Immediate, Intensive Interventions: Their critical role within a whole school program to prevent reading difficulties

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First Reader
By Billy Collins

I can see them standing politely on the wide pages that I was still learning to turn, Jane in a blue jumper, Dick with his crayon-brown hair, playing with a ball or exploring the cosmos of the backyard, unaware they are the first characters, the boy and girl who begin fiction.

Beyond the simple illustrations of their neighborhood, the other protagonists were waiting in a huddle: frightening Heathcliff, frightened Pip, Nick Adams carrying a fishing rod, Emma Bovary riding into Rouen.

But I would read about the perfect boy and his sister even before I would read about Adam and Eve, garden and gate, and before I heard the name Gutenberg, the type of their simple talk was moving into my focusing eyes.
It was always Saturday and he and she were always pointing at something and shouting, “Look!” pointing at the dog, the bicycle, or at their father as he pushed a hand mower over the lawn, waving at aproned mother framed in the kitchen doorway, pointing toward the sky, pointing at each other.

They wanted us to look but we had looked already and seen the shaded lawn, the wagon, the postman. We had seen the dog, walked, watered and fed the animal, and now it was time to discover the infinite, clicking permutations of the alphabet’s small and capital letters. Alphabetical ourselves in the rows of classroom desks, we were forgetting how to look, learning how to read.
Reading First’s model for preventing reading failure in grades K-3: Three big Ideas

1. Increase the quality and consistency of instruction in every K-3 classroom. Provide initial instruction that is appropriate to the needs of the majority of students in the class.

2. Conduct timely and valid assessments of reading growth to identify struggling readers.

3. Provide high quality, intensive interventions to help struggling readers catch up with their peers.
Evidence from one school that this model can be used to produce significant improvements in reading outcomes.

School Characteristics:
- 70% Free and Reduced Lunch (going up each year)
- 65% minority (mostly African-American)

Elements of Curriculum Change:
- Movement to a more balanced reading curriculum beginning in 1994-1995 school year (incomplete implementation) for K-2
- Improved implementation in 1995-1996
- Implementation in Fall of 1996 of screening and more intensive small group instruction for at-risk students
Hartsfield Elementary Progress over five years

Proportion falling below the 25th percentile in word reading ability at the end of first grade

- 1995: 31.8%
- 1996: 20.4%
- 1997: 10.9%
- 1998: 6.7%
- 1999: 3.7%

Average Percentile for entire grade (n=105):
- 1995: 48.9
- 1996: 55.2
- 1997: 61.4
- 1998: 73.5
- 1999: 81.7

Screening at beginning of first grade, with extra instruction for those in bottom 30-40%
Proportion falling below the 25th Percentile

1995: 31.8
1996: 20.4
1997: 10.9
1998: 6.7
1999: 3.7

Average Percentile

1995: 48.9
1996: 55.2
1997: 61.4
1998: 73.5
1999: 81.7

Hartsfield Elementary Progress over five years

Average Percentile

1996: 58.2
1997: 67.1
1998: 74.1
1999: 81.5
FCAT Performance in Spring, 2003

Hartsfield Elem.  State Average

Level 2  Level 1

- Hartsfield Elem.
- State Average
What are the areas most likely to require intensive intervention for students in RF schools?

Three main reasons children struggle in learning to read (NRC report)

1. Lack of preparation, or lack of talent that interferes with ability to understand the alphabetic principal (phonics) and learn to read words accurately and fluently

2. Lack of preparation, or lack of talent in the general verbal domain (i.e. vocabulary) that limits comprehension of written material

3. Low motivation to learn or behavior problems that interfere with learning in the classroom
Research indicates that students need to acquire skills and knowledge in at least five main areas in order to become proficient readers.

**Five critical components:**

- **Phonemic Awareness**
- **Phonics**
- **Fluency**
- **Vocabulary**
- **Comprehension strategies**

- Identifying words accurately and fluently
- Constructing meaning once words are identified
Individual differences in the development of phonological awareness

SES Differences in Phonological Awareness

 ↭ Cross-sectional study comparing the performance of 250 children from higher income families to 170 children from lower income families.

 ↭ Children were between two- and five-years of age.
SES Differences in Phonological Sensitivity

\[ \text{Children completed tests of phonological awareness that assessed their ability to analyze the phonological structure of words or to blend word parts together to form words.} \]

\[ \text{Simple tests that asked children to break apart or blend compound words, syllables, then phonemes.} \]
SES Differences in Phonological Sensitivity

1. Children from lower SES backgrounds have significantly less well developed phonological sensitivity.

2. Children from lower SES backgrounds experience significantly less growth in these skills during the preschool years compared to their higher SES counterparts.
Diversity in knowledge of letter names

bottom 10%: 2
next 10%: 5
next 10%: 5
next 10%: 9
next 10%: 9
next 10%: 10
next 25%: 6
next 25%: 6
next 25%: 6
next 25%: 6
top 25%: 26
Individual differences in vocabulary

Vocabulary refers to children’s knowledge of the meaning of words.

There are enormous differences in pre-school language experience that dramatically affect children’s vocabulary by the time they enter school.

First-grade children from higher SES groups know about twice as many words as lower SES children.

Children differ from one another in the breadth, depth, and fluency of their word knowledge.
Language

Meaningful Differences
in the Everyday Experience of Young American Children

Betty Hart & Todd R. Risley

Foreword by Lois Bloom
Hart and Risley (1995) conducted a longitudinal study of children and families from three groups:

- Professional families
- Working-class families
- Families on welfare
Hart & Risley compared the mean number of interactions initiated per hour in each of the three groups.
Interactions

Hart & Risley also compared the mean number of minutes of interaction per hour in the three groups.
Cumulative Language Experiences

Cumulative Words Per Hour

- Welfare
- Working
- Professional
Cumulative Language Experiences

Different words used per hour

- Welfare
- Working
- Professional
Cumulative Language Experiences

Cumulative Words Spoken to Child
(in millions)

Age of child
(in months)

Professional
Working
Welfare
A central problem in reading instruction arises, not from the absolute level of children’s preparation for learning to read, but from the diversity in their levels of preparation

(Olson, 1998)
Diversity in Preparation and Ability for Learning to Read

Diversity of Educational Response
Diversity in Preparation and Ability for Learning to Read

Diversity of Educational Response

[Bar chart with labels 1, 30, 70, 100]
The consensus view of most important instructional features for interventions

Interventions are more effective when they:

Provide *systematic* and *explicit* instruction on whatever component skills are deficient: phonemic awareness, phonics, fluency, vocabulary, reading comprehension strategies.
What do we mean by systematic and explicit?

**Systematic**

Guided by a scope and sequence that is comprehensive, that teaches all the appropriate knowledge and skills in a “programmatically scaffolded” manner.

**Explicit**

“First graders who are at risk for failure in learning to read do not discover what teachers leave unsaid about the complexities of word learning. As a result, it is important to directly teach them procedures for learning words” (Gaskins, et al., 1997)
The consensus view of most important instructional features for interventions

Interventions are more effective when they:

Provide **systematic** and **explicit** instruction on whatever component skills are deficient: phonemic awareness, phonics, fluency, vocabulary, reading comprehension strategies

Provide a significant increase in **intensity** of instruction
The logic of instructional intensity

Many children are already behind in vocabulary and print knowledge when they enter school.

To achieve grade level standards by third grade, poor children must learn vocabulary words at a faster rate than their middle class peers in grades K-3.

The most direct way to increase learning rate is by increasing the number of positive, or successful, instructional interactions (pii) per school day.

There are a variety of ways to increase the number of positive instructional interactions per school day.
The consensus view of most important instructional features for interventions

Interventions are more effective when they:

- Provide **systematic** and **explicit** instruction on whatever component skills are deficient: phonemic awareness, phonics, fluency, vocabulary, reading comprehension strategies.
- Provide a significant increase in **intensity** of instruction.
- Provide ample opportunities for guided practice of new skills.
- Provide systematic cueing of appropriate strategies in context.
- Provide appropriate levels of scaffolding as children learn to apply new skills.
Do the relatively specific instructional program recommendations in Reading First mean that the federal government is advocating a “one size fits all” approach to instruction?

Absolutely Not!

We all know that children vary enormously from one another in their instructional needs.

To be most effective, instruction must be adapted to the needs of individual children.
One child may require extra instruction in phonemic awareness and phonics to get a good start in reading.

Another child might require extra instruction in vocabulary.

Another child may come to school with strong phonemic awareness and letter knowledge, and may require very little instruction in phonics to begin reading to build fluency.

Another child may know very little about letters and sounds upon school entry, and may require special instructional support in this area for some time.

Still other children will require extended practice to develop reading fluency.
Johnny W.'s instructional needs:

- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension strategies
Jimmy T.’s instructional needs:

- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension strategies
Alexandra R.’s instructional needs:

- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension strategies
Timothy B.’s instructional needs:

- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension strategies
Instructional adaptations for individual children will be made primarily in terms of varying amounts and intensity of instruction and practice on the five components.

If children have difficulties learning “phonics” they should not be switched to a “sight word” approach. This will not build the necessary alphabetic reading skills that are necessary to achieve high levels of reading ability.

Children who experience reading difficulties must be helped to acquire adequate skills in all five components. If any one of these does not develop properly, the child is unlikely to attain grade level reading skills.
The top five myths about interventions for struggling readers

1. If a child is a “visual” learner, they should be taught to read using a visual, not an auditory strategy.

2. If a child has not learned “phonics” by the end of first grade, they need to be taught to read in some other way.

3. Children who struggle with phonemic awareness, vocabulary, or phonics in kindergarten and first grade will frequently “catch up” if given time.

4. We should take guidance from theories of “multiple intelligences” or “learning styles” to help us adapt our reading instruction for different children.

5. A little quality time with an enthusiastic volunteer tutor can solve most children’s reading problems.
Interventions should be organized in tiers

Layers of intervention responding to student needs

Each tier provides more intensive and supportive intervention

Aimed at preventing reading disabilities
TIER I: Core class instruction

TIER I is comprised of three elements:

- Core reading program
- Benchmark testing of students to determine instructional needs at least three times a year
- Ongoing professional development
# TIER I: CORE CLASS INSTRUCTION (cont’d)

<table>
<thead>
<tr>
<th>Focus</th>
<th>For all students in K through 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Scientific-based reading instruction and curriculum emphasizing the five critical elements of beginning reading</td>
</tr>
<tr>
<td>Grouping</td>
<td>Multiple grouping formats to meet student needs</td>
</tr>
<tr>
<td>Time</td>
<td>90 minutes per day or more</td>
</tr>
<tr>
<td>Assessment</td>
<td>Benchmark assessment at beginning, middle, and end of the academic year</td>
</tr>
<tr>
<td>Interventionist</td>
<td>General education teacher</td>
</tr>
<tr>
<td>Setting</td>
<td>General education classroom</td>
</tr>
</tbody>
</table>
TIER II: Supplemental instruction

Tier II is small-group supplemental instruction in addition to the time allotted for core reading instruction.

Tier II includes programs, strategies, and procedures designed and employed to supplement, enhance, and support Tier I.
<table>
<thead>
<tr>
<th><strong>Focus</strong></th>
<th>For students identified with marked reading difficulties, and who have not responded to Tier I efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program</strong></td>
<td>Specialized, scientifically based reading program(s) emphasizing the five critical elements of beginning reading</td>
</tr>
<tr>
<td><strong>Grouping</strong></td>
<td>Homogeneous small group instruction (1:3, 1:4, or 1:5)</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Minimum of 30 minutes per day in small group in addition to 90 minutes of core reading instruction</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Progress monitoring twice a month on target skill to ensure adequate progress and learning</td>
</tr>
<tr>
<td><strong>Interventionist</strong></td>
<td>Personnel determined by the school (e.g., a classroom teacher, a specialized reading teacher, an external interventionist)</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td>Appropriate setting designated by the school; may be within or outside of the classroom</td>
</tr>
</tbody>
</table>
Tier III is intensive, strategic, supplemental instruction specifically designed and customized small-group or 1:1 reading instruction that is extended beyond the time allocated for Tier I and Tier II.
<table>
<thead>
<tr>
<th><strong>Focus</strong></th>
<th>For students with marked difficulties in reading or reading disabilities and who have not responded adequately to Tier I and Tier II efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program</strong></td>
<td>Sustained, intensive, scientifically based reading program(s) emphasizing the critical elements of reading for students with reading difficulties/disabilities</td>
</tr>
<tr>
<td><strong>Grouping</strong></td>
<td>Homogeneous small group instruction (1:1-1:3)</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Minimum of two 30-minute sessions per day in small group or 1:1 in addition to 90 minutes of core reading instruction.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Progress monitoring twice a month on target skills to ensure adequate progress and learning</td>
</tr>
<tr>
<td><strong>Interventionist</strong></td>
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<td><strong>Setting</strong></td>
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How can immediate, intensive interventions be scheduled and delivered?

Delivered by regular classroom teacher during the “uninterrupted reading period” in very small groups.
Classroom Organization: Learning Centers for differentiated groups

- **Teacher-Led Center**
  - Small group instruction
    - Teaching “on purpose”
    - Careful observation of individual students
    - Addresses particular individual needs
    - Opportunities for responsive scaffolding

- **Student Centers**
  - Academically engaged
  - Accountability
  - Group, Pair, Cooperative, Individual
How can immediate, intensive interventions be scheduled and delivered?

1. Delivered by regular classroom teacher during the “uninterrupted reading period”
2. Delivered by additional resource personnel during the “uninterrupted reading period”, or at other times during day
3. Delivered by classroom and resource personnel during after school or before school programs
4. Delivered by well-trained and supervised paraprofessionals during the “uninterrupted reading period” or other times
5. Delivered by peers during “uninterrupted reading period”
6. Delivered by computers throughout the day
How can we insure that interventions are delivered consistently with high quality?

Professional development to provide knowledge of instructional strategies, content (scope and sequence and selection of materials), and appropriate practice/skill building activities -- use of assessment data to identify who should receive interventions and what their focus should be.

Identification of high quality intervention programs/materials and professional development in their use and individualization.
A high-quality intervention program can provide a kind of on-going professional development for teachers in the critical elements and methods of instruction for phonemic awareness, phonics, fluency, vocabulary, and comprehension strategies.

“Interestingly, many seasoned teachers commented that their abilities to teach phonics flexibly and responsively were grounded in experiences they had as novices working with reading programs that featured a systematic phonics component.” (Villaume & Brabham, 2003)
What materials are available to guide intervention instruction?

1. New “core reading programs” frequently have systematic intervention programs to use in coordination.

2. New “core reading programs” frequently have suggested intervention activities as part of the program.

3. There are many programs designed specifically for small group instruction in language, PA, phonics, vocabulary:
   - *Language for Learning*—early vocabulary
   - *Road to the Code* – PA and early phonics
   - *Great Leaps, Quickreads* – Fluency
   - *Elements of Reading: Vocabulary*—K-3 vocabulary

4. Many Programs are reviewed at [www.fcrr.org](http://www.fcrr.org) - FCRR Reports
What does it take to manage a successful interventions in a RF school?

1. Well trained teachers who understand the process of learning to read and how to identify children lagging behind in development.

2. Systematic and reliable assessments to monitor the growth of critical reading skills

3. Leadership within the school to allocate intervention resources appropriately, and to monitor the use of those resources

4. Appropriate materials available to help structure the interventions and provide instruction and practice activities at the appropriate level of difficulty

5. Personnel to assist the classroom teacher in providing intensive interventions to the students most in need
An example of a successful intervention from a research study

1. Children were identified at the beginning of the year as the 18% most at risk from a set of schools with an average free/reduced percentage of 45%

2. The schools in the study were using a systematic and explicit program of classroom instruction – 90 minute instructional block

3. The intervention was carefully written to be systematic, and to support the scope and sequence of the classroom program – provided more practice and more careful monitoring of responses.

4. Students received instruction in groups of 3 or 5 students, 45 minutes a day, five days a week, from October through May – approx. 90 hours
Growth in Word Reading Ability

National Percentile

October January May

30 70

25th 50th 75th
The success in preventing word level reading difficulties is likely to be an overestimate of our success in preventing problems on third grade accountability measures.

46% of sample had broad vocabulary scores below the 30th percentile.

At end of second grade, although word level skills stayed strong (1.6% below 30th), estimate 4.1% failure rate for silent reading comprehension.

Problem with comprehension will become more pronounced as comprehension tests become more complex -- we need to find a solution for the "vocabulary gap"
A final concluding thought....

When you have a great and difficult task, something perhaps almost impossible, if you work a little at a time, every day a little, suddenly the work will finish itself.

Isak Dinesen
Thank You

www.fcrr.org

Science of reading section