Response to Intervention and EL Learners: Questions and some answers

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Acknowledgments

Oracy/Literacy Development Spanish-Speaking Children
1 P01 HD39521-01

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What should research-based interventions look like at Tier 2?
Intervention Framework

- Prevention and intervention are viewed as a continuum
- Basic concepts and foundational skills taught are the same
- The level of intensity varies
- Progress monitoring is used to chart student progress
Comprehensive reading interventions that include **phonological awareness** (Vaughn, Linan-Thompson et al. in press; Vaughn, Mathes et al. in press)

**word attack** (Denton et al., 2004; Vaughn, Linan-Thompson et al. in press; Vaughn, Mathes et al. in press),

**fluency** (Gunn et al., 2000; Vaughn, Linan-Thompson et al. in press) and

**comprehension** (Vaughn, Linan-Thompson et al. in press; Vaughn, Mathes et al. in press)
Instructional Design: Integrated Strands

- Vocabulary and Concept Knowledge
- Phonemic Awareness
- Letter-Sound Recognition
- Word Recognition
- Repeated Connected Text Reading
- Comprehension Strategies
- Encoding
Design

- 50 minutes per day October-May
- 1:4 Teacher to Student ratio
- Provided in addition to normal language arts instruction
- Explicit instruction in synthetic phonics, with emphasis on fluency
- Integrates decoding, fluency, and comprehension strategies
- 100% decodable text
- Carefully constructed scope and sequence designed to prevent possible confusions
Lesson Cycle

- Reading Lesson (@ 35 minutes)
- Embedded Language Support (@ 5 minutes)
- Story Retell (@ 10 minutes)
Practices

- Grouping format
- Multiple opportunities for practice
- Teaching to mastery
- Teaching procedures
Results for English Intervention Cohort 1

- Statistically significant differences in favor of English Intervention treatment group for outcomes in English. Time × Treatment Interaction effects for:
  - Letter naming fluency
  - Letter sound identification
  - Phonological composite (sound matching, blending words, blending non-words, segmenting words, elision)
  - Word attack
  - Dictation
  - Passage comprehension
Results for English Intervention Cohort 2

Statistically significant differences in favor of English Intervention treatment group for outcomes in English. Time × Treatment Interaction effects for:

- Letter sound identification
- Letter word identification
- Phonological composite
- Word attack
- DIBELS, BOY
What works?

Instruction that is

- comprehensive
- that explicitly and systematically builds English language skills during reading instruction
- that explicitly teaches English letter/sound correspondences, word patterns and spelling rules
- that introduces skills in isolation and practice in context
- that builds vocabulary and emphasizes the relationships between and among words to build oral language skills
- that includes story retells that target both comprehension and language development
With whom?

- English language learners from Spanish speaking homes receiving core reading instruction in English.
In what contexts?

- In schools that are providing good instruction as measured by state accountability systems
- In schools where on average 98% of students are Hispanic
- In schools with large numbers of EL learners
- In schools in which 85-100% of students qualify for free or reduced lunch program
- In schools in which the language of instruction is consistent across tiers
- In urban and border areas
Is it enough to outperform a control group or do we also need to determine students’ RtI?
If the answer is no, what should response to intervention look like?
What is Response to Intervention?

- A practice that includes
  - High-quality instruction matched to student needs
  - The use of learning rate over time and level of performance to make instructional decisions
Rationale

- Need to determine what constitutes adequate response to intervention for English language learners learning to read in English.
How do we measure response to intervention?

- Examine the relative number of EL learners at-risk for reading difficulties who meet RtI criteria after an intensive seven month intervention using three different approaches; performance level, growth rate, and discrepancy.
Identification of at-risk students

- Criteria:
  - Scores below the 25th %ile on LWID
  - Unable to read more than 1 word on an experimental word list
Sample

- Longitudinal
  - 100 student in immersion programs in three sites in TX not in at-risk sample

- At-risk
  - Intervention 40
  - Control 36
Response to Intervention Criteria

- **Performance level**
  - SSs above 95 on both Word Attack and PC
  - ORF (40/70)

- **Growth**
  - ORF (at least 2 words per week; 48 each year)
Response to Intervention

- Matched longitudinal sample on both:
  - ORF mean gain within year:
    - English: 33 G1, 25 G2

  AND

  - ORF benchmark (mean score)
    - English: 64 G1, 90 G2
### English Intervention Study Cohort 1

<table>
<thead>
<tr>
<th></th>
<th>End of Grade 1</th>
<th></th>
<th>End of Grade 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
<td>C</td>
<td>T</td>
<td>C</td>
</tr>
<tr>
<td>SS below 85 on WA or PC</td>
<td>2/22</td>
<td>10/17</td>
<td>1/18</td>
<td>6/11</td>
</tr>
<tr>
<td></td>
<td>9%</td>
<td>59%</td>
<td>6%</td>
<td>55%</td>
</tr>
<tr>
<td>SS between 85-95 on WC or PC</td>
<td>6/22</td>
<td>4/17</td>
<td>8/18</td>
<td>4/11</td>
</tr>
<tr>
<td>with no scores below 85</td>
<td>27%</td>
<td>24%</td>
<td>44%</td>
<td>36%</td>
</tr>
<tr>
<td>SS above 95 on WA AND PC</td>
<td>14/22</td>
<td>3/17</td>
<td>9/18</td>
<td>1/11</td>
</tr>
<tr>
<td></td>
<td>64%</td>
<td>18%</td>
<td>50%</td>
<td>9%</td>
</tr>
</tbody>
</table>
### Performance level (WA & PC)

<table>
<thead>
<tr>
<th></th>
<th>T (40)</th>
<th>C (36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Criteria in 1st grade</td>
<td>40% (16)</td>
<td>30% (11)</td>
</tr>
<tr>
<td>Met criteria in 2nd grade</td>
<td>32% (13)</td>
<td>25% (9)</td>
</tr>
<tr>
<td>Met criteria both years</td>
<td>25% (10)</td>
<td>13% (5)</td>
</tr>
<tr>
<td>Met Criteria in 1st but not second</td>
<td>15% (6)</td>
<td>16% (6)</td>
</tr>
<tr>
<td>Did not meet criteria in 1st but did in 2nd</td>
<td>7% (3)</td>
<td>11% (4)</td>
</tr>
</tbody>
</table>
### Performance level (WA, PC, ORF)

<table>
<thead>
<tr>
<th>Category</th>
<th>T (40)</th>
<th>C (36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Criteria in 1st grade</td>
<td>7% (3)</td>
<td>5% (2)</td>
</tr>
<tr>
<td>Met criteria in 2nd grade</td>
<td>20% (8)</td>
<td>11% (4)</td>
</tr>
<tr>
<td>Met criteria both years</td>
<td>5% (2)</td>
<td>5% (2)</td>
</tr>
<tr>
<td>Met Criteria in 1st but not second</td>
<td>2% (1)</td>
<td>0</td>
</tr>
<tr>
<td>Did not meet criteria in 1st but did in 2nd</td>
<td>15% (6)</td>
<td>5% (2)</td>
</tr>
</tbody>
</table>
## Performance level - Comparison

<table>
<thead>
<tr>
<th></th>
<th>End of 1st grade</th>
<th>End of 2nd grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
<td>C</td>
</tr>
<tr>
<td>Both WA &amp; PC</td>
<td>16/40</td>
<td>11/36</td>
</tr>
<tr>
<td>above SS 95</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>3/40</td>
<td>2/36</td>
</tr>
<tr>
<td>Both WA &amp; PC</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>above SS 95 and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORF (40/70)</td>
<td></td>
<td></td>
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</tbody>
</table>
Most students aren’t meeting the performance level, but are they making gains?
Growth (2 words/week [48])

<table>
<thead>
<tr>
<th></th>
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<th>C (36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Criteria in 1st grade</td>
<td>5% (2)</td>
<td>2% (1)</td>
</tr>
<tr>
<td>Met criteria in 2nd grade</td>
<td>17% (7)</td>
<td>8% (3)</td>
</tr>
<tr>
<td>Met criteria both years</td>
<td>5% (2)</td>
<td>2% (1)</td>
</tr>
<tr>
<td>Met Criteria in 1st but not second</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Did not meet criteria in 1st but did in 2nd</td>
<td>12% (5)</td>
<td>5% (2)</td>
</tr>
</tbody>
</table>
How do they compare to their peers in the longitudinal sample?

English: 33 G1, 25 G2
## Growth

<table>
<thead>
<tr>
<th>Category</th>
<th>T (40)</th>
<th>C (36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Criteria in 1st grade</td>
<td>10% (4)</td>
<td>11% (4)</td>
</tr>
<tr>
<td>(33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Met criteria in 2nd grade</td>
<td>40% (16)</td>
<td>27% (10)</td>
</tr>
<tr>
<td>(25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Met criteria both years</td>
<td>7% (3)</td>
<td>11% (4)</td>
</tr>
<tr>
<td>Met Criteria in 1st but not second</td>
<td>2% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>Did not meet criteria in 1st but did in 2nd</td>
<td>32% (13)</td>
<td>16% (6)</td>
</tr>
</tbody>
</table>
## Growth-Comparison

<table>
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<tr>
<th></th>
<th>End of 1st grade</th>
<th>End of 2nd grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
<td>C</td>
</tr>
<tr>
<td>2 words/week gain</td>
<td>2/40</td>
<td>1/36</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>No discrepancy w/longitudinal sample</td>
<td>4/40</td>
<td>4/36</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>11%</td>
</tr>
</tbody>
</table>
### Performance level

<table>
<thead>
<tr>
<th></th>
<th>T (40)</th>
<th>C (36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Criteria in 1st grade (61)</td>
<td>2% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>Met criteria in 2nd grade (90)</td>
<td>15% (6)</td>
<td>8% (3)</td>
</tr>
<tr>
<td>Met criteria both years</td>
<td>2% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>Met Criteria in 1st but not second</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Did not meet criteria in 1st but did in 2nd</td>
<td>12% (5)</td>
<td>8% (3)</td>
</tr>
</tbody>
</table>
Matched on both growth and performance level

<table>
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<tbody>
<tr>
<td>Met Criteria in 1st grade</td>
<td>2% (1)</td>
<td>0</td>
</tr>
<tr>
<td>Met criteria in 2nd grade</td>
<td>15% (6)</td>
<td>8% (3)</td>
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<tr>
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<td>15% (6)</td>
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</table>
Summary

- Second year of instruction seems to be critical—possibly students need the time to acquire more English skills and more practice reading.
- Treatment group performs better than control at second grade.
- The structure, explicitness, and systematicity of treatment many contribute to outcomes.
- Use of just SS on WA and PC seems to overidentify responders.
Response to Intervention

- 6 Title I elementary schools in one near-urban district in the Southwest
- All the schools implemented a 3-tier model
- District percentages
  - 15%AA  69%H  14.3%C  1.7%O
Tier 1

- All K-3 students receive Tier 1 instruction

- Components:
  - Core reading instruction
    - Critical components of reading instruction
    - Features of effective instruction
  - Benchmark testing of all students, 3 times/year
  - Ongoing professional development
Tier 2

- Provided in addition to 90 minutes of core reading instruction (Tier 1)
- Does not replace any part of core instruction
- 30 minutes a day, 5 days per week for 10-12 weeks
- Provided in groups of 3-5 students (homogeneous)
- Progress monitoring is conducted every 2 weeks
Intervention

- Increased intensity in critical areas of reading
- Explicit and systematic instruction
- Increased opportunities to practice
- Responsive intervention
Tier 3

- Provided **in addition to** 90 minutes of core reading instruction (Tier 1)
- Does not replace any part of core instruction
- 50 minutes a day, 5 days per week for 10-12 weeks
- Provided in groups of 3 students (homogeneous)
- Progress monitoring is conducted every 2 weeks
Intervention

- Critical areas of reading
- Explicit and systematic instruction
- Increased opportunities to practice
- Responsive intervention
First Grade

- 678 students in the district
- 52 (7.6%) qualified for either 1 or 2 sessions of Tier 2 intervention
- 27 intervention students
- 25 comparison students
- Percentage of all first grade students
  - .8% AA; 71% H, 13.4 C; .2 Other
- Percentage of at-risk students
  - 11.5% AA; 71% H; 13.4% C; 3.8% O
Representation in risk category

- African American and Caucasian students are slightly under represented
- Hispanic and Asian and Native American students are slightly over represented.
Representation of students eligible for intervention

- District percentages
  - 15%AA  69%H  14.3%C  1.7%O
- 1-2 sessions (n = 52)
  - Expected
    - 7.8  35.8  7.43  .8
  - Actual
    - 4  19  2  2
    - 2  18  5
Second Grade

- 612 students in the district
- 42 (6.8%) students qualified for 2 sessions of Tier 3 intervention
- 17 intervention students
- 25 comparison students
- Percentage of all second grade students
  - 1.3% AA; 3.9% H; 1.6% C
- Percentage of at-risk second grade students
  - 19% AA; 57.1% H; 23.8% C
Representation in risk category

- African American and Caucasian students are over represented
- Hispanic students are underrepresented
- No Asian or Native American students were in this category
### Representation of students eligible for intervention

#### District percentages
- 15% AA
- 69% H
- 14.3% C
- 1.7% O

#### 3-4 sessions (n = 42)
- **Expected**
  - 6.3
  - 28.9
  - 6
  - .7
- **Actual**
  - 5
  - 9
  - 3
  - 3
Summary

- At both Tier 2 and Tier 3, students are represented in the intervention groups in almost the same proportions as they appear in the general school population.
- There are slight over and under representations and these shift over time.
Conclusion

- While there are still questions to answer
  - We do have some answers in terms of the appropriateness of interventions for some groups of students
  - Students across groups are represented in consistent patterns when RtI is implemented in a 3-Tier model
  - We still need to determine the best way to define RtI for eligibility determination