The Comprehension Connection: Fluency

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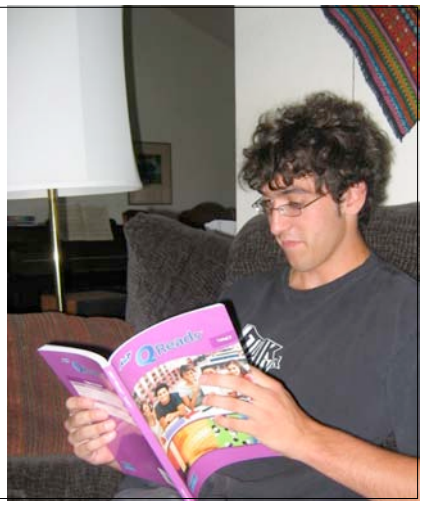


The Comprehension Connection: Fluency

1. **Why is fluency so important?**
2. **What makes fluency interventions so necessary?**
3. **Which middle-grade through high school students need text-based fluency interventions?**
4. **What are the features of effective text-based fluency interventions?**
5. **What evidence is there that text-based fluency interventions make a difference?**

1. Why is fluency so important?

- Buck & Torgesen (2004; www.fcrr.org) Oral Reading Fluency (ORF) & FCAT: r = .70
- Good, Simmons, & Kame'enui *(Scientific Studies of Reading*, 2001) ORF & Oregon Statewide Assessment: r = .67
- 65% of Florida's 10th graders performed below grade level on FCAT; Text reading fluency accounted for 32% of the variance in 10th graders' FCAT scores (Schatschneider et al., 2004)

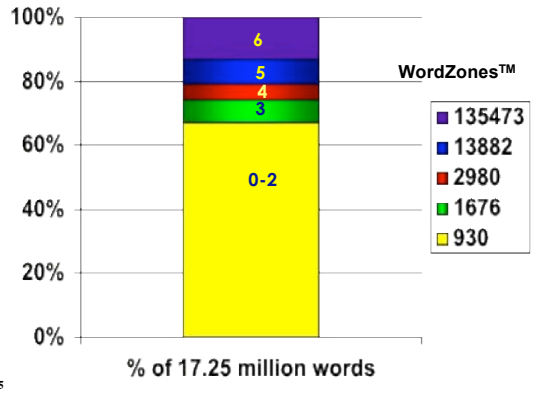
1. Why is fluency so important?

ANSWER: Fluency is the ability to read the majority of the words in a text automatically and with sufficient speed so that attention can be directed at the meaning of the text. Automatic/fluent reading is the foundation of proficient comprehension.

2. What makes text-based fluency interventions so necessary?

2a. Mismatch between typical texts & proficiencies of students who depend on schools to become literate

Words in American Schoolbooks



3 consecutive texts: Beginning of 3rd trimester Gr. 1 (One of nation's leading core reading programs)

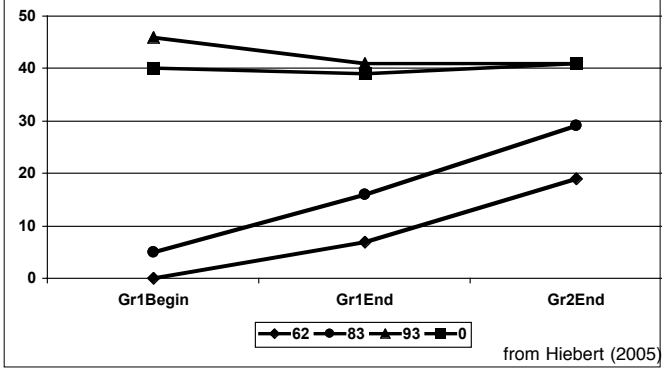
Soon the elephants came, four by four. They thundered *loud* and *shook* the ground. A GAZELLE passed. He was not *slow* like the turtle, but quick and fast.

A rhinoceros darted out of the bushes. He grunted at Baboon. Baboon was *afraid*. He will not *hurt* you," said his mother.

Mole and *Fox* braided grass into a long *rope* and waited for a crescent moon to *appear*. Then *Fox* twirled the *rope* high over his head. Clunk. It fell down and *hit* him right on the *nose*. *Fox* growled; he was mad. "Maybe the birds would carry our *rope*," said Mole.

POPPLETON propped up some pillows and read a few pages. The SALESLADY looked at her watch. "Do you want to buy the bed?" she asked POPPLETON. "I don't know yet," said POPPLETON. "Do you have any crackers?" The SALESLADY brought POPPLETON some crackers. He got crumbs *everywhere*. "Do you want the bed?"

Instructional Texts for Beginning Readers: Singletons & Repetition



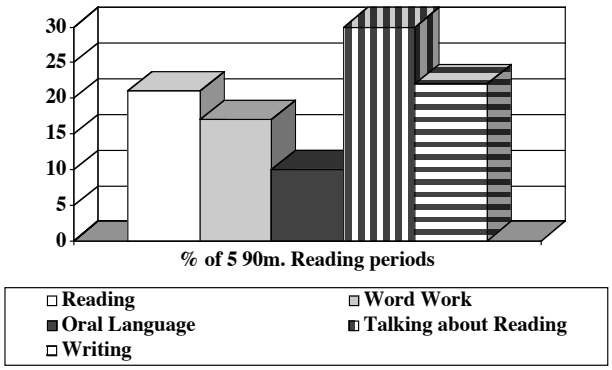
from Hiebert (2005)

2b. Amount students are reading

Length of Instructional Block	Time with eyes on text	% of entire Reading block spent with eyes on text
90-minute	17.57	20
100-minute	16.25	16
105-minute	18.49	18
120-minute	19.25	16
Overall	**18.33**	**17.5**

(Brenner, Hiebert, & Tompkins, in press)

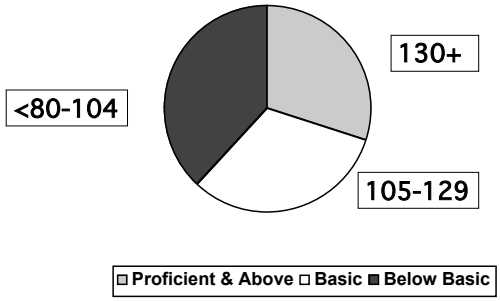
Amount of time allocated to reading in a basal reading program (©2007)



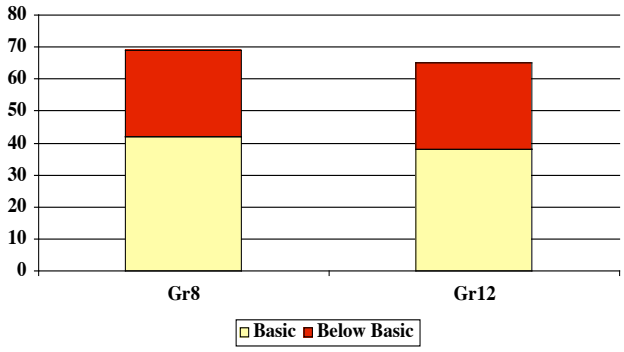
2. What makes text-based fluency interventions so necessary?

ANSWER: There is a substantial mismatch between current texts & proficiency of students in the 40th percentile and below. The amount that students read in school is not sufficient for those who depend on schools for literacy learning to become proficient readers.

3. Which students need text-based fluency interventions?



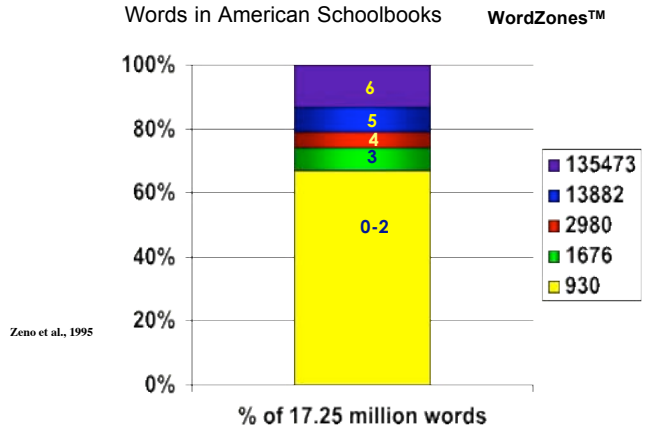
National Assessment of Educational Progress (2005)



3. Which students need text-based fluency interventions?

ANSWER: Approximately two-thirds of an age cohort can use additional opportunities to become more fluent in reading texts with the most frequent words in written English.

4. What are the features of an effective text-based intervention?



4.1 Repetition of "high-leverage" vocabulary: Fluency Curriculum

Level A	**300 most frequent words; short and long vowels**
Level B	**600 most frequent words; short, long and r controlled vowels**
Level C	**1000 most frequent words; all monosyllabic words**
Level D	**1000 most frequent words; monosyllabic words; two-syllable words with regular vowel patterns**
Level E	**2,500 most-frequent words (plus monosyllabic words)**
Level F	**5,000 most frequent words (plus monosyllabic words)**

Level B

Making Movies

You've probably seen many movies, so you know that movies can be about many different things. Sometimes writers create an idea for a movie. At other times, ideas for movies come from books.

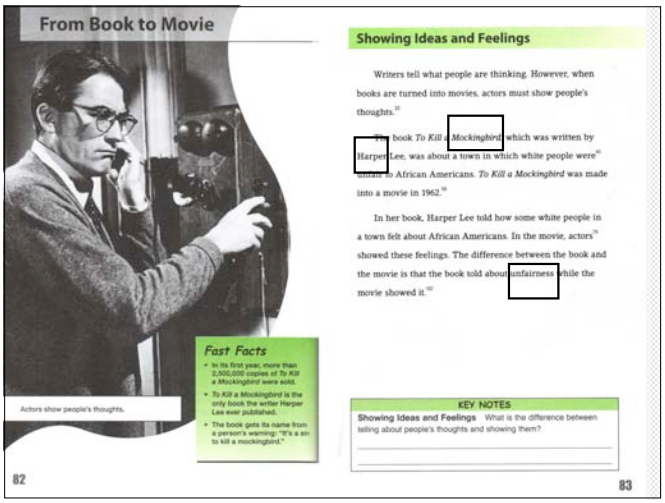
Any kind of book can be used the make a movie. Some books may tell stories the writer created. Others may be about real people and places.

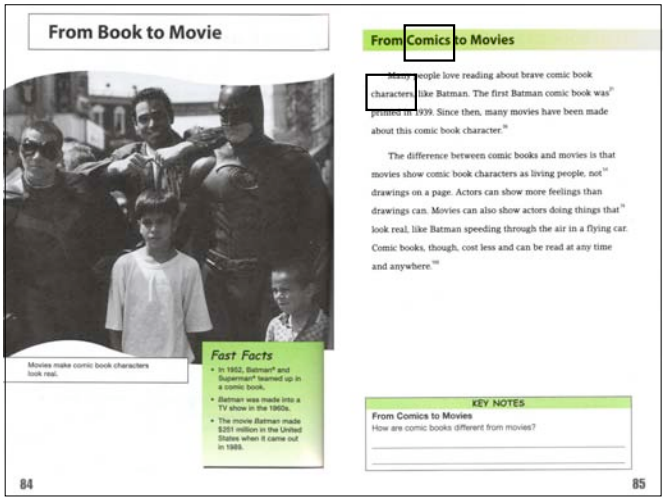
When a movie is based on a book, movie-makers decide how closely to follow the book. They decide how the people and places in the book will look and which parts of the story they will show.

Making *fantasy* real

Some movies are based on fantasy books. In fantasy books, writers imagine a world of people and places that are not real. It is the job of the movie-makers to show the world that the writer imagined.

When the three Lord of the Rings books were made into movies, it took about 300 different sets to show the fantasy world the writer had imagined. Although the books were more that 1000 pages long, the three movies ran for about 11 hours. That means that the movie-makers had to show only the most important parts of the books.





Technology changes the arts *Level D*

New technologies, or new ways of doing things, have changed the world. Today, we can ride in planes instead of riding on horses. That's because of new technology. We can send mail through computers instead of through the post office. New technologies have changed art and music, too. Although artists still use paint and musicians still play pianos, new technologies allow artists and musicians to create their work in new ways. Perhaps the most exciting part of these new technologies is that they have created new ways to create art works. Just as people still send letters through the post office, people still use paint and pianos without speakers.

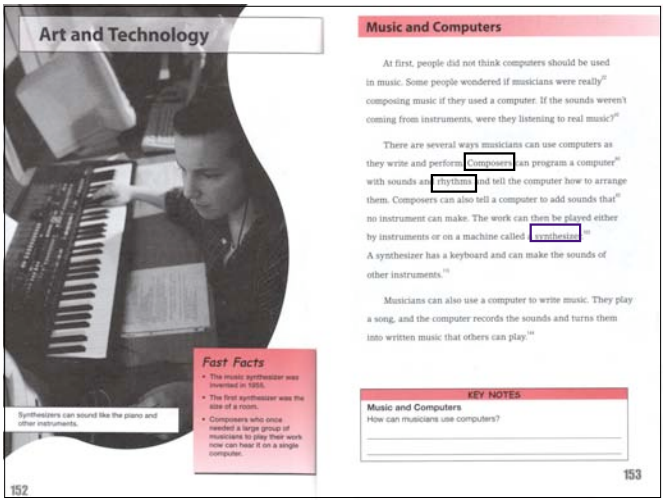
Today, however, artists can paint with beams of light. Musicians can write music with computers. Technology adds richness to the ways people can create and experience the arts.

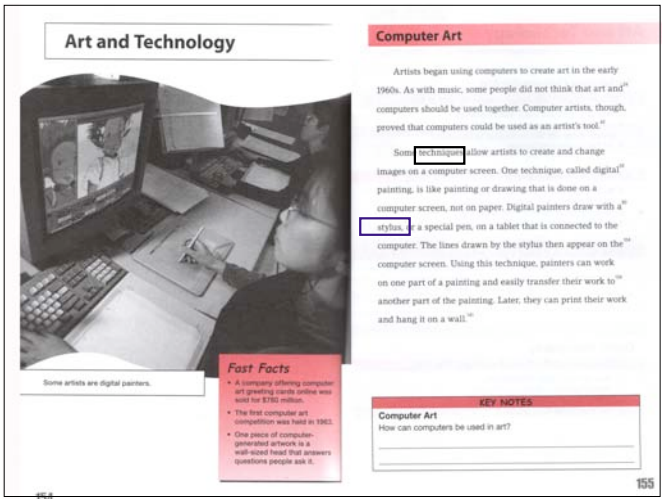
Digital photography

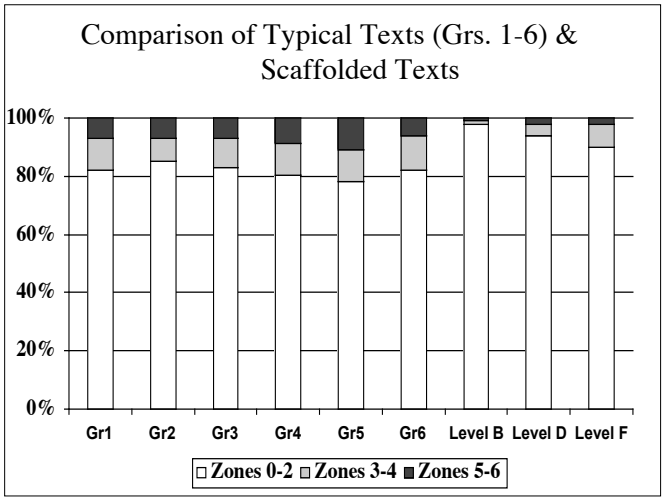
At first, many people thought that photography was not really one of the arts. A photograph, after all, was nothing more than a picture of something that existed in life. Early in the 20th century, though, people began to think of photographs as art. They understood that photographers chose their subjects and arranged them just as painters did. Today, photography is an accepted art form.

Although photography was once a new technology, digital photography has become an even newer technology. Digital cameras store photos on memory chips, not on film. Photographers using this new technology do not need a darkroom. Instead, they load their images on a computer and print them on a printer.

Artists can easily change the colors, sizes, and shapes of their subjects on a computer screen. Digital photographers can also create photographs that look like paintings.





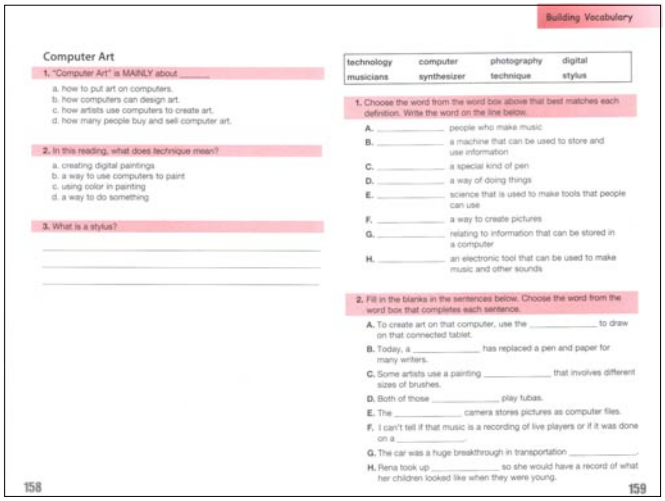


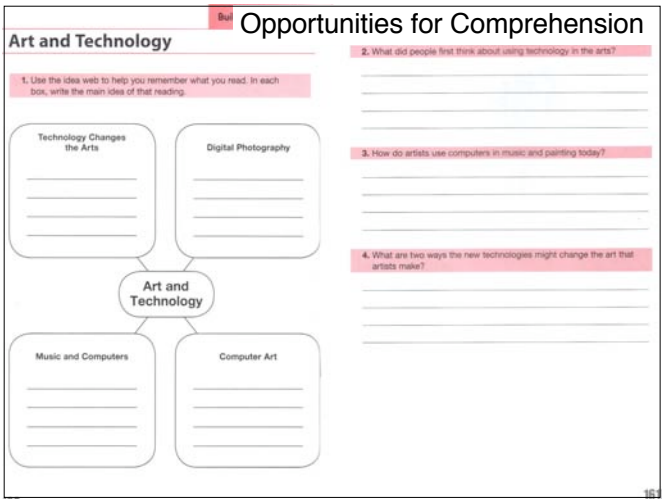
4.2 Opportunities to develop vocabulary, comprehension, and knowledge

Vocabulary & Fluency

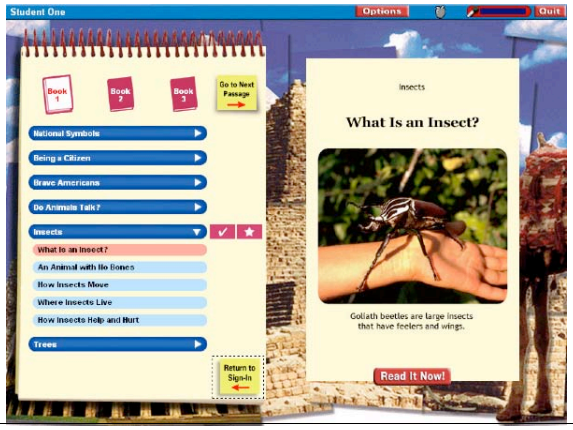
- Vocabulary knowledge was a significant and constant predictor of overall reading comprehension, regardless of grade level.
- While significant, fluency effects diminished from grades 4 through 8.

Yovanoff, Duesbery, Alonzo, & Tindal (2005)





4.3. Opportunities for extended practice with feedback and discretion



4.4. A critical mass of text

4. What are the features of an effective text-based intervention?

ANSWER:

4.1 Repetition of "high-leverage" vocabulary

4.2 Opportunities to develop vocabulary, comprehension, and knowledge

4.3 Opportunities to practice with feedback *and* discretion

4.4 A critical mass of text

5. What evidence is there that text-based fluency interventions make a difference?

Texts in studies reviewed by National Reading Panel (NICHD, 2000)

Texts with controlled vocabulary were used in 74% of the studies used in the meta-analysis. Of the four studies that used literature, only one reported a fluency outcome and, in that study, treatment and comparison groups did not differ significantly. That is: the effect size for fluency came from studies that used texts with controlled vocabulary.

(Hiebert & Fisher, *Elementary School Journal*, May 2005)

Study	Sample	Outcomes
Adams (2006)	29 grade 2 through 5 classrooms randomly assigned (560 students) to treatment or comparison	Technology version of text-based fluency program significantly > than district reading program on fluency
Hiebert (2005)	113 second graders in 3 schools (group assignment randomly by school)	Text-based fluency significantly > control on fluency; Basal fluency > (non-significant) control; Text-based fluency > basal fluency (non-significant)
Huxley (2006)	53 third-graders (half in treatment classrooms; half in comparison)	Text-based fluency significantly > district fluency in accuracy of text reading, rate of text reading, and knowledge
Vadasy & Sanders (in press-a)	162 struggling readers (Grades 2-3) randomly assigned to treatment or comparison	Text-based fluency program significantly > on word accuracy & fluency
Vadasy & Sanders (in press-b)	119 struggling readers (Grades 4-5) randomly assigned to treatment or comparison	Text-based fluency program significantly > on word and passage comprehension & vocabulary
Trainin, Wilson, Rankin-Erickson, Hayden (2007)	76 grade 2 through 5 classrooms randomly assigned (1,489 students) to treatment or comparison	Text-based fluency program (both print & technology versions) significantly > district fluency program on fluency and vocabulary

5. What evidence is there that text-based fluency interventions make a difference?

ANSWER: A substantial body of studies confirms that reading of texts with a high repetition of critical words supports fluency, vocabulary, comprehension, and knowledge acquisition.