The Role of Oral Reading Fluency in Literacy Development

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Oral Reading Fluency

“Fluency is the ability to read a text quickly, accurately, and with proper expression.”

--National Reading Panel
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“Fluency is the ability to \( \Delta \) read a text quickly, accurately, and with proper expression.”

--National Reading Panel
What is fluency—just highly proficient word reading?

No. Fluency is more closely correlated to comprehension than to word reading.
What is fluency--just highly proficient word reading?

<table>
<thead>
<tr>
<th>Relationship of word list reading with comprehension</th>
<th>Relationship of text fluency with comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>.53</td>
<td>.83</td>
</tr>
</tbody>
</table>

--Jenkins, Fuchs, Espin, van den Broek, & Deno, 2003
What is fluency--just highly proficient word reading?

<table>
<thead>
<tr>
<th>Unique comprehension variance due to word list reading</th>
<th>Unique comprehension variance due to text fluency</th>
</tr>
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<tbody>
<tr>
<td>.01</td>
<td>.42</td>
</tr>
</tbody>
</table>

--Jenkins, Fuchs, Espin, van den Broek, & Deno, 2003
Then is oral reading fluency just a measure of reading comprehension?

• Despite the close correlation, clinical case studies reveal that fluency and comprehension are independent in some exceptional first language readers.
Does fluency matter?

Yes.

Fluency training improves reading comprehension — including silent reading comprehension.
Who Needs Fluency Instruction?

- 11 studies emphasized poor readers (average effect size .49)

- 5 studies emphasized normal readers (average effect size .47)
Who Needs Fluency Instruction?

<table>
<thead>
<tr>
<th>NAEP 4th Grade Fluency Study (1995)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>7%</td>
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</tbody>
</table>
Who Needs Fluency Instruction?

<table>
<thead>
<tr>
<th>NAEP 4th Grade Fluency Study (1995)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaccurate Reading</td>
</tr>
<tr>
<td>43%</td>
</tr>
</tbody>
</table>
Who Needs Fluency Instruction?

National Reading Panel based its fluency conclusions on studies conducted in:

*Grades 1 through 9.*
Who Needs Fluency Instruction?

National Reading Panel did not base its fluency conclusions on studies conducted with second language learners.
Who Needs Fluency Instruction?

However, more recent studies have found that fluency training helps second language learners.

(Denton, 2000; De La Colina, et al., 2001)
Some indirect instructional evidence on oral reading fluency

- Amount of in class oral reading correlates with gains in reading achievement for elementary and secondary students
- Amount of in class silent reading does not correlate with gains in reading achievement for elementary or secondary students

--Jane Stallings, 1980
Why Teach Fluency?

**NRP: 4 kinds of evidence**

- 14 immediate effects studies
- 16 group learning studies
- 12 single subject learning studies
- 9 method analysis studies
Why Teach Fluency?

Other supportive reviews:

• Martinez & Perez, 1998
• Kuhn & Stahl, 2003
• Chard, Vaughn, & Tyler, 2002
How Do You Teach Fluency?

Guided oral reading practice with repetition.
How Do You Teach Fluency?

Guided

- Students benefit from modeling
- Students benefit from assisted reading
- Students benefit from guidance or feedback
- From peers, tutors, parents, teachers
- Appropriate feedback
How Do You Teach Fluency?

Pause Prompt Praise

• Pause
• Prompt
• Praise
How Do You Teach Fluency?

**Oral**

- Studies show that oral reading practice works.
- Studies do not consistently show that silent reading practice works.
- *Remember Stallings, 1980*
How Do You Teach Fluency?

Repetition

• Rereading up to criteria
• Reading a text 3 or more times for learning
• Group studies find improvements through as many as 7 rereadings and even more in the clinical research
How Do You Teach Fluency?

*Paired Reading*

- Types of partners
- Partner training
- Coaching the coaches
- Keeping track
How Do You Teach Fluency?

Not round robin.

• Too little practice
• Little repetition
• Diverts attention from essentials
How Do You Teach Fluency?

Reader’s Theatre

• Revise text into scripts
• Practice before presentation
• Lack of research and some concerns
What kind of text should be used to teach fluency?

• Studies showed learning from texts that ranged from slightly difficult to quite hard
• Hard text when you are teaching fluency and easier text when students are just reading it without instructional emphasis on fluency attention

--Hintze, Daly, & Shapiro (1998); O’Connor, et al., 2002; Morgan, et al., 2000
What kind of text should be used to teach fluency?

• Biggest learning with harder texts, but this requires more support, repetition, etc.
What kind of text should be used to teach fluency?

- Both narrative and expository text (actually more instructional studies used expository text than narrative)
What kind of text should be used to teach fluency?

• Lots of word repetition within and across selections (for younger and poorer readers)
What kind of text should be used to teach fluency?

- Passages of 50-150 words (or longer passages parsed in this manner)
How fluent do you need to be?

Accuracy

95—100%
How fluent do you need to be?

_Proper Expression_

3 or 4 on NAEP Scale
Level 4 Reads primarily in larger, meaningful phrase groups. Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story. Preservation of the author's syntax is consistent. Some or most of the story is read with expressive interpretation.
Level 3 Reads primarily in three- or four-word phrase groups. Some smaller groupings may be present. However, the majority of phrasing seems appropriate and preserves the syntax of the author. Little or no expressive interpretation is present.
NAEP Level 2

Level 2 Reads primarily in two-word phrases with some three- or four-word groupings. Some word-by-word reading may be present. Word groupings may seem awkward and unrelated to larger context of sentence or passage.
NAEP Level 1

Level 1 Reads primarily word-by-word. Occasional two-word or three-word phrases may occur—but these are infrequent and/or they do not preserve meaningful syntax.
How fluent do you need to be?

*Speed*

Grade 1: 60 wcpm  
Grade 2: 90 wcpm  
Grade 3: 110 wcpm  
Grade 4: 125 wcpm  
Grade 5: 140 wcpm  
Grade 6: 150 wcpm

*end of year norms, 50%ile*
An interesting comparison

<table>
<thead>
<tr>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Wpm (Winter)</td>
<td>80</td>
<td>115</td>
<td>138</td>
<td>158</td>
<td>173</td>
<td>185</td>
<td>195</td>
<td>204</td>
<td>214</td>
<td>224</td>
<td>237</td>
<td>250</td>
<td>280</td>
</tr>
<tr>
<td>Oral wcpm (Spring)</td>
<td>60</td>
<td>90</td>
<td>110</td>
<td>125</td>
<td>140</td>
<td>150</td>
<td></td>
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</tbody>
</table>

Hasbrouck & Tindal, 2005; Taylor, 1960
Fluency diagnosis is useful

Because it can be used to predict later performance on state tests, AYP, etc.

- 74% accuracy
- Missed 7% of kids who failed
- Identified 19% kids who did not fail

--Stage & Jacobson, 2001
What are students learning when you teach fluency?

**Group Learning Studies**

*Group learning studies included 99 comparisons:*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td>49</td>
<td>.35</td>
</tr>
<tr>
<td>Fluency</td>
<td>35</td>
<td>.44</td>
</tr>
<tr>
<td>Words</td>
<td>11</td>
<td>.55</td>
</tr>
<tr>
<td>Composite</td>
<td>4</td>
<td>.50</td>
</tr>
</tbody>
</table>
What are students learning when you teach fluency?

<table>
<thead>
<tr>
<th>Word recognition effect of phonics instruction</th>
<th>Word recognition effect of fluency instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>.41</td>
<td>.55</td>
</tr>
</tbody>
</table>
What are students learning when you teach fluency?

Repetition is an implicit test of the role of memory in learning to read.
What are students learning when you teach fluency?

Memory of a text on a first reading facilitates subsequent readings of a text. But why?
What are students learning when you teach fluency?

Rereading facilitates:

What are students learning when you teach fluency?

Rereading facilitates:

2. Word similarity judgments (Woltz, 1990)
What are students learning when you teach fluency?

Rereading facilitates:

3. Lexical decision (Masson & Freedman, 1990; Rugg, 1990)
What are students learning when you teach fluency?

Rereading facilitates:

What are students learning when you teach fluency?

Rereading facilitates:

5. Perceptual identification tasks
   (Humphreys, Besner, & Quinlan, 1988; Jacoby, 1983; Rueckl, 1990)
What are students learning when you teach fluency?

Rereading facilitates:

What are students learning when you teach fluency?

Rereading facilitates:

7. Comprehension improvement separate from improved word recognition (Bourassa, Levy, Dowin, & 1998; Levy, Abello, & Lysynchuk, 1997)
What are students learning when you teach fluency?

- Episodic memory: context dependent percepts; the mind codes a perceptual representation of the event;

- Abstract memory: context independent percepts; the mind codes a flexible version of the event;
What are students learning when you teach fluency?

Developmental change

• Torgesen & Rashotte, 1985: amount of word overlap between passages explains effects

• Levy, Barnes, & Martin, 1993: amount of word overlap between passages has no effect
What are students learning when you teach fluency?

With younger children and poor readers, rereading is episodic in nature

• Even typescript changes can interfere with learning (Jacoby, Levy, & Steinbach, 1992; Levy & Kirsner, 1989; Levy et al., 1992):

•

The brown cow jumped over the moon.

THE BROWN COW JUMPED OVER THE MOON.
What are students learning when you teach fluency?

With older proficient readers, even syntax changes do not reduce rereading effects (Levy, Barnes, & Martin, 1993):

• Currently there is a national concern over the illegal use of drugs.

• The illegal use of drugs is currently a national concern.
What are students learning when you teach fluency?

- Lack of prosody effects (except as mediated by decoding speed) for younger children (Schwanenflugel, et al., 2004)
- However, these effects are not likely until the students are older or more skilled
What are students learning when you teach fluency?

Goodman hypothesis: on rereading, students will pay less attention to the visual aspects of text as they reread.

Levy hypothesis: on rereading, sensitivity to visual aspects of text will increase as they reread.
What are students learning when you teach fluency?

In fact, on repeated readings student increase in their sensitivity to misspellings on later readings (Levy, Nicholls, & Kohen, 1993)
What are students learning when they work on fluency?

Depending on relative text difficulty or developmental level of student reading ability:

1. How to read words efficiently
2. How to make sense of the text/prosodic features
This developmental divide suggests that a wider range of instructional activity should be considered

- Parsing studies
- Older students are taught how to parse text
- Powerful impact on reading comprehension (despite lack of oral reading in the treatment)
A fluency curriculum?

• Systematic repetition of high-frequency words
Example of Repetition of High-Frequency Words

Once I was a baby. What did I do? I looked up at my mom’s face. I looked up at my toy.

Once I was one. What did I do? I looked at some flowers.

Once I was two. What did I do? I played with some toys.

Once I was four. What did I do? …
A fluency curriculum?

- Systematic repetition of key phonics patterns
Examples of Repetition of Phonics Patterns

<table>
<thead>
<tr>
<th>The Ugly Duck</th>
<th>Otto’s Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>duck</td>
<td>packed</td>
</tr>
<tr>
<td>ducklings</td>
<td>worked</td>
</tr>
<tr>
<td>up</td>
<td>liked</td>
</tr>
<tr>
<td>ugly</td>
<td>asked</td>
</tr>
<tr>
<td>us</td>
<td>opened</td>
</tr>
<tr>
<td></td>
<td>turned</td>
</tr>
<tr>
<td></td>
<td>looked</td>
</tr>
</tbody>
</table>
A fluency curriculum?

- Systematic focus on punctuation
Examples of focus on punctuation

• Every year, people from all over the world visit some amazing buildings in Egypt. What are these buildings? They are the pyramids of Giza.

• Bell said, “Mr. Watson, come here. I want to see you.” Watson rushed into the room. He had heard Bell’s voice over the wire!
A fluency curriculum?

• Systematic focus on text format
Examples of focus on text format

Dear Miss Pumpkin,

MORE housework? Tomorrow I’ll wash all the clothes myself. But please be ready to GET ME OUT OF HERE!

Percy
A fluency curriculum?

• Systematic focus on expression of meaning
Example of Expression of Meaning

“Did you see that?” Jessie shrieked.

I started to wish we hadn’t come. Then we heard a noise from the house. “Get down!” I hissed.

“We’d better go!” said Jesse. He was almost crying.
A fluency curriculum?

- Systematic focus on building speed
Example of Building Speed

“Hey Doc, where is the example?”