

Instruction and Development of Reading Fluency in Struggling Readers

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What do we as educators want for young readers? Yes, like other authors in this volume, we want readers to read words fast and accurately and with expression (i.e., read prosodically), but we want more. We want readers also to read with high comprehension, and for that to happen, we are convinced that they must be constructively responsive as they read (Pressley & Afflerbach, 1995), which includes the following: Excellent comprehenders overview text and scan it. They relate their prior knowledge to ideas in the text. They notice when they are confused or need to reread and do so. They construct images in their mind's eye reflecting the content of the text. Good readers summarize, and they interpret, often with intense feeling, rejecting or embracing the ideas of an author. Such reflective reading, actually, can be pretty slow. Speed in reading and accurate word reading are not the goals. Understanding, appreciating, and thinking about the ideas in text are. Yes, fluency at the word level, as operationalized as reading accurately and quickly, is necessary so that the reader can choose to slow down and employ the comprehension strategies previously described. When word-level reading is fluent, enough cognitive capacity is available (LaBerge & Samuels, 1974) to permit the decision to execute the comprehension strategies and profit from them. Thus, fluent readers can and do think hard about what they are reading.

Constructively responsive fluent readers do not become fluent in an instant; there is no magical moment when fluency is achieved once and for all. Moreover, even a presumably fluent, proficient adult reader might falter if presented with a very difficult and unfamiliar text. Thus, there are probably stages of fluency, with word-level fluency a precursor to fluent, constructively responsive reading, which varies in adequacy depending on the difficulty of the text for the reader.

Our reading of the literature is that no one knows with certainty how to produce fluent reading in all readers, let alone fluent reading in the constructively responsive sense. Enough is known, however, to provide some guidelines about methods to try to promote reading in initially struggling, dysfluent readers with high comprehension.

We wish to emphasize that the methods of instruction discussed in the following sections are methods for teachers to try—and, as a teacher tries a method with a struggling reader, the teacher should also monitor whether the method is having an impact. We feel especially strongly about this “try and monitor” approach, as we near completion of a study documenting the instruction at Benchmark School, Media, Pennsylvania, USA (Pressley, Gaskins, Solic, & Collins, 2005), which, in the first author’s opinion, is one of the premier, evidence-based schools in the country targeting struggling readers in grades 1–8 (Gaskins, 2005). A centerpiece of Benchmark School’s instruction is that the teachers are always monitoring whether what they are trying is working with students, and, if it is not, they try something else.

Such an approach seems imperative to us because the range of struggling readers, those who are at risk for long-term dysfluency, is great. Some children struggle in kindergarten and first and second grade because there is very little instruction occurring in their mainstream classroom, or, at least, instruction is not as explicit, systematic, and complete in word learning as they need to “get it.” If there were systematic teaching of the code, most of these children would get it. Other struggling readers are receiving instruction, perhaps very systematic decoding instruction, but somehow it does not click with them, whereas another form of systematic decoding instruction might. Still others can sound out words but do so very, very slowly, with the result that all of their conscious capacity is used up, and they call out words but have no idea what the message is in the text they just read (Cromer, 1970; LaBerge & Samuels, 1974). Then, there are those children for whom blending and synthesizing individual sounds is their very problem, and systematic, synthetic phonics instruction just does not help them. They just cannot blend individual sounds into recognizable words. In some cases, such children can work with larger word chunks just fine and are able to blend onsets and rhymes (e.g., able to blend *fl* and *at* to read *flat*) or syllables that they recognize as wholes (e.g., able to read *carpet* because they already have *car* and *pet* memorized). In other cases, the children seem to be able to learn whole words only—fortunately, sometimes multisyllabic words

(i.e., they can memorize *carpet* but cannot sound it out on first encounter even though they know *car* and *pet* already). Finally, some children seem to have normal vision, except for their perceptions of letters and words. These are the children who read and write *bs* and *ds* reversed, among other errors. They seem not to have acquired the metacognitive knowledge that, although physical objects are the same whether viewed from left to right or right to left, this is not the case with letters and words. And bear in mind that we are limiting our discussion to children with at least normal intelligence. In addition, many children with less-than-normal intelligence experience difficulties learning to read. They will not be taken up here. Our focus in this chapter is on struggling readers who are at least of average intelligence or greater and are reading at beginning levels (like the students who enter Benchmark School).

For struggling readers, diversity in instruction is essential. One reason is that these children are not a homogenous population; they differ greatly in their needs and responses to reading instruction of various sorts. Some need and benefit from traditional phonics. Some need and benefit from a different form of word-recognition instruction. Some will only learn to read words through instruction emphasizing sight words. Unfortunately, we do not have at present a really good diagnostic test that permits identification of the various types of struggling readers in advance of trying to teach them. More positively, the perceptive teacher can discover much about the specific difficulties experienced by a reader by carefully monitoring the child's reaction to instruction.

Another reason that instruction must be diverse is that skilled reading involves diverse skills. Much must be taught to cover the waterfront of competencies that the skilled reader possesses. In this chapter, we detail our thinking about how such instruction might proceed and why we think the way we do about instruction by offering a series of suggestions about how and what to teach struggling readers who read at the beginning levels.

Try Systematic Decoding Instruction

The evidence is simply overwhelming that many struggling readers do, in fact, make great progress in learning to read if they are given systematic decoding instruction (National Institute of Child Health and Human Development [NICHD], 2000). Especially if it is not known whether a child received such instruction already (and often, it is not), it makes good sense to attempt teaching phonics and seeing how much progress

the child makes. One possibility is that the child experienced exceptionally deficient instruction, that no one attempted systematic decoding instruction previously. If that is the case, there might be rapid progress in the child learning the code and being able to sound out words and eventually becoming fluent in sounding out words. Alternatively, it may be that the particular form of decoding instruction is not well matched to the child, but that another form would permit more certain progress. Finally, sometimes the child makes progress in learning to decode but does not become fluent in sounding out words. The child can only sound out words slowly. We reflect on each of these possibilities in the context of research findings that should be on the minds of anyone concerned with the development of fluency in struggling readers.

Word-Recognition Progress, Perhaps to the Point of Fluency (or Close)

Systematic phonics instruction may be powerful because it influences basic neurological processing, at least in some struggling readers. A little background information will set the stage for understanding this point. Brain-imaging techniques now exist that permit the detection of more and less active areas of the brain as people read (see Shaywitz & Shaywitz, 2004, for a review, which is the basis for this subsection; also, Goswami, 2004). One important finding is that normal, mature readers especially activate a set of three sites on the left side of the brain more reliably than readers with dyslexia (Shaywitz et al., 2002). One especially active area is in the parieto-temporal region, with its healthy functioning associated with the ability to analyze words phonologically (e.g., sound out words). This area is about three quarters of the way toward the back of the brain and two thirds of the way toward the top of the brain. A second very active region in normal functioning is in the occipito-temporal region, which is near the back of the brain and the bottom of the cortex. The healthy functioning of this region is important to recognizing words as wholes, that is, as sight words, rather than sounding out. The third region, Broca's area, is closer to the front of the brain and is implicated in analysis of spoken words. In good readers, these three areas work well in coordination, with the result that readers recognize familiar words automatically without sounding them out and can quickly and accurately sound out less familiar words.

Good readers probably are not born with these left side areas more active. For example, Turkelbaum, Gareau, Flowers, Zeffiro, and Eden

(2003) reported in a cross-sectional developmental study that activity in these areas increased with increasing age, that is, as children learned to read. Also interesting was that with development, the activation of areas on the right side of the brain decreased. Brain activation in response to words changes as people learn to read. Some areas of the brain turn on, while others turn off.

Shaywitz et al. (2004) reported an interesting initial study supportive of the possibility that systematic phonics instruction may, in fact, stimulate the development of the brain regions associated with skilled reading. That is, they explored whether brain activation in the left side areas associated with skilled reading was more likely in students receiving phonics instruction than in those not receiving such instruction. Participants in the study were children at the end of first or second grade who were performing below the 25th percentile on standardized tests of word-recognition and word-attack skills. Students receiving the phonologically based intervention received systematic phonics instruction for the school year, including reading of decodable books, complemented by reading of trade books as decoding skill increased. Other students who were below the 25th percentile on word-level skills experienced the regular school reading curriculum in grade 2 or 3, which varied from school to school but did not focus on phonological skills. After the year of intervention, the students who received the phonological intervention were reading better than those who did not receive the intervention; those who received the intervention had better word recognition, slightly faster reading, and very slightly better comprehension. In spite of their gains, however, the phonological students remained far behind same-age normal readers on standardized reading measures.

Brain images during reading were also recorded at the beginning and end of the year of the intervention. The most striking result was that after a year of intervention, the phonologically treated students had brain images resembling nonimpaired age-mates. In particular, the areas of the brain associated with sounding out words showed normal activation. The disabled readers receiving regular reading instruction had less pronounced brain activations in the areas associated with skilled reading. The researchers also collected brain-imaging data a year after intervention concluded for the students who received phonics instruction. The findings were very encouraging; they indicated more activity in the occipitotemporal region, the area that presumably mediates recognition of words as wholes. The hypothesis that phonologically based interventions may

have effects beyond teaching students how to sound out words gathers momentum with the results of this study, although much additional study needs to occur, especially mapping out the long-term effects of phonologically based interventions in the primary grades, both on behavioral data (i.e., accurate reading of words, fluency, and comprehension) and brain functioning. The brain-imaging data are suggestive at this point, hardly definitive.

More positively, however, when students who are at risk for reading failure, but who have not yet evidenced any reading failure, are provided systematic phonics instruction in kindergarten and grade 1, these students' reading is almost as fluent (i.e., fast) in the later elementary grades as the general population of late elementary readers (Torgesen, 2004). For many at-risk readers, systematic phonics instruction is probably close to a cure for their beginning reading problems, at least at the word-recognition level.

Alternative Forms of Word-Recognition Instruction

Since Chall's (1967) book, synthetic phonics instruction has been favored over all other forms of phonics. Adams's (1990) review of the data, however, suggests that both synthetic and onset-rime phonics are viable alternatives for teaching beginning readers to break the code once phonemic awareness has been attained. Synthetic phonics instruction focuses on the individual sounds in words, with students taught to map the letters and letter combinations in words to their component sounds, and then blend the sounds together to pronounce the word. Many phonics programs in the marketplace are some form of synthetic phonics. Instruction in onset-rime (analogy) phonics teaches students to use the consonant(s) (onset) before the vowel plus the vowel and what follows (rime) to decode words (e.g., blending the onset *r* with the rime *ide* to decode *ride*).

Irene Gaskins and her colleagues at Benchmark School regularly receive students who experienced some form of synthetic phonics instruction and failed to make much progress in learning to read in their first year or two of school. Hence, they end up at Benchmark, frustrated. Based on their clinical experiences and understanding of the research literature on decoding, the Benchmark faculty recognized that there is more than one way to decode a word. Rather than decoding sound by sound, readers can decode by analogy to other words (Ehri & Robbins, 1992; Peterson & Haines, 1992), and some struggling readers do better decoding that way (Berninger, Yates, & Lester, 1991; Freebody & Byrne, 1988; Wise, 1992).

Thus, once a person knows basic letter–sound associations for consonants and the word *cat*, the reader can decode by analogy *bat, fat, hat, mat, Nat, pat, rat, sat*, and *vat*. At the heart of the Benchmark Word Identification program (Gaskins, Gaskins, Anderson, & Schommer, 1995; Gaskins, Gaskins, & Gaskins, 1991, 1992), a very systematic approach to word-recognition instruction, are 120 keywords that capture the most frequent spelling patterns (e.g., *-at*) associated with the six English-language vowels. In addition, the program includes keywords for the two sounds of *g* (e.g., *girl, giraffe*) and the two sounds of *c* (e.g., *can, city*). Some word parts that always sound the same (e.g., *-tion*) are taught as wholes.

For example, to decode the word *dispatcher*, a student using the Word Identification program would learn to identify a keyword for each syllable of the word. For the first syllable, *dis-*, the keyword *this* could be used, because the vowel *i* is followed by a consonant. For the second syllable, *-patch-*, the keyword could be *cat* or *catch*, because the *a* in *-patch-* is followed by a consonant. For the final syllable, *-er*, the keyword *her* would apply. Thus, the student, who is also learning the simple consonant–sound associations of English plus the digraphs and consonant blends, would know the sequence of vowel sounds and would then be able to sound out the word. Thus, rather than *this-cat-her* being pronounced, the student would sound out the word *dispatcher*.

Does the Word Identification program approach work? With severely reading-disabled readers, it works as well as synthetic phonics (Lovett et al., 2000). If it were the case that some children do better with synthetic phonics and some do better with the analogy approach of Word Identification, then you would expect that there would be greater performance in a situation where both are taught. Both Gaskins and her colleagues (Gaskins, Ehri, Cress, O’Hara, & Donnelly, 1996/1997) and Lovett et al. (2000) included such a condition in their work and found that greater performance was indeed the case. The lesson learned is that if synthetic phonics is not working, an alternative based on decoding by analogy is available, and, to the extent that it has been tested, it appears to be as powerful as synthetic phonics (NICHD, 2000). Nevertheless, the severe readers in Lovett et al.’s (2000) work were far from fluent at the word level after receiving 70 hours of any of the three types of instruction evaluated (synthetic phonics, analogy Word Identification, combined). However, a longitudinal study of students who entered Benchmark School as beginning readers revealed that after one year of

a combined sound–letter and analogy approach, these struggling readers on average attained the 50th percentile for their grade level in word reading. Students who entered the school as beginning readers and who received only the analogy approach did not attain the 50th percentile until they had been instructed in the analogy program for three years. That finding is the critical point. A combined program appears to enable more students to acquire decoding skills that are typical of their grade level and to do so in a shorter time period.

Fluency Is Not a Byproduct of Phonics Instruction With Severely Struggling Beginning Readers

With many of the most-difficult-to-remediate struggling readers, fluency does not follow from systematic phonics alone (see Torgesen, 2004, for a review; also Torgesen, Rashotte, & Alexander, 2001). Such students read much more slowly in the later elementary grades than the general population of readers (e.g., Bowers & Swanson, 1991; Hogaboam & Perfetti, 1978; Lovett, 1984; Vukovic, Wilson, & Nash, 2004; Wolf & Bowers, 1999; Wolf, Bowers, & Biddle, 2000; Wolf, Pfeil, Lotz, & Biddle, 1994). A group at the University of Kansas is studying one possibility with respect to these children. Many struggling readers may process verbal material, in general, more slowly than other children. Their problem is not phonological processing per se but speed of verbal processing. To date, the Kansas group has found support for that possibility, with speed of processing of verbal material predictive of reading achievement over and above phonological processes in its analyses of second and fourth graders (Catts, Gillispie, Leonard, Kail, & Miller, 2002; see also Denckla, 1972; Denckla & Rudel, 1976; Levy, Bourassa, & Horn, 1999; McBride-Chang & Kail, 2002; Scarborough, 2001). Slow reading is a real problem, for those who read slowly comprehend slowly (Vukovic et al., 2004). Slow reading of words consumes the limited consciousness available for processing text, with the result that no consciousness is left over for understanding what is read (LaBerge & Samuels, 1974).

With the knowledge that decoding instruction is not a cure-all, it becomes clear that more is needed to deal with problems of fluency than phonics. Researchers have been working hard to identify other approaches that can increase fluency, with some having more support than others. Even so, there are a few ideas in the marketplace, taken up in the next section, that should be on the minds of all those who are teaching struggling readers.

Try Frequent Student Oral Reading With Teacher or Tutor Feedback

Reading fluency can be increased through repeated oral reading with feedback and guidance (NICHD, 2000). That is, accuracy in reading and speed of reading can be increased through such teacher-supported oral reading. However, the procedures for doing so are a real “mulligan stew,” as described by Stahl (2004). They vary in how much repeated reading occurs in the intervention as well as whether an adult assists reading, an adult tutors the child, or the child reads along with audiotapes. Moreover, the National Reading Panel (NRP; NICHD, 2000) did not attempt to separate the various alternative procedures for increasing fluency with respect to their relative potency.

As we reflected on Stahl’s (2004) mulligan stew, we realized that one reason that the analogy-plus-letter–sound students in Benchmark’s longitudinal study made such rapid progress toward the mean word-reading score for their grade level (Ehri, Satlow, & Gaskins, 2006) may be that, during their initial year in the program, students practiced daily echo and choral reading of text saturated with decodable and high-frequency words, both at school and at home. In later years some of the analogy-plus-letter–sound students participated in Readers Theatre, but not with the consistency that is probably necessary to influence gains in fluency. Readers Theatre is an activity that most Benchmark students find motivating, and thus should probably be revisited on a consistent basis. This activity appears to be especially valuable for developing fluency and for pulling together major concepts in content areas (see Flynn, 2004/2005).

Kuhn and Stahl (2003) looked again at the studies included in the NRP report (NICHD, 2000) and broadened the criterion so that more than just experimental and quasi-experimental studies were included in their analyses, as well as more than studies that provided enough quantitative information to be included in a meta-analysis. Their analyses of the studies examined by NRP and the additional investigations highlighted some important points: (a) Kuhn and Stahl concluded that adult assistance was quite important with respect to increasing fluency, with simple repeated reading by the child much less certain to produce a positive outcome as repeated reading with adult assistance. (b) Kuhn and Stahl also noted no difference in fluency or other reading outcomes between repeated reading of same text and the same amount of time spent reading a variety of texts (Homan, Klesius, & Hite, 1993; Mathes & Fuchs, 1993; Rashotte & Torgesen, 1985; von Bon, Bokseveld, Font Freide, &

van den Hurk, 1991). (c) Assistance during repeated reading promoted both fluency and comprehension. (d) Evidence supported readers reading aloud slightly challenging texts rather than easy texts. (e) Although most of the research on fluency instruction has been carried out with one-to-one tutoring, promising whole-group approaches (Rasinski, Padak, Linek, & Sturtevant, 1994; Stahl, Heubach, & Cramond, 1997) deserve more evaluation. (f) Nevertheless, the fluency instruction evaluated to date certainly is not catching weak readers up to regularly achieving readers with respect to fluency! A need definitely exists for more than just teacher-supported oral reading, if struggling readers are to become very good readers (if that is possible at all). One aspect of fluency instruction that deserves further attention is the percentage of high-frequency words found in the texts used in reading instruction.

Try Developing Sight Words and Vocabulary Knowledge

Given the emphasis on reading at the word level in the most popular conceptions of fluent reading, it makes sense for all concerned with reading education to be thinking about what words students are learning to read. Readers must both decode words and access their meanings automatically (i.e., once the word is read, they know what it means). With millions of words in English—consider, for example, that the complete *Oxford English Dictionary* comprises 20 volumes—how could this happen? It can happen because readers do not need to know all of the words in English!

Dolch Words

Consider first a historically prominent reading fluency intervention. Edward W. Dolch (1939, 1941, 1945, 1951, 1960) believed that children should be taught the words most often encountered in text as sight words or words they should recognize automatically. Through his research, he identified 220 words that made up between 50% and 75% of texts children read, with these being mostly function words (e.g., *the*, *a*), conjunctions (e.g., *and*), pronouns, prepositions, and common verbs. He also identified 95 nouns that commonly occurred in texts read by children. Both of these lists were part of his larger list of the 1,000 most commonly encountered words.

Dolch had a view of reading and reading instruction that was far ahead of his time (see Pressley, 2005), but in this chapter we will cover

only those elements most pertinent to our discussion on fluency. Although he believed that much learning of sight words could occur in a decontextualized fashion, he developed many literary stories filled with the common sight words so that students could have many encounters with the Dolch words in context. For struggling readers, in particular, Dolch felt that these stories should be orally read by students with substantial feedback from the teacher, including feedback about how to sound out words (i.e., the stories contained plenty of words that were not Dolch words that could be attacked with phonics skills, which Dolch believed in teaching explicitly). Dolch was emphatic that reading stories was not about reading words but about getting meaning from text, often very personalized meanings informed by students' prior knowledge.

The reading of interesting texts was just part of a larger pedagogy in Dolch's approach that emphasized motivation, filled with practices consistent with what is now known about how to motivate students based on substantial research (see Pintrich & Schunk, 2002): Dolch advocated asking students to read texts that were just a bit challenging, providing lots of praise, practicing reading skills in the context of games, and practicing reading in cooperative classrooms rather than ones emphasizing competition between students.

Dolch did not live in an era when experimental research was common or even much understood as a means of evaluating curriculum. Campbell and Stanley's (1966) classic monograph on designs for research appeared several years after the final edition of Dolch's best-known textbook. Thus, the Dolch ideas about instruction have never been subjected to a credible scientific test. What has been studied is whether intense, short-term teaching of sight words in a decontextualized fashion improves student reading of text containing those words. Although the data are mixed on whether such teaching improves reading (Fleisher, Jenkins, & Pany, 1979; Levy, Abello, & Lysynchuk, 1997), such an exclusive focus on short-term, intensive, decontextualized practice at recognizing words was not what Dolch proposed. What Dolch proposed was long-term teaching of sight words and reading of real stories containing the words occurring in a balanced reading instructional program that extends across the school day.

Dolch's idea of making certain that students know a core set of commonly encountered words makes even more sense today in light of some recent analyses. Much is now being learned about just what words K–12 students really need to know, the basic vocabulary of children and

adolescents. Biemiller and Slonim (2001) provide the most recent chapter in this effort. They performed analyses to identify words understood by 80% of children at each grade level (i.e., the children know the meanings of these words). It is important to note that these researchers were focusing on root words. For example, *fish* is a root word for *fishing*, *fishy*, and *fished*. By the end of grade 2, children know about 5,000 root words. After that, through grade 12, students gain about 1,000 words a year to a total of about 15,000 words. In their study, Biemiller and Slonim identified the words that children at each grade level need to understand. Although their list has more words than the Dolch basic 1,000-word list, it is not an overwhelming number of words. Because many of these words are not especially high-frequency words in English or in texts children encounter, it should be possible to further list in order of priority those words that should be the targets for sight-word development and to make certain that students have fluent access to the meanings of the words (i.e., know these meanings automatically when they see the words).

Benchmark School Approach

The Benchmark School staff supports students in learning sight words by fully analyzing the words they are learning during Word Identification lessons (Gaskins et al., 1996/1997). In addition, teachers support students in acquiring sight words through contextual guessing, letter–sound decoding, and analogy (Gaskins, 2004). New words that students will encounter during reading group lessons are placed on index cards with the word in isolation on the front of the card and, on the reverse side, decoding strategies the child can apply independently for identifying unknown words. For example, if the new word were *then*, the teacher might write a context clue and the analogy strategy on the reverse side of the index card (e.g., “She will work and *then* she can play.” “If I know ten, *then* I know *then*.”). Word cards are punched with one hole and added to each student’s word ring, which is checked each day by the teacher. When a child falters, the teacher asks the child what decoding strategy he or she knows that might work for decoding the word. If the child is still unable to decode the word, the teacher turns the card over and reminds the child of the strategies he or she might use to decode the word. Each time a child quickly and correctly identifies the word in isolation on the front of the card, a check mark is placed on the word card. When a child has five check marks indicating that he or she quickly and correctly identified the word on five different days, the card is removed from the word ring and filed.

In addition, a parent (or sometimes a sibling, grandparent, or other family member) enhances the sight vocabulary of the Benchmark's beginning reader by reading for 20 to 30 minutes each evening with the child. Children choose from several sources of materials to fulfill this nightly home-reading requirement. One source for this reading is Benchmark's Books in Bags program. Books published by the Rigby and Wright Group have been grouped in plastic zip-close bags according to the number of words in the text and the frequency count of those words. The books chosen for this program are books that feature the 100 most frequently used words in written English. The bags of books are sent home, and parents are asked to read each book to their child as the parent finger points and the child follows. Next, the parent and child echo read and choral read the book until the child feels ready to read the book to a parent on his or her own. The bags of books are returned twice a week so that children can have a checkout with the Books in Bags lady. If a child is able to read with 98% accuracy and adequately discuss the content of the book, a new bag of books is given to the child.

A second source of reading material for home reading is the books in bags that are part of the analogy Word Identification program. Each day during the Word Identification lesson, students practice reading these books. On some days, they echo read or choral read, or do both. On other days, they read with a partner as the teacher monitors the reading. These little books contain the word patterns that have been introduced to date in the Benchmark Word Detectives program. Copies of these books are placed in plastic bags and kept at home for children to practice reading them with their parents and anyone else they can find to listen. Students obtain "autographs" from those to whom the books are read. The bag of Word Identification books is returned each week for two new books that feature the word patterns being studied that week. In addition to reading these books, each evening students analyze the words in the books and dictate five "discoveries" to their parents about how our language works (e.g., "I noticed in the word *Nathan* that the *t* and *h* represent one sound, just like the *n* and *g* in *sing* represent one sound. The letters *a-u* in *caught* represent the same sound that *a-w* represent in *saw*").

Beginning readers at Benchmark also take home a folder of stories written by the teacher that feature the high-frequency sight words that have been introduced in reading group as part of their basal reader program. In addition, once students have acquired a preprimer sight

vocabulary, they go to the library each day to pick out books to take home from the preprimer section. In short, the school provides many opportunities for students to practice reading sight words.

Limits of Sight-Word Learning

Reading is not just about decoding words. Even the simplest view of reading (e.g., Gough & Tunmer, 1986) posits that reading involves decoding the words and then comprehending them, largely by listening to one's own reading of the words. Hence, reading comprehension is viewed as determined by a combination of word-recognition skills and listening-comprehension abilities.

In an important study, Catts, Hogan, Adlof, and Barth (2003) assessed the word-recognition, listening-comprehension, and reading-comprehension skills of a group of students who ranged in reading ability when they were in second, fourth, and eighth grades. Word recognition was much more predictive of reading comprehension at grade 2 than at grade 4, and more predictive at grade 4 than at grade 8, where it accounted for a negligible portion of the variance in reading comprehension. The researchers also examined the weakest readers at each of the grade levels. Word-recognition difficulties were more prominently associated with poor reading when students were younger than when they were older. With increasing age, listening-comprehension problems were more prominent in the reading problems of the older students. Based on these data, we see more reason to be concerned about word-recognition and sight-word learning with younger compared to older students, but for poor readers, word-recognition problems are still obvious in grade 8. At all grade levels, however, reading comprehension reflected a balancing of word-recognition and listening-comprehension skills. These analyses indicate the need for a balanced development of skills, consistent with a message in research of the last decade (Pressley, 2006) that a balancing of factors is essential in effective reading instruction.

Sight-Word Learning as Compensation

Finally, in making the point that teaching sight words and vocabulary to struggling readers makes sense, we point to another aspect of the brain-imaging data. Some adults who were dyslexic as children have, somehow, somewhat compensated for it as adults (Shaywitz et al., 2003). They recognize well-familiar words. We find it very interesting that these compensating readers have more pronounced activity in the occipito-

temporal region than do adults with dyslexia who do not recognize familiar words (i.e., the compensating adults with dyslexia have more pronounced activity in the area of the brain responsible for recognizing words as wholes rather than by sounding the words out). Because these compensating readers also seem to have more connection between the functioning of the occipito-temporal region and regions of the brain responsible for short-term memory than other readers (including normal readers), it seems likely that they have somehow memorized the sight words. In contrast, normal readers have stronger connections between the parieto-temporal and occipito-temporal regions, suggesting that repeated sounding out of words rather than rote memorization brings about the fluent reading of familiar words in them. The normal reader first sounds out the word and over repeated encounters comes to recognize the word as a sight word, with some evidence in young readers of active functioning of the parieto-temporal region preceding the active functioning of the occipito-temporal region as beginning readers who are good at sounding out begin to develop sight vocabulary.

In addition, consider the childhood dyslexics who seem to compensate as adults. Their reading is still not fluent because they have trouble with unfamiliar words. They still cannot sound out words, with the brain-imagery data confirming that there is less than optimal functioning in their parieto-temporal regions (see Shaywitz et al., 2003, for the original data on this fascinating study that we consider potentially very important as thinking about reading education proceeds). Shaywitz et al.'s (2003) observation that fluent reading depends on automatic recognition of high-frequency words and skilled sounding out of lower frequency words is consistent with other recent analyses (Compton, Appleton, & Hosp, 2004). Even so, Shaywitz and others (2003) made a significant finding, a counterintuitive one, about comprehension by the compensating readers: The compensating readers did about as well as nonimpaired adults on a comprehension measure and better than the noncompensating adult dyslexics. This finding raises the possibility that even if the compensation from memorizing familiar words does not produce as fluent reading as occurs in normal adult readers, it can still improve comprehension. On the basis of one study, this finding should be considered a hypothesis; however, it is an important hypothesis, one that should be a priority for study in the immediate future, as should instruction aimed at promoting the comprehension skills of struggling readers. If that hypothesis holds up in other studies, then emphasizing

sight-word instruction for struggling beginning readers will gain much additional impetus.

Try Teaching Comprehension Strategies

At the beginning of this chapter, we stated that fluency and comprehension are not so much linear processes but are interdependent in a “blurry” sort of way. In this section we assert that comprehension strategies should be taught to all readers from the beginning of reading instruction, even if they have not yet become fluent. This approach may be the best practical demonstration of the interrelatedness of fluency and comprehension we described earlier and, more important, the best intervention to address it. In effect, weak readers can become better readers through teaching of comprehension strategies. The work of Brown, Pressley, Van Meter, and Schuder (1996) and Anderson (1992) is especially powerful evidence of this. In the former study, weak second-grade readers were taught a small repertoire of comprehension strategies over the course of a school year of instruction, with huge gains in reading achievement at the end of the year. In the latter study, weak readers in grades 6 through 9 were provided similar instruction, with similar large gains in reading achievement. In both studies, researchers found positive effects across a variety of measures. Many of the children in both of these studies were far from being fluent readers at the word level, even at the conclusions of the interventions. However, using the comprehension strategies very much seemed to make up for the lack of fluency as demonstrated by several measures of comprehension.

In addition, learning to use comprehension strategies presents a bonus. Students get more out of reading, which, if they are reading quality material, increases their knowledge of the world, including their vocabulary, with such richer world knowledge empowering future comprehension of topically related texts (Anderson & Pearson, 1984). So by teaching comprehension strategies that permit students to read books with worthwhile content, teachers can do much for potential literacy development, even of students who are not as word fluent as their classmates.

When students are first learning comprehension strategies, the teacher must often cue their use, and the student only responds to such cueing with some effort. Use of the strategies is far from fluent. Over several years of instruction and practice, however, many students come to use the strategies on their own and seem to execute them more as habits of mind, doing so with much less effort than when they were first learning to em-

ploy the techniques (Pressley et al., 1992; Gaskins, 2005). Over the course of the four to seven years of Benchmark School, teachers make a substantial effort for students to practice these strategies from their first days in the school as 7-year-olds to their concluding lessons as middle schoolers. Just as the development of fluency at the word level takes years, becoming a fluent, constructively responsive reader takes years.

Try All of the Recommendations at Once— Try Balanced Instruction

Every day, every student at Benchmark School experiences some form of word-recognition instruction, oral reading with teacher support, development of sight-word knowledge, development of vocabulary, and comprehension strategies instruction. The components recommended in this chapter to improve student reading to the point of fluency are at the center of the Benchmark curriculum, which includes many other elements as well—the reading of fine literature, extensive reading of expository materials, and composing, as well as the full range of elementary and middle school content that is in any combined elementary–middle school. We emphasize *every day* because becoming an excellent reader, one who is fluent at the word level and constructively responsive, occurs over years, not over a few lessons, a few months, or even a year or two. Reading acquisition is a longitudinal development if ever there was one.

Not every Benchmark student becomes fluent at the word and comprehension levels, but all make progress toward fluency. In a middle school class, some students are fluent with respect to most words encountered and facile in using the comprehension strategies. Some are fluent at the word level but have not mastered independent and habitual use of the comprehension strategies. Other students depend more on the comprehension strategies because they know many sight words but still struggle with unfamiliar words.

And, finally, some students struggle reading words, period—the children who have a biological difference that impairs their ability to perceive words as quickly and accurately as others do. These children are the ones who have been ignored in the recent flurry of interest in reading disabilities. Yes, most children with reading disabilities suffer principally from verbal difficulties. A few, however, have speed-of-response and perceptual problems. Although treatment is not yet well understood, the teacher clinicians at Benchmark do work with these children so they can make as much sense as possible from text.

An important key to the success of the treatment of the struggling readers at Benchmark School is that the treatment is multidimensional (Gaskins, 1998, 1999, 2005). Realizing that children learn differently, teachers implement a variety of approaches; they are responsive to the aspects of the Benchmark program that work best for each student and make students aware of what appears to work for them. In addition, just as Kuhn (2004/2005) found, the Benchmark staff has learned that opportunities for students to spend a great deal of time during the school day and at home involved in wide reading (sometimes echo reading, sometimes choral reading, and much of the time silent or oral reading in texts in which at least 98% of the words are sight words) leads to improved fluency and comprehension. We believe that the number of words read each day is one of the most important ingredients of a program that develops fluent readers.

In addition, the Benchmark staff has found that the text in which children read does make a difference. The staff has noted that their students appear to acquire sight vocabulary more quickly and easily when students read in basal readers that were published in the heyday of controlled vocabulary. For example, some of the basal readers that have proved successful for Benchmark's struggling beginning readers are the preprimers, primers, and first readers published in the 1970s. In these texts the most frequent words in written English account for a large portion of the words, and the percentage of less common multisyllabic words is lower than is typical of the current literature readers. In the readers of the 1970s, word overlap (i.e., word families that end in the same sound) tends to be frequent, which seems to be helpful to struggling readers in gaining fluency. The best texts for aiding struggling readers to become fluent readers appear to be those that have a controlled vocabulary consisting of a high percentage of both high-frequency words (e.g., *the, dog*) and words with consistent and decodable patterns (e.g., *rug, sun*). This conclusion is based on experiences at Benchmark School and is consistent with more formal research-based conclusions produced by Hiebert (2003) and Hiebert and Fisher (2002).

Conclusions

Tremendous progress has been made in understanding how to promote better and more fluent reading in struggling beginning readers. We are far from having a cure for all such readers, although progress in alleviating their symptoms has been made. Every instructional direction discussed in

this chapter requires additional study and should receive it as part of the quest for instruction that will work to permit all children to become fluent readers—readers who can process the words on the page and respond to the ideas reflectively and intelligently. The progress has been great, but so are the challenges to get beyond where we are right now.

Then, an even larger challenge exists: There is only one Benchmark School. More positively, because of the emphasis on evidence-based approaches to reading instruction, the instructional practices reviewed in this chapter are being tried in more and more schools. Nonetheless, it is not certain how well these components are being implemented or how completely. As we come to understand more fully how to develop better, more fluent readers, we must simultaneously work on making certain that the light from a lighthouse such as Benchmark finds its way as far and as wide as possible, wherever there are children who are struggling to learn how to read—and, by the way, they are everywhere.

Questions for Discussion

1. How can all the suggestions for encouraging fluent reading be incorporated in every “reading morning”?
2. Why is measuring the number of words a child can read per minute an inadequate measure of fluency based on the perspective of this chapter?
3. Why should the development of fluent reading be a focus of instruction throughout the elementary years?

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