Supporting Effective Instruction and Interventions within Response to Intervention and Multi-tiered Systems of Support

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Purpose of Presentation

• The primary purpose of my presentation is to describe effective interventions to improve reading outcomes within RTI and MTSS and to describe school systems supports for effective implementation.
  
  – First, I’ll imagine your role in this and provide a brief rationale for why what you do makes a difference!
  
  – Second, I’ll contrast what has and has not worked in schools to support effective MTSS implementation
  
  – Third, I’ll describe features of evidence-informed interventions by:
    • Summarizing findings in a recent review of reviews
    • Highlighting promising newer studies that support Tier 1 and 2 interventions
    • Focusing on a study that provided Tier 3 right away
    • Describing examples of reading interventions combined with motivational or social and emotional learning (SEL) components
  
  – Fourth, I’ll describe an ongoing design project for kindergarten classroom instruction that is based on the evidence-based practice Dialogic Reading and SEL themes
  
  – Finally, I will provide resources to use and share that are consistent with the science of reading to Response to Intervention and Multi-tiered Systems of Support in the elementary grades.
(First) Your Role(s)

- First and foremost, be kind and compassionate to yourself
- Engage in ongoing learning about instruction, interventions, and data
- Connect with families, other professionals and advocate
- Share the research with your colleagues and school teams
Why Is Your Role Important?

• Only about 36% of fourth graders can read proficiently on grade level material in schools in the US (National Assessment of Educational Progress (NAEP; https://nces.ed.gov/nationsreportcard, 2015).
  – Rate is lower (18-21%) for vulnerable minority (e.g., African American, Hispanic) children and for children living in poverty (i.e., qualify for the National School Lunch Program).
  – A majority (67%) of fourth grade students with disabilities read below even a basic level (NAEP, 2015).

• Consequences of poor reading:
  – related social, emotional, and behavioral issues (Alliance for Excellent Education, 2002)
  – higher risk for high school dropout (Alliance for Excellent Education, 2002)
  – higher risk for delinquency (Center on Crime, Communities, and Culture, 1997)
  – higher risk of future unemployment (National Center on Education Statistics, 2005)
Situating Your Role Within RTI and MTSS
(updated from Fuchs, Fuchs, & Compton, 2012)

**Tertiary Interventions**
- 1-3 Students
- Diagnostic assessment-guided
- Formative assessment-guided based on slope
- High Intensity
- More time, more frequent
- May include special education
- Most highly trained interventionist

**Secondary Interventions**
- Some students (at-risk)
- Small Group Interventions
- More opportunity to respond
- More immediate feedback
- Focused on key skills
- More individualizing of pacing

**Universal Interventions**
- All students
- Preventive, proactive
- Includes evidence-based core
- And differentiated instruction in small groups

**Alignment across tiers**

- Universal screening
  - Diagnostic tests for strengths/weaknesses
  - More frequent progress monitoring (formative and benchmark) plus mastery checks

1-5% → 5-10% → 80-90%

Most frequent progress monitoring (formative and benchmark) plus mastery checks
Response to Intervention and Multi-tiered Systems of Support

**Common Core Components**

1. Systematic and explicit core literacy instruction

2. Universal screening to spot students who struggle to learn to read

3. Interventions that target student needs increase in intensity as needed

4. More frequent progress monitoring to inform instruction and intervention and to assess response

   (e.g., Gersten et al., 2008)
Response to Intervention and Multi-tiered Systems of Support

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1. Systematic and explicit core literacy instruction
2. Universal screening to spot students who struggle to learn to read
3. Interventions that target student needs increase in intensity as needed
4. More frequent progress monitoring to inform instruction and intervention and to assess response

(e.g., Gersten et al., 2008)

• But MTSS includes a broader array of supports

• Every Student Succeeds Act Defines MTSS as

“a continuum of evidence-based, systematic practices to support a rapid response to students’ needs, with regular observation to facilitate data-based instructional decision making”
Let’s Keep in Mind that Research Evidence Is Evolving

• “Evidence-based” findings come from quasi-experimental and experimental studies demonstrating significant differences between treatment(s) and control conditions.

• A meaningful effect means that the effect size favoring treatment over control or comparison is greater than 0.20. And effect size of 1 indicates about a standard deviation of difference in groups. So this represents about a fifth of one standard deviation.

• You and your school team (including parents) may hear various terms:
  
  – Scientifically based reading practice, Evidence-based practice, High-leverage practice, Science of reading research, Evidence-informed

• Caveat: “No evidence” does not always mean it does not work, often just that it has not been tested empirically (Yet!)
Catts & Petscher, 2022 recently described a model of how risks accumulate for students who have persistent difficulties in reading.

Their model has implications for understanding these levels or layers of implementation.

They explain that within resilience factors, some (like explicit and systematic instruction or effective parenting) promote better outcomes for all individuals (no matter their risk factors).

Some factors may also be most impactful, or protective, for individuals who are most at risk.

Let’s also Keep in Mind:
Cumulative Risk and Resilience Model
MTSS Includes Social and Emotional Learning and Positive Behavior Supports

The Collaborative for Academic, Social, and Emotional Learning (CASEL, n.d.)

- “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.”

- These include a constellation of related constructs, including
  - Growth mindset
    Dweck, 2008; Duckworth & Yeager, 2015; Sisk et al., 2018
  - Attribution theory
    Cox & Yang, 2012; Kistner et al., 1988; Tabassam & Grainger, 2002
  - Motivation
    Toste et al., 2020, Conradi et al., 2014
  - Self efficacy & self concept
    Bandura, 1977; Chapman & Tunmer, 2003

Thanks to Mai Zaru and Dayna Russell Freudenthal!
Pause and Reflect

• Please jot down any questions to share in the chat.

• In this second section of the presentation, I’ll describe some aspects of what has not worked in schools to support MTSS and prepare to contrast these aspects with others that do work.
(Second ) Systems and School Supports for MTSS Implementation- It’s not just you by yourself

Maximizing the Implementation Quality of Evidence-Based Preventive Interventions in Schools: A Conceptual Framework

Domitrovich et al., 2015
Implementation for MTSS at the School Level: What Did Not Work

- A widely cited study examined students on one side or the other of a grade-level benchmark who either did or did not receive Tier 2 intervention (researchers use the term regression discontinuity design).
- Balu et al (2015) reported that students receiving tiered interventions performed similarly or worse than students in Tier 1.
Implementation for MTSS at the School Level: More Details

• **BUT!**
  – This was an evaluation of typical practice
  – Schools were not provided any support systems for RTI/MTSS
  – There was no consistent standardized implementation
    • Inconsistent screeners or progress monitors
    • No consistent programs or interventions
    • No consistent PD, coaching, or monitoring of fidelity or dosage for instruction or intervention
PROJECT

• A comprehensive study of key factors associated with reading outcomes for students receiving Tier 3 and/or special education reading interventions

• Participating schools will represent a variety of RTI models, geographic and socioeconomic locations to incorporate a range of school risk.

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R324A160132 to Southern Methodist University. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.
Preliminary Findings from Interviews with RTI Administrators

RQ (1) How do schools use assessments to identify risk?

• Universal Screening tools were commonly the only assessment measure used to identify students for intervention.

• Progress Monitoring assessments varied in frequency of administration and were not always key in driving decisions on moving students between tiers.

• Behavior screening and monitoring were indicated as an area of need for most principals.

RQ (2) Were data-based decision-making processes in place?

• Relatively little criteria to guide moving students between tiers.

• Cut scores did not always indicate if a student would receive intervention support or not.
Take Away- Our Preliminary Findings Suggested MTSS Supports Are Need

**RQ (3) What data-based decision-making process typically informed planning for tiered intervention?**

- Discussions across grade levels are typically informal.
- RTI data discussion typically occurs monthly within grade level planning meetings.

**RQ (4) How have schools established knowledge for RTI implementation?**

- Ongoing professional development is lacking.
- Very few trainings available for those that are implementing intensive intervention
At a More Macro Level Changes over the Past Decade in RTI/MTSS Implementation

• RTI/MTSS are now considered support systems for all, not merely a pathway to referral for special education or dyslexia services.
  
  – 21 states now use “MTSS,” 5 use “MTSS/RTI” interchangeably, 17 states use “RTI” (Berkeley et al., 2020).

• Many states have passed dyslexia legislation (some part some in addition to MTSS with requirements for teacher training, screening, and some specific interventions (National Center on Improving Literacy, 2020; Petscher et al., 2020; Youman & Mather, 2018)
Pause and Reflect

- Before we shift to learn more about interventions that can work.....
- Jot down any questions to share in the chat.
- Begin thinking about what school system resources and supports you have and what you might ask for.
- Later I’ll share some specific resources.
- In this third section of the presentation, I’ll describe features of evidence-informed interventions
Recent Review of Reviews about Literacy Interventions over the Past Decade: Primary Grades

• First, we examined average effects reported by syntheses and large meta-analyses conducted in the primary grades (Al Otaiba et al., 2018; Austin et al., 2017; Gersten et al., 2020; Slavin et al., 2011; Stevens et al., 2021; and Wanzek et al., 2018).

• The majority of the early literacy interventions were preventative in nature (i.e., relatively more studies were conducted in kindergarten and first grade), and targeted beginning code-focused, foundational reading skills, provided in small groups or one to one.

• Findings provided causal evidence for the efficacy of these explicit and systematic interventions; small to moderate effects were reported on standardized measures of code-focused skills (ES ranged from 0.41 to 0.62).

• Slightly smaller effects were reported on measures of meaning-focused, comprehension skills (ES ranged from 0.32 to 0.36).
Second, we examined average effects reported by meta-analyses that included students in upper elementary, or older (Donegan & Wanzek, 2021, Flynn et al., 2012; Scammacca et al., 2013; Wanzek et al., 2013)

- Explicit and systematic interventions focused on foundational or comprehension skills; most were implemented in small groups.

- Findings provided causal evidence for the efficacy of these interventions delivered to a variety of struggling readers for code-focused standardized measures (ES ranged from 0.09 to 0.22).

- And for standardized measures of meaning-focused, comprehension skills (ES ranged from 0.10 to 0.73).
Third, we examined effects reported in meta-analyses about writing instruction on students’ reading outcomes (Graham & Hebert, 2011; Graham & Santangelo, 2014; Graham et al., 2018).

- There were positive effects of transcription and sentence-level writing on fluency (0.32) and word reading (0.39-0.51), with smaller effects on comprehension (0.17-0.32).

- Explicit spelling instruction had a moderate effect of phonological awareness (0.55) and on overall reading (0.44).
Findings from Our Recent Chapter on Early RTI: What Has Worked When Researchers Supported Implementation of Tier 1 and Tier 2

• Explicit and systematic instruction for Tier 1 and Tier 2
• We conceptualized a continuum of a hybrid of standardized plus some individualization to highly individualized interventions
  - Reliable screeners and progress monitoring data
  - Consistent routines and support (rules) for tiers
  - Teachers or interventionists provided PD and/or coaching to support fidelity
  - Tier 1 and 2 were usually aligned in terms of materials and instructional routines
  - Reading and (sometimes) resilience were promoted

Russell-Freudenthal, Zaru, & Al Otaiba (2022) Early Literacy and Multi-Tiered Systems of Supports in the Handbook of Science on Early Reading
<table>
<thead>
<tr>
<th>Tier</th>
<th>Study</th>
<th>GL</th>
<th>Participants</th>
<th>Intervention</th>
<th>Measures</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1-2</td>
<td>Solari et al., 2018 (RCT)</td>
<td>1</td>
<td>At-risk (T₁ + T₂; n = 61) &lt; 4 wmp and at-risk on listening comp. (Texas Primary Reading Inventory); BAU (n = 37).</td>
<td>Supplemental Reading Rules [RR] (68 sessions) Tier 1 whole-class; Tier 2 small group word study, comp., and fluency; T₁: coached teachers, T₂: uncoached, BAU= typical</td>
<td>Phoneme Segmentation (Yopp, 1995); WJ-III*</td>
<td>Moderate effects favoring RR conditions on word reading, fluency, and comprehension (g = 0.41 - 0.72)</td>
</tr>
<tr>
<td>R 2</td>
<td>Foorman et al., 2018 (RCT)</td>
<td>K-2</td>
<td>Students below 30th percentile on vocabulary and reading skills (T₁; n = 1653; T₂; n = 1764).</td>
<td>Students received T₁: stand-alone (81 sessions) in small groups, or T₂: foundational instruction aligned with the core reading program.</td>
<td>FRA (Foorman et al., 2016)</td>
<td>T₁ and T₂ started below 10th and improved to 20th percentile; K students experienced the largest growth.</td>
</tr>
<tr>
<td>R 2</td>
<td>Coyne, 2018a (QED; RDD)</td>
<td>1-3</td>
<td>Tier 2 (T; n = 318) 1st below grade on NWF, 2nd and 3rd below ORF benchmark. Tier 1 (BAU; n = 360).</td>
<td>Students in T received supplemental for 4 days/week, Nov.-June, or BAU.</td>
<td>ORF; WRMT-R**</td>
<td>Effects favored T on phonemic awareness and decoding (ES = 0.39, 0.36).</td>
</tr>
<tr>
<td>R 2</td>
<td>Burns, 2020 (QED)</td>
<td>2-3</td>
<td>Students below 10th percentile on ORF, not SpEd (T; n = 92). SpEd (n = 22). Tier 1: (BAU; n = 385).</td>
<td>Students received T: small group phonics or fluency; SpEd: school-delivered services; BAU (Reading Mastery).</td>
<td>PRESS decoding (PRESS, 2014); ORF</td>
<td>Effects favored T over SpEd, and BAU over SpEd on reading growth (g = 0.74, 0.68).</td>
</tr>
<tr>
<td>R 2</td>
<td>Lovett et al., 2017 (QED)</td>
<td>1-3</td>
<td>Scored at/below 85 on reading measure (T; n = 172, BAU: n = 47)</td>
<td>Students received T: small group 100-125 sessions of PHAST + RAVE-O; or BAU (typical instruction).</td>
<td>[RM], PIAT-R (Lazarus, 1990); SRI-2⁵, WRMT**¹; TOWRE⁶, GORT-4⁷</td>
<td>Effects favored T on [RM] measures (d = 1.44 - 1.82), and code-focused (d = 0.57 - 1.39) &amp; meaning-focused norm referenced (d = 0.63-0.90).</td>
</tr>
<tr>
<td>T 2</td>
<td>Fien et al., 2021 (RCT)</td>
<td>1</td>
<td>At-risk (10-30th percentile) on SAT-10 (Harcourt, 2002); (n = 757).</td>
<td>Students received T (n = 406): Tier 2 Enhanced Core Reading Instruction [ECRI] aligned with Tier 1 or BAU (n = 406).</td>
<td>DIBELS NWF², ORF, WRMT**¹²</td>
<td>Effects favored T on NWF and word attack (g = 0.31, 0.48).</td>
</tr>
</tbody>
</table>
Table 1. Cont’d

<table>
<thead>
<tr>
<th>R</th>
<th>2</th>
<th>Savage et al., 2018 (QED)</th>
<th>1</th>
<th>Students (T: (n = 119); CBP; (n = 82)) &lt; 30th percentile on WRAT-4.</th>
<th>Small groups received (22-24 sessions) T: Direct Mapping &amp; Set Variability of phonics, or CBP: current/best practices</th>
<th>WRAT-4(^{10}), WJ-III(^{6}), ORF, PPVT-4(^{8})</th>
<th>Effects favored T on word reading, vocab, spelling, sight word, ORF ((d = 0.08 – 0.41)); delayed posttest ((d = 0.18 – 0.30)).</th>
</tr>
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<tbody>
<tr>
<td>T</td>
<td>2</td>
<td>Vernon-Feagans et al., 2018 (RCT)</td>
<td>K-1</td>
<td>Students (&lt; 35th) percentile 1+ WJ III subtest; T ((n = 305)), BAU ((n = 251)).</td>
<td>Students received T: TR/I (30-40 sessions) 1:1 (re-reading fluency, word-work, guided oral reading, and pocket phrases), or BAU.</td>
<td>WJ-III(^{6})</td>
<td>Effects favored T on letter-word, word attack, spelling, &amp; comp ((g = 0.26, 0.28, 0.26, 0.16)).</td>
</tr>
<tr>
<td>T</td>
<td>3</td>
<td>Weiser et al., 2019 (QED)</td>
<td>K-8</td>
<td>Students ((n = 452)) with reading disabilities in SpEd or resource rooms.</td>
<td>Teachers ((n = 44)) were randomized in one of 3 coaching groups (face-to-face, on demand, and technology based).</td>
<td>CTOPP(^{5}); TOWRE-2(^{7}), ORF, TWS-5 (Larsen et al., 2013), WJ-III(^{8})</td>
<td>Effects favored students with teachers in tech-coaching on their phonemic awareness, decoding, fluency, writing, spelling ((d = 0.22 -1.01)).</td>
</tr>
</tbody>
</table>

Note. T = teacher-implemented. R = researcher-implemented.
Providing Intensive Intervention Immediately

- This study used a randomized controlled trial, with children randomized within classrooms, and compared the efficacy of two RTI models on first graders’ reading performance.

- We documented high quality implementation of Tier 1 through observations.

- Both models were identical in terms of the type of interventions provided in Tier 2 and 3, but differed in terms of when students began tiered intervention.

Interventions: Code and Meaning focused

<table>
<thead>
<tr>
<th>First 8 weeks</th>
<th>Second 8 weeks</th>
<th>Final 8 weeks</th>
</tr>
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</table>
| **Meaning-focused**
Dialogic Reading | Decodable Readers with fluency and sentence comprehension instruction | Decodable readers re-written to feature text structure, graphic organizers. Intervention included a written response/retell. |

**Code-focused: Explicit segmenting, blending, decoding and sight word intervention**

- **Tier 3:** *Early Interventions in Reading* (Mathes et al., SRA) (groups of 1-3 four days per week 45 m.)
- **Tier 2:** *Open Court Interventions* (groups of 5-7 twice weekly 30 m)
- **Tier1:** *Open Court Imagine It!* (Teacher led 90 m daily)

Simple View of Reading
Reading = Decoding X Comprehension
Gough & Tunmer, 1986
## Differences across RTI Models

### “Typical RTI”
- Universal screening
- All students began in Tier 1
- Re-screened after 8 weeks and if not responding, then eligible to receive Tier 2
- Re-screened after 8 weeks and if responding continue to receive Tier 2, or if not responding, receive Tier 3

### “Dynamic RTI”
- Universal screening
- Students were eligible receive either Tier 2 or 3 immediately
- Rescreened after 8 weeks and if responding, continue in same Tier, or if not responding to Tier 2, then receive Tier 3
Study Participants

7 Schools; 34 classrooms; \( n = 521 \)

Students

44.5 % Female
- 40.9 % Caucasian
- 47.2 % Black
- 1.9% Asian
- 10.0 % Other (Hispanic, Multi-racial, Not Reported)
- 56.6 % Eligible for Free or Reduced Lunch
Initial Screeners

- **Teacher nomination**: If a student’s teacher rated him or her as being below or well below grade level (Speece et al., teacher judgment of reading severity)

- **Scores below a local school-based 40th norm** (< 5 mins)
  1. AIMSweb Letter-Sound Fluency
  2. Fuchs Sight Word Fluency
  3. TOWRE Sight Word Efficiency
  4. TOWRE Phonemic Decoding Efficiency

- **Exclusionary Criteria**
  - If a student scored at or above the nationally normed 95th percentile on both the WCJ Passage Comprehension and Letter-Word Identification subtests, he or she was not eligible for intervention regardless of any of his or her other scores
In Dynamic RTI: Eligibility for Assignment to Tier 3

Tier 2

- Tier 3 eligibility
  - Once eligible for intervention, a student was assigned to Tier 3 if they scored below the school-based 40th percentile on all four screener measures and the teacher indicated that the student struggled with at least four of the areas mentioned above

- Tier 2 eligibility
  - Once eligible for intervention, a student was assigned to Tier 2 if he or she was below the school-based 40th percentile on three out of four screener measures or if the student’s teacher indicated that the student struggled in reading skills.
Findings: WJ-III Brief Reading Outcomes by Tier and Condition

Figure 1. A hierarchical linear model was run to examine w score outcomes on Woodcock Johnson Brief Reading by Tier and condition. Time on the x-axis is in months centered at the end of the year.
Percent of Students Scoring Below SS of 91 (25th percentile) by Measure

- WJ- Basic: 5%
- WJ-PC: 20%
- TOWRE SWE: 35%
- TOWRE PDE: 35%
Catts & Petscher, 2022 recently described a model of how risks accumulate for students who have persistent difficulties in reading.

Their model has implications for understanding these levels or layers of implementation.

They explain that within resilience factors, some (like explicit and systematic instruction or effective parenting) promote better outcomes for all individuals (no matter their risk factors).

Some factors may also be most impactful, or protective, for individuals who are most at risk.

**Figure 1.** Cumulative risk and resilience model of dyslexia.
What Characteristics Were Associated with Response?

• For this study, we used at or below the 25 percentile on the WJ-III Basic reading cluster as “inadequate response.”

• Only 20 students did not meet this criteria.

• We coded videos of intervention to compare them with “responders”
  – engagement
  – emotions (hope, pride, anxiety, shame, hopelessness).

Engagement vs. Avoidance

- **Physical**-standing, rocking, leaving the group

- **Verbal**-yelling out answers, humming, talking, singing

- **Interaction**-(peer-to-peer, student-to-teacher) arguing with teacher, talking with peer, arguing with peer, touching peer
Negative Emotions from Inadequate Responders

**Anxiety**
- Answering quietly
- Sponging
- Distancing self away from instruction
- Not following along
- “Yuck”
- “I can’t do this”
- Increased from fall to spring

**Shame**
- Withdrew from group
- When corrected refused to answer
- Refuse to complete activity if corrected
- “It is too hard”
- Bury face in arms
Positive Emotions from Adequate Responders

**Hope**
- Smiling
- Answering questions without coaxing
- Pointing to words
- Continued attempts with teaching model (i.e. My turn..)

**Pride**
- Volunteering to participate
- Doing independent practice on activities
- Helping other students with words
- “Can we do it again?”
- “Can I do that?”
Implications from Our Typical vs Dynamic Study and Understanding Response from Risk/Resilience Perspective

- Findings indicate that early intervention with appropriate intensity can greatly reduce risk.
- It was more effective to send students with greatest need directly to our Tier 3.
- Some students needed ongoing support, with larger proportions in the fluency and comprehension domains.
- Even though we provided positive behavior intervention supports, many of our students would likely need ongoing help in an MTSS system.
  - Greater time, dosage, smaller group size.
  - More explicit and systematic reading intervention at their independent level.
  - Support to transfer word reading accuracy to fluency and comprehension.
  - Support for positive attributions, motivation, goal setting, engagement, and a growth mindset.
Scan the QR code to read our chapter on reading achievement and growth mindset of students with reading difficulties or reading disabilities coming soon in the *Handbook of Special Education Research*.
Reading and Resilience: Social and Emotional Learning Factors

SEL factors (e.g., anxiety, attributions, mindset, motivation, self-efficacy etc.) may be related to general education success (Blackwell et al., 2007; Burnette et al., 2018; Catts & Petscher, 2022; Daley & McCarthy, 2021; Sisk et al, 2018; Yeager & Walton 2011).

Recent reviews examined the relation between reading achievement and dimensions of reading mindset (Conradi et al., 2014; Schiefele et al., 2012; Toste et al., 2020; Unrau et al., 2018).

We found limited experimental research examining the intersection of reading interventions, motivation-related interventions, and students with dyslexia.
A Few Sample Studies from the Chapter that Show Promise of Combined Interventions

– Orkin et al., (2018)
  - *RAVE-O* and *Wilson* (Wolf, 2010; Wilson, 2011) plus motivation
  - Summer Intervention, 2-4<sup>th</sup> grade
  - Posttest reading favored treatment condition (ES = 0.24) with increased engagement (ES = 0.37) and reduced avoidance behaviors (ES = 0.52).

– Wanzek et al., (2020)
  - *Lindamood Phoneme Sequencing Program (LiPs)*; Lindamood & Lindamood, 2011 with or without Brainology.
  - School-based intervention, 4<sup>th</sup> grade
  - Posttest effects favored both treatment conditions compared to the control on nonword reading (ES = 0.29 to 0.35), phonological processing (ES = 0.20 to 0.28), and reading comprehension (ES = 0.19 to 0.23), but not on growth mindset.
Toste and colleagues (Toste et al., 2019)

- Toste and colleagues
  - Multi-syllabic word reading strategies (warming up recognizing vowel patterns, recognizing and manipulating affixes, spelling multi-syllabic words, practicing reading lists, and practice reading sentences and passages).
  - With or without attribution re-training and goal setting
  - Participants were struggling readers in Grades 4-5; small group 4 times per week 40 sessions
  - Effects favored students in treatment conditions (with or without attribution training) relative to control groups for standardized measures of decoding (0.17 to 0.43, spelling (0.25), and comprehension (0.25). No differences in self-concept.
Lovett and colleagues (Lovett et al., 2020)

- Small group intervention using PHAST (word reading strategies for sounding out words, identifying words by analogy with frequent spellings, peeling off for affixes, alerting to vowels with variable vowel pattern pronunciations, and spying parts of new words that are familiar)
  - Two treatment groups: PHAST plus either comprehension or fluency strategies
  - Embedded motivational aspects: attribution training, motivation, goal planning, acknowledging the “challenge” of multi-syllabic words, especially in content texts
- Participants were struggling readers grades 6-8 (small group instruction provided for 100-125 hrs with 40-60 mins per day)
- Effects favored the two PHAST groups over BAU (ES ranged from 0.56 to 0.78 for word reading; 0.36 for comprehension; 0.61 for sense of reading competence).
Pause and Reflect

• That was a lot, thanks for listening.

• Jot down any questions.

• In this fourth section, I’ll describe an early intervention that is based on the evidence-based practice Dialogic Reading and SEL themes.
Design Project: Project GROW

Promising findings of read-alouds in the form of dialogic reading on vocabulary and listening comprehension (Foorman et al., 2016; Shanahan et al., 2010; Whitehurst, et al., 1988; WWC on Dialogic Reading)

- We are designing a class-wide KG shared book reading program that weaves together: dialogic reading and SEL concepts.
  - Commercially available multi-cultural books
  - Lesson plans support explicit vocabulary instruction
  - Lesson plans include dialogic reading questions that increase in the level of difficulty across 3 sessions per week.
**Goal:** Increase a child’s vocabulary while further developing their overall language skills through levels of questioning.

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**Dialogic Reading Levels of Questioning**

- **Level I:** Ask “wh” type questions to increase vocabulary. Questions focused on the pictures; need specific response.
- **Level II:** Expand child’s answer with 1 or 2 more words. Ask open-ended questions.
- **Level III:** Questions about story plot & personal experiences. Questions not focused as much on the pictures.
Completion Question: “My heart is full of ________” (feelings; what’s another word we learned that means feelings; emotions)

Recall: The main character is who the story is about. Who is the main character? (girl)

Open-ended question: What emotion is she feeling when her heart is hot? (She was angry, Why do you think she was angry?)

Wh-question: Why does the girl hide her heart? (she feels shy; what does she like to do when she feels shy? To swing, be alone)

Distancing question: How long do you think feelings stay with us?

Home Question: At home, if your brother or sister is feeling sad, what can you say?

School Question: We feel emotions at school too. Who can tell me about a time they felt happy this week?

Whitehurst et al., 1988; Al Otaiba et al., 2012
Design Project: Project GROW

I can name my feelings

I can learn from my mistakes

I can persist

I can be kind to others and to myself

I can work toward and achieve goals.
**Design Project: Project GROW**

**Week-at-a-Glance**

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<tr>
<th>Objective</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can name my feelings.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vocabulary**

- Emotions
- Happy
- Shy
- Brave
- Afraid
- Emotions
- Happy
- Shy
- Brave
- Afraid

**Dialogic Questions**

- Day 1: Mainly level I questions
- Day 2: Levels I and II
- Day 3: Level II and III

**Closing**

- Review of vocabulary words (definitions or vocabulary cards)

**Activity**

- Pair and share
- Setting a goal
- Drawing

---

**Lesson Plans**

**BOOK READING WITH DIALOGIC (CROWD-HS, and extensions) QUESTIONS (10 min)**

**LEVEL 1**

<table>
<thead>
<tr>
<th>Completion questions</th>
<th>Page</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>“My heart is full of _____. .” (feelings; what’s another word we learned that means feelings: emotions)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>“Sometimes my heart feels like a big yellow _____.” (star; How is she feeling? [options sad or happy])</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recall questions</th>
<th>Page</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td></td>
<td>The main character is who the story is about. Who is the main character? (girl)</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>How did the girl feel? (sad; sad is the opposite of [antonym for] _____; happy)</td>
</tr>
</tbody>
</table>

**Vocabulary Cards**

- happy
- afraid
Design Project: Project GROW (Spanish)

**Week-at-a-Glance**

**En Mi Corazón Por: Jo Witek**

### UN VISTAZO A LA SEMANA

<table>
<thead>
<tr>
<th>Objetivo</th>
<th>Día 1</th>
<th>Día 2</th>
<th>Día 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Podre reconocer/nombrar sentimientos.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vocabulario

- Emociones
- Feliz
- Tímido
- Valiente
- Temeriso
- Emociones
- Feliz
- Tímido
- Valiente
- Temeriso

### Repasar Palabras

*Palabras que los estudiantes han aprendido: grande vs. pequeño, gritar, callar.*

### Preguntas Dialógicas

- Principalmente preguntas de nivel I
- Niveles I y II
- Nivel II y III

### Cierre

*Repaso de palabras de vocabulario (definiciones o tarjetas de vocabulario)*

### Actividad

- Compartir en parejas
- Establecer una meta
- Dibujar

**Lesson Plans**

**LECTURA DE LIBROS PREGUNTAS DIALÓGICAS (TROPA-HE, y extensiones) (10 min)**

### NIVEL 1

<table>
<thead>
<tr>
<th>Pregunta de Terminación</th>
<th>Página</th>
<th>Pregunta</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Mi corazón está lleno de _____&quot; (sentimientos; ¿Cuál es otra palabra que aprendimos que significa sentimientos? Emociones.)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>&quot;A veces mi corazón se siente como una gran ______ amarilla.&quot; (estrella; ¿Cómo se siente? [Opciones: triste o feliz])</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Preguntas para Recordar

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>Página</th>
</tr>
</thead>
<tbody>
<tr>
<td>El personaje principal es de quien trata la historia. ¿Quién es el personaje principal de esta historia? (Niña)</td>
<td>1-2</td>
</tr>
<tr>
<td>¿Cómo se sintió la niña? (triste; Triste es lo opuesto a [antónimo de] ______; feliz)</td>
<td>11</td>
</tr>
</tbody>
</table>

**Vocabulary Cards**

- *feliz*
  - *sentimiento de hacer algo y estar con alguien que de agarra*

- *asustado*
  - *sentimiento de hacer algo y estar con alguien que de agarra*
Purpose of Presentation

- The primary purpose of this presentation is to describe the effective interventions for reading outcomes within RTI and MTSS and to describe school systems supports for effective implementation.
  - First, I'll imagine your role in this and provide a brief rationale for why what you do makes a difference!
  - Second, I'll contrast what has and has not worked in schools to support effective MTSS implementation.
  - Third, I'll describe features of evidence-informed interventions and highlight some promising studies that combine intervention with a motivational or social and emotional learning (SEL) component.
  - Fourth, I'll describe an ongoing design project for kindergarten classroom instruction that is based on the evidence-based practice Dialogic Reading and SEL themes.
  - Finally, I will provide resources to use and share that are consistent with the science of reading to Response to Intervention and Multi-tiered Systems of Support in the elementary grades.
Pause and Reflect

• Next, I’ll describe some helpful resources
• Keep those questions coming
Sharing Resources: You Make a Big Difference!

• These are a sample of resources you can use to support your learning, supporting others in taking up the good work, and advocating for intensive interventions.

• Some roles I can imagine you can do:
  • Support Parents
  • Plan to observe or select a Tier 1 core program
  • Examine research for adoption of a program; support implementation
  • Plan to lead a PLC team
  • Selecting a book for book study
  • Plan to share resources with teachers or administrators
  • Seek professional development (CEUs)
**Parent Involvement to Support Student Reading Motivation & Growth Mindset**

**Raffaele Mendez et al., 2016 (small scale pilot study)**
Parents instructed via phone to provide brief nightly support of oral reading and one worksheet
- Error correction within 2 secs
- Refrain from working on decoding, only provide encouragement and praise
- Record errors on a form sent in daily
All but one student with highly engaged parents realized at least a 7-point increase in 3 of 5 reading outcome measures.

**Andersen and Nielsen, 2016 (large scale RCT)**
- Parents received a booklet and online video to support a growth theory of abilities, explain construct mastery-oriented interactions with the child, and encouragement to praise the child’s efforts rather than results.
Students realized gains in language comprehension, decoding, and reading comprehension. Gains were as strong for immigrant children and students with mothers with less education.
Share Information about Tier 1

- A core reading program incorporates the science of reading.
- It supports explicit and systematic instruction in phonological awareness, phonics, fluency, vocabulary, and comprehension.
- Ideally, it will also support instruction in handwriting, spelling, and written expression.
- In the beginning stages of reading, a strong core is comprehensive and focuses on learning to read.
- In later stages of reading, the content emphasis may shift to more focus on reading to learn.
- Explore and share this Vanderbilt University Iris Center resource**!
- Teachers can get CEUs!

https://iris.peabody.vanderbilt.edu/module/rti03/resource/q2/p03/
What if you recognize a need for a Universal or Class-wide Reading Program?

- One in-expensive evidence-based explicit and systematic program in Peer Assisted Learning Strategies, or PALS.
- It is available in English for KG and Grade 1 to support phonemic awareness, phonics, and fluency.
- A slightly different type of PALS for older grades is available in English and Spanish and it also involves a partner-reading activity to support comprehension (e.g., strategies of prediction, paraphrasing, summarizing).
- The teacher directs the lesson, then students practice with a partner.
- So it increases opportunities to respond and students learn to correct one another.
- Recognized as a “best-practice” by Office of Education.
- Typically used year-long but a recent Maki et al., 2021 used PALS partner reading with children in Grade 3 who scored below ORF benchmarks and across 10 sessions had a positive effect on ORF relative to control condition.

- [https://frg.vkcsites.org/what-is-pals/pals_reading_manuals/](https://frg.vkcsites.org/what-is-pals/pals_reading_manuals/) There is also a brief video.
How might you learn more about the evidence for PALS to decide if it is a good fit for your school and students?

Institute for Education Science reviews interventions; you can access the studies; Project Iris also provides information about PALS.
Example programs with evidence that might map onto a continuum of school resources

• For Tier 1 class-wide peer tutoring:
  – Peer Assisted Learning Strategies (PALS; Fuchs et al., 2011, 2016)
  – Dialogic Reading (Whitehurst et al.)

• For volunteers and para pros:
  – Sound Partners (Vadasy, Sanders, & Peyton, 2006)

• For small group teacher/specialist intervention (daily, 30-45 mins):
  – Early Interventions in Reading (Mathes et al., 2005)
  – Early Reading Intervention (Simmons et al., 2003)
  – Road to the Code (Blachman, 2000)
  – ECRI (Fien et al., 2020)

• Plan, select, evaluate, and support intensive reading interventions
How can you support classroom management for Tier1/2 to enable small group interventions?

<table>
<thead>
<tr>
<th>Code Focused</th>
<th>Teacher Managed</th>
<th>Child Managed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alphabet activities</strong></td>
<td><strong>Letter Sight-Sound</strong></td>
<td><strong>Spelling</strong></td>
</tr>
<tr>
<td><strong>Phonological Awareness</strong></td>
<td><strong>Onset-rime, blending and segmenting</strong></td>
<td><strong>Phonics worksheets</strong></td>
</tr>
<tr>
<td><strong>Word Segmentation</strong></td>
<td></td>
<td><strong>Phonological awareness</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Other code-focused center activities</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meaning Focused</th>
<th>Teacher Managed</th>
<th>Child Managed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocabulary</strong></td>
<td><strong>Teacher Read Aloud</strong></td>
<td><strong>Student Read Aloud, Individual</strong></td>
</tr>
<tr>
<td><strong>Teacher Read Aloud, Choral</strong></td>
<td><strong>Student Read Aloud, Choral</strong></td>
<td><strong>Sustained Silent Reading</strong></td>
</tr>
<tr>
<td><strong>Group Writing, Writing</strong></td>
<td><strong>Group Writing, Writing</strong></td>
<td><strong>Reading Comprehension</strong></td>
</tr>
<tr>
<td><strong>Instruction, Model Writing</strong></td>
<td><strong>Instruction, Model Writing</strong></td>
<td><strong>Worksheets</strong></td>
</tr>
<tr>
<td><strong>Listening Comprehension Discussion</strong></td>
<td></td>
<td><strong>Student Individual Writing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Other meaning-focused center activities</strong></td>
</tr>
</tbody>
</table>

Al Otaiba et al., 2011; Connor et al., 2007
Child-managed
code-focused
See this resource** for more detail. There is also a module you can watch or share with colleagues [https://-intensiveintervention.org/resource/getting-ready-implement-intensive-intervention-infrastructure-data-based-individualization](https://-intensiveintervention.org/resource/getting-ready-implement-intensive-intervention-infrastructure-data-based-individualization)
Data-Based Individualization (DBI): Tier 2 and Tier 3

Data-Based Individualization (DBI) is a systematic process (e.g., Lemons, Kearns, & Davidson, 2014) for using data to determine when and how to provide more intensive intervention in addition to Tier 1 core reading programs:

- Origins of DBI are in school psychology models for supporting teaching first developed at the University of Minnesota (Deno & Mirkin, 1977) and expanded upon by others (Fuchs, Deno, & Mirkin, 1984; Fuchs, Fuchs, & Hamlett, 1989b; Capizzi & Fuchs, 2005).

- DBI is a process, not a single intervention program or strategy. Fuchs and colleagues have described the strategy or process as following a taxonomy for change (Fuchs, Fuchs, & Malone, 2016).

- DBI is an ongoing process comprising intervention and assessment adjusted over time.

- I’ll reference a process that is suggested by the National Center for Intensive Intervention.
Includes Chapters on Intensive Interventions for:

- Phonological Awareness and Phonemic Awareness
- Phonics and Word Recognition
- Fluency
- Oral Language
- Language and Reading Comprehension
- Writing to Read
- Multi-component Reading Interventions

Book Study Example

[Image of book]

This Text Provides Case Studies to Demonstrate Intensification Strategies

- Provide more time and provide smaller group intervention.
- Provide more explicit intervention.
- Provide more systematic intervention.
- Provide more frequent opportunities to respond.
- Provide more specific and corrective feedback.
- Provide cognitive strategies (memory, attention, attribution, motivation, goal setting).
- Provide direct instruction to support transfer to new contexts (e.g., read/write).
- Provide frequent progress monitoring to guide further intensification as needed.
## Share Resources for Evidence about Intensive Interventions

<table>
<thead>
<tr>
<th>Resource</th>
<th>Author or Original Funding Agency</th>
<th>Key Features</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive Intervention Practice Guides</td>
<td>National Center on Intensive Intervention</td>
<td>• Provides users with information about RTI and MTSS (tools for assessment).</td>
<td><a href="http://nclii.org/intensive-intervention-practice-guides/">http://nclii.org/intensive-intervention-practice-guides/</a></td>
</tr>
<tr>
<td>IRIS Center</td>
<td>IRIS Center Peabody College funded by the Office of Special Education Programs</td>
<td>Provides free online resources about evidence-based instructional practices particularly for struggling learners and those with disabilities</td>
<td><a href="https://iris.peabody.vanderbilt.edu">https://iris.peabody.vanderbilt.edu</a></td>
</tr>
<tr>
<td>WWC Practice Guides and Intervention Reports</td>
<td>Institute of Education Sciences through the Department of Education</td>
<td>• Provides intervention reports and reviews of effectiveness for individual reading programs.</td>
<td><a href="https://ies.ed.gov/ncee/wwc/PracticeGuides">https://ies.ed.gov/ncee/wwc/PracticeGuides</a></td>
</tr>
<tr>
<td>Evidence for ESSA</td>
<td>Center for Research and Reform in Education (CREE) at John Hopkins University School of Education</td>
<td>• Provides evidence of a variety of programs in reading and math approved by the Every Student Succeeds Act (ESSA).</td>
<td><a href="https://www.evidenceforessa.org/">https://www.evidenceforessa.org/</a></td>
</tr>
<tr>
<td>International Dyslexia Association (IDA)</td>
<td>International Dyslexia Association</td>
<td>• Provides information about identifying interventions for individuals with dyslexia.</td>
<td><a href="https://dyslexiaida.org/">https://dyslexiaida.org/</a></td>
</tr>
</tbody>
</table>
• Produced by the What Works Clearinghouse of the Institute of Education Sciences (IES), U.S. Department of Education

• Provides specific and coherent evidence-based recommendations specific to various topics

• Intended for use by educators, particularly district-level administrators

• Addresses a multifaceted challenge that lacks developed or evaluated packaged approaches (i.e., specific curriculum programs or materials)

https://ies.ed.gov/ncee/wwc/
PROFESSIONAL LEARNING COMMUNITIES
FACILITATOR’S GUIDE

For the What Works Clearinghouse Practice Guide

Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade

https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectId=4541
Facilitating Professional Learning Communities That Support Struggling Readers Who Are English Learners in the Southwest

Purpose
The Professional Learning Communities (PLC) Facilitator’s Guide assists PLCs in applying evidence-based strategies to support struggling readers who are English learners.

Research Base
The PLC Facilitator’s Guide aligns with the Teaching Academic Content and Literacy to English Learners in Elementary and Middle School educator’s practice guide, produced by the What Works Clearinghouse, Institute of Education Sciences.

The practice guide presents four evidence-based recommendations:

1. Academic Vocabulary: Teach a set of academic vocabulary words intensively across several days using a variety of instructional activities
2. Content-area instruction: Integrate oral and written English language instruction into content-area teaching
3. Structured writing instruction: Provide regular, structured opportunities to develop written language skills
4. Small-group intervention: Provide small-group instructional intervention to students struggling in areas of literacy and English language development

Benefits for Educators
- Evidence-based strategies to help K–8 English learners acquire academic language and literacy skills
- Collaborative professional learning experience for reading, discussing, sharing, and applying the practice guide’s key ideas and strategies
- Activities and content for eight 75-minute PLC sessions
- Systematic five-step cycle that encourages PLCs to debrief, define, explore, experiment, and reflect and plan

Video Series
- 4 introductory videos cover the practice guide recommendations
- 19 classroom videos show actual instruction at three grade levels: 2–3 (combination), 4, and 6–8 (newcomers)
  - Pre-Teaching Vocabulary
  - Activities to Promote Vocabulary
  - Activities to Promote Word Learning
  - Providing Review
  - Word Forms and Cognates
  - Most popular topics

Testimonials From PLC Facilitators:
- “Resources are invaluable... videos are super”
- “The recommendations, the videos, and the graphic organizers... refocused my thinking and clarified the best methods for helping ELLs”
- “Excellent resources for creative, effective PLCs”
- “The resources and research base was most effective”
- “The presentation of research evidence, including the degree of evidence for each of the focus recommendations” [about what was most helpful]

Success
Series titles account for the top 5 most watched videos on the Institute of Education Sciences’ YouTube channel.

Conclusion/Scholarly Significance
The PLC Facilitator’s Guide, along with the companion educator’s practice guide, is intended to foster a deeper understanding of how scientifically based research on educating English learners may be applied to classroom practice. The research on effective instruction for English learners provides the basis for the guide’s content, while the PLC format provides teachers with a structure for shared learning and improvement as they apply evidence-based concepts to classroom practice.

This PLC model is a key component of coherent and high-quality professional development (Desimone, Porter, Garet, Yoon, & Birman, 2002). Through this evidence-based and collaborative approach, the PLC Facilitator’s Guide helps educators align the needs and learning goals of English learners with school curriculum and school- and districtwide change efforts.
Assessment Terms Used in Reading

There are multiple terms used to describe reading assessments. This infographic is intended to clarify these terms.

**Screening Assessment**
Brief assessments, typically administered to all students, designed to identify those at risk of failing an outcome. Performance on a screening assessment can be used to identify students who need further evaluation of skills as well as students who are expected to perform adequately or in an accelerated fashion on an outcome assessment. A screening assessment can also be used as an interim assessment.

**Progress Monitoring**
There are two approaches to monitoring students’ progress throughout the school year.

**Interim Assessment**
An assessment that is used to evaluate student knowledge and skills relative to a specific set of academic goals. These assessments are typically administered within a limited time frame. Results can be used at the classroom level as well as aggregated and reported at the school or district level.

**Summative Assessment**
An assessment generally administered one time, usually at the end of a school year, to evaluate students’ performance relative to a set of content standards.

**Diagnostic Assessment**
An assessment that is typically given to those identified as at-risk on a screening assessment to provide specific information to practitioners about a student’s strengths and weaknesses.

**Formative Assessment**
An on-going assessment process that is used by teachers and students to gauge student learning of the current unit of instruction. Formative assessments help teachers provide corrective feedback, modify instruction to improve the students’ understanding, or indicate areas needing further instruction.

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• Thanks to our funders
  – The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A200397 and by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number R01HD091232
  – The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education or the National Institutes of Health.

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  – Special shout our to thought partners in the lab including doctoral students Dayna Russell Freudenthal Mai W. Zaru
  – and my Co-PI on Project GROW Dr. Brenna Rivas and post-doctoral student Dr. Jennifer Stewart
Most of all, thank you for teaching and supporting teachers and students learning to read!

Thank you to MTSU!

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