

# DYSLEXIA -- WHAT IS IT, REALLY?

## PERSONAL REFLECTIONS AND SCIENTIFIC FACT

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I'm not an advocate for children in special education because I'm dyslexic. That is the answer to the first question that people have when we first meet. They have been told I am dyslexic, and they find out I'm an advocate. My early interest involved persons with developmental disabilities. However, within the broad spectrum of reasons why some children learn differently, it is presently the field of learning disabilities that is the most dynamic, creative, and motivating.

Within the field of learning disabilities most of the effort of researchers and educators seems to be focused on issues related to the acquisition of literacy skills. How are literacy skills acquired? Why do some children have difficulty acquiring such skills? What can be done to help those who don't easily acquire such skills? I guess I became interested in learning disabilities generally and dyslexia specifically, because these are the same questions for which I needed answers in order to advocate successfully for a child who can't seem to learn how to read. What I didn't know is that the dedication, generosity, and selfless nature of those in the forefront of finding answers to these questions are as irresistible as quicksand. This is where everything is happening. I've been sucked in over my head, and I'm loving it!

For many years I declined to speak of my own dyslexia. Although, I don't recall ever being ashamed or being in denial, I never thought my having dyslexia was a credential that should be exploited as if it made me a better advocate or that my personal anecdotes would provide the least bit of meaningful knowledge or insight to anyone else. How many presentations have we all suffered that were merely entertaining and didn't bring us closer to the answers we were seeking? I didn't feel that what I have to say about myself would be helpful to anyone else. Nevertheless, at some point I was convinced to take a shot. For my story to be relevant, the reader (or listener) must be able to distinguish his/her needs as a learner from my own in order to profit from my experiences. We are not the same; we are different people with certain similarities. Knowing what makes us different is as important and meaningful as knowing what makes us the same.

Four out of ten children have difficulty learning how to read. Almost half that number has so much difficulty that they need direct and explicit instruction by knowledgeable instructors using informed methods of instructions if they are ever to be efficient at *breaking the code*.

In this day and age, literacy skills are required if we are to effectively provide for our family, our community, and ourselves. There was a time when reading was not necessary to be a successful provider. Two hundred years ago, if you could track an elk, shoot straight, and figure out how to get it back to camp you were a hero and community leader - reading didn't matter.

The Internet has recently made keyboarding skills a necessity for everyone wanting access to the "information highway." It wasn't to long ago when only secretaries needed to know how to type. The time will come again when reading will not be a required skill; but, for the foreseeable future, "reading is the foundation upon which all scholastic success depends." *R.E. v. Jersey City Bd. of Ed.* OAL DKT NO. EDS 7018-97 (N.J. 10-30-97).

### What is a Learning Disability?

Surprisingly, there remains significant disagreement among laymen regarding the concept of "learning disability." In order for what I have to say to be meaningful to you, we must have a common understanding of what I mean when I use the term "learning disability."

In 2002 the issue of Learning Disabilities as a scientifically valid concept was addressed by the Commission on Excellence in Special Education created by President George W. Bush on October 2, 2001 (PCESE), the International Dyslexia Association (IDA), and by The Learning

Disabilities Roundtable (the Roundtable).<sup>1</sup> These initiatives were all related. The PCESE white papers triggered the creation of the Roundtable. As a member of the Roundtable, IDA developed position papers on each of the topics for which the Roundtable sought to achieve consensus.

The following discussion appears to be the general consensus of the vast majority of the researchers, practitioners, and advocates participating in all three projects.

1. **The concept of *learning disability* is valid.**
2. **The term learning disability refers to a *class of specific disorders*.**

The recognition that subgroups of learning disabilities exist identifies the concept of learning disabilities as a taxonomic hierarchy.

3. **Such specific disorders are due to *cognitive deficits*.**

The etiology of a learning disability is neurological in nature. A "cognitive deficit" is distinguishable from *performance deficits* and *adaptive functioning*.<sup>2</sup> For instance, a deficiency in phonological processing is a *cognitive deficit* that results in *performance deficit* in word recognition, spelling, and fluency that predicts problematic *adaptive functioning* (a Manifest Disability) in the development of literacy skills.

In other words, a learning disability cannot be identified by reference to performance deficits or a Manifest Disability alone. For instance, the ability to read at a level expected, considering age and potential, is neither necessary nor sufficient to diagnose a learning disability. On one hand, the cognitive deficit may exist even though the predictable impact on adaptive functioning has been ameliorated through effective remediation. On the other hand, problematic adaptive functioning may exist due to

variables unrelated to cognitive abilities, such as an ineffective general curriculum.

4. **Such cognitive deficits are *intrinsic to the individual*.**

Although it is accepted that learning disabilities are inherent, the term "intrinsic" is used in place of "congenital," which was previously preferred, because of the currently accepted hypothesis that "environmental factors" (e.g., instruction) must be in place to develop the neural networks that support academic skills" (Executive Summary, p.7). Nevertheless, there continues to be a lack of general consensus as to whether or not a learning disability can be caused by an acquired (extrinsic) versus a developmental (intrinsic) environmental pathogen and/or postnatal trauma.

5. **Such cognitive deficits are *unexpected in relation to other cognitive abilities*.**

If the cognitive variable identified *predicts* the anomalous development of a particular skill, such predicted development is not unexpected. For instance, problems reading are not unexpected in light of a cognitive deficit in phonological processing. However, the deficient neurocognitive process *is* unexpected in relation to other neurocognitive abilities. Sally Shaywitz aptly and simply describes the concept by stating that individuals with learning disabilities display a "weakness in a sea of strengths."

The concept of unexpectedness requires that the role of discrepancy analysis be considered. There is *no validity* to a discrepancy analysis that compares aptitude to achievement (e.g., IQ to reading ability), or achievement-to-achievement (e.g., Math ability to reading ability). However, discrepancy may be applied to intra-individual cognitive patterns, as a step in the identification process; which step is understood to be neither necessary nor sufficient to determine the existence of learning disability. Such an analysis merely confirms the existence of an element in the LD phenotype that distinguishes the LD child from other populations experiencing similar cognitive deficits. In other words, within the LD population individuals exhibit a pattern of cognitive deficits in the presence of a preponderance of cognitive assets. This discrepancy has diagnostic salience and is a factor that is necessary in order to help quantify appropriate expectations for intervention and establish goals relating to rate of growth. If individuals are to be grouped for instructional purposes, such information is also necessary to ensure the homogeneity of grouping.

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<sup>1</sup> The Learning Disabilities Roundtable consisted of ten organizations sponsored by the Division of Research to Practice Office of Special Education Programs of the U.S. Department of Education. The report of the Roundtable entitled *Specific Learning Disabilities: Finding Common Ground* was published July 25, 2002. I was privileged to have prepared the initial draft that resulted in the IDA position paper on *The Nature of Learning Disabilities* and to have been a representative from IDA to the Learning Disabilities Roundtable

<sup>2</sup> In this article the term *Manifest Disability* is synonymous with a predictable anomaly in adaptive functioning due to a cognitive deficiency.

It is the *assets* not the *deficits* that distinguish individuals with learning disabilities from other populations that share similar cognitive deficits. For instance, the individual who is considered a low achieving slow learner may have a similar cognitive profile in a particular domain to an individual with a learning disability. However, the individual with the learning disability will show a preponderance of assets relative to the deficits involved and, as a consequence, may be expected to exhibit a different rate of progress and growth.

The only discrepancy model with any relevance is one that is **intra-individual**, compares the extent of discrepancy between **cognitive** deficits and a preponderance of relative **cognitive** assets (clinical judgment may be a significant factor in the case of a profile that is confounded by co-morbidity), and is applicable to **diagnosis**, but is not a factor to be used to determine eligibility for services.

**6. Such cognitive deficits predict performance deficits.**

**7. Such performance deficits predict consequences in adaptive functioning.**

The developmental course of an unrecognized and untreated cognitive deficit is the underdevelopment of performance skills that result in a Manifest Disability in a particular domain of adaptive functioning. A cognitive deficit, no matter how profound, is not a disability unless it results in an impact on adaptive functioning. The label "disability" is not determined by the "deficit itself, but its social consequences." (Vigotsky, 1993, paraphrase). To paraphrase Dr. Gordon Sherman, a disability is characterized by an incompatibility between biology and environment. If the skill that is impacted by the disordered variable is not needed by the culture and time in which the person exists (a contextual variable), it has no consequence and is not a disability. For instance an inability to efficiently learn to detect poisonous plants is not a disability in a culture where everyone buys their food from grocers and supermarkets. Therefore, the Manifest Disability has no Derivative Impact. In contrast, the inability to read has significant social consequences (Derivative Impact) in most cultures. We would not categorize a deficient cognitive process that predicts an inability to identify poisonous plants as a learning disability because it does not predict deficits in performance that predict consequences on adaptive functioning (a Manifest Disability with Derivative Impact) in the culture within which the individual is expected to perform.

**8. Such consequences are variable across the life span.**

Although the cognitive deficit involved is intrinsic to the individual and neurological in nature and, therefore, is life-long, the consequences on adaptive functioning vary over time for a variety of reasons. For instance, the performance deficit involved, e.g., word recognition, may be successfully remediated or the manifest disability, e.g., reading, is made less consequential due to life choices such as the individual who does not read efficiently choosing to be a farmer instead of a journalist or pursuing a degree in engineering instead of history.

Consistent with the foregoing discussion, the International Dyslexia Association (IDA) has proposed the following definition that identifies *learning disability* as a level in a taxonomic hierarchy.

**The term learning disability refers to a class of specific disorders. They are due to cognitive deficits intrinsic to the individual and are often unexpected in relation to other cognitive abilities. Such disorders result in performance deficits in spite of quality instruction and predict anomalies in the development of adaptive functions having consequences across the lifespan.**

The concept of learning disabilities is widely misunderstood and an ability to describe the concept with the authority of scientific consensus has powerful potential. To educators who do not understand the concept, remediation is a waste of time and accommodations are unfair. It is the "sea of strengths" that Dr. Shaywitz refers to that is so often overlooked. Unfortunately, there is no learning disability, if it goes unrecognized or unremediated, that does not have the ability to pollute a child's *sea of strengths*.

### **Matthew Effect:**

Research conducted by the National Institute of Child Health and Human Development (NICHD) at the National Institutes of Health (NIH) indicates that 17 to 20 percent of children exhibit a significant reading disability. Of children that are reading disabled in the third grade, 74 percent remain disabled at the end of high school. The pervasive effect of deficient literacy is aptly described by Keith Stanovich's "*Matthew Effect*" construct.

Stanovich has coined the phrase "Matthew Effect" to describe the phenomenon that a single

unmediated deficit can have a significant impact on the development of skills that are not deficient. The phrase comes from the Gospel according to Matthew where it is inferred that "the rich get richer and **the poor get poorer.**"

There have, in addition, been a number of empirical studies of the correlation between IQ and reading achievement. The results of these studies converge on the conclusion that IQ is only weakly and nonspecifically related to achievement in the early grades. To these findings, however, I must add a sobering afterward. Whereas IQ and general cognitive skills seem not to have much bearing on early reading achievement, early reading failures seem to result in a progressive diminution in IQ scores and general cognitive skills. In the words of Keith Stanovich, who has developed this argument with scholarship and force:

"Slow reading acquisition has cognitive, behavioral, and motivational consequences that slow the development of other cognitive skills and inhibit performance on many academic tasks. In short, as reading develops, other cognitive processes linked to it track the level of reading skill. Knowledge bases that are in reciprocal relationships with reading are also inhibited from further development. The longer this developmental sequence is allowed to continue, the more generalized the deficits will become, seeping into more and more areas of cognition and behavior. Or to put it more simply -- and sadly -- in the words of a tearful nine-year-old, already falling frustratingly behind his peers in reading progress, "Reading affects everything you do." (Adams, 1990, pp. 59-60).

### Cognitive Dissonance:

The concept of *unexpectedness* helps explain an unfortunate and often experienced side effect of having a learning disability. Concomitant to unexpected weakness is unreasonable expectations and concomitant to unreasonable expectations is failure. Failure is a relative concept. Expecting an "A" and getting a "B" is as much a failure as expecting a "C" and getting a "D". The messages we hear from our environment are: "If you would only try harder you could do it." "You don't care enough." "You are lazy." "You are unmotivated." As we enter into adolescence the belief that we can do "it," is being challenged by an emerging understanding that we can't do "it." These incompatible beliefs eventually create an uncomfortable (downright painful) psychological state known as a *cognitive dissonance*. In order to resolve the dissonance between a belief in one's competence and efficacy

("I'm smart") with emerging beliefs of lack of competence and efficacy ("I'm stupid"), the adolescent will often add a variable to explain the failure without challenging self image. The variable most often introduced is effort. "If I don't do my homework, if I don't study for tests, if I don't go to school, my failure is explained and I can remain *smart*." Barry Lorinstein, a well-known neuropsychologist, refers to such a child as preferring to be seen as *unwilling* rather than *unable*. For those of us who have difficulty learning how to read we also struggle with the compounding impact of Matthew Effect, failure, and cognitive dissonance.

### Aptitude-Achievement Discrepancy:

In order to qualify for special education services, Federal Regulations require that the pupil exhibit "a severe discrepancy between achievement and intellectual ability." Thus, the criteria for eligibility are not the existence of a learning disability (a weakness in a sea of strengths) but a **failure** to achieve. In other words, a pupil with dyslexia can't get special education assistance until and unless other children of similar intellectual potential are reading significantly better. This formula has been roundly criticized:

- The formula for identifying children with learning disabilities under the Federal law (IDEA) is a "wait and fail model." "The way we define kids as learning disabled is invalid and immoral." Tom Hehir, Director, Office of Special Education Programs (OSEP), U.S. Department of Education. (The agency responsible for implementing, interpreting and enforcing the Federal Regulations).
- Any such formula requires that the student cross a "threshold of severe failure." Nancy Mather, University of Arizona, co-author of the materials accompanying the Woodcock Johnson Psychoeducational Battery Revised.
- "The only thing such a formula prevents is prevention." Jack Fletcher, University of Texas, a pre-eminent researcher and author in the field of learning disabilities.
- "For twenty-five years, we have used the IQ-achievement discrepancy model, a wait-to-fail model that is known to be:

1. Ineffective --
2. Inefficient --
3. Irrational --
4. Immoral --
5. Indefensible – consensus in the field that is must go.”<sup>3</sup>

This formula virtually guarantees failure, Matthew Effect and a struggle with cognitive dissonance. Administrative convenience is not a sufficient reason to continue the use of this invalid and archaic construct. If you wait until a cancer patient actually shows signs of illness, it is often to late. Early detection, early treatment is the goal of the medical doctor it must also be the goal of the educator.

### My Story:

I am dyslexic. I was left back in the first grade because I couldn't learn to read. The first day of my second try at first grade was a perfect example of the kind of insult that is often added to the "injury" of having a learning disability. I was a second grader in first grade; the other children were kindergartners in first grade. To make them feel comfortable, the teacher had all the desks placed in the middle of the room so we could all "skip around the class." I wasn't a kindergartner -- I refused skip. Sensing my anguish, the teacher sent me back to kindergarten for the rest of the week to learn how to skip - so much for empathy.

This teacher also used the EIF approach to teaching reading -- Embarrassment Is Fundamental. She was actually surprised that I had just as much trouble reading in front of the class as I had trying to read at my desk. As a result, until I was 40 years old, any kind of public speaking resulted in ordinate anxiety and panic. Teachers called me "lazy and unmotivated" to my face. I began hating school. They told my parents: "He needs a fire put under him." or "Put a bomb under his butt." I learned to hide in the back of

the room, with a book in front of my face, and, if possible, behind Billy Norton, the biggest kid in class. I wanted to be invisible.

Then, in the eight grade, I met that "charismatic adult" about whom Robert Brooks often speaks. Mr. Tanenbaum taught science and he was "tough." But his toughness included structured, hands-on, and visual experiences. He used graphs and charts while challenging my conceptual strengths. Reading and memory skills took a back seat. I got "A"s instead of "C"s and "D"s. Other kids, who always appeared quicker and smarter than me in school, were struggling to get "C"s.

The effect of this experience in science class was profound. I started to face those fears that haunted me the most. I committed to running for a class office knowing that in a month, which is an eternity for an 8<sup>th</sup> grader, I would have to SPEAK IN PUBLIC! In 10<sup>th</sup> grade, I ran for Vice President. The varsity quarterback ran for President. Two weeks before the election he realized that a loss would be a significant blow to his campus status. Since I, would probably loose anyway, he proposed that we trade nominations. To his surprise, to my surprise, and to the surprise of some of my teachers (several of whom considered early retirement), I won.

College started badly. I didn't know how to study. I went to a challenging school, and took 18.5 credits the first semester. I managed only 3 to 4 hours of sleep per night and still couldn't make up for my labored reading, slow processing speed, and poor memory skills. I flunked out after the second semester.

In my second year at C.W. Post College of Long Island University, I gradually learned what I needed to know. First and foremost: reading the teacher is often more important than reading the book. Go to every class, sit in front, watch the teacher (make eye contact), take notes, and review your notes immediately after class.

To counteract my failed freshman year, I took 56 credits in my senior year; almost double the average course load of 30 credits. Incidentally, my undergraduate degree is in engineering because it was the only degree that didn't have a foreign language requirement. Also, I never did learn my times tables (7x9 is processed 7x3=21x3=63, etc.) and, as a consequence, I did not do well in math in public school. In college I was at home with the math concepts and abstract problem solving necessary to earn an engineering degree.

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<sup>3</sup> **Testimony of Dr. Douglas Carnine, "IDEA: Focusing on Improving Results for Children with Disabilities," Hearing before the Subcommittee on Education Reform Committee on Education and the Workforce United States House of Representatives, March 13, 2003**

After college came a job, marriage, three years in the U. S. Army, children, and law school. Rutgers Law School used a Socratic method of instruction; understanding and being able to argue concepts was more important than remembering the name and date of a particular case.

### **Remediate, Compensate, Accommodate, Promote:**

My personal profile of unexpected deficits includes problems with phonological processing, memory, and processing speed. I also have unexpectedly strong visual spatial skills. A plan to address weaknesses should be to *remediate* that which can be remediated, then to *compensate* for those problems that can't be remediated, and lastly, *accommodate* those needs that can be neither compensated for nor remediated. The difference between these concepts is important. If you fill in a pothole it is remediated. If you learn to take yourself around the pothole, you are compensating for its existence. If you need help to get around it, you are asking for an accommodation. My profile involves a phonological processing deficit that can be effectively remediated, memory problems that can be reasonably compensated for by using digital recorders, taking notes and by finding a wife with a good memory and all of the skills that I lack. My processing speed deficits require that I have to request the patience of others (such as those who await this article). Of course, opportunities to promote unexpected skills should never be overlooked.

### **Dyslexia:**

In the United States 80% of children identified as having a learning disability have a difficulty learning how to read commonly known as dyslexia. Unfortunately, there remains widespread misunderstanding as to what dyslexia is among parents and professionals.

G. Reid Lyon, Ph.D. head of the branch of the National Institutes of Child Health and Human Development responsible for researching learning disabilities has said, "If you don't know the cause you get instructional paradigms built on faulty assumptions." The Center for Effective Collaboration and Practice in 1998 took the position that one must "look beyond the overt topography of behavior, and focus, instead, upon identifying biological, social, affective, and

environmental factors that initiate, sustain, or end behavior."

Sometimes the cause for behavior is counterintuitive. The following is an example that helps explain the counterintuitive nature of an understanding of the cause of dyslexia.

1. Read the following sentence aloud.

**FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS.**

2. Before going on, go back and count how many Fs appear in the above sentence.

3. The answer to your question as to why I am asking you to do this is in the footnote below.<sup>4</sup>

Most of the world assumes that dyslexia is a visual problem involving such things as reversals, transpositions, words "dancing" on the page, and the like. Hence, there is a long history in the reading field of worthless "instructional paradigms built on faulty assumptions."

Louisa P. Moats has said, "It is not self evident that phonological processing underlies reading disability."

Jeanne S. Chall said:

"The reading gaps of the deaf as compared to the blind seem almost a contradiction. Common sense tells us that the deaf would be the better readers because they can see the print. Yet the blind are the better readers. This happens because reading is closer to hearing than to seeing."

On August 3, 2002, a scientific consensus meeting was held in Washington, D.C., to address the need to update the research definition of Dyslexia

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<sup>4</sup> There are 6 F's. All written languages are a code for spoken language. In an alphabetic language letters and letter combinations represent phonemes, the smallest unit of sound in the spoken language being encoded. Good readers automatically make symbol to sound and sound to symbol correspondence. In this case, the instruction to count F's was automatically interpreted by the brain to mean the unvoiced /f/ sound that most often corresponds to the f symbol and an accomplished reader overlooks the voiced /v/ sound in the word "of." This is one test that good readers most often fail and non-readers always get correct.

adopted by NICHD in 1994.<sup>5</sup> This group came to consensus on the following definition:

**Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.**

The various concepts in the definition can be broken down as follows:

**1. "Dyslexia is a specific learning disability ..."**

This definition recognizes the existence of other specific learning disabilities and its place on the taxonomic hierarchy of the concept learning disability.

**2. "... that is neurobiological in origin."**

The deficit is cognitive, intrinsic to the individual, and occurs at the level of neuronal activity.

**3. "It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities."**

Prior definitions focused on decoding as the performance deficit caused by a cognitive deficit in phonological processing and spelling and fluency problems were considered derivative to the decoding deficit. This definition recognizes fluency, automaticity, and spelling along with decoding as being directly influenced by the cognitive deficit involved. As a result, the definition has greater relevance to written languages that are more phonologically regular and transparent, e.g., Italian, or that are non-alphabetic, e.g., Chinese.

**4. "These difficulties typically result from a deficit in the phonological component of language. . ."**

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<sup>5</sup> Participants: Susan Brady, University of Rhode Island; Hugh Catts, University of Kansas; Emerson Dickman, Secretary IDA, Project Leader; Guinevere Eden, Georgetown University; Jack Fletcher, University of Texas Medical School, Houston; Jeff Gilger, California State University/LA; G. Reid Lyon, Chief, Child Development and Behavior Branch, NICHD; Bennett Shaywitz, Yale University, Discussion Leader definition of "dyslexia;" Sally Shaywitz, Yale University; and Harley Tomey, President, IDA.

The core cognitive deficit of dyslexia resides in the phonological system.

**5. "... that is often unexpected in relation to other cognitive abilities . . ."**

Consistent with the definition of learning disabilities, the cognitive deficit involved exists in the presence of cognitive assets and is not expected as the result of a generalized developmental disability. The factor distinguishing a Learning Disability from a Developmental Disability is not the character of the deficit, which may be similar, but the existence of relative cognitive strengths. It is critical to recognize the relative nature of the comparison of deficit to assets. In other words, there is nothing in this definition that would preclude an individual with a generalized developmental disability from also being dyslexic if his cognitive assets were relatively superior to his "deficit in the phonological component of language."

**6. "and the provision of effective classroom instruction."**

Individuals who can't read due solely to poor instruction (curriculum casualties) are not dyslexic.

**7. "Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge."**

The primary goal of reading is to comprehend the meaning of text. The dyslexic individual does not, without comorbid weakness, have a cognitive deficit that directly impacts the ability to comprehend. However, if you can't decode a word - you don't have access to its meaning and if you don't read - the vocabulary and background knowledge necessary for efficient comprehension does not develop. Therefore, comprehension suffers indirectly. Almost like the family that suffers when the head of the family is injured and can't work.

Dyslexia in a nutshell:

- **Cognitive deficit = *phonological***
- **Performance deficit = *decoding, accurate word recognition, fluency, spelling***
- **Manifest Disability = *reading***
- **Derivative impact = *comprehension***

## **Informed Instruction:**

Research for the last twenty years, and practice for the last fifty years, is converging on the elements that comprise informed, effective instruction for dyslexia. To wit: direct and explicit instruction that is structured, sequential, cumulative, phonics-based, and multisensory. The one aspect of such instruction that is most often discussed, most often overlooked, and most often misunderstood in the *multisensory* element, especially the use of tactile/kinesthetic input. Kinesthetic memory accounts for *fixed action patterns* that help us through the hundreds of movements repeated in the same order without apparent conscious thought in the shower every morning. One word written with a finger on the palm of the opposite hand will unlock the door to long term memory and permit the retrieval of not only the single word, but also the whole concept it was intended to represent. If you know this trick there is no good excuse to interrupt when another is speaking or to forget the "great idea" that came during a lonely ride in the car. The importance of reinforcing direct instruction with tactile/kinesthetic input should not be underestimated.

"We have gained enormous insight into factors that contribute to successful reading acquisition and explain failure." (Bonita Blachman, Syracuse University.) "The knowledge children need to master in order to succeed at reading is well documented, and the kinds of instruction methods that are effective have also been verified." (Brady and Moats, 1997, [Informed Instruction for Reading Success: Foundations for Teacher Preparation](#); A Position Paper of the International Dyslexia Association.)

## **Fear Is Our Enemy:**

Self-advocacy is a two way street. It is more important that we do for ourselves than have others do for us.

- Come to class prepared.
- Make eye contact.
- Take notes as best you can.
- Expand, summarize, or outline notes immediately after class.
- Focus on concepts.
- Highlight text.
- Manage time.
- Sit in front.

If you are like me and have experienced embarrassment at the hands of insensitive teachers, be proactive - discuss your concerns with the teacher.

"I am a student with learning problems I have been afraid of being embarrassed by teachers all my life. If you will agree to call on me only when I raise my hand, I will be able to set aside this fear and concentrate on what you have to teach. If you do this for me, I will sit in front, take notes, and come to every class."

We must all learn to sit in front!