Dee Tadlock

Developer of READ RIGHT® Methodology

Co-Founder
READ RIGHT® Systems, Inc.

Nominated by

Melinda Reeves

Dee Tadlock
Developer, READ RIGHT® Methodology
Co-Founder, READ RIGHT® Systems, Inc.

Dee Tadlock obtained her Ph.D. in reading from Washington State University in 1978. As she was completing her doctoral program, Dr. Tadlock watched as her own son developed a serious reading problem. Her son's school and Dr. Tadlock did everything reading theorists then and now say should be effective in addressing a reading problem, but the recommended interventions did not work. To help her son, Dr. Tadlock spent the next three years investigating current knowledge from the fields of linguistics, language acquisition theory, information theory, communication theory, cognitive psychology, neurobiology, and neuropsychology. Her thinking was heavily influenced by the works of Jean Piaget, world-renowned in the development of intelligence, and Donald Hebb, the first neuropsychology to hypothesize that learning something new is reflected in physical brain changes (now widely recognized as neural networks). From this work, Dr. Tadlock developed an entirely new view of what brains must do to produce excellent reading ability each every time reading is attempted. Identified by Dr. Tadlock as an interactive constructivist view of reading development in recognition of Piaget and Hebb's work, the new view led her to develop methodology that eliminated her own son's reading problem in just three months. This discovery led to more than 20 years of work perfecting the methodology and the development of efficient delivery systems to optimize the numbers of children, teens, and adults who could benefit. Since 1978, Dr. Tadlock has been employed as a reading specialist at every level—from elementary school through the college level—and has also worked with adult literacy in community college, community-based, and workforce literacy programs. Under contract with more than a dozen Fortune 500 corporations in three countries (the U.S., Canada, and China), the company she founded in 1991 (READ RIGHT Systems, Inc.) has implemented dozens of adult literacy programs serving thousands of struggling adult readers. In the mid-1990s she began working with schools again and her methodology is now used by more than 150 schools in the United States. Since her company was formed in 1991, it has maintained records on the more than 20,000 children, teens, and adults who have used her methodology to eliminate their reading problems.

Submitted by: Melinda Reeves

DECATUR HIGH SCHOOL

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It is my honor and privilege to nominate

Dee Tadlock, Ph.D.,

Developer of the Interactive Constructivist View of
Reading and Reading Development and
READ RIGHT® Methodology
for the prestigious

Brock International Prize in Education

Submitted by Melinda Reeves,
Principal, Decatur High School,
Decatur, Texas

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June 15, 2005

Dear Brock International Prize in Education Selection Committee,

It is my honor and privilege to nominate Dee Tadlock, Ph.D. for the 2005-2006 Brock International Prize in Education.

In just a couple of paragraphs, I cannot adequately express what Dee's remarkable body of work has done for me, five classes of students at Decatur High School, and thousands of children, teens, and adults all across America. I hope I cover that adequately in the nomination.

Before I introduce you to Dee, however, there is one more thing I'd like to share that is not addressed in the nomination. In her 2003 book, *Overcoming Dyslexia*, the nation's leading proponent of the current popular view of reading development (the phonological processing view), Sally Shaywitz, M.D. states that one of the most effective methodologies for struggling readers is "reader's theatre" (dramatized readings). Dr. Shaywitz points out that reader's theatre has been documented to produce one grade level of improvement in reading ability with just 10 weeks of effort—even though reading theorists cannot explain precisely *why* reader's theatre is so effective.

This is pertinent and interesting to this nomination for two reasons:

1) Reader's theatre involves no systematic, explicit instruction in phonemic awareness, phonics, vocabulary, fluency or comprehension. The National Reading Panel says that systematic, explicit instruction in all five areas are essential to reading development.
2) Rather, by its nature, reader's theatre involves both familiarity with material being read and performed and excellence in the delivery of the material. As you will see, both of these are integral to the methodology Dee developed more than 20 years ago to eliminate reading problems quickly and efficiently (in a matter of months rather than years).

Although reader's theatre is not mentioned in this nomination, Dee's new view of reading development can explain precisely why reader's theatre is so much more effective than traditional reading interventions grounded in the phonological processing view. Without question, reader's theatre involves familiarity with text and commitment to delivering excellence. Both of these together are *powerful*—they compel the subconscious brain to experiment with reading until the desired excellence is achieved.

There is so much more that we need to do to make 100% of students successful readers. If we truly want to leave "no child behind," then our minds need to be open to new ideas. This nomination is about an *extraordinary* reading expert with a new idea that is demonstrating the ability to help nearly every individual with a reading problem.

Respectfully,

Melinda Reeves

Melinda Reeves
Principal, Decatur High School

DEE TADLOCK

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EDUCATION

DOCTOR OF PHILOSOPHY

1978 Washington State University — Major: Reading Minor: Curriculum and Instruction

MASTER OF ARTS

1969 New Mexico State University — Major: History

BACHELOR OF ARTS

1966 Central Washington State — Major: Education (cum laude)

1964 Washington State University — Major: History (with High Honors)

EXPERIENCE

DEVELOPER OF READ RIGHT®

Developed the READ RIGHT system, a unique and fundamentally different way of teaching reading. READ RIGHT utilizes methodologies grounded in constructivist learning theory and reading theory and is supported by understandings from brain research.

Co-founded READ RIGHT Systems, Inc. in 1991 to bring the READ RIGHT methodology to corporate America and to American schools.

The company has grown to thirty employees.

Workforce literacy projects have been established in 80+ different manufacturing plants in 25 states, Canada, and China.

Corporate clients include Boeing, Weyerhaeuser, Motorola China, Hewlett-Packard, Saskatchewan Wheat Pool, AMOCO, Ford, Johnson & Johnson. Merck Pharmaceuticals, Procter & Gamble in China, and others.

School clients include more than 200 schools in fifteen different states in elementary schools, middle schools, and high schools.

CURRICULUM DEVELOPMENT ACTIVITIES

Authored elementary school programs in math, spelling, and reading comprehension

Developed remedial reading, study skills, and critical thinking programs for Yakima Valley Community College

Developed program for course-specific tutoring for high-risk college courses including a model for training the tutors

Authored student learning objectives for school districts and for the Washington State Department of Education

PROGRAM EVALUATION ACTIVITIES

Designed and implemented evaluation models

- Yakima Valley Community College Basic Skills Program
- Washington State University reading clinic
- Title III and other grant-funded special projects including Joint Training Partnership Act projects

Served as outside evaluator

- El Paso Community College literacy and English-as-a-second-language programs

GRANTSMANSHIP ACTIVITIES

Conceived and wrote federal and state grant proposals

Administered funded projects

→

TEACHING ACTIVITIES

Elementary School:	special education and remediation, K-6 (six years)
Elementary School:	gifted education, 4-6 (two years)
Junior High School:	reading and history (two years)
Community College:	reading, writing, text analysis, critical thinking, adult basic education, GED (six years)
University:	graduate-level reading education (to teachers of reading; 8 years)
Workplace:	tutored employees, trained tutors and project coordinators (seven years)
Training Trainers:	trained consultants in implementing workforce literacy projects and school projects for READ RIGHT Systems (eleven years)

PROFESSIONAL RECOGNITION

AFFILIATIONS

Phi Beta Kappa, academic honorary

Past President, College Reading & Learning Association, a 900-member national professional development organization

PRESENTATIONS

Presented at numerous state and national conferences

Keynote addresses at state and national conferences

Conference presentations on topics in reading, writing, literacy, workplace literacy, critical thinking, English-as-a-second-language, learning theory, evaluation, and curriculum development

CONSULTING

Consultant to more than 15 different school districts prior to establishing current business

Consultant for both two-year and four-year colleges

Consultant to five different corporations prior to establishing current business

ADJUNCT FACULTY

Adjunct faculty status at Central Washington University, Seattle Pacific University, Northern Montana State University, and University of Puget Sound

PUBLICATIONS

"SQ3R--Why It Works, Based on an Information Processing Theory of Learning," *Journal of Reading*, November, 1978.

"Cognitive Structures and Learning to Read," in ERIC (ED 185 501), February, 1980.

"In-service for ABE Instructors: Why Should an Adult Educator Do It?" *Adult Literacy & Basic Education*, Vol. 4, No. 1, Spring 1980, 36-40.

"Faulty Criteria for Mainstreaming," *Phi Delta Kappan* (Backtalk Section), May, 1981, 686.

"A Practical Application of Psycholinguistics and Piaget's Theory to Reading Instruction," *Reading Psychology*, Volume 7, Number 3,1986,183-195.

"Growing a Literate Workforce, Simpson Reads Right," *Target*, The Periodical of the Association for Manufacturing Excellence, Volume 8, Number 3, May/June, 1992, 7-14.

BOOK

Read Right! Coach Your Child to Excellence in Reading, McGraw-Hill, NY, 2005.

I first met Dee Tadlock...

when I was a struggling young principal with a low-performing campus. Dee made a presentation at the National Association of Secondary School Principals National Convention in San Antonio, Texas where she explained her READ RIGHT program, which had been developed and tested over a 20-year period in public school, community college, and adult literacy settings. I was completing an application for a Texas Education Administration Ninth Grade Initiative grant when I attended her presentation. I was so moved by the effectiveness of READ RIGHT and its inclusion of the most current brain research that I revamped my grant to include the program. Since implementing it in 2000, I have witnessed dozens of lives transformed by Dee's methodology and the power of learning to read. READ RIGHT is *the* most powerful program I have witnessed in my 28 years in education.

As a reading specialist, I am very aware of the prevailing beliefs and the current research in the field of reading. I am also aware that every new discovery is initially met with scoffers and nay-sayers. Most people are uncomfortable with change. Imagine the ridicule Galileo, Edison, or Bill Gates endured when they initially spoke of their discoveries. I believe that Dee Tadlock is truly a pioneer in the field of reading, as the results our students are experiencing attest. Her methodology is very difficult for the current establishment to acknowledge because it is so highly effective and it is grounded in a much more extensive understanding of brain science. In fact, Dee's research has been widely ignored in part because it disagrees with popular assumptions about reading and, more so, perhaps, because she has operated quietly and in relative obscurity.

The Brock Prize would move Dee's work out of obscurity and into the national and international spotlight, where it needs to be in order to get the attention of the reading field. This would encourage independent research into her findings and would ultimately help the millions of children, teens, and adults who have not been served through current methods. Awarding the Brock Prize to Dee would indeed "provide long-term benefit to all humanity through change and improvement in education," just as stated in the informational brochure on the Brock Prize. How better to celebrate the achievements of Sequoya—the first individual to create a written language entirely on his own—than to honor the first person to develop a new and far more complete understanding of what the brain does when it uses the English-language alphabet for passage reading?

Decatur High School and more than 150 other schools using Dee's methodology are learning that, for the 20 million children in the United States with significant reading problems, reading instruction is *not* the problem. *Reading theory is!* We are learning that children from all walks of life (whether it be Native American, African American, Hispanic, Caucasian, learning disabled, or low income) are equally capable of becoming excellent readers. On the surface, this statement may seem outrageous—but we are experiencing its truth. High schools using Dee's methodology in particular are observing first-hand that nearly all teenagers who have struggled with reading throughout their lives can overcome their reading problems systematically, quickly, and efficiently.

Since our school implemented READ RIGHT in August 2000, it has proven to be a powerful, life changing program for our students. In that time, two freshman classes have been with us for four full years and graduated from Decatur High School—and 100% of both of those classes have passed our state's tough reading/English and Language Arts (ELA) exit exams!

Of the two classes, the Class of 2004 faced the greatest challenge. Historically, this particular class was the lowest achieving class in the Decatur ISD, failing state reading and other tests in higher numbers than any other group. This group was in need of widespread and individualized help to give them any hope of being successful in both high school coursework and the state exit exam. Ultimately, nearly one out of five of the students in this class (19%) were served by Dee's program. Quite remarkably, 96 percent of the Senior Class of 2004 passed the state exit reading exam on the first try and *100 percent* of the class passed the test by the end of their senior year! This outcome far exceeds the federal government's belief that only one out of four students with a reading problem after the age of 9 will ever overcome their reading problems. The only reading intervention our students received was Dee's program. Additionally, our struggling readers did not drop out of school. Since we've made Dee's methodology available to students, our drop-out rate has decreased from 13% to under 1%. When kids believe they can be successful because they can read and understand the material, they stay in school.

The success of every one of our students is possible *only* because Dee's methodology accurately reflects what struggling readers truly need in order to overcome reading difficulties. How else could we achieve this kind of success?

Since the READ RIGHT program was first implemented at DHS, it has served over 350 students. Among those, 100% are currently attending school or have graduated—another amazing feat, considering that we use the program to serve our district's at-risk students. Students in our READ RIGHT program average one grade level of reading improvement for every eight and one-half hours of tutoring—an extraordinary rate of growth. At one point, the federal government labeled adult literacy programs effective if they achieved one year's gain with 100 hours of tutoring.

Regardless of ethnic origin or family income, many of our students have gone on to college when originally they had no hope or desire to do so because of their struggles with reading. We have found that READ RIGHT works for every category of student. I have personally witnessed its effectiveness with special education students, learning disabled students, students with Down syndrome, students who suffer from attention deficit disorder, as well as other challenges.

Again, the only explanation I can think of for this kind of effectiveness is that Dee has accurately identified what the brain needs to construct excellent reading ability.

Finally, I want to relate the story of just one of our 350 READ RIGHT students. "Johnny" had always had trouble with reading. Johnny's parents had resources to provide him with all the benefits that reading specialists, tutors, special programs, medication, etc., could provide—all to no avail. As a sophomore, Johnny was still struggling, still frustrated, and failing in school. Then Johnny was enrolled in our school's READ RIGHT Program.

When he was just a junior, we received a call from Johnny's mom. She said she walked into her son's bedroom and he seemed sad. She noticed a book lying on the bed. He looked up at his mom and said, "that was a really sad book."

Mom said, "I fell to my knees in thanks for READ RIGHT. My son had just read *The Grapes of Wrath!*

We at Decatur High School consider ourselves blessed to have accomplished President Bush's vision. We truly have left no child behind!

Dee's discoveries and related reading program are an amazing gift to students and the field of education. Honoring Dee Tadlock for 25 years of remarkable work would shine the spotlight on her findings and encourage others to study and access the power of her discoveries and research.

Dee Tadlock has devoted most of her life...

to helping others. Through her unconditional commitment to do what is right rather than what is popular or in vogue, she has blazed new trails in the fields of education and reading that are sure to help children, teens, and adults world-wide for generations.

Dee graduated in 1964 from Washington State University with High Honors with a degree in History. Soon after, Dee and her husband entered the Peace Corps. She spent the next two years living in and working with the poor of India, teaching the basics of hygiene and techniques for boosting productivity for the essentials of life (i.e. milk production and teaching farmers to raise chickens).

Upon her return to the United States, Dee pursued a secondary teaching credential. She graduated cum laude from Central Washington University in 1967 and accompanied her husband to New Mexico, where she pursued a master of arts degree in History. She completed the degree in 1969.

During this period, Dee's focus turned to reading and reading instruction. At the time, she accepted without question all that leaders in the field were saying was necessary for healthy reading development. Then and now, assumptions about reading are rooted in 150 years of history. In the mid-1800s, an initial approach for reading development that included instruction in the alphabet and phonics and application of decoding strategies and sight word recognition was not uncommon. Reading materials back then, though, were highly limited by family income and availability (a very small number of books had actually been published compared to the million or so titles available today). Books that existed in schools and the home, therefore, often were highly familiar to children, since they heard the same stories read again and again by a teacher or older child in classrooms, or by parents and older siblings at home. One of the most common books found in literate homes back then was the Bible.

Through the 1900s, several theories emerged as to what was most important in reading development. In the first half of the century, the theories revolved for the most part around decoding or sight word recognition. Subsequent methodologies for reading instruction focused on these, with one or the other rising to popular standing off and on. Either way, the spotlight remained on *individual word identification* as the main event of reading and reading development.

In the early 1970s, however, the reading field was on the brink of a major paradigm shift in its views. In spite of the best efforts of teachers', emphasis on decoding and sight-word recognition continued to produce large numbers of children and teens with reading problems. But the traditional views could not explain why meaning (understanding what was being read) and context (the meaning of individual words within the structure of language) were so important to the act of reading. Work by Kenneth Goodman and Frank Smith in the late 1960s and early 1970s sought to address meaning and context, and ultimately set the stage for a shift away from the traditional approaches and toward a new view of reading development called *whole language.*

As whole language rose to prominence in the late 1970s, two important events intersected fatefully in Dee's life: in the fall of 1977, she was nearing the completion of a Ph.D. in education with an emphasis in reading when her son developed a severe reading problem. Dee was better equipped than most parents to help her son. She was well aware of interventions used for decades to address reading problems and, as a result, saw to it that her son had plenty of alphabetic knowledge (including phonemic awareness and phonics), as well as instruction in decoding and sight word identification. Seeking a source for the problem, she ran through a mental checklist: her son had grown up in an environment rich with literature and read-aloud experiences, he was enthusiastic about school and learning to read, and he possessed a vocabulary that far exceeded his age and grade level. She could see no apparent reason for the presence of a reading problem. Yet, in spite of Dee's best efforts and the efforts of her son's teacher and school, her son made no progress in reading. In fact, Dee observed that her son's reading problem appeared to get worse the more she or his teachers worked with him!

What a dilemma. A beloved son with a serious reading problem and a reading expert who could not help him! Intriguingly, it is a theme that has occurred throughout the years with little notice. As a reading specialist myself, I have known many other reading specialists and teachers who have personally experienced the pain and frustration of being able to do little for their own children when reading problems emerge. The techniques and strategies for helping a struggling reader have changed little over the last 100 years—and the gains these interventions produce are almost always slow and incrementally small, if at all. When the same ideas about reading and reading development have been available for decades, *why* should so many knowledgeable people fail to be able to help their own children with this life-shaping skill?

This is the question that Dee Tadlock faced in 1978.

Most people then and now have trusted reading theorists to know what is best for children with reading problems. But Dee wasn't so certain. If reading theorists' views were accurate, why would her otherwise bright son continue to struggle with reading? Why would additional instruction in decoding the sounds of speech produce little if any gain? There were too many unanswered questions and, now, her own son's well-being depended upon the elusive answers.

Rather than "try more of the same," Dee decided to pull back. She made a conscious decision to do no more with her son until she had reviewed the best thinking science had to offer in *several* disciplines, rather than reading theory alone. She spent three years reviewing studies and the literature from the fields of:

- Linguistics
- Language acquisition theory
- Information theory
- Communication theory
- Cognitive psychology and learning theory
- Neurobiology, and
- What is now known as Neuropsychology

Even though the science of "neural networks" was relatively new at the time, Dee was struck by its significance to any kind of brain development. The brain constructs neural networks, she learned, in the process of learning, and these neural networks are the physical manifestation of *all* learning—learning that involves facts (declarative), perception (organization and orientation of the senses), and the performance of processes (procedural).

Essentially, the brain "wires itself" in the process of learning, especially for the performance of processes. To this day, the field of education does not fully understand the implications of a brain that wires itself for the functions it performs. Dee, on the other hand, as early as the late 1970s recognized that the brain's natural plasticity (or its ability to construct alternative neural pathways in order to optimize performance) makes the idea of "permanent" reading problems highly suspect. If the brain is capable of constructing new neural circuitry to replace inefficient, ineffective, or damaged neural circuitry (as is the case with some individuals who lose function to brain damage), why should reading problems exist *at all* in non-brain-damaged and otherwise healthy children?

Without really pondering the implications, Dee thought of a simple answer: Commonly accepted ideas about reading—rooted in 150 years of history—may be *wrong*.

As she sought to help her son, Dee recognized this and began her search for a *new, total solution* to her son's reading problem. She continued to research and dig into complex scientific observations. She was fascinated by one particular vision study that showed that the brain could "rewire" its visual perception. In this now famous study, subjects wore glasses 24-hours a day that caused the world to look upside and backward. With the glasses on, the subjects' brains re-oriented themselves to the topsy-turvy world until, in a matter of weeks, the subjects saw normally through the glasses! When the glasses were removed, the subjects saw the world upside down and backward once more. This time, however, their brains quickly and efficiently made adjustments and, within a matter of days, they saw the world right-side up again. No one taught the subjects of the study how to re-orient their visual senses. Their implicitly-operating brains simply did it.

This experiment caused Dee to realize that, on an implicit level (below the level of consciousness) the human brain is perfectly capable of making sense of complex cognitive puzzles without explicit instruction.

One of the world's most famous 20th Century learning theorists is Jean Piaget. His observations and studies of young children and how they learn are highly regarded. To this day, Piaget's works are not considered light reading. Dee, however, was relentless in her study of his work. As her search continued, she integrated information from: 1) her growing understanding of the physical structures that represent learning (neural networks) and 2) Piaget's observation that children learn by interacting with their environment through a process of experimenting with that which attracts their interest. As a result of experimentation, Dee learned, children construct new knowledge through their interactions. This is known as Piaget's "interactive constructivist" view of learning. From this and the study of the work of others, Dee began to formulate new ideas about what the brain requires for effective learning and the development of excellent reading ability. Piaget's works significantly influenced a new view of reading and reading development that Dee developed. Very appropriately, she calls this new view the "interactive constructivist view of reading and reading development."

Other researchers whose work significantly influenced Dee's thinking and subsequent methodology include Donald Hebb, whose 1940s and 50s work first substantiated the idea that learning results in physical changes in the brain; neurobiologist Gary Lynch from UC Irvine, from the joint work of Lynch and Richard Granger; and Leon Cooper and James Anderson at Brown University. Later work by David Rumelhart, Geoffrey Hinton, and Ronald Williams has since supported significant parts of her new view and methodology.

After three years of study and investigation, Dee had developed a new theoretical understanding of what a brain does when it learns a process, such as reading, and what the brain of an excellent reader does when it reads with excellence. Equipped with this understanding, she was finally ready to make a new attempts at helping her son. The results of that new attempt overwhelmed her. Through the new thinking, what her son's teachers could not do in three years was accomplished in a matter of months. With the new methodology, her son's severe reading problem was *totally eliminated* in just three months.

Since that time, Dee has spent more than 20 years refining and improving both the methodology and its delivery system with the goal of making it available to *all* struggling

readers—children through adults. She has systematically tested the new methodology with various readers. For five years she was a special education teacher in a K-5 school. Next she was a middle school reading teacher. From 1986 to 1990, she was a reading intervention specialist in a community college. From there, she was recruited to implement the program with adults in adult workforce literacy programs for more than a dozen Fortune 500 companies, such as Weyerhaeuser, Motorola, Johnson & Johnson and numerous others.

What did she figure out was wrong with traditional reading theory?

Simple: for 150 years, reading theorists had assumed that individual word identification and passage reading are the same. Dee figured out that the two are completely different cognitive activities. In fact, Dee found that individual words do not even drive the passage reading process. Instead, the brain's inherent need to *make sense* of everything that it encounters is what drives both passage reading and related reading development. Furthermore, the real "engine" driving the reading process, so to speak, is not the act of decoding words. The real engine is *familiarity with what is being read* (either with subject matter or actual text) and the brain's natural ability to experiment in the process of solving a cognitive puzzle.

Somewhat ironically, 150 years ago—when school rooms and families had few texts for children to read, and when those texts were read over and over again by older children in the one-room school house or by parents or siblings in the home—the repetitive activity was helping the future reading development of younger children! For 150 years, we have overlooked this vital part of reading development (familiarity with text as the brain seeks to solve a cognitive puzzle) in favor of the idea that decoding and individual word identification are the engine and driving force in reading development.

In presentations that Dee gives around the country, she makes the point that the storehouse of knowledge we possess in our brains is intimately related to both reading and reading development. She gives her audiences the opportunity to experience this reality through the following demonstration, originally published in an academic article by Dooling & Lachman in 1971. Read the following passage:

With hocked gems financing him
Our hero bravely defied all scornful laughter
That tried to prevent his scheme
Your eyes deceive he had said
An egg not a table correctly typifies this unexplored planet
Now three sturdy sisters sought proof
Forcing along sometimes through calm vastness
Yet more often over turbulent peaks and valleys
Days become weeks
As many doubters spread fearful rumors about the edge
At last from somewhere welcome winged creatures appeared
Signifying momentous success

Were you able to read each and every word? Most people who find their way to this reading material answer "yes." Did you know and recognize each of the words? Again, the answer is usually "yes." Were you able to read the passage quickly and efficiently, or did you find yourself slowing down and even struggling? Most people slow down as they progress through this piece. Many struggle. Did you understand what the passage is about the first time you read it? Many people say "no," even though they recognize each and every word.

Now, read the passage again. This time, however, think of these words: *Christopher Columbus.*

This time, was the passage easier to read? If so, *why?* If you are like most readers, on the first read you likely had to slow down and search for a place to "ground" the passage, or more accurately, ground it in knowledge you've already stored in your brain. The search for the right place to ground the passage represents the brain's need to ground *everything* it reads in meaning in order for reading to be quick, efficient, automatic, and fully comprehended.

This is *not* "whole language." As she developed her thinking, Dee was well aware of the work of Goodman and Smith, whole language's official "fathers." It was a well established fact, however, that whole language, too, produced large numbers of children with reading problems, and it offered no new solutions for struggling readers. Throughout the years, the numbers of children who struggle with reading has remained high. Even today, when the federal government is so certain that it has found the appropriate formula for early reading instruction to prevent widespread reading failure—explicit, systematic instruction in phonemic awareness, phonics, vocabulary, fluency, and comprehension, elements of which constitute the "phonological processing hypothesis" of reading and reading development—officials continue to estimate that one in four children has a significant reading problem and three out of four children who have reading problems after the age of 9 will have them throughout life. The statistics are bleak, with no end in sight, as our government seeks solutions to what it now officially calls "the fourth grade slump," or reading development that stalls at or near a fourth grade level *in spite of* highly trained certified teachers using explicit, systematic instruction in phonics and decoding.

Well, there is a solution and our government so far is not listening: the phonological processing hypothesis is *wrong*. The effectiveness of Dee's methodology proves it. But Dee is too obscure and too unknown a figure to attract anything but our government's skepticism.

As a former reading specialist, I, too, was skeptical at first. However, as a new school administrator of a high school that was designated as low-performing by the State of Texas, I needed innovative solutions. With my staff, our school decided to learn more about the human brain in our quest to help our students. I instituted a book study on the brain and learning theory and, along the way, encountered Dee Tadlock and her ground-breaking views. What we discovered as a staff is that Dee's views on reading and reading development and her associated methodology are marvelously consistent with *emerging knowledge* of how the brain functions—far more so than views held by currently popular reading theorists. It is readily apparent that popular reading theorists have failed to reconcile broader knowledge of how the brain functions with their very narrow view of

reading as associated *only* with the language centers of the brain (it is a speech and language view of reading and reading development, and not a global view of brain functioning).

Five years ago, based upon our growing understanding of how the brain functions, our staff at Decatur High School decided to try Dee's methodology, aptly called READ RIGHT. That year, we welcomed an incoming freshman Class of 2004. Without question, one in four members of that class had a significant reading problem. In keeping with the federal government's estimates, we worried that the majority of those ninth grade struggling readers would never overcome their struggles with reading.

Four years later, however, the results astounded us—and these results defy the federal government's estimate that three out of four kids with reading problems after the age of 9 are destined to have reading problems throughout life. Here is what we observed: 100% of our Class of 2004—many of whom were assigned to and graduated from Dee's methodology as their only reading intervention—*passed* the state of Texas's tough reading/English and Language Arts assessment required for graduation. 100%! Additionally, 100% of the members of the following year's class, the Class of 2005—faced with an even tougher state test more like a college entrance exam—*passed* the reading/English and Language Arts component! Graduating seniors all across the state struggled with this tougher test, but our students did not.

It is an extraordinary accomplishment, one that should have every reading researcher in the country looking at what we are doing to achieve these results. However, because the methodology we are using completely disagrees with 150-year-old assumptions about reading, our program as well as nearly 200 other READ RIGHT programs around the country are largely dismissed as flukes.

This is no fluke. We have seen special education students and students with Down syndrome *completely transformed* by the methodology. It is powerful and authentic and deserving of recognition for its innovation and promise for ending the epidemic of reading problems in this country and beyond.

It is my honor to nominate Dee Tadlock for the Brock Prize. To some degree, I and other educators using her methodology owe it to her. Decatur High School has been transformed from a low-performing school to a National Blue Ribbon winner and, related to that remarkable transformation, I have been honored as Texas's 2004 High School Principal of the Year. This year, I was one of three finalists for National Principal of the Year. My staff here at Decatur High School has much to do with my achievements—but Dee Tadlock has something to do with it, too. My success is her success. She has created something extraordinary to help children and teens and our school has been transformed by it. Yet, Dee lives daily with the knowledge that federally-funded researchers and the majority of the reading field totally reject her and her work. Still, she continues on—transforming the lives of students and the lives of educators across this country. She is making us successful, and it is time that we make her successful and help her spread the message:

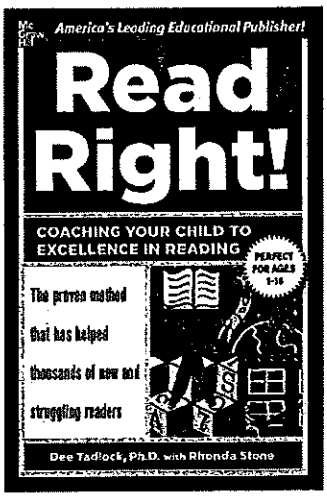
Reading problems are not the fault of teachers, children, or their parents.
Reading problems are the fault of 150-year-old erroneous ideas about reading.

In July 2005, the nation's leading publisher of educational books, McGraw-Hill, will release Dee Tadlock's first book. Rather than write the book for the academic community, Dee chose to write it for parents seeking to help their children with reading development. As always, she has put the people who need her first. In doing so, she has created a remarkable book that explains in the simplest of terms:

- What the brain does when it reads with excellence
- How the brain learns to perform any process with excellence
- The interactive constructivist view of reading and reading development
- How it is possible for children to figure out the reading process for themselves without any explicit instruction in reading (a small group of children do it every year and these children have stumped reading experts for decades)
- Techniques parents can use to influence their children to figure out the reading process for themselves and become excellent readers for life
- The real threats to reading development

The rest of this nomination is taken from Dee's written works, including her new book, *Read Right! Coaching Your Child to Excellence in Reading* (McGraw-Hill, July 2005), and her academic paper (available at www.readright.com), *Interactive Constructivism and Reading: The Nature of Neural Networks Challenges the Phonological Processing Hypothesis.* Dee's other published works appear in the references at the end of this nomination.

Dee Tadlock is an *excellent* choice for the Brock Prize. Please give her positive consideration.



Understanding How Excellent Readers Read

From Chapter 2 of Dee's book, *Read Right! Coaching Your Child to Excellence in Reading*

(Note: In Chapter 1, Dee talks about Dolores Durkin's exhaustive late 1950s and early 1960s studies of children who start school already knowing how to read and the fact that these children figure out how to do so without any systematic, explicit instruction in phonics or decoding. Although not a participant in Durkin's studies, Dee notes in Chapter 1 that she was one of those exceptional kids who taught themselves to read. From Dee's new book:)

I still remember what it was like to be in first grade and already know how to read. It was very satisfying to be able to efficiently complete worksheets and comfortably read the simple books we were given in class. Yet, I remember feeling surprised that my classmates struggled with both activities. I had never read the way my peers read: by slowly and laboriously sounding out words (decoding). I had always simply read to know the story. From the beginning, I was an excellent reader. Because I had never been taught to be a decoder, I never focused on the words.

Why Decoding Is Different from Passage Reading

How, then, is it possible for any child to read with excellence when they have had absolutely no experience decoding words? Simple. *Decoding* is not the same cognitive act as *passage reading*. Each requires significantly different activity in the brain. As counter-intuitive as it may sound, just because a student becomes proficient at identifying individual words, it does not mean she will necessarily become an excellent reader. The following two activities will help you understand this point.

Activity 1: Vowel-Less Words
Read these English words from which the vowels have been removed.

lttl
th
t
wnt
th
grl
str

With the vowels missing, was the list easy or difficult to read? Are you confident that you identified each word correctly? Now try this:

Th lttl grl wnt t th str.

Is the second arrangement easier to read? Virtually everyone who has done this exercise reports that the second arrangement is much easier. Why? If efficient reading is nothing more than the ability to identify words quickly and easily, both tasks would be identical to the brain. But they aren't. The incomplete words presented in a random list are more difficult to read than the same words presented in a meaningful sentence--*The little girl went to the store.* Clearly, word identification and passage reading are *different cognitive acts.*

Activity 2: Scrambled Words
The following activity is another demonstration that individual word identification and passage reading are different cognitive acts. Read the next sentence.

> I beneficial read the to task presented be complex to in on hope the discovering to in excellent cognitive will information your how chapter become of you this an learning child help reader.

The first thing you probably noticed about this activity is that your brain didn't like doing it. The brain is the organ of the body that is specifically responsible for making sense of everything around us. It probably didn't take long for your brain to realize that it couldn't easily and efficiently make sense of this paragraph. You may have kept reading, plodding through; you may have attempted to rearrange the words so the paragraph would make sense; or you may have simply quit reading. When the brain is put in a situation where it cannot make sense, it no longer wants to participate. Let's see if your brain likes this better:

> I hope the information presented in this chapter on the complex cognitive task of learning to read will be beneficial to you in discovering how to help your child become an excellent reader.

Think about the speed at which you read the two sentences associated with this activity. Each was composed of the same words. Why should you be able to read the same words faster if they are arranged in a meaningful sentence rather than randomly presented? If passage reading resulted from accurately and rapidly identifying each individual word, wouldn't the speed at which you can read these two sentences be nearly identical? Yet, most people report that they were able to read the meaningful sentence faster. From this exercise, all of us should be able to conclude that the brain is doing something other than simply identifying words as it reads.

Limitations to Working Memory

Why doesn't the brain read by identifying every word on the page? It seems like the simplest and most likely approach. The answer: all human brains have limitations as to the amount of information they can process. These limitations make it difficult if not impossible to understand the text if you read to identify the sounds of speech (decoding) or individual words (sight words). For just a moment, let's experience how a pure decoder reads.

Activity 3: A Decoded Sentence

Read the following sentence aloud, replacing the dashes with a brief pause. After you sound out all the parts of a word, say the word, and then sound out the next one, etc. This is the way first graders typically are taught to read if they cannot immediately identify the words!

Th-e y-e-ll-ow b-a-l-l-oo-n w-i-ll ex-p-l-o-de wh-e-n i-t g-e-t-s t-oo b-i-g.

Such reading poses a significant challenge to the limitations of working memory (also called short-term memory). Scientists have determined that short-term or working memory doesn't have much capacity. Working memory on average can hold only seven bits of information at a time--plus or minus two. When a child reads purely through decoding, she is confronted with the dilemma of too many bits of information that her brain must retain and assemble. The sentence in Activity 3 has at least thirty-eight bits of information, if each letter is sounded out separately. With decoding as the primary reading strategy, these bits of information have to be reassembled one-by-one in left-to-right sequential order to make sense of the sentence. However, by the time you finish sounding out the first three words (Th-e y-e-ll-ow b-a-ll-oo-n…), you have already exceeded the capacity of working memory! Like a computer program that has reached its capacity, a pure decoder will have to clear this information from memory in order to create space for what is yet to come next.

The same working memory limitations impede understanding when readers read by identifying each and every word as a sight word. The following activity will help you experience what it is like to read--one--word--at--a--time.

Activity 4: Reading to Identify Words

Focus visually in a purposeful way on the first word in the sentence below and then say the name of the word. Pause and then focus visually on the next word, say that word, and then pause again. Don't decode--just name each word. A cautionary note: Your brain will

be tempted to move ahead quickly as it seeks to read for understanding. Force yourself to focus on every word.

> If--your--brain--always--reads--to--identify--words--rather--than--to--construct--the--author's--intended--message,--you--would--probably--avoid--doing--it.

Not a very satisfying experience, is it? Did you get a sense of what we are asking very young children to do when we direct them to focus on individual words rather than the *meaning* an author is attempting to convey? In language, meaning comes from multiple words strung together to form a *single idea*--not from any one word in isolation! It is, therefore, easier for the brain to process ideas that involve many words than it is for the brain to process individual sounds or individual words. Through the identification of ideas, the brain can overcome the limitations of short-term memory.

Reading to Identify Words vs. Reading From Meaning

The ideas expressed by authors (their intended meaning) provide the framework and support for the process of passage reading. Excellent readers read *from meaning*. In other words, they ground reading in what they already know. This is not to be confused with the skills-based or whole language views that suggest that we read *for meaning*. The two views are significantly different. Reading *for* meaning suggests that you come to the meaning by first identifying and then adding up all of the individual words. Reading *from* meaning contends that the process can't happen efficiently unless you initiate the reading process by linking ideas in your own mind with the ideas an author intends to convey at the moment that you begin to read.

Reading from Meaning--Lessons from China

The original Chinese system of writing evolved from picture-based *pictographs* to representative *ideograms*, or symbols designed to directly represent ideas. The figure below is an example of a written message using ideograms

1 2 3 4 5 6

Translation by Debbie Yuan

These symbols represent the idea: "The bear is in the water," or because of the way the Chinese language is structured, more accurately, "The water has in it a bear." Can you locate the symbol for "bear?" *Hint*: Look for his claws. (See Symbol No. 6.) Can you find the symbol for "in?" *Hint*: Look for something that is at least partially inside of a rectangle. (See Symbol No. 3.) And, finally, can you identify the symbol for "water?"

Rather than think of water as waves, think of water as a force pushing against another force--land. (See Symbol No. 2.)

Although directly meaningful, the ideographic system of writing is very cumbersome because of the thousands of individual characters that have to be memorized. Ironically, though, learning the myriad of symbols virtually guarantees excellence in reading because pictures rather than phonetic representations automatically focus the brain on meaning. With ideograms, the brain's attention cannot be diverted from meaning as it can with the alphabetic systems. In other words:

In Chinese

- Step 1: Symbol (ideogram)
- Step 2: Meaning

In English (conventional view of reading)

- Step 1: Symbol (alphabetic letter).
- Step 2: Connect a letter or letters to a sound of speech.
- Step 3: Blend the sounds of speech.
- Step 4: Identify the word.
- Step 5: Repeat all of the steps for all of the words in a sentence.
- Step 6: Add up all of the words to derive the meaning of a sentence.

The purpose of passage reading is the same regardless of whether the written system is alphabetic or ideographic: *understand the author's message.* In alphabetic systems, it is possible to divert the brain's attention away from meaning to a laborious process of figuring out the words. This creates a challenge. If the reader doesn't minimize her reliance on the alphabetic system and maximize the use of information already stored in her brain, the quest to construct meaning will be impeded because of the limitations on working memory. Excellent readers do not read through a process of decoding. They start *with* meaning to create *more* meaning.

In ideographic systems it is not possible to divert the brain's attention away from the right cognitive act (the creation of meaning) because the symbols themselves communicate meaning directly. This was an invaluable insight for me in 1994 when the industry giant Motorola contracted with my company to bring READ RIGHT methodology to two of its plants in Beijing and Tianjin, China. The objective was not to teach reading, per se. The objective was to assist employees in acquiring English language skills through reading. Though we had never before worked with individuals who had a meaning-based ideographic system of printed language, I assumed that, because the written Chinese language is meaning-based, none of our students in China would have reading problems in their native Chinese.

As we planned time and resources for the projects, I announced to the READ RIGHT program staff my assumption that we wouldn't encounter reading problems. They were highly skeptical. We already had implemented numerous reading-improvement and English acquisition projects at plant sites for a variety of corporations throughout the U.S., and we had *never* found a single site where there were no reading problems. My staff wondered why it should be any different for the projects in China.

What they didn't initially understand, however, was the significance of learning to read in a meaning-based symbol system like Chinese. I was confident that, if the new

view of reading accurately reflected what brains must do to read with excellence, then people who initially learned to read in a predominantly ideographic system simply *could not* have reading problems in their native language. Their brains could lack knowledge of some symbols, but they simply had to understand on an implicit level that passage reading requires a direct link between knowledge already stored in memory and the meaning conveyed by the author. I predicted that, when applying their reading abilities to an alphabetic system, the majority of Chinese readers would maintain this core understanding about the fundamental nature of the reading process; and, as we guided them through the process with English-language materials, they would read in English without any impediment *as long as we did not alter how they intuitively read.* This meant that we would have to keep them focused on meaning and, in keeping with READ RIGHT methodology, completely avoid any strategies related to phonetic decoding or fixation on individual words.

As it turned out, my hypothesis was tested with over 650 Chinese workers in five cities when we ended up working with employees of Procter & Gamble at three sites, in China in addition to the two Motorola projects.

Throughout the five-and-a-half years that we were involved in the projects, we did not encounter one Chinese worker with a reading problem--*not one.* Every one of our students did as I had expected: they transferred their excellent reading abilities to the English alphabetic system because their basic concept of what they were trying to achieve did not change. We did not redirect their focus to decoding or fixation on every individual word and, consequently, they figured out how to read in English by appropriately *anticipating the meaning* authors were attempting to convey.

[Note to Brock Prize Panel: English-language reading researchers have long wondered why there are few to no reading problems among cultures that use an ideographic system of printed language. These researchers are equally puzzled by the fact that excellent ideographic system readers sometimes develop reading problems—including dyslexia—when they attempt to learn to read in English or another sound/symbol-based system. Dee's discoveries explain why it happens! Back to Dee's narrative...]

We Read Through Our Eyes, Not Our Ears

In the decoding view of reading, all readers must associate each letter in a written word with the corresponding sounds of the spoken word, and then blend the sounds together so the word can be identified through "recoding" it to speech. Then readers must decode and recode the same word again and again until a replica of the word is finally encoded into a proposed "word form area" of the brain. Once the replica is stored in the "word form area," it is ready for instant retrieval any time a reader encounters it on the printed page.

In the *new view*, excellent readers do not use the alphabet for the purpose of decoding, recoding, or matching words to replicas stored in the brain. This is a speech and language view of reading development.

Activity 6: Scrambled Letters

The following paragraph, which circulated all over the world via the Internet in 2004, helps to demonstrate the flawed nature of the decoding view and helps to clarify how excellent readers actually use the alphabet. The purpose of the paragraph was purportedly

to see how far and wide it would travel in cyberspace. Scrambled words were used in order to easily and efficiently track distribution. Read the following paragraph.

> Aoccdrnig to rscheearch, it deosn't mttaer in waht oredr the ltteers in a wrod are prseetend. The olny iprmoatnt tihng is taht frist and lsat ltteres are at the rghit pclae. The rset can be a toatl mses and you can sitll raed it wouthit a porbelm.

In the paragraph, not one of the words longer than three letters matches any word in the English language. If excellent readers read by decoding, recoding, and/or matching every word on a page to replicas stored in a "word form area" of the brain, how could readers possibly read this paragraph with any ease and efficiency? They couldn't. And yet *you* did. How?

An excellent reader uses only as much alphabetic information as she needs--and no more--to quickly and efficiently establish a link between ideas in her mind and the message an author is attempting to communicate. The brain's search for the most useful alphabetic information comes through an implicit process of *strategic sampling* through which the brain quickly and efficiently seeks and finds alphabetic clues that support predictions about what the author is attempting to communicate.

Scientific studies of excellent readers and their eye movements support this view. Decoding-oriented reading and individual word reading demand strict left-to-right visual scanning. However, vision scientists consistently have found that excellent readers do not use their eyes in this way. Instead, their eyes appear to "sample" text, using a seemingly erratic but strategic pattern of movement. Excellent readers move their eyes several words ahead and then fall back several places behind, apparently seeking whatever is needed at any given moment to help anticipate the text's meaning. Additionally, vision researchers have found that, on average, experienced readers fixate on only sixty to sixty-five percent of the words in a paragraph. Even new readers, surprisingly, fixate on only eighty percent of the words.

Why would excellent readers scan forward and fall back and fail to fixate on every individual word during the process of passage reading? Because it is *not necessary* to do so if a more efficient means of reading exists. Because the human brain is designed to operate efficiently, it will use any and all information available to anticipate what it is that an author has attempted to communicate. It will simultaneously use accumulated knowledge of the topic, knowledge of how language operates, the style of the author's writing, alphabetic information, and *more* in order to anticipate the text's message.

"Ah," you may think. "But I 'see' every letter and read every word on a page when I read."

Are you certain? Studies have shown that excellent readers routinely make word substitutions when they read, substituting a similar word that is more familiar to the reader for a different word used by the author. They also omit words that the subconscious brain regards as unnecessary and even insert words, as long as the text continues to make sense. Excellent readers tend to be certain that they read exactly the same words the author wrote--but in fact, they don't.

Activity 7: Excellent Readers Change the Text
The following example comes from listening to excellent readers reading out loud:

Text says:
People were warned of the high fire danger and urged to be extra cautious.

Excellent reader reads:
The people were warned of the fire danger and urged to be extremely careful.

Did the two sentences seem the same to you? Without looking back, how many differences did you notice? Now look at the two sentences again. How easy is it to identify the *four* wording changes?

Additional research from vision science supports the idea of strategic visual sampling in efficient reading and also helps to explain why the brain can make sense of the scrambled paragraph in Activity 6. Vision scientists wanted to know where our eyes come to rest when reading longer words of five to eleven letters. If excellent reading was oriented to decoding, the eyes logically would fixate initially on the first letter of individual words and then scan in sequence from left to right. However, what vision scientists found is that the eyes come to rest just left of the center of longer words--at the third or fifth letter, depending upon the length of the word. Fixating on a word near the center allows the brain to gather a wider array of alphabetic information all at once. This better supports the brain in its search for whatever alphabetic information it needs to keep predictions about meaning coming; or to confirm or reject predictions once they are made.

In the *new view,* the alphabetic information our brains need in the process of anticipation at any given moment may come from the center of the word, the end of the word, or the beginning of the word. Or, the brain may choose not to fixate on certain words at all if it can accurately anticipate a passage's meaning without doing so. Through a process of sampling the letters on the page and integrating that information with knowledge stored as memory, the brain uses whatever alphabetic information is helpful at the exact moment it is needed in the process of making predictions about text. The brain efficiently ignores all the rest.

The Predictive Strategy at Work During the Act of Reading
Anticipating text--or the act of predicting an author's message--is used all the time by excellent readers without their even realizing it. The following activity helps to make the point:

Activity 8: The Predictive Strategy
Read the following sentence.

The little boy lives in a __.

Most excellent readers, rather than saying to themselves, "The little boy lives in a *blank*," will naturally and without conscious thought predict the intended meaning. They put a word in the blank that represents the prediction: "The little boy lives in a *shoe*" (if this were a nursery rhyme), "The little boy lives in a *house*" or, for those who live in London, "The little boy lives in a *flat*." The excellent reader will anticipate, or predict, a logical association grounded in their own knowledge of locations where little boys live and automatically insert a word that represents the predicted meaning to complete the phrase. Add just one letter and the brain may modify its prediction:

The little boy lives in a h__.

Now, *flat* or *shoe* no longer works. The reader settles on, "The little boy lives in a *house*." As long as the sentence continues to make sense in the context of subsequent sentences, the reader may move on without considering more alphabetic clues. If, however, the reader is uncertain about her prediction, she will choose to integrate more alphabetic information to reduce the uncertainty:

The little boy lives in a h_t.

As the brain integrates this additional alphabetic information, it must reject the previously anticipated meaning and make a new prediction about the author's intended message. Grounding the prediction in knowledge of human dwellings, the excellent reader will now probably predict that the sentence reads: *The little boy lives in a hut.* No other predictions readily make sense. Subsequent sentences will confirm the prediction:

The little boy lives in a hut. His home is in a small village in Africa.

Activity 9: Key Letters

Activity 8 provides another glimpse at how the brain uses select alphabetic information to predict the meaning of printed language. Do your best to read this sentence, even though many letters are missing.

Th_ _itt_ns _r_ s_ft

This sentence still can be read, even with one-third of the alphabetic information removed. A high percentage of English sentences start with the word "The." As soon as the brain has accumulated enough knowledge of how English works, it will know this and easily predict "the" and then move quickly to answer the question, "The *what?*" The brain will then seek to make additional predictions. Is the author's message about mittens or kittens? Or, the implicit brain may direct the eyes to look ahead in an attempt to gain more information to assist in predicting the topic. Skipping right over the letter r, the eyes may sample alphabetic information in the last word to try to produce a prediction that will unlock the meaning of the entire sentence. From the structure of the sentence and knowledge of either mittens or kittens, the implicit brain knows that the last word is most probably "soft." The phrases: *The mittens are soft* and *The kittens are soft* make perfect

sense. Information from the sentence that follows the first will help the reader affirm a prediction.

Let's add a second sentence with partial letters and see what happens:

Th_ _itt_ns _r_ s_ft. _ _y _av_ w_ _sk_rs.

Even though half of the alphabetic information is missing from the second sentence, key letters in the last word enable most excellent readers to confirm or reject the accuracy of predictions about the first sentence. The brain can feel reasonably sure that the two sentences are about *k*itt*e*ns because kittens have w*hi*sk*e*rs.

Does the excellent reader *ever* use a pure decoding strategy? Yes, but only when she encounters a vocabulary word that is new to her. When this happens, it is not a reading issue, it is a language issue, and an excellent reader may choose a decoding strategy as an assist in figuring out the meaning of the unknown vocabulary word. Consider, for example, this term: **bilabial plosives**

If you've never seen or heard the term before, you might attempt to sound it out to see whether any part of it matches a known vocabulary word or word part. If you can't figure out the meaning by associating it with language you already know, you are most likely to grab a dictionary or simply move on, depending upon how important the term is to your understanding of an author's message or how determined you are to know the meaning. If you do grab a dictionary, you will discover that bilabial means "two lips" and "plosives" is a word for describing a category of speech sound. The sounds represented by the English b and p are bilabial plosives: air is blocked by compressing the two lips (bilabial). But the air flow, once it is built up, "explodes" (plosives), pushing the lips apart and creating the sound.

Decoding: A Barrier to Reading Development

Old ideas about reading would have us believe that decoding--or the identification of words through a process of sounding them out--is a necessary and normal part of reading development. In the *new view,* we rarely use a decoding strategy and do so only if we need to provide ourselves with a lesson in new vocabulary. Teaching children to focus on decoding as the main event of reading can be the *cause* of significant reading problems, if children do not experiment and figure out for themselves other complex, implicit strategies required for excellent reading. In other words, struggling readers usually become struggling readers because their brains have done *exactly* what they were told to do. Directions like: "Sound out the word, Jimmy" or "You got that word wrong, Jenny" direct the brain to focus on the identification of words.

The Marvelous Brain and How We Learn to Perform With Excellence

From Chapter 3, *Read Right! Coaching Your Child to Excellence in Reading*

I still recall my mother saying to me, "If a thing is worth doing, it is worth doing well." Perhaps she knew intuitively that excellent performance at anything is not a random event. Rather, excellence must be intentionally constructed by an individual's implicit brain, deep below the level of consciousness, and encoded as a part of neural circuitry.

This has important implications for reading. It means that most reading problems result not from structural brain differences, but from differences in how excellent readers and poor readers have "learned" to read--or, more specifically, differences in the information encoded in the neural circuitry constructed to guide the reading process. The quality of the operation of the neural network--whether it is faulty or efficient--depends wholly upon how the individual reader *subconsciously* constructed the complex neural network in the first place.

The idea of the quality of neural circuitry determining how well a child reads offers both good news and bad news for those who desire to help young children become excellent readers.

- *The bad news:* it is possible for well-meaning and loving people in a child's life to unintentionally provide guidance or an environment that directly contributes to a reading problem.
- *The good news:* nearly every child can be coached into building a neural network to guide reading that operates correctly, producing excellent reading ability. Such coaching can be provided very purposefully *if* individuals in a child's life know how to do it.

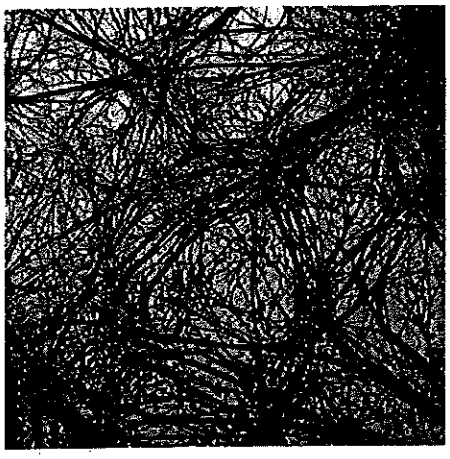
For you to become an effective coach, it is essential that you have a basic understanding of how brains learn any process and how every brain learns to perform with excellence. This understanding will help you make good decisions as you encounter new and unexpected situations.

How the Brain Operates–Simplified

For most people, just the idea of brain science is intimidating. There is a reason we joke about not being brain surgeons. The volume of knowledge required to develop expertise in the field can be overwhelming. Yet, the basics of brain function really aren't that hard to grasp; and how the brain functions is vital to understanding how every excellent reader quickly and efficiently reads newspapers, magazines, poetry, and books. Understanding this becomes much easier if you think of the brain as being somewhat (but not entirely) like a living computer, rather than a mass of gray matter.

What is it that computers do? They are designed specifically for the storage, retrieval, and use of information. A tremendous amount of storage is available on our computers for us to save everything from our literary masterpieces to our day-to-day business transactions. Once stored, this information is ready and waiting for our quick

and efficient retrieval. However, before computers can perform these functions, someone had to program them to do everything necessary to operate efficiently and effectively.



An actual photo of ***neurons.***

The human brain has even greater potential for the use of information and it is much more adaptable than a computer. Computers are hardwired, meaning that they cannot change how they are programmed. The brain, however, is wonderfully *soft wired.* It can change its own "wiring." The brain can disconnect, reconnect, and construct countless "signal pathways" as it seeks to be ever-more functional and efficient. Remarkably, in a $1/8^{th}$ inch cube of *your* gray matter, there are approximately 300,000 neurons, 39,360 feet of wiring, and 300 million connections (or synapses).

When we are born, we already possess most of the neurons, but we have very little of the wiring. "Learning" is what constructs the "soft wiring" in our brains!

When we turn on a computer, we have conscious or *explicit* knowledge about how to operate the machine. What the computer actually does to operate, however, lies deep within its network of circuits and memory chips. We are aware of the result of the computer's operation, but we aren't necessarily aware of what it had to do to get the result.

Our brains are like that, too. We have some explicit knowledge about how to do things like talk, walk, or ride a bicycle, but the mechanisms that actually enable us to do these things reside deep within our brains, operating *implicitly*—or below our level of consciousness. We are not aware of the neural networks that we construct and then access to perform processes like these, but the neural networks are there nonetheless, guiding every aspect of our physical and cognitive functioning.

Similar to talking and walking, reading is a process. Piaget was one of the world's foremost authorities on how young children learn to perform processes. He provides this example of the subconscious interactive nature of all process-oriented or procedural learning:

> ... [a baby] tries to grasp a hanging object but only hits it without getting his hand around it. What results is interesting to the infant, and he tries to make it happen again by means of reproductive assimilation involving a series of regulations and corrections that continues until the ability to perform the act becomes stable.

The "series of regulations and corrections" Piaget refers to constitutes the continuous modifications the baby must make as he seeks to figure out how to be successful. As his attempts are made and modified, the baby constructs the neural circuitry he will use throughout life to guide the grasping process. The life-shaping process requires *interaction* with the environment in some way and then *construction* of

the neural circuitry required to guide the process—giving rise to the term *interactive constructivist* learning.

According to the interactive constructivist view, to soft wire our brains to guide any process we must:

1. Come to understand exactly what we are trying to achieve (the goal).
2. Anticipate or predict what we must do to achieve the established goal.
3. Make a first attempt based on a prediction.
4. Implicitly analyze the result of the first attempt.
5. Judge whether we were successful.
6. If we are not successful, implicitly predict what modifications might lead to success.
7. Make a new attempt.
8. Continue to use this cyclical, implicit process until we figure out how to succeed at achieving the goal.

Over time, as we move through this predictive cycle, we construct the neural networks that eventually guide the processes we seek to perform. All skills we learn and all knowledge we acquire involve this type of soft wiring or *encoding* of information and construction of neural circuitry. The encoding of information in the brain is the essence of learning.

Although we are aware of all the declarative knowledge that we construct in our brains--facts, beliefs, and opinions--we are not aware of our *procedural* knowledge because it operates implicitly, and thank goodness for that! Imagine how slow and inefficient we would be if, every time we wanted to walk across a room, we had to think through every aspect of the process!

- Step 1: maintain balance
- Step 2: signal muscles to contract and lift foot
- Step 3: maintain balance
- Step 4: lift foot
- Step 5: maintain balance
- Step 6: signal muscles to contract and bend the knee;
- Step 7: signal muscles to put foot down;
  and that was just the first step!

Rather than put us through this laborious series of events, the human brain implicitly accesses our neural network constructed for walking and we walk with ease and efficiency. No conscious thought on our part is needed.

Programming the Brain: The Role of Executive Functions

What is it that makes it possible for our brains to plan, coordinate, and control multiple neural networks as we figure out how to perform other complex processes? Something called *executive function* performs this all-important task. A baby, for example, constructs the neural network to guide the process of sitting up. The mastery of the movements and balance required for this process becomes procedural or process knowledge stored in the brain. Later, as the baby attempts to figure out how to stand, his brain implicitly seeks any procedural knowledge that may help him figure out the

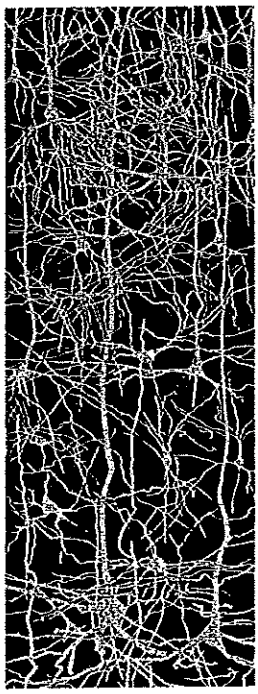
complex, integrated process of standing. The knowledge about movement and balance the baby has stored for the process of sitting up may actually be accessed and applied as he attempts to figure out the process of standing. In this way, neural networks the baby has already constructed help him with the construction of new neural networks for other processes.

Such integration and coordination have been described by some as a "symphony" in the brain. The integration and coordination of neural networks becomes a crescendo of electrical and chemical activity throughout the brain. The crescendo almost instantaneously yields functions we choose to perform--functions like walking, talking, dancing, and even *reading*.

Our brains can handle variations in how we perform functions only because we can access and integrate information stored from past experiences. For example, a toddler just learning to walk trips over a toy the first time he encounters one in the middle of the floor. After several spills over different toys, he figures out what is causing the falls and determines that it is more efficient to step over or go around the objects in his path than to continue falling. He experiments with these modifications and successful attempts become new information stored in the brain. As the toddler implicitly locates and integrates this information when needed, he ceases to fall over his toys. Eventually, the toddler is stepping over or walking around objects automatically because his brain knows this is what it has to do to avoid falls. The child doesn't consciously think about it any more. He just does it.

In 2003, neuroscientists Laughlin and Sejnowski observed that: "The more we learn about the structure and function of brains, the more we come to appreciate the great precision of their construction and the high efficiency of their operations. Neurons, circuits, and neural codes are designed to conserve space, materials, time, and energy." In other words, our wonderful brains are *designed* for efficiency. As long as the brain is not provided with inappropriate information and misled by an erroneous goal, the brain will figure out for itself the most efficient means for solving a problem—and it will also give up on strategies that do not work.

*A simulation of neural networks in an infant, age **2 months.***



*A simulation of neural networks in a toddler, age **2 years.***

Programming the Brain for Excellence

How well a speaker speaks, a drummer drums, or a skater skates depends wholly upon the quality of the neural circuitry constructed to guide the respective activities and upon the efficiency of executive functioning. Most people can speak, but very few do so with the power and richness of poet Maya Angelou. Her deep voice, meaningful emphasis on just the right words, and careful enunciation are highly developed--and guided by neural circuitry constructed specifically to produce excellence in the area of poetic recitation.

Most people can tap sticks on a table top, but very few can drum with the talent and skill of an expert drummer like Buddy Rich. His meticulous control of muscle movements enabled him to turn what might otherwise have been considered to be taps and bangs into pleasurable rhythmic music. How was he able to deliver such a refined sound? By constructing neural circuitry designed specifically for excellence in the use of drumsticks and drums.

Many people can skate, but there is only one Michelle Kwan. How did this athletic young woman rise up to become the record holder for American figure skating titles? You guessed it--by constructing neural circuitry designed specifically to produce excellence in the area of figure skating.

Angelou, Rich, and Kwan each achieved excellence through hard work, determination, and, literally, the creation of neural circuitry constructed specifically for world-class performance. Each became masters of performance through the same means—by figuring out how to produce excellence for themselves. Every person who achieves excellence ultimately does so because he or she settled for nothing less. We alone construct the neural circuitry and perfect the neural functioning that results in our performance.

Our brains are a marvel of memory and physiological communication, instantaneously integrating ever-expanding knowledge from wherever it is stored with new information we encounter. Only through the construction of neural circuitry specifically designed to produce excellence can *any* function be performed well.

Contrary to Popular Belief, We All Learn in the Same Way

A widely accepted assumption in education circles is that individuals learn in different ways; and that a mismatch between an individual student's learning style and instruction (including a teacher's "teaching style") explains why some otherwise bright and capable children struggle with classroom learning. The basic styles of learning are considered to be through listening (auditory), seeing (visual), and hands-on touch (kinesthetic). The assumption is that an auditory learner may struggle if the learning activities are heavily dependent upon visual processing. For the same reason, it is assumed that the visual learner may struggle in a hands-on learning environment if the instruction is mostly hands-on, and so on.

All of us, of course, access information from the environment in the same way--through the sensory channels of vision, hearing, touch, taste, and smell. And we all have the potential to watch a Neil Simon play and learn nothing about playwriting; listen intently to Mozart and learn nothing about how to reproduce classical music on a piano; and use a sewing machine in an effort to make a dress and learn little about dress-making. The point is this: the particular sensory channel accessed to get the information into the

brain is not nearly as important as what our brains choose to *do* with the information as and once we take it in.

In the *interactive constructivist view* of learning, an individual's learning style is not their dominant method of learning. Instead, it is a preference. For example, if I prefer salty foods and you prefer sweets, we both respond to sensory information--but each has a different preference. In the same way, if you prefer visual input and I prefer auditory information, we may be happier if we each have our preferences met at least some of the time. The idea, however, that we run the risk of not being able to learn if our preferred learning style is not addressed is inconsistent with the fact that a brain designed for efficiency uses whatever sensory systems are useful and required to most efficiently process information. Recent studies have actually failed to document a significant role for a specific learning style in learning!

In the interactive constructivist view, brains learn to perform processes in fundamentally the same way--through a process of anticipating how a process is done, making attempts, analyzing the attempts, making adjustments, and continuing the predictive cyclical process until success at a task is achieved. From person to person the fundamental process of learning is the same. Brains construct neural networks to guide processes in the same experimental, interactive way.

The idea that every brain performs its primary function--*learning*--in fundamentally the same way should not be surprising. The same is true of all the other organs of the body and their primary functions (with the exception of individuals who are born with defective organs). Everyone's heart pumps blood in fundamentally the same way, everyone's lungs take in oxygen in fundamentally the same way, everyone's digestive system processes food in fundamentally the same way (whether that food is salty or sweet!), and everyone's brain--that marvelous organ for making sense of the world--constructs neural circuitry or *learns* in fundamentally the same way. Wouldn't it be somewhat of a freak of nature if all our organs worked in fundamentally the same way *except* the brain?

Performing a Process with Ease and Efficiency

Savants are individuals who develop an uncanny skill for performing a specific function exceptionally well. Individuals with mild to severe brain dysfunction occasionally turn up as savants. An explanation from an interactive constructivist point of view is that these individuals' implicit brains become fascinated with a specific function or skill and chose to remain focused on the performance of that skill until they figure out how to do it with remarkable ease.

In a way, the very young child who teaches himself to read is a savant. He has taught himself to perform reading with remarkable ease and efficiency and the ability stays with him throughout life. It stays with him for only one reason. His brain is performing the process of passage reading *correctly*. The brain no longer needs to make implicit modifications to the neural network guiding the process because the network constructed in the first place produced the desired end result, which is excellent reading.

There is much we can learn from these little reading savants and every individual who teaches himself to perform a process with ease and efficiency. Every single one achieves excellence in the same way: They construct neural circuitry that is specifically designed to perform the process with excellence. It really is that simple. But what made it

possible for them to construct this kind of efficiently-operating neural circuitry without any systematic, explicit instruction?

In the interactive constructivist view, there are three requirements for building neural circuitry that is designed specifically to produce excellence:

1. Developing an appropriate concept of what constitutes excellence.
2. Maintaining strong intent until excellence is achieved.
3. Employing a repetitive, implicit cycle of anticipating--or predicting--what must be done to achieve success.

An appropriate concept of excellence, strong intent, and the use of a predictive strategy to figure out how to perform with excellence are tools used by top athletes and artists all the time. Equipped with strong intent, they establish a standard of excellence (e.g. in tennis, "serve an ace;" in golf, "land the ball in the middle of the fairway"), and they do not give up until they have achieved the well-defined standard. As their brains figure out how to serve the ace or land the ball in the middle of the fairway, they encode the information into their brains by *remodeling* existing neural circuitry or constructing a new neural network to guide future performance of the task. This is how all humans learn to perform a process excellently. To figure out how to read excellently, developing readers must use the same three requirements.

When she studied very young children who figured out the reading process for themselves, researcher Dolores Durkin found these common traits:

1. The early readers had parents who read to them often. *Early exposure to reading excellence helps children develop an appropriate concept of excellence in reading.*
2. The early readers were determined to figure out the reading process for themselves. *"Determination" is another term for strong intent.*
3. The early readers requested that the same books be read to them again and again, thereby making the stories they wanted to read for themselves highly predictable. *Predictability makes it easier for children to figure out the reading process.*
4. The early readers asked many questions and made many requests as they spent time with books, including alphabet books. *Answers to children's questions and fulfilling their requests assists children in figuring out the reading process by helping them solve whatever cognitive puzzle they may be working on at a given moment.*

The only way to figure out any process is to experiment with the process on an implicit level. It is safe to assume, therefore, that Durkin's early readers were using a predictive strategy to conduct their own implicit experiments as they sought to figure out for themselves how to make reading happen. It stands to reason, then, that the key to guiding every young child through the process of becoming an excellent reader is to guide them through a process of 1) forming an appropriate concept of what it is to read with excellence and 2) providing them with an environment where they will want to

make attempts at reading, while willingly assessing their own performance, making adjustments, attempting again, and continuing the cycle until they achieve excellence.

All of us—including little reading savants—really do learn in fundamentally the same way!

Model for Constructing Excellent Reading Ability

Develop a Concept of Excellent Reading	**+**	**Maintain Strong Intent to Achieve Excellent Reading**	**+**	**Use a Repetitive Predictive Strategy to Figure Out How to Make Excellent Reading Happen**	**=**	**BECOME AN EXCELLENT READER**

Results

From *Melinda Reeves:*

I'd like to begin this section with an example from my own school. Dee uses this example in Chapter 3 of her book and I can tell you that it is accurate. Jordan Null spent his entire school career in our school system. What happened to him with Dee's methodology is just short of a miracle. Jordan has Down syndrome and was subjected to a host of reading interventions beginning in the first grade, including the Orton-Gillingham method, long believed to be one of the best methods for addressing severe reading problems. Nothing produced significant results with Jordan and we'd pretty much given up hope. Please note what Dee's methodology did for Jordan (from Dee's new book *Read Right!,* McGraw-Hill, July 2005):

Success Story: A Young Man with Down Syndrome

The following is the story of the power of the new view to cause the brain to completely remodel the neural circuitry that guides the performance of a process.

Jordan Null has Down Syndrome and a long history of participation in special education and after-school remedial programs. When Jordan was three, he began to attend developmental pre-schools, and later repeated kindergarten. Between second and sixth grades, Jordan participated in pull-out programs for reading and math, including continuous and intensive training forty minutes a day, five days a week with a reading program considered tops in the field for tapping into multiple senses (vision, hearing, and touch) in the process of learning. By the end of sixth grade, Jordan struggled to read upper first grade/lower second grade materials. By eleventh grade, Jordan's reading level was assessed in the same late first/early second grade range and he had a significant problem with stuttering.

Jordan's mother, Paula Null, heard about READ RIGHT through a classmate of her son's, and decided that she wanted the program for her son, too. Prior to enrollment, Jordan resisted almost all recreational and functional reading activities. READ RIGHT tutors employed by the school performed a program assessment and started Jordan in

first-grade level books. During the year, Jordan's tutors noticed slow but progressive improvement in his stuttering in oral reading activities and significant improvement in his ability to read materials efficiently.

Two years after beginning the READ RIGHT program, Jordan was reading recreationally at a fourth- and fifth-grade level and was continuing the program with fifth and sixth grade reading materials. Though little more was done for him than the basic READ RIGHT program, in October 2003, Jordan's tutor sent us the following report:

> [With Jordan] there is a speech problem, too, and we're seeing progress in areas other than his reading. His vocabulary is growing and so is his ability to communicate with others. He is able to give longer answers to his family. He's not giving up so easily when he is trying to communicate. For example, he was reading a story on whales to his mother and she couldn't understand him when he said the word 'whales.' Jordan explained what was happening in the story and then his mother understood that he was talking about whales. Jordan is also learning how to relate things in his environment to things in stories. He is learning to link vocabulary and concepts in books to his world. This has tremendous benefit for him because it is helping him to read, but it's also helping him to learn about things in his world. Because he can see and apply things that he is reading about--computers, Christopher Columbus, space, the ocean--Jordan is now more interested in seeking out things that are fact-based and science-based.

Later on, Jordan's tutor reported to us that even though he had not received remedial instruction in handwriting in the last two years, Jordan had made significant improvements in his penmanship as well as in his reading.

Jordan's experience is an impressive story of success. There is a reason that his hand-writing and speech skills improved, too. Jordan's brain is learning to *anticipate* and *experiment* in the process of figuring out the complex process of passage reading. Along the way, his brain on an implicit level is figuring out how to use *anticipation* and *experimentation* with other complex processes that the brain guides--processes like handwriting and speech. Before READ RIGHT, Jordan's brain did not consistently use anticipation and experimentation to produce improved performance. Now he is beginning to more consistently use these all-important brain functions.

[Note to Brock Prize Panel: The following are additional individual success stories from Dee's book. I've elected to include these because permissions have already been given.]

Success Story: A Little Girl Who Has the Right Idea
A business associate who is the father of a charming 5-year-old recently shared with me an experience from his daughter's kindergarten class.

He began using READ RIGHT methodology with his daughter when she was 4 years old. To his pleasure, his daughter is in the early stages of figuring out the reading process, to the point that she can read text in some predictable books. This year, she was one of the few early readers in her kindergarten class.

In her classroom, the little girl's teacher is doing exactly what all kindergarten teachers should do—she is reading to the children on a regular basis. On one particular day, however, the teacher chose to read—a—story—in—an—unnatural—and—slow—pattern,—accentuating—each—and—every—word.

What do you think our little early reader did? She raised her hand and pointed out to her teacher that she was reading incorrectly.

"You're supposed to read so that it sounds natural, just the way you talk," she told her teacher. She knew instinctively from her father's example that it is of vital importance for adult readers to *always* model truly excellent reading.

Good girl!

Success Story: 5-Year-Old Friends Become Avid Readers
The director of a community development organization I know shared the following story with me. He had obtained grant funding to place a READ RIGHT tutoring program at an area middle school. As part of the grant agreement, he employed the program's reading tutors to work with adults after school hours at another location. Largely out of curiosity, the director began to bring his 5-year-old granddaughter and a young friend of hers to the after-hours program two to three days a week.

The girls worked with the tutors alongside struggling adult readers. Within three months, both girls were beginning to read and, within six months, both 5-year-olds were avid readers, reading with excellence. At the same time, the director watched as middle school children and adults eliminated reading problems that had persisted for years. As you can imagine, this director is now a huge believer in the power of the new view of reading and the methodology developed to reflect it.

Success Story: From Struggling Reader to Class Valedictorian
This story wonderfully demonstrates how excellent reading ability can shape a child's future. Matt Hoss was raised by caring and loving parents who are themselves educated and devoted to Matt's schooling. His father is an attorney and his mother is a secondary school teacher. Yet, in the third grade, when Matt was just 9 years old, he scored in the fifteenth percentile on a reading test administered by his school. Such a low level of performance is a clear indicator of a significant reading problem. Matt's father shared his son's story through letters written to me:

June 30, 1995

Dear Dr. Tadlock:
Your firm recently assisted my wife, Martha, and I with our son's very serious reading problem. I am writing to express our great appreciation for your help and our great respect for the READ RIGHT *program. Our nine-year-old son, Matt,*

had a significant reading problem, and the best efforts of Martha, his teacher, and me were unable to help. For nearly three years we assumed that hard work and long hours of practice would solve his reading problem. We were wrong.

There is no way I can adequately describe the frustration we experienced when listening to Matt try and read aloud. We have always known he is a smart kid, and he was certainly trying very hard. We spent some time reading with him every day, often an hour or more. The frustration was so great I even got angry with him more than once because I just didn't think he was trying hard enough. Why couldn't he figure this out?

Martha has a Master's Degree and teaches math and science at the same school Matt attends. She kept in very regular contact with Matt's teachers, seeking advice and special attention for his reading problem. Matt has always had exceptionally good teachers, and each tried hard to help... .

Matt solved his reading problem [with READ RIGHT] after twenty-one sessions over a two-and-a-half- month period. He has become an excellent and exuberant reader, and he is as proud of himself as we are of him. On his own he is reading three or four books a week now and is reading aloud to his mother, sister or me every spare minute.

READ RIGHT helped solve for Matt in two-and-a-half months what the best teachers and programs at his public school and what Martha's and my best efforts could not.

Based on my personal experience with the READ RIGHT program, I know it works. My family is grateful for your expert help.

Sincerely,
Richard T. Hoss

What did we do to help Matt eliminate his reading problem when he was in third grade? We coached him through re-learning the reading process from top to bottom. Rather than use decoding strategies or focus on individual word identification, we helped him figure out how to access multiple forms of knowledge stored in his brain to anticipate the author's message, and how to use an appropriate concept of excellent reading ability to help him improve his performance.

A few years after we tutored him, Matt was scoring in the ninety-ninth percentile not only in reading, but also in every other area of the school district's assessment tests. He continued to excel throughout his school career, becoming the co-valedictorian of his graduating high school class of 330 students and being accepted into the prestigious Harvey Mudd College, an elite private school in California. "I love the bookstores at colleges," Matt recently said. "I spend hours in bookstores just because they have such interesting theories and scientific ideas." Not bad for a young man who at age 9 had a significant reading problem. Matt's life is forever changed because, rather than focusing on and decoding individual words, he now reads to produce reading that makes sense, feels comfortable, and seems just like conversational speech.

Success Story: A Timber Worker & Hundreds of Others Become Excellent Readers
Using a predictive strategy to figure out how to improve reading performance is powerful stuff. It works not only for children just learning to read, but also for individuals diagnosed with dyslexia.

As a high school freshman more than twenty years ago, Ken Reinertsen was diagnosed with severe dyslexia by clinicians at the University of California, Los Angeles. He attended that university's prestigious Fernald Reading Clinic for more than a year and developed his reading ability to a second grade level. When he graduated from public high school, he was still struggling at a second grade level of reading.

As an adult, Ken chose a job with a timber company near Olympia, Washington in part because the job didn't require reading. In 1990, his employer--the Simpson Timber Company--began a pilot literacy program as part of a project to prepare employees for new technology. The company examined a variety of adult literacy programs being used across the U.S. and chose READ RIGHT because it was significantly different in its approach from any other reading program Simpson's employees had encountered in school. The program also promised faster results. At the start of the project, Ken was assessed and it was found that he inserted words that rendered what he was reading meaningless, dropped endings from words, and omitted key portions of what he was reading. The severity of Ken's reading problem resulted in his initial placement in the program in first grade level books. After only sixty hours of tutoring with books that gradually increased his reading level, Ken read well enough to read his first novel, *Where the Red Fern Grows* by Wilson Rawls, and, after a total of ninety-nine hours of tutoring, he was reading at a post-high school level with ease, comfort, and total understanding. Even before completing the program, Ken began reading management books such as *One-Minute Manager, The Art of Leadership,* and *Better Makes Us Best.*

Based upon success with Ken and nineteen other timber workers, Simpson's pilot literacy project was deemed a success and, over the next five years, the program was expanded to seventeen other Simpson sites in a total of seven states: Washington, Oregon, California, Michigan, Pennsylvania, Vermont, and Texas. A review of data kept for the project shows that Simpson's volunteer READ RIGHT tutors delivered 17,654 hours of tutoring and reported 1,998 grade levels of gain among their adult students. This success was possible because READ RIGHT methodology compelled the struggling readers to use a predictive strategy to figure out how to make excellent reading happen.

The predictive strategy involves implicit experimentation by the brain. Regardless of whether we are talking about children or adults, if the brain doesn't experiment, it doesn't learn. Period.

Success Story: Overcoming Dyslexia
When he was in the second grade, Tom was evaluated for learning disabilities at Children's Hospital of Boston. Clinicians there noted significant gaps between his cognitive ability and his performance; and according to his mother, communicated that he could not be expected to do well academically. Tom's mother found the news rather chilling. They predicted that he would only be able to learn basic living skills. In fourth grade, Tom began spending most of his school day in a resource room with special education interventions. For Grades 7 and 8, he attended a renowned residential school for dyslexic students. In Grade 10, he attended a public school and was provided with

remedial instruction through a popular and highly regarded reading method. Despite all of these interventions, Tom graduated from high school reading at a second grade level.

When Tom was 23, he began long-distance telephone tutoring with READ RIGHT methodology. He participated in twice-weekly, hour-long tutoring sessions by phone. In approximately 200 hours, Tom eliminated his reading problem completely. In his mid-20s, Tom enrolled in college and attended through his junior year.

In Tom's last year of college, his mother reported that he had earned a 4.0 in his winter quarter. Additionally, Tom had taken courses for national emergency medical technician certification and passed the required exams on the first try. Some of Tom's study partners, who had not experienced learning disabilities as children or teens, failed the exam on the first attempt. Tom maintained a 3.3 GPA throughout college. In December 2003, he made a personal decision to leave college and start his own business. In preparation, he was in the process of reading a plethora of business-oriented books.

Success Stories from Schools

From *Melinda Reeves:*

Total elimination of a reading problem is not a common expectation for individuals diagnosed with dyslexia or, more generally speaking, students with severe reading problems. The federal government has set the expectation low. They project that only one student in four with a severe reading problem after the age of 9 will ever overcome it.

But this is not the experience of schools using Dee's methodology and this is why so many of us in education feel strongly that the research and education communities need to sit up and take notice of what Dee is doing.

Like us, the following schools conduct their own testing of students enrolled in READ RIGHT programs. We do the testing, individuals employed directly by READ RIGHT Systems, Inc. do not. The role of Dee's organization is to train our school employees (teachers and classroom aides) to deliver the methodology appropriately. The training requires seven weeks of intensive on-site, hands-on training during the first year and an additional five weeks if schools want to have an on-site trainer. If trainees do not meet Dee's high standard of excellence, they are not certified. Dee and her staff do not compromise their standard of excellence because they know that doing so means that tutors will deliver the methodology incorrectly, thereby running the risk of contributing to or causing a reading problem in the students we work with. As always, Dee puts the people she intends to help *first.*

Here is a summary of observations and results noted by other schools (from Dee's academic white paper, *Interactive Constructivism and Reading: The Nature of Neural Networks Challenges the Phonological Processing Hypothesis;* the full text is available at www.readright.com.)

<u>The Forestburg ISD</u>

Fonda Huneycutt, Ph.D., is superintendent of the Forestburg Independent School District, Forestburg, Texas. Prior to becoming a school administrator, Dr. Huneycutt was a first grade classroom teacher and an elementary reading specialist. She reports that, in READ RIGHT's first four to six weeks, regular classroom teachers began to notice improved fluency among previously poor

readers and the same students began to complete homework on time. As reading ability continued to improve, administrators noticed a marked reduction in discipline referrals and parents noticed an improvement in their children's behavior.

[Note to Brock Prize Panel: We have experienced this, too—when students experience success in the classroom, incidents of problem behavior decline. At the high school level, we also have noticed that fewer kids drop out of school when they experience success first-hand. Since READ RIGHT was implemented at our school, our drop-out rate has declined from 13% to just under 1%. Back to Dee's narrative...]

In a letter, Dr. Huneycutt recounts the significant improvements made by some of Forestburg's special education students:

> At the program start, Forestburg had three students who were labeled by special ed diagnosticians as 'non-readers.' One of these frustrated students could read very few words last January as a second grade student. At an ARD (Admission, Review, and Dismissal) meeting, staff reported that the student is reading at a 2.7 grade level as measured by the WIAT-2. (The methodology) uses Gates-MacGinitie, and it is nationally normed. We also use the Star Assessment, and results closely align with the WIAT-2 and the Gates-MacGinitie. The special education diagnostician has been re-testing students and she reports at the ARD committee meetings that some of our students (using the methodology) have gained four grade levels since last tested.

Sharon Schmitt has been a tutor and site coordinator using READ RIGHT methodology in Washington state for more than six years and, prior to that, was a secondary reading teacher for 14 years. Ms. Schmitt volunteered the following about her experiences implementing the methodology:

> My school decided to implement [the methodology] four years ago in an attempt to provide assistance for the 67% of incoming sophomores who were reading 2 or more grades below their current level. Of those, approximately 60% were reading at the second/third grade level. Additionally, approximately one-third of our students qualify for Title I, special education, or ELL services. ... (the methodology) more than met our expectations. The first year, 67% of students left the program reading at grade level. On average, students realized three-plus grade levels of gain in their instructional reading level, many realizing as much as five and six. Students showed an average increase of 1.9 years on the Gates-MacGinitie standardized test, and we had our first increase on the state's assessment test... .

A study designed to investigate the effectiveness of the methodology with at-risk tenth grade students from two high schools in Ms. Schmitt's district supports the methodology's effectiveness. Forty-nine students who received interactive constructivist tutoring and no other interventions in the tenth grade were matched to a randomly selected control group of 49 tenth graders not participating in the methodology. The two groups were matched based upon ethnicity and 7th grade test scores from the *Washington Assessment of Student Learning* (*WASL*).

All 10th graders involved in the study (experimental and control) took the 10th grade *WASL*. The results were compared. Data was provided by the school and analyzed by an independent third-party evaluator (Litzenberger, 2001a).

On the 7th grade *WASL*, no student in either the experimental or the control group met the standard of performance on the reading component or any of its sub-tests. On the 10th grade *WASL*, highly significant differences in favor of the experimental group were found in every subset of the test and in overall standards ($p = 0.001$). The results: 26 of the students tutored in the methodology grounded in the interactive constructivist view of reading development met the standard overall in the 10th grade (53 percent), compared to 12 of the non-tutored students (24 percent). Tutoring the students with a methodology reflecting the interactive constructivist view produced a significant gain in students meeting the standard on the state reading sub-tests. The data for all subsets is reported in Table 2.1.

TABLE 2.1

GRADE 10
2001 *WASL* Assessment

PERCENT OF STUDENTS MEETING STANDARDS
Grade 10 Comparisons

Reading Sub-Test	READ RIGHT	Control
Information Analysis	51	20
Information Comprehension	53	31
Information Critical Thinking	53	35
Literature Analysis	61	49
Literature Comprehension	57	39
Literature Critical Thinking	57	32
OVERALL STANDARD	55	32

In a separate study, the longitudinal reading performance of students tutored with the methodology in Union Gap School, Union Gap, WA was assessed (Litzenberger, 2001b). The purpose of the study was to determine whether gains would be made during tutoring and, if so, whether these gains would be maintained over an extended period of time. Each student was administered the *Woodcock Reading Mastery Test* (*WRMT*) prior to beginning the tutoring program. When students exited the program, they were administered a different form of the *WRMT* as a post-test. Two to five years after they had exited the program, all of the originally tutored students who could be found (17 middle school students and eight elementary students) were re-tested using the form of the *WRMT* that had been used in the pre-test. None of the re-tested students received any kind of reading intervention after they exited the program.

The group at pre-test registered a mean Normal Curve Equivalency (NCE) score for Total Reading of 35. The post-test mean NCE score immediately following tutoring was 63, a significant gain of 28 NCE ($p = 0.001$). When

students were re-tested for the longitudinal study between two and a half to five years after they had exited the program, the mean NCE score for Total Reading was 53, demonstrating that students continued to keep pace with their peers. For details of the results, see Table 2.2.

Table 2.2

Woodcock Reading Mastery Test

Reading Sub-Tests

	Pre-Test	*Post-Test*	*Re-Test*
Word Identification	39	59	48
Word Attack	38	69	59
Basic Skills Cluster	37	67	53
Word Comprehension	35	49	48
Passage Comprehension	35	57	56
Reading Comprehension Cluster	34	56	51
Total Reading	35	63	53

The 28 NCE gain from pre-test to post-test demonstrated in the Union Gap study is almost unheard of in the reading field. A 10 or more NCE gain is considered exceptional and is not uncommon for students tutored with interactive constructivist methodology.

Other evaluation data gathered by schools using interactive constructivist methodology in Washington State showed the following NCE gains:

- Nineteen at-risk students at Curtis Junior High, University Place School District, were administered the *Degrees of Reading Power* (*DRP*) test. After an average of 57 hours of tutoring, students registered a mean gain of 13.1 NCE. (1999)
- Sixteen at-risk students attending an alternative secondary school in the Arlington School District were pre- and post-tested with the *Degrees of Reading Power* (*DRP*) test after an average 51 hours of tutoring. The students registered a mean NCE gain of 21.5. (2000)
- After an average 63 hours of tutoring, 20 Meeker Junior High students (Kent School District near Seattle, WA) achieved a mean NCE gain of 10.5 on the comprehension sub-set of the *Gates MacGinitie Reading Tests.* (2002)
- Seventy-two Kent-Meridian High School students (Kent School District) registered a mean NCE gain of 11.4 as measured by the comprehension sub-set of the *Gates MacGinitie Reading Tests* after receiving a mean of 56 hours of tutoring. Kent-Meridian High School serves the high-poverty area in a Seattle suburb. (2002)
- Kentlake High School, a different high school in the same district, reported that 25 students who received at least 25 hours of tutoring (mean hours of tutoring: 44)

registered a mean NCE gain of 11.6 as measured by the comprehension sub-set of the *Gates-MacGinitie Reading Tests*. Ten of these students had pre-qualified for special education. (2002)

- 113 special education-qualified students registered a mean gained of 10 NCE as measured by the comprehension sub-set of the *Gates-MacGinitie Reading Tests* after receiving a mean 54 hours of tutoring, The 113 students included all special education-qualified students at nine project sites. (2003)

[Note to Brock Prize Panel: Since 1991, records have been kept for every student enrolled in certified programs using the methodology. The data is collected by school personnel at sites all across the country and reported to READ RIGHT Systems, Inc. for the purpose of monthly tracking. From a distance, Dee and her staff can tell whether or not programs are operating appropriately. If they aren't, it is apparent in their monthly data and READ RIGHT field consultants can step in with appropriate instruction for tutors. Averaged, the data indicates that since 1991 nearly 26,000 students (adults as well as school-age students in grades 2-12, including special education and English Language Learners) have received over 1 million hours of tutoring with an average rate of gain of *one full grade level of improvement* in reading ability for every *12.3 hours of tutoring.* The methodology is quick, efficient, and totally effective with the vast majority of struggling readers.]

From Melinda Reeves:

To conclude this section, I would like to add one more personal success story. This one is excerpted from the foreword to Dee's book, *Read Right! Coaching Your Child to Excellence in Reading.* Dee's foreword was written by one of the most prominent pediatric neurologists in the United States. From Floyd Gilles, M.D.:

My adult son became a functional reader for the first time in his life as a result of the techniques presented in this book. He wasn't a child when he learned to read, though I wish he had been. He was a middle-aged adult whose life had already been shaped by many years of struggle with learning. Through the years, my family investigated and implemented one intervention after another to help my son. Just as many, many families before and after us have experienced, the interventions did little to help him. Members of my family even became actively involved in federal and state legislation to protect the rights and interests of children in similar situations—children with significant learning problems.

Several years ago my brother asked my son if he would be interested in being tutored by long-distance telephone with methodology developed by his wife, Dr. Tadlock. My son was willing. I was intrigued by my son's relatively quick progress with Dr. Tadlock's highly structured methodology and couldn't help but wonder what she had stumbled upon. From this book, I now understand that she didn't "stumble upon" anything.

As I read these pages from cover to cover, I found the ideas to be remarkably consistent with knowledge of how brains function and emerging understanding of the brain's wondrous and natural plasticity. With a foundation of neuroscience, Dr. Tadlock provides a plausible framework to describe mysteries that have stumped the reading field for decades.

I finally understand why this methodology worked to help my son when all other conventional approaches failed. Professionally, I am intrigued and impressed by her discoveries and am pleased to share with you that my son now reads high-school level material with ease and comfort. The effect on his life is extremely impressive.

–Floyd Gilles, M.D.

Head, Childrens Brain Center, Childrens Hospital Los Angeles

Burton E. Green Professor of Pediatric Neuropathology, Childrens Hospital Los Angeles

Professor of Neuropathology, Neurosurgery, and Neurology,

Keck School of Medicine, University of Southern California, Los Angeles

The reason Dee is willing to challenge the status quo:

"Every man who knows how to read
has it in his power to magnify himself,
to multiply the ways he exists,
to make his life
full, significant, and interesting."

–Aldous Huxley

The Methodology

From *Melinda Reeves:*

Dee's program is not a classroom curriculum. It is a method of tutoring that requires seven weeks of intensive hands-on training for tutor certification during the first year and five additional weeks of hands-on training for trainer certification.

Dee's methodology is based in an interactive constructivist view of reading and reading development. Essentially, this means that the brain has to interact appropriately with reading materials and, in the process, construct its own reading ability. The methodology is highly structured and demands excellence. In fact, excellence is at the heart of the intervention model.

There are four components to the READ RIGHT intervention program. They are:

1) The Excellent Reading Component: In this component, struggling readers are guided by tutors through a process of 1) artificially experiencing excellent reading ability through a process of "cycling" (involving listening to stories read aloud over and over and then making attempts at reading the stories with the same standard of excellence) and 2) learning to judge one's own reading ability for excellence.

2) The Coached Reading Component: In this component, students read unfamiliar reading material aloud and receive immediate feedback from the READ RIGHT tutor during the process. Guiding remarks provided by tutors are highly structured and designed to produce immediate improved in a struggling reader's reading ability.

3) The Critical Thinking Component: In this component, tutors guide students through a process of thinking more analytically in the process of reading. READ RIGHT students spend approximately 20 percent of their time working on critical thinking.

4) The Independent Reading Component: Rather than serve as independent "practice," this component is designed to provide a laboratory apart from and in addition to the daily 55-minute daily (five days a week) READ RIGHT tutoring sessions. During this component, students apply their developing reading ability to new material privately, making additional discoveries about the reading process and helping to "wire" emerging successful strategies into the brain.

At program entry, students are assessed for reading ability and assigned materials appropriate to their reading level. Students do not move to higher level reading material until a significant reduction in symptoms is noted by the certified tutor (re: symptoms of the reading problem). If students do not possess sufficient knowledge of the alphabet when they enter the program, they are provided individualized instruction in the stable letters of the alphabet and their sounds. Rather than read through a process of decoding, READ RIGHT methodology reflects that the brain must be free to use alphabetic clues as needed. Alphabetic knowledge is essential to the reading process, but it is used by the brain in a different way as opposed to assumptions associated with the traditional decoding view.

READ RIGHT students do not work with artificial reading materials. They only work with authentic works of fiction and non-fiction from a 900+ book library, entirely

assessed for proper grade level. Because publishers vary widely in their assessment of reading materials, Dee re-evaluates *every* book for proper grade level assignment.

Students spend the majority of their time in the READ RIGHT program in the Excellent Reading Component, using the process of cycling (hearing the material over and over again to familiarize the brain with the text) to compel the brain to experiment with new strategies that will successfully produce excellence in reading. In the Coached Reading Component, tutors provide students with appropriate guiding remarks the second that errors occur.

The methodology has evolved to a small-group format that still delivers individualized guidance. One tutor works with up to four students at a time. A single tutor, therefore, can work comfortably with up to 24 students a day. Because the methodology has been systematized to provide for the distribution of materials and all record keeping during each 55-minute session, there is no additional preparation time needed for the certified teachers or classroom aides who serve as tutors. The program is totally turn-key.

In Conclusion

I am certain that Dee Tadlock's contributions will one day be viewed as major milestones in the history of education. She has, indeed, figured out what the brain actually does when it reads with excellence, how very young children figure out the complex reading process for themselves, how to compel young children to construct their own excellent reading ability, AND what is required to quickly and efficiently correct a reading problem once one is established. No other individual in the reading field has ever incorporated so many areas of brain science or synthesized so much emerging knowledge into a single cohesive understanding of how to compel the brain to produce excellent reading ability. *No one*—and the proof of the accuracy of Dee's thinking are students like mine: *whole classes* of students who graduate from high school having demonstrated that they are competent readers.

I cannot adequately convey how satisfying it has been to watch as 100% of my students graduate truly prepared to be successful in the world. I can't think of one other gift I'd rather give my students.

I have Dee Tadlock to thank for my ability to give my students this gift. Her discoveries are a gift to the world and truly deserving of the prestigious Brock Prize. It is my earnest belief that the timing is right for her to be recognized for her remarkable achievements so that reading theorists, researchers, and educators will finally sit up and take note. Waiting longer will delay study and dissemination of her remarkable body of work, and her work deserves to be studied and shared. *Millions* of children, teens, and adults are waiting for quick and efficient solutions to the continuing epidemic of reading problems.

My high school students who have been transformed will tell you that *the answer* is here! They also will tell you that it is now up to the adults who shape children's lives to pay attention and act in the best interest of struggling readers everywhere.

To demonstrate that Dee has not overlooked anything in her new view of how the brain reads with excellence, I will conclude with the extensive references that provide the scientific basis for her academic white paper, *Interactive Constructivism and Reading: The Nature of Neural Networks Challenges the Phonological Processing Hypothesis.*

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