Interventions for Students with Reading Disabilities: Requirements at the School and Classroom Level

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The basic problem that brings us together...

Children are enormously diverse in their talent and preparation for learning to read.

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)
What are the most important ways children are diverse—when it comes to learning to read?

1. They are diverse in their talent and their preparation for learning to read words accurately and fluently
What are the most important ways children are diverse when it comes to learning to read?

1. They are diverse in their talent and their preparation for learning to read words accurately and fluently

2. They are diverse in their oral language knowledge and abilities - vocabulary and world knowledge

3. They are diverse in their abilities to manage their learning behaviors and their motivation to apply themselves to learning to read
The challenge of diversity in talent and preparation for learning to read

Diversity in talent and preparation

Diversity of educational response
The challenge of diversity in talent and preparation for learning to read

**Diversity in talent and preparation**

Interventions and differentiated instruction in the classroom

**Diversity of educational response**
What are the **key ingredients** at the classroom and school level needed to prevent reading difficulties in young children?
A model for preventing reading failure in grades K-3: The big Ideas

1. Increase the quality, consistency, and reach of instruction in every K-3 classroom

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

3. Provide more intensive interventions to “catch up” the struggling readers

The prevention of reading difficulties is a school-level challenge
Screening or Progress monitoring assessment in 2nd Grade

Expected Progress

Correct words per minute

Sept Dec Feb May
TIER II Interventions

Tier II is almost always given in small groups.

Tier II should always increase the intensity of instruction.
The Logic of Instructional Intensity

If a child performs below grade level targets on a screening or progress monitoring measure, they are already substantially behind in required development.

To achieve the grade level standard by the end of the year, these students must learn critical skills faster than their grade level classmates.
Screening or Progress monitoring assessment

<table>
<thead>
<tr>
<th>Month</th>
<th>Correct words per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept</td>
<td>32</td>
</tr>
<tr>
<td>Dec</td>
<td>48</td>
</tr>
<tr>
<td>Feb</td>
<td>64</td>
</tr>
<tr>
<td>May</td>
<td>96</td>
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- **Expected Progress**

The graph shows the expected progress in correct words per minute from September to May.
The Logic of Instructional Intensity

If a child performs below grade level targets on a screening or progress monitoring measure, they are already substantially behind in required development.

To achieve the grade level standard by the end of the year, these students must learn critical skills faster than their grade level classmates.

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

Teacher explains a concept clearly at the right level, and the child is actually attending-processing the information.

Teacher models a correct response and the child attends to the model.

Teacher corrects students error in a way that increases the chance for the student to respond correctly the next time.

Teacher reinforces a correct response in way that increases probability child will respond correctly on future occasions.
The Goal of Increased Instructional Intensity

“School based preventive efforts should be engineered to maintain growth in critical word reading skills at roughly normal levels throughout the elementary school period”

(Torgesen, 1998)
There are serious consequences that follow from getting a slow start in learning to read.

Poor readers get less reading practice from the beginning of first grade.

Mean words read by each child in reading sessions at three points in the year.

Biemiller, 1977-78
 Tier II Interventions

Tier II is almost always given in small groups.

Tier II should always increase the intensity of instruction.

Tier II must be precisely targeted at the right level on student’s most critical learning needs.

Tier II must increase the explicitness of instruction.
Explicit Instruction

• Nothing is left to chance; all skills are taught directly.
• Student practice activities are carefully guided with “instructive” error correction
• Practice activities are carefully engineered to produce mastery
• Development of critical skills is carefully monitored-instruction is focused on mastery.
An Example of an Effective Intervention
Design of Study

1. Most “at risk” first graders from five elementary school—PPVT above 70

2. Instruction provided in 45 min. sessions every day from October through May in groups of 3 or 5 by experienced teachers or well-trained paraprofessionals

3. Used a structured (scripted) reading program that contained instruction and practice in phonemic awareness, phonics, fluency, and comprehension

4. Used a number of methods to achieve fidelity of implementation
   - 3 days of initial training
   - Weekly supervisory visits
   - Monthly inservice (3 hours)
Work on phonemic awareness
Blending sounds into words
Directly building sight recognition of high utility words
Comprehension-story grammar...
Two types of scaffolding....
Programmatic Scaffolding

Instructional sequences organized so that students have the knowledge and skills they need to respond before they are asked to respond

Micro level within lessons
- Modeling of correct responses
- Complete and clear explanations

Embedded in the instructional sequence
- Oral blending skills before blending printed words
- Awareness of phonemes before learning how they are represented in print
- Grapheme-phoneme knowledge before decoding
Responsive Scaffolding

Teacher follows an error with a question or comment that directs the child to do the thinking necessary to correct the response – a Pii

On video
Teacher notices error – stretches word “slim”

Asks question—what’s the last sound you hear in slim?

Child responds -- /m/

Teacher asks, pointing to spelling, “does that match?”
Two types of scaffolding....
Growth in Word Reading Ability

National Percentile

October | January | May

30 | 70

25th | 50th | 75th
Growth in Correct Words Per Minute on First Grade Level Passages

Comprehension on SAT9 = 50th percentile
Tier II interventions across the grade levels

Kindergarten – 20 minutes, small group, push in

First grade – 30-45 minutes, small group, push in or additional instruction outside the block
One important way to enhance the power of instruction during the 90 minute block is to have some of the small group instruction provided by another teacher or paraprofessional.

- Classroom teacher and group of 7
- Independent Learning Activity (5)
- Resource teacher and group of 4
- Independent Learning Activity (6)
Tier II interventions across the grade levels

Kindergarten – 20 minutes, small group, push in

First grade – 30-45 minutes, small group, push in or additional instruction outside the block

2-3 grades – 30-45 minutes, small group, push in plus another 30-45 minutes outside of reading block

or

2nd and 3rd Grade – an “intervention” core, smaller class for 90 minutes—”walk and read”
Four Second Grade Classes
Orderly movement between classes

Intervention teacher
Possible schedule for a 90 minute intervention class in 2\textsuperscript{nd} and 3\textsuperscript{rd} grade

2 teachers -- 30 minute rotations

Group of 5 – decoding and fluency - low, mid, hi

Group of 5 – fluency, comp, vocab – low, mid, hi

Group of 5 – technology-learning center
As we work to solve this problem, we will need to try some new things.

“In an increasingly complex world, sometimes old questions require new answers.”
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 computers throughout the day
Screening or Progress monitoring assessment

Correct words per minute

- Sept
- Dec
- Feb
- May

Expected Progress

- 32
- 48
- 64
- 80
- 96
Tier III is intensive, strategic, 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.
What are the critical elements of effective interventions?

Ways that instruction must be made more powerful for students “at-risk” for reading difficulties.

More powerful instruction involves:

- More instructional time
- Smaller instructional groups
- More precisely targeted at right level
A mistake we often make in education is to plan the curriculum materials very carefully, arrange all the instructional materials wall to wall, open the doors of the school, and then find to our dismay that they’ve sent us the wrong kids.

What are the critical elements of effective interventions?

Ways that instruction must be made more powerful for students “at-risk” for reading difficulties.

More powerful instruction involves:

- More instructional time
- Smaller instructional groups
- More precisely targeted at right level
- Clearer and more detailed explanations
- More systematic instructional sequences
- More extensive opportunities for guided practice
- More opportunities for error correction and feedback

resources

skill
Two resources for teachers and schools to improve differentiated instruction and interventions:

To download up to 240 independent student learning activities for K-1 classrooms, and also to receive video-based training in the use of these activities to support reading instruction: go to http://www.fcrr.org/activities/

To find objective, teacher-written reviews of commercially available intervention programs and materials, go to: http://www.fcrr.org/FCRRReports/

About 70 supplemental/intervention program reviews are available
What about interventions for older students?

There are really two problems to address...

1. We have many students with reading disabilities in late elementary, middle and high school right now, who did not receive the benefit of powerful preventive instruction and continue to struggle with basic skills...

2. Many students with reading disabilities need continued support for the development of more advanced reading skills as they encounter increasingly complex text in middle and high school ....
A comprehensive model for reading instruction in late elementary, middle, and high school

1. Intensive Reading Classes for struggling readers—taught by reading specialists

2. More effective instruction in content knowledge and understanding—made accessible for weaker readers

3. Content teachers provide instruction that helps students improve their skills in how to learn from reading—reading strategies

4. Ongoing formative assessments as well as end of year outcome assessments

http://smarttogether.org/clc/index.html
What is currently known about the effects of intensive remedial interventions for older students with serious reading difficulties
Change in Reading Skill for Children with Reading Disabilities who Experience Growth in Reading of .04 Standard Deviations a Year

Hanushek, Cain, & Rivkin, 1998
A study of intensive, highly skilled intervention with 60 children who had severe reading disabilities

Children were between 8 and 10 years of age

Had been receiving special education services for an average of 16 months

Nominated as worst readers: at least 1.5 S.D’s below grade level

Average Word Attack=69, Word Identification=69, Verbal IQ=93

Randomly assigned to two instructional conditions that both taught “phonics” explicitly, but used different procedures with different emphasis

Children in both conditions received 67.5 hours of one-on-one instruction, 2 hours a day for 8 weeks

Children were followed for two years after the intervention was completed
Time x Activity Analyses for the Two Intervention Approaches

<table>
<thead>
<tr>
<th>Activity</th>
<th>LIPS %</th>
<th>EP %</th>
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<tbody>
<tr>
<td>Phonemic Awareness and Phonemic Decoding</td>
<td>85%</td>
<td>20%</td>
</tr>
<tr>
<td>Sight Word Instruction</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Reading or writing connected text</td>
<td>5%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Growth in Total Reading Skill Before, During, and Following Intensive Intervention

![Graph showing growth in total reading skill](image-url)
Growth in phonemic decoding during intervention & follow-up

- **LIPS**
- **EP**

- **Pretest**
- **Posttest**
- **1 year**
- **2 years**

- **Standard Score**

- Pretest: 90
- Posttest: 100
- 1 year: 90
- 2 years: 90
Growth in text reading accuracy during intervention & follow-up
Growth in comprehension during intervention & follow-up

Pretest  posttest  1 year  2 years

Standard Score

LIPS

EP
Growth in fluency during intervention & follow-up

- Pretest
- Posttest
- 1 year
- 2 years

Standard Score

LIPS

EP
Oral Reading Fluency was much improved on passages for which level of difficulty remained constant.

Absolute change in rate from pretest to 2-year follow-up.

<table>
<thead>
<tr>
<th>Most difficult passage</th>
<th>Pretest -- 38 WPM, 10 errors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Posttest -- 101 WPM, 2 errors</td>
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</table>

<table>
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<tr>
<th>Next most difficult passage</th>
<th>Pretest -- 42 WPM, 6 errors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Posttest -- 104 WPM, 1 error</td>
</tr>
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</table>
Disparity in outcomes for rate vs. accuracy in five remediation studies

Accuracy

Rate

Standard Score

Beginning level of Word Identification Skill

2nd 2nd 10th 10th  Prev. 1  Prev. 2
Projected growth in “sight vocabulary” of normal readers and struggling readers before and after remediation.
Alexis....
Conclusions about interventions with older students:

We know how to do much better in remediating reading difficulties in older students than we are frequently doing in our schools.

However, we do not yet have research demonstrations of all the conditions that need to be in place to completely close the reading gap for older students after they have struggled in reading for several years.
A final concluding thought....

There is no question but that providing the right kind of interventions for students who need them is a very difficult challenge...

It will involve professional development for teachers, school reorganization, careful assessments, and a relentless focus on the individual needs of every child...

But, it's not the most difficult thing we could be faced with...
Consider this task for example...
Thank You