Implementing New Discoveries about Reading and Reading Instruction in a Coherent Reading Plan

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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.
The most important goal of this talk:

To share some information and ideas about reading, reading growth, and reading instruction that will address the need for initial, consistently high quality classroom instruction as the first step in prevention of reading difficulties, and a set of supplemental instructional and practice activities as the second necessary element.

With the goal being to maximize instructional efficiency and power for all children.
Why is this a good time to be thinking about ways to improve our programs of reading instruction?

1. Far too many poor and minority children are being “left behind” when it comes to growth of proficient reading skills.
Right now, all over the United States, we are leaving too many children behind in reading—2003 NAEP results

And, a large share of those children come from poor and minority homes

Percent of Students Performing Below Basic Level - 37%
The nature of our current reading crises….

“Current difficulties in reading largely originate from rising demands for literacy, not from declining absolute levels of literacy”

Report of the National Research Council
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.
Why is this a good time to be thinking about ways to improve our programs of reading instruction?

1. Far too many poor and minority children are being “left behind” when it comes to growth of proficient reading skills.

2. Prevention of reading problems is far more effective and humane than trying to remediate after children fail.
Reading stimulates general cognitive growth—particularly verbal skills.
Why is this a good time to be thinking about ways to improve our programs of reading instruction?

1. Far too many poor and minority children are being “left behind” when it comes to growth of proficient reading skills.

2. Prevention of reading problems is far more effective and humane than trying to remediate after children fail.

3. New discoveries from scientific research about reading can provide the basis for improved outcomes for all children.
How the “new research” is different--

1. It is much, much more extensive

2. It has been much better funded, so it has been of higher quality – better measures, longitudinal designs, larger samples of children

3. It has involved a convergence of findings from both basic science on the nature of reading and from instructional studies that implement those findings
In 1995, the U.S. Department of Education and the National Institutes of Health

National Academy of Sciences

Report from the National Research Council

1998
Teaching Reading Is Rocket Science

What Expert Teachers of Reading Should Know and Be Able To Do

American Federation of Teachers
In 1997, United States Congress

National Institute of Child Health and Human Development & U.S. Department of Education

Report of the National Reading Panel
Available from:

National Institute for Literacy

1-800-228-8813

EdPubOrders@aspensys.com

www.nifl.gov
The top 5 discoveries

1. It is very important for young children to acquire strong phonemic decoding skills early in reading development.

2. Many children struggle in learning “phonics” because of lack of skill and/or preparation in phonemic awareness.

3. Children must become accurate readers early in development in order to become fluent readers by 3rd grade – and fluency is important for comprehension.

4. The large individual differences in oral language vocabulary that arise from pre-school experiences begin to exert a powerful influence on comprehension by grade three.

5. Many children must be taught explicitly and directly how to “think” about what they are reading to improve comprehension.
Effective early reading instruction must build reading skills in five important areas:

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

**Phonemic Awareness**

**Phonics**

**Fluency**

**Vocabulary**

**Comprehension strategies**

- Identifying words accurately and fluently
- Constructing meaning once words are identified
What we know from science about the growth of reading skills:

1. It is very important to get off to a strong start in learning to read during early elementary school

Children who “catch on to reading” early get much more reading practice than those who “catch on” late

Children who “catch on early” are more accurate readers—accuracy is important as children form memories for words that allow them to identify them at a single glance

Children who read more have more opportunities to add words to their vocabulary

Children who “catch on to reading” early develop stronger motivation for reading
What we know from science about the growth of reading skills:

1. It is very important to get off to a strong start in learning to read during early elementary school

2. It is critical that children acquire skill in use of the alphabetic principle to help accurately identify unknown words early in development of reading skill

“From all these different perspectives, two inescapable conclusions emerge. The first is that mastering the alphabetic principle is essential to becoming proficient in the skill of reading....” (Rayner, et al., 2001)

What we know about the growth of reading skills:

1. It is very important to get off to a strong start in learning to read during early elementary school.

2. It is critical that children acquire skill in use of the alphabetic principle to help accurately identify unknown words early in development of reading skill.

3. Children who are delayed in the development of alphabetic understanding and skill struggle to become fluent readers.

4. Accurate and fluent word reading skills contribute importantly to the development of reading comprehension.
“In fact, the automaticity with which skillful readers recognize words is the key to the whole system…The reader’s attention can be focused on the meaning and message of a text only to the extent that it’s free from fussing with the words and letters.”

Marilyn Adams
What we know about the growth of reading skills:

5. Oral language vocabulary and other forms of verbal and conceptual knowledge also contribute importantly to the development of reading comprehension.
Relationship between Vocabulary Score (PPVT) measures in Kindergarten and later reading comprehension

End of Grade One -- .45
End of Grade Four -- .62
End of Grade Seven -- .69

The relationship of vocabulary to reading comprehension gets stronger as reading material becomes more complex and the vocabulary becomes more extensive (Snow, 2002)
What we know about the growth of reading skills:

5. Oral language vocabulary and other forms of verbal and conceptual knowledge also contribute importantly to the development of reading comprehension.

6. Children must also develop and actively use a variety of comprehension monitoring and comprehension building strategies to reliably construct the meaning of text.
What we know about the growth of reading skills:

5. Oral language vocabulary and other forms of verbal and conceptual knowledge also contribute importantly to the development of reading comprehension.

6. Children must also develop and actively use a variety of comprehension monitoring and comprehension building strategies to reliably construct the meaning of text.

7. Motivation for learning to read is important to early reading development, and continued motivation to read is critical for reading development after basic skills are well established – growth of reading skills after 3-4th grade is heavily influenced by amount of reading the child does.
Our ultimate goal is to help every child acquire the knowledge, skills, and attitudes that lead to proficient reading comprehension

“Acquiring meaning from written text”
Gambrell, Block, and Pressley, 2002

“the process of extracting and constructing meaning through interaction and involvement with written language”
Sweet and Snow, 2002

“thinking guided by print”
Perfetti, 1985
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
Word reading fluency and accuracy

Knowledge and Strategies for Linguistic comprehension

Motivation and interest

= Reading Comprehension
Reading Comprehension

**Language**
- Oral Language Skills
- Knowledge of Language Structures
- Vocabulary
- Cultural Influences

**Knowledge**
- Life Experience
- Content Knowledge
- Activation of Prior Knowledge
- Knowledge about Texts

**Metacognition**
- Motivation & Engagement
- Active Reading Strategies
- Monitoring Strategies
- Fix-Up Strategies

**Fluency**
- Prosody
- Automaticity/Rate
- Accuracy
- Decoding
- Phonemic Awareness

**Decoding**
- Phonemic Awareness

**Prosody**
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
Application: To be successful in “leaving no child behind” schools must do at least three things well:

1. Increase the quality and consistency 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
To be successful in “leaving no child behind” schools must do at least three things well:

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Improving the quality and consistency of instruction in every K-3 classroom: BIG IDEAS

1. Select a core reading program that implements instructional content and strategies consistently
2. Provide strong support for the implementation of the core program with fidelity and consistency
What are the advantages of having an evidence-based core program as the base?

Teaching reading to at-risk children is a very complex activity that requires a curriculum that “includes explicit instructional strategies, coordinated instructional sequences, ample practice opportunities and aligned student materials”. This is very difficult and too time consuming for most teachers to construct on their own.

“A well developed curriculum that blends explicit instructional strategies within a coherent instructional design acts as an important scaffold to guide teacher behaviors so they will be more consistent with the principles of effective instruction.”
A high-quality core reading 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)
This strategy involves a delicate balancing act requiring not only scientific knowledge but also common sense and sensitive leadership.

Need and capability of experienced, excellent teacher for autonomy to deliver fluid, responsive instruction.
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Need and capability of experienced, excellent teacher for autonomy to deliver fluid, responsive instruction

with

Need for less experienced teachers for support and guidance in instructional routines and sequences
This strategy involves a delicate balancing act requiring not only scientific knowledge but also common sense and sensitive leadership.

Needs of many children for explicit and systematic instruction in alphabetics.
This strategy involves a delicate balancing act requiring not only scientific knowledge but also common sense and sensitive leadership.

Needs of many children for explicit and systematic instruction in alphabetics

Need for holistic reading and writing experiences that are instructive, enriching, and motivational

with
This strategy involves a delicate balancing act requiring not only scientific knowledge but also common sense and sensitive leadership.

Needs of some children for substantial instruction and guidance in acquiring word level reading skills.
This strategy involves a delicate balancing act requiring not only scientific knowledge but also common sense and sensitive leadership.

Needs of some children for substantial instruction and guidance in acquiring word level reading skills

Needs of other children for much less systematic and explicit instruction in this area and more opportunities to “fly” with higher level reading and writing tasks.
Because of the need for good judgment and differentiated instruction….

“The right answer is the hard answer – The solution for helping struggling readers succeed is to cultivate a population of teachers who are very knowledgeable about how children learn to read and who are adept at applying their understanding of reading acquisition to the assessment and instruction of individual children.”
Improving the quality and consistency of instruction in every K-3 classroom: BIG IDEAS

1. Select a core reading program that implements instructional content and strategies consistent
2. Provide strong support for the implementation of the core program with fidelity and consistency
3. Provide professional development to improve teachers “broad and deep” knowledge of reading, reading instruction, reading assessment, reading interventions
Because of the findings from scientifically based research in reading, we are asking teachers to change the way many have been teaching reading in their classrooms.

The most significant change will be toward instruction that teaches each of the major components in a more explicit, and more systematic way.
“…. Although some children will learn to read in spite of incidental teaching, others never learn unless they are taught in an organized, systematic, efficient way by a knowledgeable teacher using a well-designed instructional approach.” (Moats, 1999)
What we know about reading instruction:

1. Systematic and explicit approaches to instruction are consistently more effective than approaches that depend on student discovery and inference.

   “From all these different perspectives, two inescapable conclusions emerge. The first is that mastering the alphabetic principle is essential to becoming proficient in the skill of reading…. and the second is that instructional techniques (namely phonics) that teach this principle directly are more effective than those that do not.” (Rayner, et al., 2001)

This seems to be especially the case for children who are at risk in some way for having difficulty learning to read
What we know about reading instruction:

1. Systematic and explicit approaches to instruction are consistently more effective than approaches that depend on student discovery and inference.

2. The need for explicit instruction extends beyond phonics to fluency, vocabulary and comprehension strategies.
Bringing Words to Life
Isabel Beck
M. McKeown
L. Kucan
Guilford Press
Big ideas from “Bringing Words to Life”

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

High school seniors near the top of their class knew about four times as many words as their lower performing classmates.

High-knowledge third graders have vocabularies about equal to lowest-performing 12th graders.

Individual differences in vocabulary have a powerful impact on reading comprehension beginning about third grade.
Big ideas from “Bringing Words to Life”

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

A “robust” approach to vocabulary instruction involves directly explaining the meanings of words along with thought-provoking, playful, interactive follow-up.
To be successful in “leaving no child behind” schools must do at least three things well:

1. Increase the quality and consistency 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
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 kind of assessments do we need: Big Ideas

Screening assessments that identify children who are lagging behind in growth of critical skills

Progress monitoring in growth of critical reading skills for all children during the year to help plan instruction

Diagnostic assessments for children who may require very specialized types of interventions

End of year outcome assessments in the critical elements of reading growth—is the child on track to read at grade level by third grade?
What should we be monitoring in K-3?: Big Ideas

Kindergarten – phonemic awareness, letter-sound knowledge, phonemic decoding, oral language-vocabulary

1st grade – phonemic awareness, letter-sound knowledge, phonemic decoding, oral language-vocabulary, reading fluency

2nd grade – phonemic decoding, vocabulary, reading fluency, reading comprehension

3rd – 5th grade – reading fluency, reading comprehension
State PMT Report

District: All Participating Districts  
School: All Participating Schools  
Teacher: All Teachers  
Grade: 1st Grade  
Probe: Nonsense Word Fluency  
Student: All Students  
Assessment: All Assessments  
School Year: 2003-2004  
Date/Time: 3/20/2004 11:58 AM

Correct Letter Sounds in a Minute

# of Students 43794  
44509  
44341  

54%  
24%  

57%  
30%  

41%  
38%
State PMT Report

**District:** All Participating Districts  
**School:** All Participating Schools  
**Teacher:** All Teachers  
**Grade:** 2nd Grade  
**Probe:** Oral Reading Fluency  
**Assessment:** All Assessments  
**School Year:** 2003-2004  
**Student:** All Students  
**Date/Time:** 3/20/2004 12:03 PM

![Box plots showing data distribution for different assessments.]

**Correct Words in a Minute**

- **Assessment 1:** 48
- **Assessment 2:** 48
- **Assessment 3:** 48
- **Assessment 4:**

<table>
<thead>
<tr>
<th># of Students</th>
</tr>
</thead>
</table>
| **Assessment 1** | 41300  
| **Assessment 2** | 41979  
| **Assessment 3** | 41653  

**Pie charts showing data breakdown.**
To be successful in “leaving no child behind” schools must do at least three things well:

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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.
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
Two kinds of scaffolding are important

Programmatic Scaffolding

The program of instruction is carefully sequenced so that students are explicitly taught the skills and knowledge they need for each new task they are asked to perform.

- 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
Two kinds of scaffolding are important

**Responsive Scaffolding**

After an error, or inadequate response, the teacher provides responsive support to assist the child in making a more adequate, or correct response.

Through appropriate questioning or provision of information, the teacher supports the child in doing a task they cannot immediately do on their own.
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 “l”
Teacher says, “what sound does “l” make?”
Child says “/l/”
Teacher says, “if you say the /l/ sound right after /s/ in this word, what word does that make?”
How can immediate, intensive interventions be scheduled and delivered?

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

- Teacher-Led Center
  - Small group instruction

- 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”—good use of Title 1 money
3. Delivered by classroom and resource personnel during after school or before school programs
4. Delivered by designated, strong teachers, during “walk and read” times
5. Delivered by peers during “uninterrupted reading period
5. 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
Putting it all together—the story of one elementary school

The school serves a population of students with many at-risk children

- 70% children qualify for free/reduced lunch
- 65% children from racial/ethnic minorities

Elements of change and improvement:

- Adopted a common, explicit/systematic curriculum and began training teachers for high-fidelity implementation
- Began identifying children being “left behind” and providing more intensive, small group instruction
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):
- 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%
Hartsfield Elementary Progress over five years

Proportion falling below the 25th Percentile

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<th>Year</th>
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<td>6.7</td>
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<td>3.7</td>
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Average Percentile 1996-1999

- 1996: 58.2
- 1997: 67.1
- 1998: 74.1
- 1999: 81.5
Why the disparity between early word-level outcomes and later comprehension of complex texts?

Accelerating introduction of complex and unfamiliar words in text places stress on children with remaining dysfluencies in word level processes.

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.
On the one hand....

Hartsfield might be criticized for placing too much emphasis on phonemic awareness, phonics, and fluency and not enough emphasis on comprehension.

But on the other hand....

We could recognize their success in teaching all children critical beginning reading skills, and work with them to add in more powerful instruction in vocabulary and comprehension strategies.
A concluding thought....

There is no question but that significantly improving reading outcomes for all children is going to be a significant challenge...

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

But, its not the most difficult thing we could be faced with...