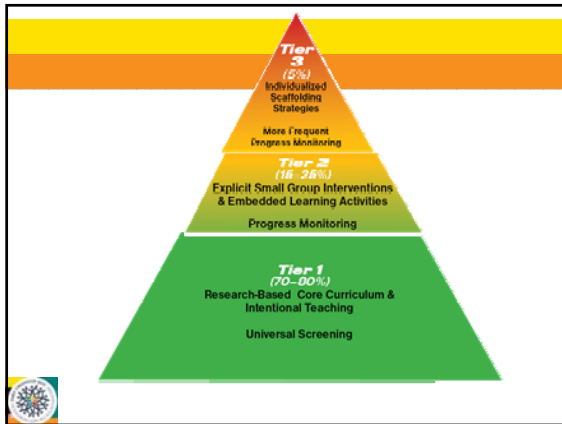
## R&R Key Components

**Recognition:** Child assessment (universal screening & progress monitoring)

**Response:** Core instruction for *all* children Targeted interventions for *some* children

**Collaborative problem-solving:** Process for supporting data-based decision-making





### Screening & Progress Monitoring Tools

- Purpose is for instructional planning, not for diagnostic evaluation
- Designed to be used repeatedly
- Quick, easy to administer
- Correlated with long-term educational goals; not tied to a particular curriculum
- Information on both level & rate of growth

### An Example of Screening and Progress Monitoring



### What is the Tier 1 Response: Core Curriculum & Intentional



### What is the Tier 2 Response?


- Tier 2: Explicit small group interventions augmented with embedded learning opportunities
  - Explicit: structured, teacher-directed, content-specific interventions (DAP)
  - Embedded: occur within daily activities, build on children's strengths & interests, complement explicit interventions

### Small Group Tier 2 Intervention




### What do We Mean by Embedded Learning Activities?

- Embedded learning activities reinforce key skills at Tier 2
- Teachers monitor & encourage children's participation in embedded learning
- Peers can support & benefit from embedded learning activities



### Embedded Learning Activities




Enriching & adapting existing contexts for teaching and learning

- The learning environment
- Small-group activities
- Whole-group activities
- Individualized instruction
- Classroom routines
- Child-initiated activities & interest centers


Adjusting teacher roles

- Monitoring
- Encouraging
- Facilitating




### Individualized Scaffolding Strategies

- Modeling
- Response prompting
- Peer supports



### Steps for Implementing Tier 3 Strategies

- Use results from progress monitoring and universal screening to determine which children need additional instructional supports.
- Add scaffolding strategies into small-group intervention lessons.
- Monitor student progress and re-adjust plan for scaffolding strategies

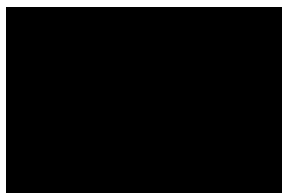


### How Collaborative Problem-Solving Supports R&R

- Data-based decision-making
- Intervention



## Collaborative Problem-Solving



What is the  
research  
evidence for  
R&R ?



## Participants of the R&R Pilot Study

Study sites in FL & MD

- 24 pre-k classes
- 352 4-year-olds
  - 95 target children (4/class)
  - 257 classmates / 94 comparison children



## Study Procedures

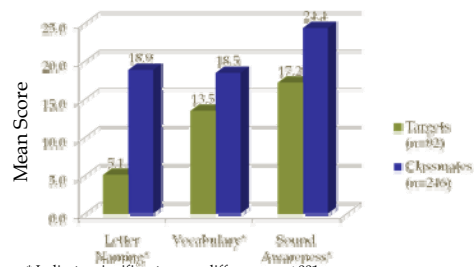
- Focus on language & literacy skills
- Teachers received PD to administer:
  - Screening/progress monitoring to all children (mCLASS:CIRCLE)
  - Tier 2 small-group intervention to target children (Read It Again—Pre-k! daily, 2 mos)
- Researchers gathered pre- and post-assessments on target & comparison children (PPVT-4 & TOPEL)



## Can R&R help teachers select children for targeted interventions?



## First Universal Screening Results





### Can teachers implement the Tier 2 interventions with fidelity? (Response fidelity)



### Fidelity of Targeted Interventions

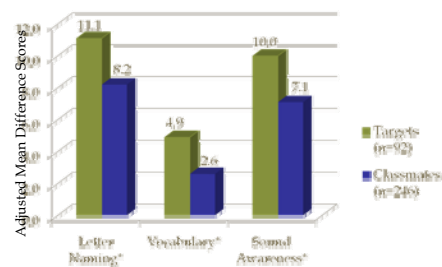
- Mean target child participation = 94% of all lessons
- Observed 112 small-group lessons (4.7/teacher)
  - Mean fidelity score = 97%
  - 85% of observations had scores of 100%



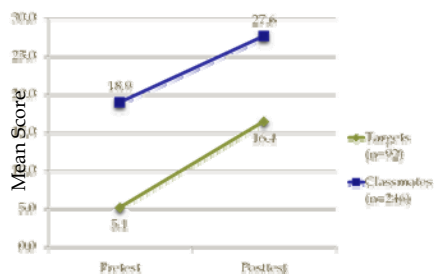
### Do children benefit from tiered interventions in R&R? (Efficacy)



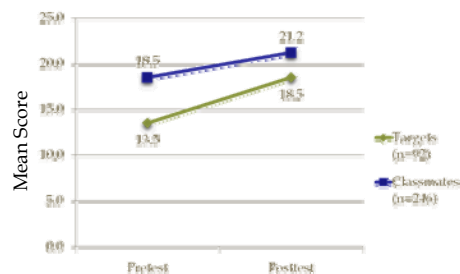
### Growth on Screening Measures

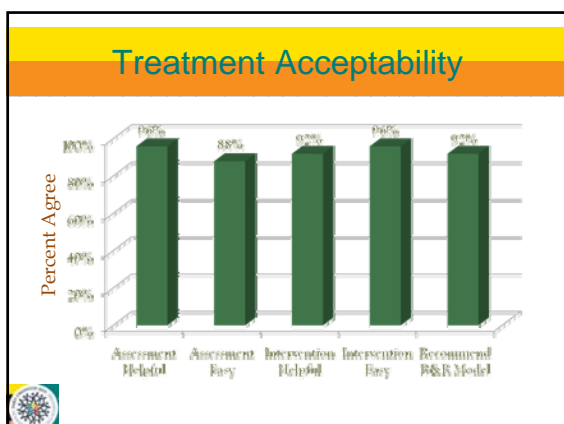
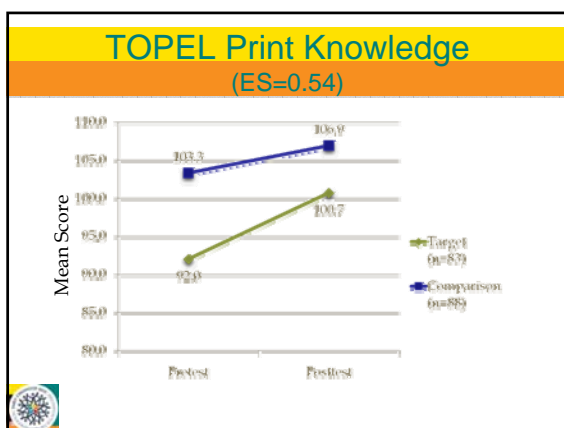
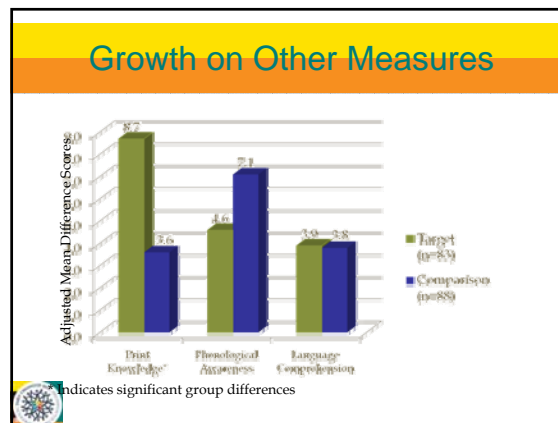
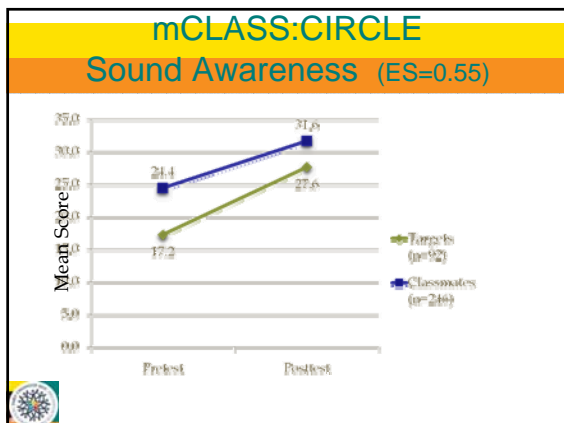


### mCLASS:CIRCLE Letters (ES=0.37)



### mCLASS:CIRCLE Vocabulary (ES=0.48)






- ### Key Findings
- Teachers could implement the R&R system with good fidelity (both recognition & response)
  - Children who received the targeted interventions made greater gains in language & literacy skills than their classmates.
  - Teachers found the R&R model acceptable, useful, and easy to implement.



### R&R Website





For more information on R&R, visit [randr.fpg.unc.edu](http://randr.fpg.unc.edu)

### Center for Response to Intervention in Early Childhood (CRTIEC)

**A New Research Initiative to Promote  
Early Literacy and Language**

**Scott McConnell, Ph.D.**



### CRTIEC Partners and Investigators

- Juniper Gardens Children's Project,  
University of Kansas
  - Charles Greenwood and Judith Carta
- Dynamic Measurement Group
  - Ruth Kaminski
- Schoenbaum Family Center,  
Ohio State University
  - Howard Goldstein
- Center for Early Education & Development, University  
of Minnesota
  - Scott McConnell
- Division for Early Childhood,  
Council on Exceptional Children
  - Sarah Mulligan

### CRTIEC's Overall Goal

- To develop and validate interventions and  
progress monitoring tools so that pre-  
kindergarten programs can find and  
intervene earlier with young children  
showing the earliest signs of reading  
difficulties.

### CRTIEC's Major Focus Areas

- Develop and test RTI measurement system
- Develop and test Tier 2 intervention
- Develop and test Tier 3 intervention
- Develop and assess feasibility of RTI  
measurement and Tier 2 and 3 interventions  
in preschool classrooms
- Examine how the quality and quantity of Tier  
1 early literacy instruction affects children's  
literacy growth and the proportion of children  
needing higher tiers of instructional support

### What We Expect to Learn

- We will develop an "architecture" to use for  
RtI decision-making in preschool
- We will estimate effect sizes for specific  
Tier 2 and Tier 3 interventions with respect  
to readiness for Kindergarten
- We will understand how aspects of  
implementation fidelity of Tier 2 and Tier 3  
interventions mediate children's early  
literacy outcomes.

### What We Are Not Doing

- While we are interested in Tier 1 (and have carried out a descriptive study of Tier 1), we are not building or testing Tier 1 interventions
- While we are developing practices needed for use in Tier 2 and 3, we are not testing the efficacy of a comprehensive 3-tier model in the current work scope
- Future research will be needed to evaluate the efficacy of all three tiers

### Measurement Goals

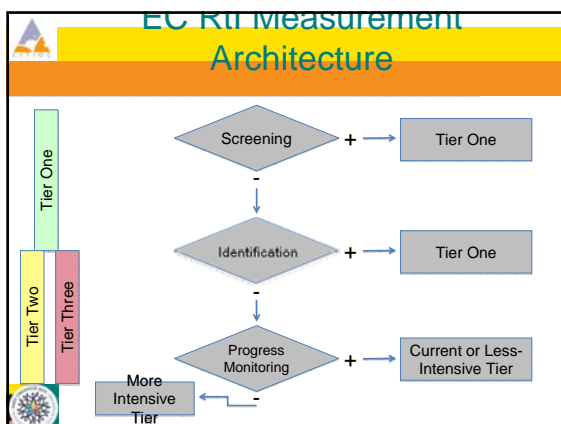
- Goal: To complete a focused series of development and validation studies to produce an assessment system for language and early literacy development that can drive RtI in preschool classrooms
  - Evaluate and improve existing measures
  - Develop and evaluate new measures
  - Produce norms, benchmarks, and other decision rules for all measures
  - Build a usable system and set of efficient procedures
  - Test feasibility and initial efficacy in classrooms

### Domains of Assessment

- Language and Early Literacy for Four-Year Old children
  - Oral language/vocabulary
  - Phonological awareness and letter/sound correspondence
  - Alphabet knowledge and print awareness
  - Comprehension


### Measurement Design Objectives

- Match measures to functions of assessment
  - Identification and progress monitoring measures
  - General Outcome Measures and Mastery Monitoring Measures
- Maximize efficiency and feasibility
- Incorporate psychometric “best practices” in design, evaluation, implementation
  - Classical Test Theory and Item Response Theory tools
- Build on existing infrastructure, expanding and improving as needed
  - IGDIs, DIBELS, ggg.umn.edu



### Measurement: Lessons Learned



- We have IGDIs to assess development in oral language, phonological awareness, and alphabet knowledge (evidence of construct and concurrent validity)
- Teacher judgments can set preliminary “cut points” for identification of eligibility for tiers
- IGDIs correlate with other measures of child and classroom status
- Comprehension remains a challenge to



## Tier 2



### Skill Focused Listening Centers

- Skill Focused Activities - Tier 2 (SFA – T2) are designed to be independent of teacher instruction. Monitoring can be done by a paraprofessional.
- Supplemental to Tier 1 curriculum in 4 major domains
  - Phonological Awareness
  - Print Awareness/Alphabet Knowledge
  - Vocabulary
  - Comprehension
- Follow a generalized developmental/hierarchical process based on previous evaluation of curricular skill implementation sequences.
  - For example, in the PA area, Storybook Script 1 would focus on "Listening for Sounds: Same and Different," whereas Storybook Script 10 would focus on "Identification of First Sounds in Words."



## Tier 2 Intervention Delivery

- Activities administered in "listening centers" via pre-recorded compact discs.
- Children listen using headphones and respond to the embedded interactive activities. Familiar characters (e.g., Sally the Sound Seal, Luke the Letter Lion) serve as the teaching "guide."
- Stories contain visual and auditory cues to increase children's ability to complete the listening center each day with minimal adult assistance.
  - For example, a bell sound prompts children to turn the book pages
  - Pictures/icons (e.g., kitten) appear in the reading books and on written materials to serve as orienting cues, so when children are asked to follow along they can check whether they are in the right place.

## Maximizing Tier 2 Learning



- All stories require active participation and responding - modeling answers, asking questions, and providing time for spoken, manipulative play, and drawn or printed responses.
- Feedback is provided within the context of the recorded story so children can monitor whether they are responding correctly
  - (e.g., "Beetle. The first sound in beetle is /b/. Say beetle. (pause) What is the first sound you hear in the word beetle? (pause) /b/. Great job. Tell me again, What is the first sound in beetle? (pause) /b/. Now back to our story...").
- Multiple embedded opportunities to respond
  - Each story presents about 10 embedded opportunities to respond
  - Story is repeated 4X per week
  - Child has 40 practice opportunities practice per week



## What We Learned So Far

Embedding supplemental instruction within book reading activity enables most children to learn skills

- Students become more proficient as the week progresses
- Progress on our mastery monitoring probes is typically demonstrated
- Initial results were excellent for vocabulary and comprehension books; we benefited from earlier work as we addressed these challenges:
  - Child attention and engagement
    - Add reinforcement system, smaller groups, shorten pauses, shorter tx sessions
  - Maximize learning from embedded interventions
    - Increase number of examples, alter some instructional procedures
  - Adjust the measures
    - Increase sampling on mastery monitoring probes, less frequent IGDI assessment
- Expect refinements in timing, density of instruction, word choices, teaching techniques, the language of instruction, etc.
- Will all skills lend themselves to this degree of independent interaction?


## Tier 2: Lessons Learned





## Tier 3 Intervention Development

- What do we know from the research?
  - Lowest performing children benefit the most from language and early literacy intervention that is:
    - Focused on a few priority skills
    - More explicit
    - Attentive to connections between skills
    - More systematic



(e.g., Biemiller & Slonim, 2001; Foorman & Torgesen, 2001; Justice & Vukelich; National Reading Panel, 2000; Snow et al., 1988; Stahl, 2003)







### Tier 3 Intervention

- Children served:
  - Children who display significant delay in language and early literacy compared to peers
  - Children who are not making adequate progress in T2
- Activities:
  - Teacher-led
  - Increase in intensity of instruction
  - More restricted focus on prerequisite and high-priority skills



### Tier 3 BRIEF Activities

- Brief Reading-related activities that are Intense, Engaging, and Focused
  - Brief 5 - 20 minute small-group activities
  - Reading-related activities in the domains of:
    - phonological awareness
    - alphabet knowledge
    - vocabulary and oral language
    - comprehension



### Tier 3 BRIEF Activities, cont.

- Intense
  - Teacher-led
  - Smaller group size (1-2 children per group)
  - High specificity of instructional design
    - Explicit instruction
    - Systematic scope and sequence of skills
    - Carefully designed instructional examples
  - Increased opportunities for guided practice with immediate teacher support
  - Accommodations specified for individualizing for children with identified disabilities


### Tier 3 BRIEF Activities, cont.

- Engaging
  - Inclusion of movement, songs, games appropriate for preschool children
  - Inclusion of extension activities for additional practice and integration of newly acquired skills/competencies in center activities
- Focused
  - Restricted scope and sequence of skills
  - Focus on prerequisite and high-priority skills

### Tier 3 Lessons Learned


- What Tier 3 looks like in any system depends on both what Tier 1 and Tier 2 look like.
  - Children need Tier 3 support for a variety of reasons, (e.g., children with behavioral or attentional difficulties, ELL, lack of exposure to/experience with print, speech-language delays, other learning difficulties). Thus, Tier 3 interventions must be intensive and flexible to meet diverse learning needs.
- Children who are low on both early literacy and language skills benefit from intense work on language development prior to work on early literacy skills.




### Early Childhood RTI Network


- Help people keep up with what's happening in RTI in early education
- Learn about current research on progress monitoring and interventions in early literacy
- Find out what local agencies are doing in RTI
- Join the network at [www.crtiec.org](http://www.crtiec.org).





## 2nd Summit on RTI in Early Childhood, Kansas City KS 10/12-10/13/10

- Two-day Summit for practitioners, policy makers, researchers
- Plenary sessions on Tier 1



## Reach Us Online at [www.crtiec.org](http://www.crtiec.org)



Center for Response to Intervention in Early Childhood

CRTEC's Mission  
To conduct research and provide resources that support application of RTI in Early Childhood Education

Updated! 2010 Presentations  
RTI Summit  
RTI Myths


CRTEC Brochure  
Join the Network  
Start Only

A Collaboration with:  
Dynamic Measurement Group  
University of Missouri  
Ohio State University  
IES Institute of Education Sciences

Made possible by funding from:

## RTI in ECE – A View from OSEP

- Dr. Alexa Posny, Assistant Secretary for Special Education and Rehabilitative Services, has provided general comments on Response to Intervention in Early Childhood
  - The letter is available at <http://www.nectac.org/idea/clarfctnltrs.asp>



## Resources for RTI in Early Childhood

- National Center for Learning Disabilities RTI Action Network
  - [www.rtinetwork.org](http://www.rtinetwork.org)
- Recognition and Response
  - [www.recognitionandresponse.org](http://www.recognitionandresponse.org)
- Center for Response to Intervention in Early Childhood
  - [www.crtiec.org](http://www.crtiec.org)
- OSEP Informal Guidance Letter on RTI
  - <http://www.nectac.org/idea/clarfctnltrs.asp>

