Using Data and Interventions to Leave No Child Behind: Methods for Younger and Older Students

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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.

"Hello!" said Dick to the family. "Can we help you?"
"Yes, thank you," said the father. "You can help Peter and Ellen."
"Oh, where is Ellen?" said Jane. "I see two boys. But I do not see a girl."
"Now look," said Ellen. "Do you see two boys now?"
"No," laughed Jane. "Now I see a boy and a girl."
“Current difficulties in reading largely originate from rising demands for literacy, not from declining absolute levels of literacy”

Increasing demands for higher levels of literacy in the workforce require that we do better than we have ever done before in teaching all children to read well.
The influence of the NAEP results

Reading achievement has been quite stable since 1971
The influence of the NAEP results

Far too many students across the nation cannot meet grade level standards in reading in 4th and 8th grades

<table>
<thead>
<tr>
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<th>Nationally</th>
<th>Rhode Island</th>
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<td>4th</td>
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<td>38%</td>
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<td>8th</td>
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Federal Policy Statements about Reading
Attainments for all children

Two recent policy statements:

**Annual Yearly Progress under the NCLBA**

“schools are held accountable for the achievement of *all* students, not just average student performance”
Secretary Paige

*What* works to improve performance for *which* students?

*How much* improvement can we expect for *which* students?

**President’s commission on special education.**

“The ultimate test of the value of special education is that, once identified, children *close the gap* with their peers.”
What do we mean by “closing the reading gap”?

This phrase might be used in two ways:

1. *Closing the gap* means narrowing the gap between a student’s current performance and grade level reading skills. Requires an acceleration in the rate of growth in reading skills – evidence: change in standard score or percentile ranking

2. *Closing the gap* means bringing a student’s reading skills to within grade level standards. For struggling readers, this requires an acceleration of development over a sufficient period of time. The most important grade level standard involves ability to comprehend complex text
The most important thing we have in common---

We want to help students acquire all the skills and knowledge they need to proficiently comprehend the meaning of text.
What skills, knowledge, and attitudes are required for good reading comprehension?
What we know about the factors that affect reading comprehension

Proficient comprehension of text is influenced by:

- Accurate and fluent word reading skills
- Oral language skills (vocabulary, linguistic comprehension)
- Extent of conceptual and factual knowledge
- Knowledge and skill in use of cognitive strategies to improve comprehension or repair it when it breaks down.
- Reasoning and inferential skills
- Motivation to understand and interest in task and materials
In other words, student’s reading comprehension depends on:

- How well they read the words on the page
- How much they know, and how well they think
- How motivated they are to do “the work” of comprehension
The Many Strands that are Woven into Skilled Reading
(Scarborough, 2001)

**LANGUAGE COMPREHENSION**
- BACKGROUND KNOWLEDGE
- VOCABULARY KNOWLEDGE
- LANGUAGE STRUCTURES
- VERBAL REASONING
- LITERACY KNOWLEDGE

**WORD RECOGNITION**
- PHON. AWARENESS
- DECODING (and SPELLING)
- SIGHT RECOGNITION

**SKILLED READING:**
fluent execution and coordination of word recognition and text comprehension.

Reading is a multifaceted skill, gradually acquired over years of instruction and practice.
“Clifford loves to go visiting. When he visits his sister in the country, he always calls ahead. Clifford always arrives on time. Don’t be late. Knock before you walk in. He knocks on the door before he enters. He wipes his feet first. Wipe your feet. Clifford kisses his sister. He shakes hands with her friend. Shake hands. Wash up before you eat. Clifford’s sister has dinner ready. Clifford washes his hands before he eats. Clifford chews his food with his mouth closed. He never talks with his mouth full. Don’t talk with your mouth full. Help clean up. Clifford helps with the clean-up. Say good-bye. Then he says thank you and good-bye to his sister and to his friend. Everyone loves Clifford’s manners” -- Norman Bridwell - *Clifford’s Manners*
Just what Tom’s thoughts were, Ned, of course, could not guess. But by the flush that showed under the tan of his chum’s cheeks the young financial secretary felt pretty certain that Tom was a bit apprehensive of the outcome of Professor Beecher’s call on Mary Nestor. “So he is going to see her about something important, Ned?” “That’s what some members of his party called it.” “And they’re waiting here for him to join them?” “Yes, and it means waiting a week for another steamer. It must be something pretty important, don’t you think, to cause Beecher to risk that delay in starting after the idol of gold?” “Important? Yes, I suppose so,” assented Tom. – Victor Appleton, *Tom Swift in the Land of Wonders*
Pierre had been educated abroad, and this reception at Anna Pavlovna’s as the first he had attended in Russia. He knew that all the intellectual lights of Petersburg were gathered there and, like a child in a toyshop, did not know which way to look, afraid of missing any clever conversation that was to be heard. Seeing the self-confident and refined expression on the faces of those present, he was always expecting to hear something very profound. At last he came to Mono. Here the conversation seemed interesting and he stood waiting for an opportunity to express his own views, as young people are fond of doing – Leo Tolstoy War and Peace
As reading material becomes more challenging:

Many words appear that are not part of the student’s speaking vocabulary

The number of unique words appearing in text accelerates rapidly after 3rd grade

Sentences become longer and more complex

Ideas contained in text, and inferences required to understand, become more complex
Taking a closer look at the skills and knowledge that are required to perform well on measures of reading comprehension given in third grade and higher.

Do the skills that contribute most importantly to performance on these tests change from 3rd to 7th, to 10th grades?

What areas are most troublesome for children who struggle on these tests?
How the study was conducted:

Gave 2 hour battery of language, reading, nonverbal reasoning, and memory tests to approximately 200 randomly selected children in each grade at 3 locations in Florida who had also taken the SAT9 test.

- **Language** – Wisc Vocab and Similarities
  - Listening comprehension

- **Reading** – Oral reading fluency passages, TOWRE, Gray
  - Oral Reading Test

- **NV Reasoning** – Wisc Matrix Reasoning, Block Design

- **Working Memory** – Listening span, Reading Span
"Reading is thinking guided by print”
(Perfetti, 1995)
Important Conclusions from the Study

1. The most important reading and language factors that explain individual differences in performance on a widely used measure of reading comprehension are reading fluency and vocabulary/verbal reasoning.

2. Differences in reading fluency (accuracy and speed) are particularly important in explaining differences among children in performance at third grade, and vocabulary/verbal reasoning differences become increasingly more important as text becomes more complex.
The Surprise Party

My dad had his **fortieth** birthday last month, so my mom planned a big surprise party for him. She said I could **assist** with the party but that I had to keep the party a secret. She said I couldn’t tell my dad because that would spoil the surprise.

I helped mom organize the guest list and write the invitations. I was responsible for making sure everyone was included. I also addressed all the envelopes and put stamps and return addresses on them…..
The Surprise Party

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The development of proficient reading skill: the ideal developmental path

K 1 2 3 4 5 6 7 8 9 10 11 12

Alphabetic Principle and other word reading strategies

Acquisition of Fluency

Development of Vocabulary, Knowledge and Thinking Skills

Development of attitudes—motivation, interest, curiosity
Three potential stumbling blocks to becoming a good reader (NRC Report, 1998)

1. Difficulty learning to read words accurately and fluently

2. Insufficient vocabulary, general knowledge, and reasoning skills to support comprehension of written language

3. Absence or loss of initial motivation to read, or failure to develop a mature appreciation of the rewards of reading.
Almost all children who experience reading problems in elementary school have difficulties acquiring accurate and fluent word reading skills.
Extreme difficulties mastering the use of "phonics" skills as an aid to early, independent reading

- difficulties learning letter-sound correspondences
- difficulties with the skills of blending and analyzing the sounds in words (phonemic awareness).

Slow development of "sight vocabulary" arising from:

- limited exposure to text
- lack of strategies to reliably identify words in text
Children who experience difficulties acquiring accurate and fluent word reading skills show two kinds of difficulties with word reading

**When asked to read grade level text:**

1. The child cannot recognize a sufficiently high proportion of the words easily, at a single glance, to support fluent reading. Too many of the words fall outside the child’s “sight vocabulary.”

2. The child does not employ efficient strategies to accurately and quickly identify unknown words. Use of phonemic decoding strategies is particularly impaired.
The Surprise Party

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I helped mom organize the guest list and write the invitations. I was responsible for making sure everyone was included. I also addressed all the envelopes and put stamps and return addresses on them…..
The nature of the underlying difficulty for most children who have problems acquiring accurate and fluent word reading ability

Weaknesses in the phonological area of language ability

 inherent, or intrinsic, disability
 lack of certain types of language experience

Expressed primarily by delays in the development of phonological awareness
Phonological Language Ability is not highly Correlated with General Verbal Ability as measured by IQ tests.
Phonological Language Ability is not highly Correlated with General Verbal Ability as measured by IQ tests.
What is the fundamental conceptual error in using IQ-achievement discrepancies to identify young children with reading disabilities?

1. Children with reading problems not discrepant from their intelligence appear to have the same type of problems with early reading as children whose reading is discrepant from their IQ: they both have difficulties resulting from weaknesses in the phonological domain.

2. “Slow learners” have difficulties learning to read, not because of low IQ, but because of weaknesses in the phonological language domain.

3. Discrepant and non-discrepant children require the same type of instruction in basic reading skills in order to acquire critical beginning reading skills.
Very simply put, we have two broad classes of children who experience difficulties learning to read in school:

Children who enter school with adequate general verbal ability and knowledge, but specific weaknesses in the phonological language domain.
These children we have referred to as "reading disabled" or "dyslexic"

A new science based definition --

“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.” (Lyon & Shaywitz, 2003)
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A new science based definition --

Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

Phonological Language Ability is not highly Correlated with General Verbal Ability as measured by IQ tests.
Must a child have intelligence in the average range to be diagnosed as dyslexic?

The traditional answer to this question has been yes.

“A core assumption of the concept of dyslexia has been that the reading problems of children with a specific reading disability (reading ability discrepant from intelligence) have a different etiology, involve different cognitive impairments, require a different kind of intervention, and have a different prognosis than the reading difficulties of children whose poor reading skills are consistent with their level of general intelligence.” (Torgesen & Wagner, 1999)

Recent research has shown this assumption to be incorrect.
FIGURE 6
Phonological Language Ability is not highly Correlated with General Verbal Ability as measured by IQ tests.
Very simply put, we have two broad classes of children who experience difficulties learning to read in school:

- Children who enter school with adequate general verbal ability and knowledge, but specific weaknesses in the phonological language domain.

- Children who enter school with weaknesses in the phonological language domain, who also have weaknesses in broader language domains such as vocabulary and verbal knowledge.

Both groups have the same phonological problem that makes it difficult to learn to read, but only one group (the discrepant one) is eligible for services as learning disabled.
Summary Statement: Two broad areas of weakness in language and/or cognition can make it difficult for children to acquire proficient reading skills by third grade.

Weaknesses in the phonological area of language ability

Weaknesses in broad verbal ability (knowledge and/or verbal reasoning)

These weaknesses can have at least two kinds of causes:

Biologically based – inherent or result of disease or deprivation

Environmentally based – result of lack of certain kinds of language or cognitive experience in the home
Each of these kinds of weakness is normally distributed in the population.
Each of these kinds of weakness is normally distributed in the population.

Serious difficulties—probably require special interventions and a lot of extra support.

Percentile Ranks

Standard Scores
Leaving No Child Behind: Three Tasks that address all age levels

1. Insuring all children master the alphabetic principal and become fluent readers with good comprehension by third grade

2. Providing the instruction and support that students require to acquire mature literacy skills by high school graduation

3. Accelerating the development of struggling readers to “close the gap” between them and their grade level peers
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
Three Definitions of Schools

A series of autonomous classrooms that are connected by a common parking lot.

A place where the relatively young watch the relatively old work.

A complex organization that is built upon relationships that require individuals to work interdependently.
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Effective early reading instruction must build reading skills in five important areas by providing instruction that is both engaging and motivating.

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

Taught by methods that are...

- Identifying words accurately and fluently
- Constructing meaning once words are identified
- Engaging & motivating
We know how to help almost all children become accurate and fluent readers by third grade.
The very best teachers of children who have difficulties learning to read are **Relentless** in their pursuit of every child.
The very best teachers of children who have difficulties learning to read are relentless.

Let no child “escape” from first grade without being proficient in phonemic decoding skills.
Why is it important for children to acquire good phonemic decoding skills (phonics) early in reading development?

Because learning to read involves everyday encounters with words the child has never before seen in print.

Phonemic analysis provides the most important single clue to the identity of unknown words in print.
The most efficient way to make an “accurate first attempt” at the identity of a new word is:

First, do phonemic analysis and try an approximate pronunciation

Then, close in on the exact right word by finding one containing the right sounds, that also makes sense in the sentence.

(chapter 10, Preventing Reading Difficulties in Young Children (2000))
The connection to reading fluency:

To be a fluent reader, a child must be able to recognize most of the words in a passage “by sight”
These are interesting and challenging times for anyone whose professional responsibilities are related in any way to literacy outcomes among school children. For, in spite of all our new knowledge about reading and reading instruction, there is a widespread concern that public education is not as effective as it should be in teaching all children to read.
The report of the National Research Council pointed out that these concerns about literacy derive not from declining levels of literacy in our schools but rather from recognition that the demands for high levels of literacy are rapidly accelerating in our society.
The connection to reading fluency:

To be a fluent reader, a child must be able to recognize most of the words in a passage “by sight”

Children must correctly identify words 3-8 times before they become “sight words”

Children must make accurate first attempts when they encounter new words, or the growth of their “sight word vocabulary” will be delayed—they will not become fluent readers
Words likely to be encountered for the first time in first grade:

- animal
- faster
- happy
- never
- time
- sleep
- rabbit
Words likely to be encountered for the first time in second grade

amaze

beach

comfortable

easy

example

interesting

grease

stiff

sweep
Try reading the following third grade passage.

*All the words you’ll have to guess are ones that are likely to be encountered for the first time in third grade texts.*

_______the middle ages, it was the _______ for
During the middle ages, it was the custom for a ____ to wear his full set of ____ whenever he
During the middle ages, it was the custom for a knight to wear his full set of armor whenever he ________ in _____ -- even in times of _____ !
During the middle ages, it was the custom for a knight to wear his full set of armor whenever he appeared in public -- even in times of peace! When a knight believed he was ______ friends, he would remove his ______.
During the middle ages, it was the custom for a knight to wear his full set of armor whenever he appeared in public -- even in times of peace! When a knight believed he was among friends, he would remove his helmet. This ______ of _________ showed that he felt _________ and safe.
During the middle ages, it was the custom for a knight to wear his full set of armor whenever he appeared in public -- even in times of peace! When a knight believed he was among friends, he would remove his helmet. This symbol of friendship showed that he felt welcome and safe.

Note: This passage is from a third grade reading comprehension test
_______the middle ______, it was the
_______for a _______ to wear his full
set of ______ whenever he
_________ in _______ - even in times
of_______! When a _______ believed
he was ______ friends, he would
_______ his _______. This ______
of _____________ showed that the
_______ felt _______ and safe.
State level progress in teaching all children to read within “high risk” schools — Reading First data from Florida

At the end of 2004, 53% of third grade students in Reading First schools achieved the grade level standard – which was performance at or above the 40th percentile on the SAT10

Degree of difficulty:
Average 74% Free/reduced lunch
Average 60% Minority
Average 14% ELL students
Oral Reading Fluency – Assess4, Third Grade

29,475 students

Ave. WPM = 105
35th percentile

35% moderate risk

22% high risk

Std. Dev = 36.87
Mean = 105.3
N = 29745.00
29,466 students

Ave percentile = 34th

Assess 4 OLV Percentile

Std. Dev = 26.72
Mean = 39.0
N = 29466.00

37% high risk
25% mod. risk
At the beginning of 2nd grade, most of our students had not achieved the 1st grade benchmark for phonemic decoding.

At the end of second grade, we still have more than 20% of our students who have not achieved the first grade benchmark in phonemic decoding.
44th percentile

31st percentile

Achieved benchmark late
Implications of these outcome data

1. Instructional and interventions systems must operate better in first grade so that more students have mastered the alphabetic principal when they enter second grade.

2. Instructional and intervention systems must operate better in second grade so that more students acquire grade level fluency expectations by the end of the year.

3. Beginning in kindergarten, instructional and intervention systems must have a more powerful accelerating impact on the growth of vocabulary.
Big ideas from “Bringing Words to Life”

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

Poor children, who enter school with vocabulary deficiencies have a particularly difficult time learning words from “context.”

Research has discovered much more powerful ways of teaching vocabulary than are typically used in classrooms – generalization to reading comprehension.

A “robust” approach to vocabulary instruction involves directly explaining the meanings of words along with thought-provoking, playful, interactive follow-up.
Four Critical Elements for More Robust Vocabulary Instruction

Select the right words to teach – Tier 2 words
- absurd
- fortunate
- ridiculous

Develop child-friendly definitions for these words

Engage children in interesting, challenging, playful activities in which they learn to access the meanings of words in multiple contexts

Find a way to devote more time during the day to vocabulary instruction
And we haven’t yet mentioned motivation...

Detailed studies of effective teachers document that they are powerful motivators:

“Basically, we found that engaging primary-grades teachers do something every minute of every hour of every school day to motivate their students, using every conceivable motivational mechanism to do so---from praising specific accomplishments to reminding students how well they perform when they try to encouraging constructive possible selves (e.g., imagining themselves going to college). Pressley, 2004
High-quality teachers are effective motivators. Less engaging teachers undermine student motivation, including negative tone in the class, placing great emphasis on extrinsic rewards, calling attention to weak performances by students, providing ineffective or unclear feedback, and fostering competition among students. Engaging teachers never teach in ways that undermine students’ motivation. Pressley, 2004
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
Why is good early assessment so critical?

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)
Two kinds of assessments that are not commonly done are required in a school level system for leaving no child behind

Screening assessments

Progress monitoring assessments

If we do these assessments well we will not overlook our students who are less well prepared and who are not making adequate progress in learning to read
What can teachers learn from screening measures?

**Screening**

Which children are entering my class weak in the skills and knowledge that are required for success in my classroom?

What are the skills and knowledge that are particularly weak in these children?

**Decisions to be made**

What children in my class are most in need of extra support in order to achieve grade level reading by the end of the year?

What areas of skill and knowledge are most in need of extra support?
Growth in Word Reading Ability

National Percentile

October January May
What can teachers learn from progress monitoring tests?

Information from progress monitoring

Are the children actually learning what I am teaching?

Are the children ready to move forward in the curriculum?

Is my intervention strong enough to place the children on a growth trajectory that ends in grade level performance by the end of the year?
What can teachers learn from these assessments?

Information from progress monitoring

- Are the children actually learning what I am teaching?
- Are the children ready to move forward in the curriculum?
- Is my intervention strong enough to place the children on a growth trajectory that ends in grade level performance by the end of the year?

Decisions to be made

- Should I reteach the last unit to some of my children?
- Should I move the child to a smaller group, or program more instructional time?
- Should I seek help to implement a more powerful instructional strategy?
In order to monitor progress adequately, we need two different kinds of information about progress.

Information from curriculum embedded tests or teacher obs.

- Are the children actually learning what I am teaching?
- Are the children ready to move forward in the curriculum?

Information from “index” tests like the DIBELS

- Is my instruction powerful enough to place the child on a trajectory for grade level achievement by the end of the year?
Progress monitoring with an “index” test—the DIBELS subtests

Involves progress monitoring assessments 3-4 times a year

Development of phonemic awareness and phonics skills is monitored 3-4 times a year from kindergarten through first grade. Oral reading fluency is monitored from first through third grade.

1st sound fluency
Letter naming fluency
Phoneme Seg. fluency
Nonsense Word fluency

Oral Reading Fluency – one minute timed passages
The Dynamic Indicators of Basic Early Literacy Success
DIBELS: Basic Rationale

Data from many thousands of students has shown that how children perform on certain “index” skills is very predictive of whether they will be reading on grade level by third grade.

In kindergarten, these areas of skill and knowledge are:
phonemic awareness, letter knowledge, vocabulary

In 1st grade, these areas of skill and knowledge are:
phonemic awareness, phonemic decoding, vocabulary, reading fluency, comprehension strategies

In 2nd and 3rd grade, these areas of skill and knowledge are:
vocabulary, reading fluency, comprehension strategies
The DIBELS tests are valid and reliable measures of most of these constructs, but not all of them.

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<th>Grade</th>
<th>Areas of Skill and Knowledge</th>
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<td>Kindergarten</td>
<td>phonemic awareness, letter knowledge, vocabulary</td>
</tr>
<tr>
<td>1st grade</td>
<td>phonemic awareness, phonemic decoding, vocabulary, reading fluency, comprehension strategies</td>
</tr>
<tr>
<td>2nd and 3rd grade</td>
<td>vocabulary, reading fluency, comprehension strategies</td>
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Features of Scientifically Based Reading Interventions

How does intervention differ from core reading instruction?

Intervention is MORE:
- Explicit
- Systematic
- Intensive
- Supportive
Explicit

Nothing is left to chance; all skills are taught directly.

Always involves:
- Direct explanations
- Modeling of correct responses
- Opportunities for student responses with corrective feedback
Systematic

Instruction is purposeful and sequential.

Always involves:

A scope and sequence of instruction that is well organized and hierarchical

Students being well prepared for each new task they are asked to do
Programmatic Scaffolding

Oral blending skills before blending printed words

Awareness of phonemes before learning how they are represented in print

Grapheme-phoneme knowledge before decoding

Vocabulary instruction before reading for meaning

Strategies for oral language comprehension that support reading comprehension
Intensive

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

Intensity can be accomplished in two ways:
- Decreasing group size (3-5)
- Increasing the amount of time in instruction

Small group instruction can be just as effective as 1:1 instruction for prevention.
Supportive

At-risk/struggling readers benefit from a supportive environment, both emotionally and cognitively.

Students need encouragement, feedback and positive reinforcement.

Responsive Scaffolding
Teaching children to identify the first phoneme in words

After telling child the names of the pictures, teacher says, ”which one begins with /s/?” child chooses fan

“fan begins with /f/, which one begins with /s/? Child chooses can

“Listen, I’m going to say the names of the pictures very slowly- see which one begins with /s/ - “f-an, f-ire, c-an, s-ack” which one?
Two kinds of scaffolding are important

**Responsive Scaffolding**

Word reading error – “let’s check this word. Can you read it for me?

Child reads “side”.

Teacher says, “you’re right that the word begins with the /s/ sound. What letter do you see coming right after the s in this word?”

Child says “I”

Teacher says, “what sound does “I” make?”

Child says “/l/”

Teacher says, “if you say the /l/ sound right after /s/ in this word, what word does that make?”
Interventions should be organized in tiers.

Layers of intervention responding to student needs:

- **TIER I**
- **TIER II**
- **TIER III**

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>
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<th>Focus</th>
<th>For all students in K through 3</th>
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<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>
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<tr>
<td>Time</td>
<td>90 minutes per day or more</td>
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<tr>
<td>Assessment</td>
<td>Benchmark assessment at beginning, middle, and end of the academic year or more</td>
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<td>Interventionist</td>
<td>General education teacher</td>
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<td>Setting</td>
<td>General education classroom</td>
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</tbody>
</table>
Screening or Progress monitoring assessment

Correct words per minute

Sept  Dec  Feb  May

- 96
- 80
- 64
- 48
- 32
- 16

Graph: Correct words per minute over time from September to May.
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>Focus</th>
<th>For students identified with marked reading difficulties, and who have not responded to Tier I efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Specialized, scientifically based reading program(s) emphasizing the five critical elements of beginning reading</td>
</tr>
<tr>
<td>Grouping</td>
<td>Homogeneous small group instruction (1:3, 1:4, or 1:5)</td>
</tr>
<tr>
<td>Time</td>
<td>Minimum of 30 minutes per day in small group in addition to 90 minutes of core reading instruction</td>
</tr>
<tr>
<td>Assessment</td>
<td>Progress monitoring twice a month on target skill to ensure adequate progress and learning</td>
</tr>
<tr>
<td>Interventionist</td>
<td>Personnel determined by the school (e.g., a classroom teacher, a specialized reading teacher, an external interventionist)</td>
</tr>
<tr>
<td>Setting</td>
<td>Appropriate setting designated by the school; may be within or outside of the classroom</td>
</tr>
</tbody>
</table>
Screening or Progress monitoring assessment

Correct words per minute

Sept      Dec      Feb      May

32
48
64
80
96
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>
<td>Appropriate setting designated by the school</td>
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</table>
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.
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” – Tier 2

2. Delivered by additional resource personnel during the “uninterrupted reading period”, or at other times during day Tier 2 or Tier 3

3. Delivered by classroom and resource personnel during after school or before school programs – Tier 2 or 3

4. Delivered by well-trained and supervised paraprofessionals during the “uninterrupted reading period” or other times – Tier 2

5. Delivered by peers during “uninterrupted reading period” – 1.5

6. Delivered by computers throughout the day – Tier 1.5
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
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 research tell us about the success of our most effective interventions in terms of preventing reading difficulties?
Studies of Prevention

How to measure successful prevention?

Meets standards on measure of reading comprehension at end of third grade

Achieves Oral Reading Rate of more than 40 correct words per minute by end of first grade

Achieves score above the 30th percentile on measures of word reading ability by end of first or second grade
We do not yet know how to prevent reading difficulties in “all” children

Percent of children scoring below the 30th percentile

<table>
<thead>
<tr>
<th>Study</th>
<th>Amt. of instruction</th>
<th>% delayed</th>
<th>overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foorman</td>
<td>174 hrs.- classroom</td>
<td>35%</td>
<td>6%</td>
</tr>
<tr>
<td>Felton</td>
<td>340 hrs. - groups of 8</td>
<td>32%</td>
<td>5%</td>
</tr>
<tr>
<td>Vellutino</td>
<td>35- 65 hrs. 1:1 tutoring</td>
<td>46%</td>
<td>7%</td>
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<td>88 hrs. 1:1 tutoring</td>
<td>30%</td>
<td>4%</td>
</tr>
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<td>Torgesen</td>
<td>80 hrs. 1:3 tutoring</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>Torgesen</td>
<td>91 hrs. 1:3 or 1:5 tutoring</td>
<td>8%</td>
<td>1.6%</td>
</tr>
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<td>Mathes</td>
<td>80 hrs. 1:3 tutoring</td>
<td>1%</td>
<td>.02%</td>
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</tbody>
</table>
We can prevent early problems with reading accuracy in almost all children

Percent of children scoring below the 30th percentile

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Fourth grade follow-up for students participating in early intervention through second grade
Evidence from one school that we can do substantially better than ever before

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

Average Percentile for entire grade (n=105)

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


Hartsfield Elementary Progress over five years


Proportion falling below the 25th Percentile:
- 1995: 31.8
- 1996: 20.4
- 1997: 10.9
- 1998: 6.7
- 1999: 3.7
Why the disparity between early word-level outcomes and later comprehension of complex texts?

Demands of vocabulary in complex text at third grade and higher place stress on the remaining SES related “vocabulary gap”

More complex text demands reading comprehension strategies and higher level thinking and reasoning skills that remain “deficient” in many children.
The Challenge of the “vocabulary gap”

This gap arises because of massive differences in opportunities to learn “school vocabulary” in the home.

The gap must be significantly reduced in order to enable proficient reading comprehension of complex texts by third grade.
Conclusions:

We know how to prevent problems in reading accuracy and fluency in almost all children—whether we do it or not depends most on “how we feel about the fact we haven’t done it so far”.

We have some promising new techniques for teaching vocabulary in a way that will generalize to reading comprehension. We must incorporate these techniques into our instruction in a very powerful way.
Leaving No Child Behind: Three Tasks that address all age levels

1. Insuring all children master the alphabetic principal and become fluent readers with good comprehension by third grade

2. Providing the instruction and support that students require to acquire mature literacy skills by high school graduation

3. Accelerating the development of older struggling readers to “close the gap” between them and their grade level peers
Children must continue to add to the lexicon of words they can recognized “at a single glance.”

Children must acquire the more complex vocabulary that appears primarily in written language.

Children must acquire appropriate strategies to effectively process different types of texts.

Children must grow in background/conceptual knowledge, and reasoning/inferential skills.

Literacy instruction beyond third grade is a job for all teachers, not just “reading” teachers!
The Content Literacy Continuum

1. More powerful instruction in the content areas so that all children learn essential content—even poor readers

2. Embedded instruction in strategies for learning and performance

3. Intensive remedial work for students with serious reading difficulties
The Content Literacy Continuum

http://smarttogether.org/clc/index.html

1. More powerful instruction in the content areas so that all children learn essential content

2. Embedded instruction in strategies for learning and performance

3. Intensive remedial work for students with serious reading difficulties
**Insuring content mastery**

**What students do:** Students learn critical content required in the core curriculum regardless of literacy levels.

**What teachers do:** Teachers compensate for limited levels of literacy by using **Content Enhancement Routines** to promote content mastery and by making the necessary modifications for students with learning problems.

**What it looks like:** For example, the history teacher introduces a unit on "Causes of the Civil War" by co-constructing with students a Unit Organizer that depicts the critical content demands of the unit. The organizer is used throughout the unit to link students' prior knowledge to the new unit and to prompt learning strategies such as paraphrasing and self-questioning. Other routines are used to ensure that critical vocabulary is developed.
The SMARTER Planning Process

- Shape the Critical Questions.
- Map the Critical Content.
- Analyze Difficulties
- Reach Enhancement Decisions.
- Teach Strategically
- Evaluate Mastery
- Reevaluate Critical Questions
• **Shape the critical questions.**

“What would be three or four questions that represent the heart and soul of this unit? If students could answer these, you could say that they would do well on the test.”
Unit: *Causes of the Civil War*

What was sectionalism as it existed in the U.S. of 1860?

How did the differences in the sections of the U.S. in 1860 contribute to the start of the Civil War?

What examples of sectionalism exist in the world today?
• Map the critical content

“If I stopped one of your students in the hall way as they left your class after taking the unit test and asked, “What was that unit about?” What would you want them to say?”
Content Map

Unit: Causes of the Civil War

This unit is about Sectionalism

was based on

Areas of the U.S.

Differences between the areas

was caused by

became greater

was influenced by

Leaders

Events
• Analyze difficulties

“What would make this unit hard for some, most, or all of my students?”
This unit would be hard because:

There is too much information
Some students have the background knowledge.
The text is poorly organized.
Major concepts are very abstract.
Students are required to frequently compare and conclude.
Many students have poor question exploration skills.
Many students are not independent readers.
Some students have difficulty identifying important from unimportant information.
• **Reach enhancement decisions**

“How can I enhance the critical content and reduce the difficulty of learning the information in this unit?”

“How can I enhance the critical content by the routines that I can use and the learning strategies that I can teach?”
Thinking About Critical Content

Knowledge
Thinking About the Curriculum...

Knowledge
Thinking About the Curriculum...

Knowledge

Critical Content

Course
Unit

ALL

MOST

SOME
Content Enhancement Teaching Routines

**Planning and Leading Learning**
- Course Organizer
- Unit Organizer
- Lesson Organizer

**Teaching Concepts**
- Concept Mastery Routine
- Concept Anchoring Routine
- Concept Comparison Routine

**Explaining Text, Topics, and Details**
- Framing Routine
- Survey Routine
- Clarifying Routine

**Increasing Performance**
- Quality Assignment Routine
- Question Exploration Routine
- Recall Enhancement Routine
“If it weren’t for students impeding our progress in the race to the end of the term, we certainly could be sure of covering all the content.”

However, the question should not be whether we are covering the content, but whether students are with us on the journey.” Pat Cross

“Give me a fish while you’re teaching me how to catch my own. That way I won’t starve to death while I’m learning to tie flies.”
The Content Literacy Continuum

http://smarttogether.org/clc/index.html

1. More powerful instruction in the content areas so that all children learn essential content

2. Embedded instruction in strategies for learning and performance

3. Intensive remedial work for students with serious reading difficulties
Teaching strategies to enhance learning and performance

What students do: Students are introduced to and learn to use key learning strategies for increasing literacy across their core curriculum classes.

What teachers do: Teachers directly teach and then embed instruction in selected learning strategies in core curriculum courses. Teachers use direct explanation, modeling, and group practice to teach the strategy and strategy steps and then prompt student application and practice in content-area assignments throughout the year.
What it looks like: At the beginning of the year, the history teacher explains that being able to paraphrase the history text is important because paraphrasing is required to write reports, answer questions, and discuss ideas. The teacher shares the steps of the Paraphrasing Strategy (RAP) with students and models how to paraphrase history text to complete different types of learning tasks. This strategy is reinforced and practiced in multiple contexts, in both reading and writing assignments across the year, and across classes.
Paraphrasing

- **Read** a paragraph
- **Ask** yourself what is the main idea and what are important supporting details
- **Put** the main idea and supporting details into your own words
<table>
<thead>
<tr>
<th><strong>Acquisition</strong></th>
<th><strong>Storage</strong></th>
<th><strong>Expression of Competence</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Identification</td>
<td>First-Letter Mnemonic</td>
<td>Sentences</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>Paired Associates</td>
<td>Paragraphs</td>
</tr>
<tr>
<td>Self-Questioning</td>
<td>Listening/Notetaking</td>
<td>Error</td>
</tr>
<tr>
<td>Visual Imagery</td>
<td>LINCS Vocabulary</td>
<td>Monitoring</td>
</tr>
<tr>
<td>Interpreting Visuals</td>
<td></td>
<td>Themes</td>
</tr>
<tr>
<td>Multipass</td>
<td></td>
<td>Assignment</td>
</tr>
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<td></td>
<td></td>
<td>Completion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Test-Taking</td>
</tr>
</tbody>
</table>
The Content Literacy Continuum

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1. More powerful instruction in the content areas so that all children learn essential content

2. Embedded instruction in strategies for learning and performance

3. Intensive remedial work for students with serious reading difficulties
**Intensive instruction in reading for students with serious difficulties**

**What students do:** Students develop decoding skills and increase reading fluency through specialized, direct, and intensive instruction in reading.

**What professionals do:** Teachers, reading specialists, special education teachers, speech-language pathologists, and other support staff team develop intensive and coordinated instructional experiences designed to address severe literacy deficits. Reading specialists and special education teachers often deliver these services. They also assist content teachers in making appropriate modifications in content instruction to accommodate severe literacy deficits.
Intensive instruction in reading for students with serious difficulties

What it looks like: Small group or 1:1, everyday for 45-60 minutes, instruction is systematic and explicit, focuses on phonemic decoding, reading accuracy, building fluency, and comprehension strategies

One way to do this is to use research-based programs to support and guide the instruction

Corrective Reading
Spell Read P.A.T.
Wilson Reading System
Lindamood-Bell Programs
Failure Free Reading
A different model for improving reading skills in middle and high school

Every professional in the school teaches reading/literacy for 45-60 minutes a day

Children with the lowest reading skills are taught in the smallest groups—4-6 students

Instruction is provided to different groups/classes based on need – word level skills, advanced decoding/fluency, comprehension strategies, critical thinking/analysis in reading and writing
A different model for improving reading skills in middle and high school

Children with skills below 4th grade level—Groups of 4-6—focus on word level skills building accuracy and fluency – i.e. corrective reading

Children with mid level skills (4th-6th grade) – advanced decoding—group reading practice with comprehension and work to build fluency – i.e. Rewards

Children with more advanced skills—focus on critical reading and writing strategies
Still another model for improving reading skills in middle and high school

Adopt a comprehensive literacy/language arts program like Language! that has been written for older children.

Create classes of 15-20 students based on entering levels of skill.

Be prepared to keep most students in this program for 2-3 years.
What we know about the effectiveness of most remedial interventions provided in public schools for students who are still struggling to master basic reading skills.

We know that it tends to stabilize the relative deficit in reading skill rather than remediate it.

Most remedial and special education interventions do not “close the gap” for older very poor readers.
Characteristics of interventions in many remedial settings that limit their effectiveness

1. Insufficient intensity -- teachers carrying too large a case load to allow sufficient instructional time.

2. Weak instruction in phonemic awareness and phonemic decoding skills--often consisting of “phonics worksheets” -- not enough direct instruction and application of appropriate reading strategies in text

3. Little or no direct instruction in comprehension strategies
Examine outcomes from five clinical or experimental studies of remedial interventions with children from 10-12 years of age experiencing reading difficulties

**One** sample of mildly impaired children with beginning word level skills around the 30th percentile.

**Two** samples of moderately disabled children with beginning word level skills around the 10th percentile

**Two** samples of severely disabled children with beginning word level skills around the 2nd percentile
Instructional Effectiveness Measured by Outcomes in Four Areas

**Phonemic Decoding Accuracy** -- skill at using sound-letter relationships to decode novel words

**Text reading accuracy** -- Accuracy with which individual words are identified in text

**Text reading fluency** -- speed of oral reading of connected text

**Reading Comprehension** -- accuracy with which meaning is constructed during reading

Outcomes measured in standard scores. An improvement in standard score means that a child is improving his/her reading skills compared to average readers. On all the measures used here, 100 is average.
A Brief Description of the Spell/Read P.A.T. program

Distribution of activities in a typical 70 minute session:

40 minutes -- Phonemic awareness/phonics
20 minutes -- shared reading
7 minutes -- writing about what was read
3 minutes -- wrap up

Systematic instruction in phonic elements beginning with mastery of 44 phonemes at single syllable level through multi-syllable strategies. Fluency oriented practice from beginning of instruction. Discussion and writing to enhance comprehension.
A Clinical Sample of 48 Students aged 8-16

Middle and upper-middle class students
Mean Age 11 years
79% White, 67% Male
Received 45-80 hours (mean=60) hours of instruction
Intervention provided in groups of 2-4
Remedial Method: Spell Read P.A.T.
Mean beginning Word Identification Score = 92
Children with word level skills around the 30th percentile
Outcomes from 60 Hours of Small Group Intervention with upper middle class students--Spell Read

- Word Attack: Standard Score 114
- Text Reading Accuracy: Standard Score 113
- Reading Comp.: Standard Score 108
- Text Reading Rate: Standard Score 99

30%
A Middle School Sample of 14 Students aged 11-14

Working class students
Mean Age 12 years
39% White, 64% Male
Received 37-58 hours (mean=51.4) hours of instruction
Intervention provided in groups of 2-4
Remedial Method: Spell Read P.A.T.
Mean Word Identification Score = 80
Children with word level skills around the 10 percentile
Outcomes from 50 Hours of Small Group Intervention with working class students--Spell Read

Standard Score

Word Attack: 102
Text Reading Accuracy: 90
Reading Comp.: 94
Text Reading Rate: 78

30%

87
82
82
69
A School-based, treatment control study of 40 students

60% Free and reduced lunch

Mean Age 12 years (range 11-14)

45% White, 45% Black, 10% other

53% in special education

Received 94-108 hours (mean=100) hours of instruction

Intervention provided in groups of 4-5

Remedial Methods: Spell Read P.A.T.

Mean Word Identification Score = 83

Children begin with word level skills around 10th percentile
Outcomes from 100 Hours of Small Group Intervention--Spell Read

<table>
<thead>
<tr>
<th></th>
<th>Standard Score</th>
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<tr>
<td><strong>Word Attack</strong></td>
<td>111</td>
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<td><strong>Text Reading Accuracy</strong></td>
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</tr>
<tr>
<td><strong>Reading Comp.</strong></td>
<td>96</td>
</tr>
<tr>
<td><strong>Text Reading Rate</strong></td>
<td>79</td>
</tr>
</tbody>
</table>

30%
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.
Outcomes from 67.5 Hours of Intensive LIPS Intervention

- Word Attack: 96
- Text Reading Accuracy: 89
- Reading Comp.: 86
- Text Reading Rate: 75

Standard Score

30%
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.

**Most difficult passage**
- **Pretest** -- 38 WPM, 10 errors
- **Posttest** -- 101 WPM, 2 errors

**Next most difficult passage**
- **Pretest** -- 42 WPM, 6 errors
- **Posttest** -- 104 WPM, 1 error
Follow-up study of intensive intervention with 60 children who have severe reading disabilities - preliminary results

Children were between 8 and 10 years of age
All are currently receiving or were identified for special education services
Nominated as worst readers: at least 1.5 S.D’s below grade level
Average Word Attack= 72, Word Identification= 72, Verbal IQ=87

Randomly assigned to two instructional conditions that both taught “phonics” explicitly, but contained different emphasis on fluency oriented practice
Children in both conditions received 83 hours of one-on-one and 50 hours of small group instruction, 2 hours a day for 16 week

Preliminary results for 45 children in both conditions combined
Major differences between Accuracy and Accuracy + Fluency Groups

<table>
<thead>
<tr>
<th></th>
<th>Accuracy</th>
<th>Accuracy + Fluency</th>
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</thead>
<tbody>
<tr>
<td>First 33 Hrs. 1:1</td>
<td>LIPS</td>
<td>LIPS</td>
</tr>
<tr>
<td>Next 50 Hrs. 1:1</td>
<td>LIPS</td>
<td>70% LIPS, 30% Fluency</td>
</tr>
<tr>
<td>Next 50 Hrs. Sm. Grp.</td>
<td>Extended LIPS</td>
<td>Comprehension--V V</td>
</tr>
<tr>
<td></td>
<td>Comprehension V V</td>
<td>Repeated reading practice</td>
</tr>
<tr>
<td></td>
<td>Accuracy Oriented</td>
<td>with text and word drills</td>
</tr>
<tr>
<td></td>
<td>Text practice</td>
<td></td>
</tr>
</tbody>
</table>
Outcomes from 133 Hours of Intensive LIPS + Fluency+ Comprehension Intervention

- Word Attack: 96
- Text Reading Accuracy: 76
- Reading Comp.: 78
- Text Reading Rate: 73

Standard Score

100%
90%
80%
70%
Summary and Conclusions:

1. For many older children with word level reading skills around the 30th percentile, a relatively brief (60hrs) dose of appropriate small group instruction can bring their skills in phonemic decoding, text reading accuracy and fluency, and comprehension solidly into the average range.

2. For many older children with word level reading skills around the 10th percentile, a more substantial dose (100hrs) of appropriate small group instruction can bring their skills in phonemic decoding, text reading accuracy, and reading comprehension solidly into the average range. Although the gap in reading fluency can be closed somewhat, reading fluency is likely to remain substantially impaired.

3. For older children with word level reading skills around the 2nd percentile, intensive interventions can have a strong effect on phonemic decoding, text reading accuracy, and reading comprehension, but they are likely to leave the fluency gap essentially unaffected.
Disparity in outcomes for rate vs. accuracy in five remediation studies

Beginning level of Word Identification Skill

Standard Score

Accuracy
Rate

2nd 2nd 10th 10th 30th
Our current hypothesis about the difficult fluency gap

Children who struggle initially in learning to read miss out on many hundreds of thousands of opportunities to learn to recognize individual words because they read inaccurately and they don’t read very much.

By the time they reach 3-4 grade, their “sight word vocabulary” is severely restricted compared to good readers of their same age.

After they become more accurate readers, there is still a huge gap in the number of words they can recognize by sight. They can’t catch up with their peers because 4th and 5th grade good readers are continuing to add words to their sight vocabulary at a very fast rate.
Projected growth in “sight vocabulary” of normal readers and disabled children before and after remediation.

- Normal
- Dyslexic

Grade in School

Size of “sight vocabulary”

2nd Year follow-up

Intervention
Children who struggle initially in learning to read miss out on many hundreds of thousands of opportunities to learn to recognize individual words because they read inaccurately and they don’t read very much.

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A very important factor in determining how fluently a child will read a passage involves the proportion of words in the passage the child can recognize by sight.
These are interesting and challenging times for anyone whose professional responsibilities are related in any way to literacy outcomes among school children. For, in spite of all our new knowledge about reading and reading instruction, there is a widespread concern that public education is not as effective as it should be in teaching all children to read.
Our current hypothesis about the difficult fluency gap

Children who struggle initially in learning to read miss out on many hundreds of thousands of opportunities to learn to recognize individual words because they read inaccurately and they don’t read very much.

By the time they reach 3-4 grade, their sight word vocabulary is severely restricted compared to good readers of their same age.

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A very important factor in determining how fluently a child will read a passage involves the proportion of words in the passage the child can recognize by sight.

Unless poor readers who have received strong remediation can add words to their “sight vocabulary” at a faster rate than their peers, the “fluency gap” will continue.
What happens to accuracy and fluency of reading scores when children receive powerful preventive instruction?
Disparity in outcomes for rate vs. accuracy in remediation and prevention studies

Accuracy
Rate

Beginning level of Word Identification Skill

Standard Score
Summary and qualification:

After problems with reading accuracy have been substantially remediated through intensive instruction, children remain dysfluent readers relative to age peers primarily because there are too many words in grade level passages that they still cannot recognize as sight words.

1. Their early practice deficits leave them just ‘too many words behind” in the growth of their sight vocabulary.

2. Some dyslexic children may also have special difficulties acquiring sight words for neurobiological reasons.
Instructional methods that are likely to be effective in remedial settings if applied with sufficient intensity and skill

Lindamood Phoneme Sequencing Program for Reading, Spelling, and Speech (www.lblp.com/)

Wilson Reading System (www.wilsonlanguage.com/Coursesatglance.html)

Phonographix (www.readamerica.net/)

SpellRead P.A.T. (www.spellread.com/)

Language! (www.sopriswest.com)

Corrective Reading (www.sra-4kids.com/teacher/directin/corread.html?)
Diagnostic decision tree for students who perform below standards on a measure of reading comprehension in 3rd Grade or later

**TOWRE** Sight Word Efficiency  
(45 second subtest)

Scores at or below 39th%ile (for student’s grade level)

Scores above 39th%ile (for student’s grade level)

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**Stanford Diagnostic Reading Test** or  
**Group Reading Assessment and Diagnostic Evaluation**  
(vocab and comprehension subtests)

**Scores above 39th%ile**

**Scores at or below 39th%ile**

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**TOWRE** Phonemic Decoding  
(45 second subtest)

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**CTOPP**  
(Elision subtest)

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**QRI-3**  
Identify independent/instructional reading levels;  
Diagnose reading/thinking strategies

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**Background knowledge?**  
**Vocabulary?**  
**Details/explicit questions?**  
**Inferring/implicit questions?**  
**Synthesizing/main idea?**

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**Test taking strategies**  
Higher order questioning  
Practice writing extended responses citing support from text

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**Above 39th%ile**

**At or below 39th%ile**

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Intensive instruction in phonics based program

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Needs phonics based program that explicitly addresses phonemic awareness (not assumes)
The side of the tree for students with word reading difficulties

At or below the 39th percentile on a measure of word reading accuracy and fluency

TOWRE test of phonemic decoding efficiency (45 secs.)

Above 39th % → Build fluency

At or below 39th % → CTOPP Elision Subtest

At or below 39th % → Needs phonics based program that builds PA, not assumes it

Above 39th % → Intensive instruction in phonics based program
The side of the tree for students with word level skills above the 39th percentile

Stanford Diagnostic Reading Test or Group Reading Assessment and Diagnostic Evaluation (vocab and comprehension subtests)

Above 39th %
- Test taking strategies
- Higher order questioning
- Practice writing extended responses citing support from text

At or below 39th %
- QRI-3
  - Identify independent/instructional reading levels; Diagnose reading/thinking strategies
  - Build background knowledge
  - Teach vocabulary
  - Teach comprehension strategies
A final concluding thought.

There is no question but that “leaving no child behind in reading” is going to be a significant 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...
Thank You