

Series: Powerful Best Reading Practices for Struggling Readers

Part 1: Teaching Reading the Way the Brain Learns

by Marie Carbo, Ed.D.

Why Brain-Based Reading Instruction Works

Our most important reading goal is to make learning to read easy, fun, and powerfully effective so that our students enjoy reading, make substantial reading gains, and are highly motivated to read for their own pleasure. When that happens, we are teaching reading the way the brain learns. The result? Not only do reading scores rise, readers are being created.

When educators use powerfully effective reading strategies and make reading enjoyable, miracles do happen and are happening across the U.S. Recently, for example, in a poor section of the Bronx in New York City, students in grades 5-8 at Intermediate School 206 became excited about their brain-friendly reading program, and their reading gains. Those students gained 1.8 years in reading, rising from a 2.3 to a 4.1 reading level in only five months! Those are life-changing gains—precisely the kinds of gains needed by our struggling readers, especially those who live in poverty and are most at risk.

As Eric Jensen pointed out in his excellent article in *Instructional Leader*, “The Effects of Poverty on the Brain,” children who live their lives in poverty are actually likely to have developed “different” brains! This occurs because poor children are most likely to be exposed to toxins, chronic stress, substandard cognitive skills, and impaired emotional-social relationships (Jensen, 2012). As Jensen observed, “Our neurons are designed by nature to *reflect their*

environment, not to ‘automatically’ rise above it (p. 1).”

Jensen also suggested that educators intercede to create the “positive experiences” poor youngsters need to succeed. He continued: “...while those from poverty may have suboptimal brains, positive experiences can (and do) change their brains” (p. 3). And that is precisely what I believe is happening to the students at I.S. 206 in the Bronx. Those students are making extraordinary reading gains in part because their brain-compatible reading program provided the reading materials and strategies that enabled those youngsters to learn naturally and easily.

We know that the brain thrives on high meaning, positive emotions, challenge, choices, and learning through multiple senses (Caine et al., 2005; Jensen, 2006). The brain-compatible reading practices that follow have resulted in extremely high reading gains across grade levels, increased enjoyment of reading, and greatly improved student confidence and behavior (Carbo, 1995, 2007, 2009).

The Effect of Emotions on the Brain

Negative emotions dull the mind and create anger and fear. Positive emotions motivate and create excitement. Unfortunately, for many struggling readers, as their grade level increases, their reading difficulties worsen. In fact, after third grade, struggling readers tend to fall further and further behind in reading, and often become discipline problems (especially

boys). Many of our struggling readers have a reading level lower than their ability level. They hear themselves stumbling over simple words, they dislike the simplistic stories they have to read, and every single day feels like a battle. For many, reading aloud in school becomes an agonizing and terribly embarrassing event.

Invariably, struggling readers say that they feel dumb. Many become withdrawn or begin to act out. Caine et al. (2005) explains this phenomenon: “Excessive stress actually short-circuits the brain/mind and reduces the ability of people to engage their own higher-order capacities (p. 30).” In other words, repeated failure causes stress and makes learning difficult—exactly the opposite of what we want for our struggling readers. We want repeated successes that thoroughly engage students and make them feel confident and smart.

How to Create Repeated Successes for Struggling Readers

A few decades ago, I created special recordings for my students with severe learning disabilities, and the results were remarkable. In my first experiment, Georgette, who was repeating second grade and could read only the word “Georgette,” learned 31 words in just one month (Carbo, 1978a). My second experiment was with eight of my students. The highest reading gains were made by Tommy, who was reading a book three to four years above his reading level. Tommy worked with the special recording I made for him of a passage in his

favorite book, *Charlotte's Web*. In just 10 minutes, he read the passage back to me perfectly. In just six weeks, Tommy rose from a 2.2 level in word recognition to a 3.5 level—a gain of 1.3 years!

What's the secret of these remarkably effective recordings? I had observed that my students with learning disabilities enjoyed commercially recorded books, but they couldn't keep up with the fast pace of the recordings. I decided to record books of their choice at a slower pace, with slightly exaggerated phrasing and good expression. I recorded just a few minutes of text on each tape side (see Figure 1). The children would listen to their own special recording a few times and follow along in their book. Then amazing reading gains began to happen all around me. One by one, each of my students couldn't wait to read to me, and each one was reading much more smoothly and confidently than ever before. In six weeks, the average gain of the eight children in that group rose .8 years—and they all improved dramatically in reading fluency and comprehension (Carbo, 1978b, 1981).

That was more than 30 years ago. Over the years, tens of thousands of teachers have learned about the Carbo recording method, and many have told me their amazing success stories. Best of all, this method has helped teachers to accomplish our most important goals for struggling readers: to raise their reading abilities and test scores and to nurture a love of reading. According to brain research, my special recordings provided a modeling reading method that enhanced learning and recall because: 1) my students could read high-interest, challenging reading materials that they chose, so they were emotionally engaged; 2) the slow pace, special phrasing, and good expression of the recordings made them easy to

Figure 1 How to Record for Maximum Reading Gains

- Use high-interest stories that are above the student's independent reading level.
- Record at a slow pace with good expression.
- Record about 2–4 minutes of text per tape side.

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Figure 2 Grade 6 Reading Interests

- Scary books and stories
- Comics, cartoons, magazines about popular culture
- Books and magazines about sports, cars, and trucks
- Series books
- Funny books
- Books about animals

Adapted from Moorman & Turner, 1999.

follow and supported comprehension; 3) the amount of text recorded was small, enabling students to master it in a few repetitions; 4) the task was multimodal; and 5) the students controlled the amount of repetition needed as well as when they would read aloud, so there was little or no stress (Caine et al., 2005; Jensen, 1998).

The Brain Thrives on Meaning, Challenge and Choices

The most powerful kind of memory is emotional memory. Obviously, struggling readers need to read books and stories that are of great interest to them. The more students are emotionally connected to what they read, the more likely it is that they will enjoy, understand, and recall what they are reading. Struggling readers also need choices of high-interest reading materials that challenge them, and they need the assistance of modeling reading methods that enable them to read high-level materials with ease (such as the recordings I described

above). We know that many students don't enjoy the reading materials given to them in school. In fact, a study by Moorman and Turner (1999) found that school is the last place that sixth-graders will find the kind of reading material they like (see Figure 2). In order to advance in reading at a rapid rate, struggling readers need high-interest, challenging materials, reading choices, and the modeling reading methods that enable them to read those materials. In the second article in this series, we will look at a group of modeling reading methods that will enable teachers to raise their students' reading levels using high-interest, challenging reading materials.

Whenever possible, the interests of the struggling reader should be the deciding factor in what reading materials are emphasized. That may seem difficult to accomplish if students are not interested

in nonfiction, given today's growing emphasis on nonfiction. Whenever possible, the interests of the struggling readers should be the deciding factor in what reading materials are emphasized. While we do want our students to "understand a wide variety of literary and informational texts," as recommended by TEKS, brain research tells us that emotional memory is the most powerful kind of memory. To help struggling readers learn to read with ease and joy, we need to emphasize reading materials that engage the students emotionally. As struggling readers become increasingly motivated and capable of reading well, a greater variety of "literary and informational" texts can be used. *Remember, our most important goal in reading is to foster a love of reading.* We want to create "engaged readers," students who read a great deal because they enjoy what they are reading and enjoy the process of reading.

Multiple Memory Lanes Help Powerful Learning to Occur

Many students learn more easily when multiple senses are engaged.

Brain research tells us that active learning enables students to process what they've learned on deeper, more lasting levels (Caine et al., 2005; Sprenger, 1999, 2003). Remember, too, that many young children and struggling readers are global, tactile, and kinesthetic learners who also tend to have high mobility needs. Boys, in particular, are increasingly at risk in today's classrooms, where students are often expected to sit still, listen, and complete numerous worksheets. Boys enter school less verbal and auditory and more tactile and kinesthetic than girls, and remain so throughout the grades (Thies, 1999/2000). Boys also consistently outnumber girls in remedial reading classes, are twice as likely to be identified as learning disabled and placed in special education classes, and by eighth grade are 1½ years behind girls in reading. It's no wonder that an increasing number of boys dislike school and do not attend college (Newkirk, 2003).

The stakes are high, especially for our struggling readers who slide

further behind each year. Despite all the remedial work in our schools, most struggling readers are not making sizeable reading gains every school year. We know that the brain thrives on high meaning, positive emotions, challenge, choices, and learning through multiple senses. Yet most struggling readers in our schools work with low-level reading materials that often don't interest them, they are fearful of reading aloud and being ridiculed, and they often must complete thousands of boring skill sheets that do not serve to advance their reading levels sufficiently. When we teach reading the way the brain learns, we enable all students to perform well in school. And when we make this process easy, enjoyable, and fail-safe, we help children to become lifelong readers.

In subsequent articles in this series, we'll look at how and when to use powerful modeling reading methods, teach to students' strengths, increase active learning, and reduce dyslexia.

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For information about Power Reading Online, the brain-compatible reading program used at I.S. 206 in the Bronx, and many of the schools listed in this article, as well as to work with Carbo recordings, visit www.nrsi.com.