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Developing interventions to support early reading comprehension:
Results from iterative design

Presented by Tiffany P. Hogan

SSSR 2012

Acknowledgements

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Investigators: Laura Justice (PI) Diane Nielsen
Shelley Gray (Co-PI) Laida Restrepo
Hugh Catts (Co-PI) Mindy Bridges
Tiffany Hogan (Co-PI) Stephen Petrill
Kate Cain (Co-PI) Ann O'Connell
Jim Bovaird Richard Lomax
Shayne Piasta

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Intervention Staff:	Post Docs:
Rashaun Geter	Jill Pentimonti
Marcie Mutters	Janet Capps
Beau Bevens	
Shara Brinkley	
Stephanie Williams	
Willa Cree	
Trudy Kuo	
Maria Moratto	
Carol Mesa	
Dawn Davis	
Lori Chleborad	
Sara Gilliam	
Ryan Moore	
Denise Meyer	
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Miki Herman	

Teachers, administrators, students, assessors, and families

Here we go...

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**2 years of intervention work
across 5 grades
by 100+ people
described in 15 minutes!**

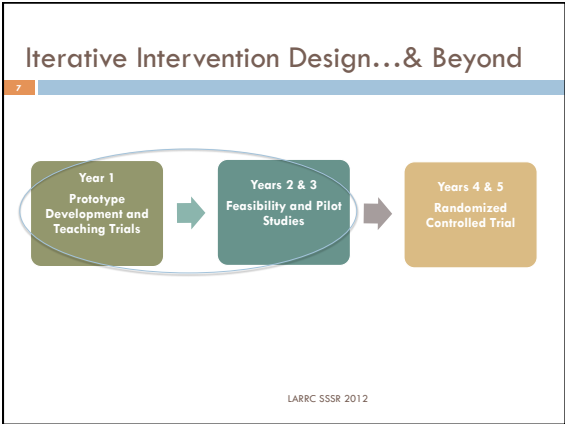
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LARRC Intervention Aim Years 1-3

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- Define and develop...
 - 2 distinct instantiations
 - language-based comprehension intervention
 - grades PreK to Grade 3 & ELL PreK
 - systematic and iterative developmental process

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UNIFYING PRINCIPLES

- Language-based
- Text-based
- Concept-based
- Adaptable
- Motivating
- Systematically organized

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Year 1: Advisory Panel Conclusions

- Include both informational and narrative texts
 - Texts should be the backbone of intervention
- Strategic selection of words
 - Vocabulary tied to texts
- Align with Common Core and State Standards

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Year 1: Advisory Panel Conclusions

- Lesson format
 - Supplement to existing language arts curricula
 - Include a range of lesson types
 - Scripted lessons with examples
 - 30 minutes maximum
- Content-based, language-based intervention innovative compared to current curricula

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Year 1: Winter Teaching Trial

- 16 teachers distributed across sites completed one unit
 - Six, 25-30 minute lessons
 - PreK and K unit "Animals and Their Needs"
 - Grades 1 and 2 unit "Are Spiders Insects?"
- Lessons were observed by LARRC staff
- Teachers completed online evaluation after each lesson
 - Planning and effort
 - Student engagement
 - Success meeting teaching objectives
 - Evaluation of texts and other teaching materials

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Year 1: Changes for Next Trial

- Clarified key objectives for each lesson
- Ensured that all activities supported objectives
- Wrote lessons that could be implemented in 30 mins
- Provided scripts for modeling vocabulary words and expanding on responses

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Year 2: Fall Teaching Trial

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- Tested a six-week “Earth Materials” Unit
 - Eight classrooms
 - Two classrooms each in PreK, PreK ELL, K, Gr 2 across sites

PreK Rocks Language Focus •Description	Kindergarten Fossils Language Focus •Description	Grade 1 Wind Language Focus •Cause and Effect	Grade 2 Soils Language Focus •Cause and Effect	Grade 3 Water Language Focus •Description
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Spiral Content Across Grades and Across Areas of Text Structure

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Year 2: Fall Teaching Trial

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- FIDELITY : Fidelity to lesson plan
- FEASIBILITY: Lesson Pacing and Intensity; Ease of Implementation
- SOCIAL VALIDITY: Satisfaction with the Intervention
- STUDENT BENEFIT: Student Engagement; Students' Outcomes
- Data Collected:
 - Fidelity observations tied closely to each lesson
 - Daily lesson logs completed by teachers
 - Curriculum-Based Assessments
 - Online survey
 - Face-to-face interviews at the completion of the unit

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Changes for Spring Feasibility Study

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- 4, 7-week units
 - Two Informational Text Units, Two Narrative Units
 - Two instantiations of each unit
 - Four, 30 min lessons per week
 - Week 6 CBMs
- Expanded CBMs to more closely match intervention
 - Added CBM preview in week 2 of the unit

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2 Instantiations: *Let's Know*

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Instantiation 1	Instantiation 2
Hook	Hook
Read to Me	Read to Me
Integration	Integration
Read to Know	Read to Know Integration Practice
Words to Know	Words to Know
Text Mapping	Text Mapping Words to Know Practice
Stretch and Review	Stretch and Review
Close	Close
Show Me What You Know Lite	Show Me What You Know Lite
Show Me What You Know	Show Me What You Know

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Year 2: Spring 2012 Feasibility Study

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- Goal: To determine...
 - revised prototypes
 - 2 instantiations
 - could be delivered in different classrooms
 - acceptable levels of consistency, usability, and fidelity
- Tested 2 instantiations of 7-week “Fiction” Unit
 - 54 classrooms
 - 5 classroom per instantiation pre grade PreK – Grade3
 - 4 PreK ELL classrooms

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Feasibility Study Results & Changes

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- No major differences between 2 instantiations
 - Fidelity was medium-high
 - 68-94% of components implemented
 - Teacher satisfaction was high
 - 72-90% of lessons rated 'satisfied' or 'very satisfied'
 - CBM data similar
 - Mean grade-level scores of 11-21 out of 26 points
- Numerous minor changes were integrated into next iteration of lessons and professional development

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Year 3 Pilot Study

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- Goal: To test...
 - sequence of lessons and professional development
 - implemented at each grade (3 units; 2 instantiations)
 - acceptable fidelity?
 - positive impacts on the quality and quantity of language instruction within classrooms?
- 72 classrooms
 - 12 classrooms per grade, PK ELL, PK-Grade 3
 - Two each: instantiation 1, instantiation 2, BAU
 - 5 children per classroom (360 total)

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Year 3 Pilot Study

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Refining:

- Lessons
- Professional Development
- General and lesson-specific fidelity checklists
- Measures of child and teacher classroom language
- CBMs and progress monitoring tools

Selecting and Refining:

- Pre- and post-test measures

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On the Horizon...Years 4 & 5

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    graph LR
      A[Year 1  
Prototype  
Development and  
Teaching Trials] --> B[Years 2 & 3  
Feasibility and Pilot  
Studies]
      B --> C[Years 4 & 5  
Randomized  
Controlled Trial]
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