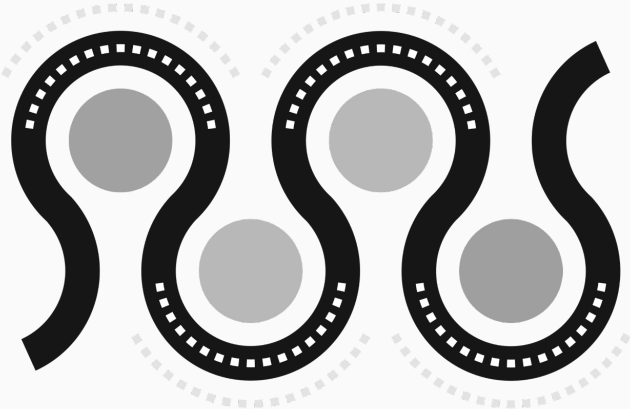
SPECIAL DETROIT EDITION

EDUCATION REFORM

A SIMPLE BLUEPRINT for HUMAN-FRIENDLY EDUCATION



SUSAN KRUGER, M.ED.

2-in-1 BONUS includes best-selling book,
Cue to Reading: How to Identify & Fix Any Reading Challenge... Quickly!

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Dedication

To Mark & Madison…
the brightest lights in my life!

And to the students of Detroit.

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Foreword:
A Vision for the Worst-Performing School System in the World

"Do we have a vision for what schools in Detroit can look like…

A dream? A <u>real</u> vision for what schools can look like?"

- Dan Quisenberry,
Michigan Association of Public School Academies
June 2016, Mackinac Policy Conference

With a success rate of only 4%, students in Detroit are 96% likely to fail![1]

What happens when students fail?

Students internalize "failure in school" to mean "failure as a person." Failure removes options. Gaps fill with poverty, illness, homelessness, and crime.

Can Detroit Really Be a Leader for Education Reform?

Detroit is the worst-performing school system in the United States.[1] The United States is the worst performing country in the industrialized world.[2]

Detroit is at the bottom of the bottom, the worst of the worst.

But, Detroit has a prime opportunity to reframe what "optimal education" can be. We can catapult beyond expectations. We can become leaders for the nation and the world.

Detroit can become a phoenix, rising from the ashes to SOAR… more beautiful and brilliant than ever!

How Can Detroit Thrive When It Can Barely Survive?

Detroit schools have the lowest proficiency rate of the industrialized world.[3] Our unemployment rate is more than twice the national average.[4] We are in rough shape.

If we don't fix something --and fix it fast-- employers will have only two choices:

1. Leave Detroit to find better talent, or
2. Import talent into our city.

Either way, we lose.

But, there's a simple leverage-point that will quickly launch our students and workforce to success! It's so simple, it's almost completely overlooked.

It's so critical, it sits at the very top of Common Core as the "Anchor Standards." Yet, everyone looks right past it because we're too busy arguing about how to best teach 3rd grade math.

That leverage-point is "soft skills;" the skills for knowing HOW to learn, organize, communicate, and solve problems.

There is a lot of focus on STEM, but STEM is useless without a solid foundation of soft skills. Students must know *how to learn* in school or *function in the workplace* before STEM training can have an impact.

Our Workforce Is Paralyzed by an Invisible Ignorance!

Without soft skills, even our "educated" youth are struggling. 60% of today's working millennial's will exit their job within the first three years.[5]

"Employees told us they hire for technical skills, but fire for soft skills," explained Naheed Huq, Manager of Community and Economic Development at SEMCOG (Southeast Michigan Council of Governments).

Detroit's skills gap exists because our workforce does not have the skills to be: life-long learners, flexible, organized, efficient, and adaptive to constant changes in technology and society. As SEMCOG says, "Soft skills provide workers with the ability to respond to new opportunities."[6]

Rebuilding Detroit's economy requires us to focus on our greatest asset; our people! We already have the grit... we simply need the skills to bring that grit to life.

Soft Skills = Life Skills!

Soft skills education, included in the context of a human-friendly education model, is our single greatest leverage-point; **we can make a massive impact, quickly, and with minimal resources.**

These skills can be taught as early as 6th grade. They make students more successful in school. They also make employees more successful in the workplace.

Soft skills *empower* learners and workers. They create more engaged students and employees.

Soft skills training provides more "bang for the buck" for students, teachers, employers, and our society than anything else. These skills are the path to economic viability and success…

> ***"There is one set of skills that every employer is looking for in every employee. Regardless of sector, industry, occupation, or level, the vast majority of***

employers consider soft skills to be an essential component of workplace success."

– SEMCOG (SE Michigan Council of Governments) Lifelong Skills Framework Report[6]

"Work-readiness skills, also known as 'soft skills,' are the most influential factor in hiring decisions by local employers, even above technical skills and credentials."

- Detroit Skills Gap Report[7]

"The majority of the skills and competencies --in terms of importance, frequency, and hard to find in job candidates—(are) soft skills…"

- Oakland County Workforce Development Skills Needed Assessment Report[8]

The Good Side of Detroit!
(It's an Attitude, not a Geographic Location.)

This is personal!
Like me, you've endured the looks of distrust when people learn you're from Detroit.

Two weeks after the bankruptcy announcement of 2013, I was at a conference on the east coast. Naturally, several people asked, "Where are you from?"

When I responded with, "Detroit," *every single person* stepped back and looked me up and down. (It's true… they actually eyed me from head to toe!)

"Really?" they asked, with a tone of disgust.

By the end of the day, I was feeling awfully dejected. "Tomorrow, I'm going to tell people I'm from southeast Mich…," I thought. Then, immediately interrupted myself.

"No, dammit! I'm from Detroit!" The next day, I had a new answer.

"I'm from the *good side* of Detroit." No more stepping back to eye me with suspicion. Instead, people simply looked confused.

Then I added, "It's an *attitude*, not a geographic location!"

YOU know what I'm talking about! Yes, Detroit has had its share of black eyes and bruises.

But Detroit has far more grit and "blue-collar" spirit!

We are known for our resilience. We've always been "America's Renaissance City."

We are known as the nation's #1 sports town; we are fiercely competitive! Yet, we are also known for our unparalleled sportsmanship.

And we are known for being really, really nice.

Despite being at the bottom for education, we are now in a unique position of power. Our beloved city can now break down walls and experience the glory of bringing people together. (Because, after all, we are soooo nice!)

"Can It Really Be That Simple?"

How do "soft skills" solve so many hard problems?

Easy. Soft skills are the "80/20" of education, according to the mathematical law of Pareto's 80/20 Principle. They are the 20% of skills that account for 80% of a person's effectiveness in education and the workplace. These skills include: organization, prioritization, problem-solving, communicating effectively, etc.

Soft skills are:

- ✓ Proven to raise motivation by a factor of 3X![8]
- ✓ Proven to raise college graduation rates by a factor of 7X![9]
- ✓ Proven to raise average GPAs by more than 1 full point![10]
- ✓ Radically in demand by employers, comprising 95% of the top skills most needed by local[11] and national[12] employers.

It's Been Done Before!

This level of radical reform has been done before! In 1896, in the slums of Rome, Maria Montessori transformed children labeled as "idiots" and "uneducable" into top performing students.

If it could be done in the slums of Rome, it can be done in Detroit!

What happened to Montessori's revolutionary methods? They are still used successfully today, on every inhabited continent, in every socioeconomic setting.

Montessori, however, is less prevalent in the United States.

But, let's not forget that we are performing at the bottom of all industrialized nations.

Oh, and we spend 40% more per student than our international peers![13]

The principles that Dr. Montessori developed, that the world has tested, and that brain science has solidly confirmed have been proven for more than 100 years, across every cultural and socioeconomic boundary.

Montessori believed in highlighting and building upon the individual strengths of the learner. She knew this was a key foundation for motivation and engagement. She then taught strategies that fit with the natural rhythm of the learner. 100 years later, advances in brain science confirm her theories and methods align perfectly with the human brain. (And, brain biology transcends geographic, cultural, and socioeconomic boundaries… because we are all HUMAN!)

"But, Will It Work in Detroit?"

Detroit has more children living in extreme poverty than any of the nation's 50 largest cities.[15] It's only natural to wonder if such radical changes can be made in such dire situations.

But, when education is aligned to human development, it transcends geographic, cultural, and socioeconomic boundaries. Compared to global peers, the United States has the greatest correlation between home environment and student performance.[3] This suggests that the most important elements of education in the US currently come from parents, not from our education system.

Certainly, a nurturing and supportive family is optimal. But, the effectiveness of our education system should not depend on this factor. In the top-performing countries around the world, home environments have little to no correlation with student performance.[3] But, if we can improve students' success in school and the workplace today, we can improve family stability for future generations!

The Vision… the Dream for Detroit Schools

I was in the audience of the 2016 Mackinac Policy Conference during the session focused on education in the city of Detroit. One of the panelists posed the following rhetorical questions to the crowd…

> *"Do we have a vision for what schools in Detroit can look like…? A dream? A <u>real</u> vision for what schools can look like?"*

Nobody had an answer. Not even the panelists on stage.

But, my answer is a resounding "YES!"

On the pages that follow, I have outlined a pathway to education reform that follows the trail blazed by Maria Montessori over 100 years ago.

Susan Kruger, M.Ed.
Detroit, MI
February, 2017

Introduction

A few years ago, I had the opportunity to write a letter to my "younger self" on a writing retreat with Ellyn Spragins, author of the best-selling book, *What I Know Now; Letters to My Younger Self*. (The same book that inspired Brad Paisley to write his #1 song, "Letter to Me.")

The following letter flowed right off my pen, exactly as it is below, in 15 minutes. I never write anything that fast, let alone write without making dozens of revisions and edits later. Clearly, these words were longing to find their way on paper.

Per Ellyn's guidelines, the letter begins with a description of the setting --the time and place in my life-- to which the letter is written…

---------- THE SETTING ----------

Three days before I was scheduled to be induced with my first child, I horked my pregnant self into the corner of the couch, pulled out a journal, and attempted to drain the all-consuming anxiety out of myself.

I was 28 and married to a wonderful man. I had just graduated from grad-school and left my seven-year career as a teacher. I wanted to be an entrepreneur in the field of education.

Back at age 16, when picking out colleges, I immediately ruled out one of my parents preferred choices because it didn't offer an "elementary education" degree. Mom was always very encouraging of my personal ambitions. So, it was only out of support that she questioned my decision.

"Are you sure you want to go into education? You'd be very good in business."

I responded, "Yeah, but someday, I'll find a way to blend my interest in business with my passion for education." At the time I thought I would own a Montessori school. I never could have imagined the internet or opportunities opened by advancing technology.

12 years later, I had trudged through all my formal education and seven years in the classroom. Meanwhile, I had uncovered a few secrets to make learning easier… much easier. These secrets flipped me from a struggling student in K-12 to a 4.0 student in college. They made my life easy and they paved a path of confidence that was foreign, but exhilarating.

I "moonlighted" my way through college and my teaching career, teaching these "secrets" in community education classes. The classes were a big hit and very fulfilling. I dreamed of bringing these "secrets" to every student across the country.

Now, it was time for me to make "study skills" a full-time gig. But just after celebrating my last day in the classroom and turning in my resignation, I was hit with a big surprise.

I was pregnant.

I felt like my life would be over. I wouldn't have the freedom to go to McDonald's by myself for a Diet Coke! How would I ever pay the bills or follow my dream of bringing study skills to students across the country?

I was riddled with anxiety!

---------- THE LETTER TO MY YOUNGER SELF ----------

Dear Sue,

No one else could possibly convince you of this right now, but you are going to be perfectly fine.

You are about to give birth to a beautiful baby boy who will set your heart on fire! Only, the fire will take a few months to ignite.

You are going to get your Diet Cokes from time-to-time. Not only that, you are going to travel all over the country… and even to Paris and South Africa! All while your children are young. You will do this because God has blessed you with four grandparents and a loving husband who will love this baby like crazy, too. And, they'll be pretty cool with you going after your dream.

You'll have many challenging years, but you'll always make it.

But, the most important thing you need to know is that you have no idea what you are building.

You think your ambition is about making a living as an entrepreneur, while helping students find a better way to navigate school.

What you don't know is that you'll cross that goal off your checklist before your little boy turns five. And that will be good.

But, on a cold February night, just two days before he turns seven, you will be struck with a much bigger insight. Your little man is going to struggle in school with ADHD and dyslexia. You will watch him struggle through kindergarten and first grade as his inner light is extinguished.

This will shock and horrify you. And you will realize that your mission is to *change the system*, not the students. Because no institution should be allowed to put out the inner fire of a child.

And then you will realize this little baby is not a roadblock on your journey; he's your most important catalyst!

With love,
A Proud Mama

Two days old.
I was terrified he would stop me from achieving my dreams.
Little did I know how wrong I was.

-Chapter 1-

How One Woman Revolutionized Education

Everyone talks about the need for education reform. Data consistently confirms that the United States is at the bottom of all industrialized countries.[1,2] The need for reform is undeniable.

Yet, no one seems to know how to make effective reform happen. (Hint: throwing another assessment at students is *not* the answer.)

This problem was actually solved well over 100 years ago. It was 1896, in the slums of Italy. As Italy's first female physician, she was an outcast. Unwanted and rejected by society, she was assigned to work with unwanted and rejected children.

She soon taught children labeled as “uneducable” and “idiots” to surpass their “normal” peers on standardized tests. Those children were poverty-stricken rejects of society. But, they flourished under this woman’s care.

One woman transformed the neediest "special education" children into students who surpassed their “normal” peers on standardized tests.

She spent 50 years carefully observing children from all over the world. WWI and WWII forced her into exile across several western and eastern countries, allowing her to test her methods in a wide variety of cultures. 100 years later, advances in brain science would confirm the validity of her philosophies and methods.

She revolutionized education around the globe! She received three Nobel Peace Prize nominations. Her theories are still alive today, working on every inhabited continent, in every socio-economic setting.

That woman was Maria Montessori. As a physician and anthropologist, her theories transcend all cultural and economic boundaries.

Her methods and theories have stood the test of time because they were based on *human development*.

Herein lies the crux of the problem in the United States…

The SYSTEM of Education Is Completely Negligent of Human Development!

Teacher-training programs typically address some aspects of human development. Yet, when the teacher reaches the classroom, the heavy mandates of content standards, developmentally inappropriate expectations of students, and crushing levels of assessments force both students and teachers into a SYSTEM that is negligent of how children/young adults effectively grow and learn.

This book is based on COMPLETE HUMAN EDUCATION. When educating *human beings*, we must be mindful of how the complete human –the physical, emotional, intellectual, and even spiritual being— develops and functions… *naturally.*

Until we embrace human-development in education, our reform efforts will NEVER be successful!

No amount of STEM (Science, Technology, Engineering, & Math) funding, “rigorous academic standards,” or assessments will ever be enough.

Education will remain an uphill battle… until we embrace *complete* human education.

Part I:
A Simple Framework for Achieving Complete Human Education

In Part I, I begin by exploring three core problems with education in the United States. As stated in the previous chapter, the primary problem is that our instructional expectations do not match human development. But, within this dilemma, there are three specific areas in which to focus our attention.

I then share the critical framework for accomplishing Complete Human Education. I call it the "Success Pyramid." This framework is lightweight and offers plenty of room for a personal touch from educators.

Next, we'll explore how the biology of the brain proves that the "Success Pyramid" is essential for achieving learning success.

We'll then explore how the Success Pyramid helps us solve the three core problems with education in the United States.

I then address the keys to effective instruction of reading, math, and self-management skills and finally, address how Complete Human Education supports Special Education.

Part II

In Part II, I dig deeper into specific examples for implementing the framework described in Part I, including: ideal instructional models, how to build a human-friendly school culture, a political model to follow, and why Common Core is the worst *and* best thing to happen to education in the United States.

Conclusion

I close with a simple matrix summarizing how to construct an ideal school system of Complete Human Education.

-Chapter 2-
Three Core Problems with Education in the United States

Our neglect of human development is THE core problem with education. However, within this context, there are three specific areas in which to focus:

1—The Motivation Crisis.

Our country suffers from a severe lack of motivation and engagement! Across every gender, racial, geographic, and socioeconomic boundary, students simply don't care.[1] Even students who get "As" are not usually motivated to *learn*; they are only motivated to please people with good grades. If students don't care, they don't learn.

> *"At the start of this term, one professor asked what we wanted to get out of his class. Everyone said, "A four-point!' Nobody really cared if we learned anything; we're just 'playing the game' to get our degree and get on with our life!"*
>
> Jessie Smude, Senior
> Michigan State University

2 – The Lack of Relevance.

Technology is not to blame for the Motivation Crisis; it's the sheer lack of relevance within existing curriculum.

Students are always asking themselves, "Why do I need to know this in real life?" Until a 10th-grader in Houston, Texas can understand how English Literature will impact his future, he won't be naturally inclined to engage with this subject. (Unless, of course, he happens to love the history and culture of England.)

Students don't see a connection between the classroom and the real world. As a result, school becomes only a game for getting grades.

3 – The Use of Completely Irrational and Ineffective Models for Learning.

With the traditional model of instruction centered around subject-area silos, delivered via lectures and textbooks, and burdened with heavy levels of assessment, our approach to education is completely ignorant of:

- how the human brain learns,
- human-development and age-appropriate learning, and
- the fact that emotions supersede everything related to learning.

So, before I address solutions to these and other problems, I will share a model of effective learning I call the Success Pyramid. Then, I will explore the brain biology behind that model.

-Chapter 3-
The Success Pyramid:
A Model of Effective & Efficient Learning

It was a long, hot August day. I was 4.5 years old and very unhappy. Mom dragged my two brothers and me to Greenfield Village, an outdoor museum in our hometown of Dearborn, MI founded by Henry Ford.

All day long, I moaned about being hot, bored, and hungry. I constantly begged, "When are we going home?" I was a total brat.

We had toured epic places such as Edison's laboratory and the Wright Brothers house & bike shop (all of which Henry Ford personally had transferred to the Village). But, I had no interest in this real-life history lesson; I complained. All. day. long.

Towards the end of the day, Mom mentioned our next stop was Noah Webster's house. Suddenly, I bolted towards the house with excitement! Mom straggled behind with my two brothers in the stroller, stunned at my new interest in Noah Webster.

Finally, she caught up. "Momma we read about him, remember?!" I exclaimed.

Mom was perplexed, "I don't remember reading about him."

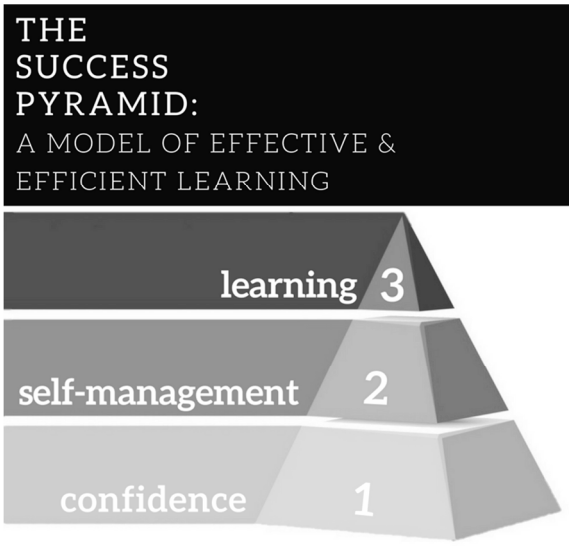
"Yes, we did!" I insisted. "Don't you remember? He built the arc!"

I may have had the wrong Noah, but this story illustrates the power of a simple connection. One simple connection with

"Noah" instantly transformed me from a bored and bratty child into an excited and engaged child! As we'll see in Level 3 of the Success Pyramid, the ability to make connections is a biological requirement for learning.

Three Requirements of Successful Learning

The Success Pyramid identifies the three requirements for successful learning in school and throughout life:



Level 1: Confidence

The core foundation of learning requires "confidence." Every teacher knows, when student's do not believe in their own abilities, they make no progress.

Confidence is not optional; it's *critical!* Priscilla Vail, author of *Smart Kids with School Problems* said it best, "Emotions are the 'on/off' switch to learning."

Henry Ford arguably agreed when he famously said, "Whether you think you can or you think you can't—you're right!"

"Confidence" includes students' belief in themselves and their comfort in their environment.

Level 2: Self-Management

Self-management includes the knowledge and ability to: manage interactions with others, communicate effectively, and be organized. These skills are often called "study skills" in education, "executive function" skills in special education, or "soft skills" in the workplace.

The ability to communicate effectively, manage behavior, and organize is critical for success. Organization skills are necessary for managing: tasks, time, papers, supplies, steps in a process, and information for recall.

A study of Fortune 500 CEOs, conducted by Stanford Research Institute and the Carnegie Mellon Foundation, found that 75% of long-term job success depended on soft skills and only 25% on technical skills.[1]

You can learn all the information in the world, but if you can't organize, manage, and access it when needed, it won't do you any good. If you can't work effectively with others, you won't get very far in the workplace.

Self-management skills are essential for success in school, in the workplace, and even for managing a home and family.

Level 3: Learning

The process of "learning" is usually thought to be difficult, arduous, and hard work. This perception is only because our schools have grossly over-complicated every aspect of

learning. Learning is nothing more than a process of making connections between new information and "known" information.

In other words, everything you have ever learned in your life, you've learned by attaching the new information to something you already understood.

The very nature of learning hinges on a person's ability to categorize and connect new information, which is why the ability to organize is prioritized *before* the ability to learn.

Conclusion

The Success Pyramid outlines the three layers required for successful learning:

Level 1: Confidence. Students must believe in their abilities and be comfortable in their environment.

Level 2: Self-Management. Students must know how to effectively manage interactions with others, communicate effectively, and organize.

Level 3: Learning. Only after students are feeling confident and have developed appropriate self-management skills (especially organization) are they able to learn successfully.

In the next chapter, we'll explore the brain biology behind this model.

-Chapter 4-
The Brain Biology of Learning: Why the Success Pyramid Works

Please pause for a moment to try something… reach behind your neck and feel for your vertebrae. Now, trace your fingers along the bumpy path of your spinal cord, up into the base of your head. Stop at the bottom of your skull.

Right there, just on the other side of your skull, is the Emotional Center of your brain.

This path you just traced is the same path all information follows into your brain. The first stop for all incoming information is the Emotional Center.

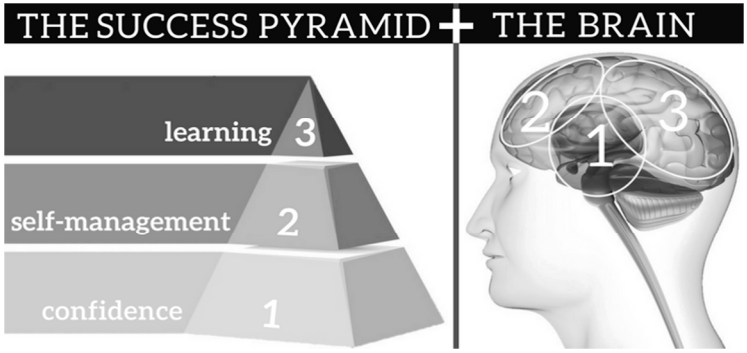
As human beings, we are a very emotional species because the Emotional Center of our brain is the first *to filter all incoming information.*

The Success Pyramid is a simple model outlining the three essential levels of efficient and effective learning. These three levels have a direct link to brain biology.

The brain is powered by electricity, just like any electrical appliance. It is made of billions of tiny wires (neurons) that send electrical impulses across various regions of the brain.

These brain wires need power to send and receive signals; that power comes in the form of brain chemicals. (You've probably heard of dopamine or serotonin, two of the most well-known brain chemicals.)

Effective and efficient learning is about managing the power supply in each region of the brain.



Region 1: The Emotional Center of the Brain → "Confidence"

The "Emotional Center" of the brain correlates with the foundation layer of the Success Pyramid, "Confidence."

As you just experienced, by tracing the path of your spine into your brain, the very first section of the brain to receive information is the Emotional Center.

This pathway explains why emotions are the "on/off" switch to learning; the very first region to process information is the Emotional Center of the brain.

We are designed this way out of self-preservation. If something is about to harm us, the Emotional Center is the first to know about it and is equipped to send immediate warning signals to the rest of our brain and body.

Threats Make Learning Biologically Impossible

If the brain perceives a "threat" of any kind, it immediately goes into "RED ALERT! DANGER!" mode. This mode *pulls*

brain chemicals from other regions of the brain as it prepares to respond.

That means, when the brain perceives a threat of any kind, learning becomes physically impossible. The Emotional Center literally "steals" power from the learning regions of the brain.

This design goes back to caveman days when we might have encountered a tiger in the wild. Who could possibly think about memorizing theorems when a tiger wants to eat you??

Today, this region of the brain still does not know the difference between "Tiger!" and "Someone just said something really mean to me on my way to class."

Both situations are threats. A tiger threatens our most basic physical survival. "Mean words" threaten our sense of belonging, which is also deeply important to our survival as a human, social species.

We Are Ignoring the #1 Roadblock to Learning

Our education system has completely ignored this fundamental aspect of brain function; if the emotional region of the brain is not in the "Green Zone" of "safe, happy, and content," it is physically impossible for the brain to learn.

As you might imagine, to protect us, our brains error on the side of caution. Any sense of discomfort will put the brain in "RED ALERT! DANGER!" mode.

So, if a student feels…

- like their teacher doesn't like them,
- uncomfortable around a peer or peers,
- upset over something at home,
- anxious about an upcoming test,
- sad, depressed, stressed, or down for any reason,

- disengaged or bored,

…the Emotional Center of the brain will hoard all the brain chemicals needed for learning.

No amount of "education reform" will be successful if we do not embrace this critical aspect of brain function.

Emotions are the on/off switch to learning!

Region 2: The Front Brain → "Self-Management"

The "Front Brain" correlates with the middle layer of the Success Pyramid, "Self-Management."

When information makes it through the Emotional Center of the brain, it next travels to the Front Brain.

The Front Brain organizes everything about your life. It is the section that guides you through the sequence of getting a glass of water ("walk to the cabinet, open the cabinet, grab a glass, close the cabinet, walk to the sink, etc."), managing your time, preparing food, organizing your supplies, communicating and interacting with others, etc.

The Front Brain is the most susceptible to "power outages."

How to Refresh Power in the Front Brain

Power is restored to the Front Brain through: consumption of food/drink with glucose (such as a piece of fruit or slowly sipping on lemonade), aerobic exercise, and rest.

However, the goal is to provide students with *very efficient* self-management strategies so they don't exhaust their supply at inconvenient times, such as in the middle of class.

What do you do when you feel fatigued? You usually hold the front of your head. That's because this is the region of your brain experiencing the most significant power outage. That feeling of fatigue is a sign that your Front Brain is "out of juice."

The best way to limit the strain of brain power on the Front Brain is by developing self-management skills, especially skills of organization. Successful organization skills help you convert everyday tasks into simple systems and routines, requiring as few steps as possible. The fewer steps required, the less demand on brain energy.

80% of the "organizing demands" a person encounters come from 20% of their tasks, usually repetitive tasks. In school, there are typically three aspects of self-management providing the greatest leverage-points:

- An ultra-efficient paper-management system to keep assignments organized. (Or an ultra-efficient digital-management system for organizing digital assignments.)
- An ultra-efficient calendar/planner system.
- Ability to work with teachers and peers, including the ability to resolve conflicts.

As students get older, they are expected to take more and more ownership of their work. This can only happen successfully if students are effectively coached in the development of self-management and organization skills.

Pre-School thru Grade 5

During the first several years of a student's school experience, "self-management" is focused on social development, such as learning how to manage behavior in different settings (classroom vs outside) and getting along with peers.

At this age, the "organization" of time and materials is often managed by teachers and parents. However, the development of sorting and classification skills during these years provides a solid foundation for independent organization skills as students get older. (The Montessori math curriculum provides deep practice in sorting and classification skills for this purpose.)

Middle School: A Critical Transition

Generally, students in the United States face a major transition as they enter middle school; they no longer spend the day in one classroom with one teacher who manages everything for them.

In middle school, students visit multiple classrooms with multiple teachers. Each teacher has her own communication style and set of expectations.

In middle school, *students* are now responsible for keeping track of all expectations (both explicit and implied), assignments, due dates, and test dates across MULTIPLE classrooms, each with a different teacher and a different set of expectations, assignments, due dates, etc.

At best, this transition is challenging. Often, however, it becomes debilitating for several reasons:

1. Students have never been taught any skills for organizing all these expectations.
2. Each teacher has a different set of demands and expectations for how their students *should* organize.
3. These expectations are typically *implied*, instead of explicitly taught.
4. And, these expectations often contradict each other.

Region 3: The Back Brain → "Learning"

The "Back Brain" correlates with the top layer of the Success Pyramid, "Learning."

After information is processed by the Front Brain, it is sent to the Back Brain.

The Back Brain holds your long-term memories and long-term learning. Like the Front Brain, the Back Brain uses electricity to power connections across brain wires.

However, there is a fundamental difference between these two sections: the Front Brain has a limited amount of energy and burns through its resources frequently throughout the day.

Unlike the Front Brain, the Back Brain has a *far greater* power capacity. Rather than "limiting" steps, as required for maximizing self-management skills, the Back Brain *thrives* on connections. The more connections the Back Brain can make, the more permanent new learning will be.

Memorizing vs Learning

It is important to make a distinction between "memorizing" and "learning." If you've ever studied for a test --perhaps rehearsed definitions, theorems, or the steps to solve a math problem-- then took the test and totally "froze" on something you rehearsed many times… that was *memorizing*.

You didn't fully understand what you were memorizing. You could never have used what you memorized to solve any real-life problem because you didn't have a clue how the information related to anything in *real life*.

Memorization is entirely managed by the Front Brain. Your short-term memory is in the Front Brain. Memorization is

simply a process of spooling things around in your short-term memory long enough to serve a simple purpose. Sometimes that purpose is to remember a phone number long enough to call someone. Or, perhaps that purpose is to remember the few items you need from the grocery store.

In school, however, students usually remember information just long enough to take a test. As soon as they turn that test in, their short-term memory "breathes a sign of relief" and literally releases its hold on the information. In this case, there is no long-term learning happening.

The reason students "memorize" is because they've never been taught how to access their Back Brain, where real, true learning happens. For most students, any true learning that does take place has happened accidentally. It is not because they had any idea how to learn (vs memorize) information *intentionally*.

True learning –learning that is stored permanently and can be accessed at any time— happens when our brain can connect the new information to something it already understands. If this connection doesn't happen, *learning* doesn't happen.

Real Learning Changes Your Brain

When you learn something new, you literally change the physiology of your brain. The new information ignites a new brain wire. However, that new brain wire can only be created as an off-shoot from an existing wire (which is the "thing" you already understood).

For example, a spider spinning a web cannot just spit out a string and expect it to stay suspended in thin air. Instead, every string the spider spins must connect to something else for it to be a useful part of the web. The same logic applies to information stored in your "brain wires."

The one solid key to all learning is to make connections to: things, ideas, concepts, and emotions that students already understand.

For this reason, we don't expect a toddler to understand a physics textbook. First, the toddler must learn some basics about physics; "When I let go, things fall to the floor." As the toddler grows into a young adult, she has millions of experiences and makes millions of observations about how the world around her functions. Meanwhile, her reading skills gradually grow and advance, as well. After many years, she may be able to understand a physics textbook, but only *if* she's had enough background to make sense of the advanced vocabulary and concepts described in the book.

The years of growth, from toddler to "proficient reader of physics," is an ever-evolving process of new brain wires growing out of existing brain wires, over and over again, ever growing in complexity.

Conclusion

The Success Pyramid is directly correlated with the path information travels within the brain.

Level 1: Confidence → Region 1: Emotional Center

The first layer of the Success Pyramid tells us that students must be confident in their ability to learn, before any learning can happen. This layer correlates with the Emotional Center of the brain, which is the first region to receive all incoming information.

If the Emotional Center senses any kind of threat, it pulls brain chemicals from the other regions of the brain. This process literally shrinks our brain's ability to learn.

Level 2: Self-Management → Region 2: Front Brain

The second layer of the Success Pyramid tells us that students must begin to develop self-management skills before they can effectively learn. This includes the ability to work with others and organize themselves. This layer correlates with the Front Brain, which is the next place information travels after leaving the Emotional Center.

The Front Brain is the region that handles all self-management skills. The Front Brain is always at risk of running out of power, so it is optimal to develop communication and organization skills that maximize efficiency.

Level 3: Learning → Region 3: Back Brain

Finally, we reach the top layer of the Success Pyramid, which is "learning." This layer correlates with the Back Brain. After the Front Brain evaluates information, it determines where to send signals in the Back Brain.

The Back Brain is where all learning happens. This region thrives on making as many connections as possible; the more connections you can make to things you already understand, the more permanent your learning will be.

In the next chapter, we will evaluate how this understanding of the brain and the Success Pyramid provide solutions to the three core problems with education in the United States.

-Chapter 5-
Solutions: Three Core Problems with Education in the United States

In Chapter 2, I described three core problems with US education:

> **Core Problem #1**
> There is a serious motivation crisis amongst our students.
>
> **Core Problem #2**
> There is a lack of relevance in our curriculum.
>
> **Core Problem #3**
> We are using completely irrational and ineffective models for learning.

Within each problem, however, there are *simple* leverage-points that can initiate great change without radical "restructuring" of the existing system. (The radical restructuring can come later.)

Solution for Core Problem #1: The Motivation Crisis

All we simply need to do is "change the conversation!" Instead of focusing on deficiencies and what students *cannot* do, we must lead with strengths. Change the conversation to "*HOW* are you smart?" Simple investigations into the Theory of Multiple Intelligences open students --and schools-- up to a whole new paradigm for thinking about intelligence and capabilities. (See a student-friendly Multiple Intelligences Quiz at: miquiz.studyskills.com.)

A strengths-based approach to learning creates an environment of safety. Feeling "safe" is a biological

requirement of learning. A strengths-based approach to learning does *not* mean you ignore students' challenges or deficiencies.

Challenges are still addressed. But, when you lead with strengths, "challenges" no longer become the students' identities. Developing a strong awareness of strengths allows students to feel accepted for who they are, not shamed for what they cannot do well or simply do not enjoy.

To experience the power of this conversation, start asking your family and closest friends, "HOW are you smart?" "What is your super power?" (For more details, see two articles with these titles in the Appendix.)

Notice the changes in their body language and tone of voice. People light up with these questions! They sit up straighter. They lean in. Their eyes get brighter. Their voice goes higher. These changes are infectious! Imagine how these simple questions will transform the culture of your school community. I've seen it happen!

(NOTE: When you first start this conversation with adults, they tend to be leery of these questions; the cultural expectation of modesty holds them back. In this case, be prepared to share your own "intelligences" and "superpowers" first to break the ice. On the other hand, the only hesitation young people tend to have is simply identifying their strengths.)

This simple conversation literally transforms school cultures and creates a fertile ground for nurturing confidence!

Solution for Core Problem #2: The Lack of Relevance

"Relevance" is critical to the brain biology of learning for two reasons:

First, students must know WHY they need to know something. They must feel the investment of their time will be worthwhile. If they have any sense that "this is a waste of my time," the Emotional Center of the brain restricts brain chemicals. On the other hand, if there is interest in a topic and/or an authentic understanding of why something is important, the Emotional Center floods the brain with fresh power, promoting engagement and learning!

Secondly, the brain cannot learn something new if it cannot connect the new information to something it already understands. So, if students don't see how new information is relevant to something they already understand, no learning will happen; it is biologically impossible.

The most impactful way to achieve "relevance" is to ensure curriculum content and mandates are correlated with **needs in the workplace and for managing independent living.**

Finland streamlined curriculum standards to match workplace relevance and emerged at the top of the world for education quality *and* effectiveness in the workplace.

No Legislation Needs to Change!

The United States has made forward progress in following Finland's example. We have streamlined standards and matched them to the needs of the workplace; this was the entire purpose behind Common Core.

However, our *interpretation* and *implementation* of Common Core has major flaws. We desperately need a better understanding of Common Core, as I will explain in Chapter 11.

Meanwhile, the United States does not need new legislation to accomplish "relevance." A powerful leverage-point is

hiding in plain sight within the Common Core… the *Anchor Standards*.

The Common Core Anchor Standards were intended to describe the desired *outcomes* all graduating 12th-graders should achieve to be successful in higher education and the workplace. However, if you read the Anchor Standards (see the Appendix), you will see they are not outcomes; they are *skills*.

The Anchor Standards are the desired *skills* that a graduating 12th-grader needs to be successful in higher education and the workplace. Countless workforce development sources confirm that the skills described in the Anchor Standards match the most in-demand skills of today's employers.[1] (These skills are typically called "study skills" in education, "executive function skills" in special education, or "soft skills" in the workplace.)

These skills can --and *should*-- be taught explicitly, beginning in 5th or 6th grade. Arming students with these skills allows them to access new information with ease. These skills remove the *unnecessary* friction of learning new information.

If we *don't* teach the Anchor Standards as skills, we are forcing students to trudge through 6+ years of secondary education with zero tools for accessing new information. And, we are expecting them to arrive at the Anchor Standard "outcomes" only by osmosis.

The United States' single greatest leverage-point to accomplish "relevance" is to flip the Anchor Standards from "outcomes" to explicit instruction of skills. The most age-appropriate time to begin this instruction is in 5th or 6th grade.

Solution for Core Problem #3: The Use of Completely Irrational and Ineffective Models for Learning

If we address Core Problems #1 & #2, much of #3 is already accomplished. However, the Success Pyramid is a model that tells us how to make learning more human-friendly.

Continue Building Confidence.

Correlates with Level 1 of the Success Pyramid (Confidence) and Region 1 of the brain (the Emotional Center).

As mentioned in the previous section, change the conversation with students to "HOW are you smart?" Lead with their strengths! This is the most powerful way to build confidence.

Another very useful strategy is to transition students into an emotional state that is, at the very least, "neutral." I call this the "Green Zone," as in "green light = go!" The brain is incredibly sensitive to a wide range of conditions, but it can be easily swayed into the Green Zone... *if* you are aware of the need for this "maneuvering."

How to Transition Students to the Green Zone

Some simple ways to ease students into the Green Zone include:

- Start with strengths! Change the conversation to "HOW are you smart?"
- Teach students about the Theory of Multiple Intelligences; promote self-investigations into the various intelligences.
- Open class with a funny story, puzzle, video, or light-hearted anecdote. This helps to "wipe the slate clean."

- Allow movement. Movement generates new brain chemicals, especially aerobic movement. (Jumping jacks are a great, classroom-friendly, aerobic exercise!)
- Encourage "pairing." We humans are social creatures! Allowing students to learn through socializing is very Green Zone-friendly. Just be sure to avoid triggering anxiety with this one… *assign* partners so no one feels left out.

See the Appendix for a more detailed article on how to easily transition students into the "Green Zone."

Provide Choices!

The ability to make choices is very powerful to inspire motivation. Countless studies consistently confirm that having "choices" promotes higher levels of performance and feelings of well-being than situations providing no choice, especially in the classroom.[2]

When a student has the authority to make a choice for themselves, they internalize that opportunity to mean, "I matter. My opinion matters. My voice is heard." When students do not feel this healthy sense of empowerment, they are much more vulnerable to poor influences, such as: bullying, violence, substance abuse, and other destructive behaviors in their attempt to achieve a sense of "control."

A good example of the power of simple choices is the popular ride at Walt Disney World (WDW)…

WDW is the "most magical place on Earth." It is filled with advanced technology that brings amazing adventures and fantasies to life!

But the most popular attraction is nothing more than a simple carnival ride… *Dumbo!* In fact, Dumbo is so popular, WDW

added two more rides exactly like it to other parts of the Magic Kingdom: Aladdin's Carpet Ride and Astro Orbiter.

Why are these rides so popular?

Because of the joystick. Children love to make the ride go up and down! And for those 30 seconds of "control," they will wait in line for hours.

Simple choices are very powerful!

How to Provide More Choices in the Classroom

Below is a short list of classroom choices. Of course, there are countless options, limited only by your creativity. But, this list can get you started.

You will notice that all examples are simple and reasonable to manage in the classroom. Do not let their simplicity fool you; even "small" choices are very powerful!

- Do you want to use a paper or electronic planner?
- Do you want to read the chapter by yourself or with a partner?
- Do you want to read Chapter 4 on your own, or have small groups role-play each section of the timeline for the whole class?
- What color binder do you want: red, yellow, blue, or black?
- Do you want to do homework on the bus, or socialize with your friends and do homework later?
- When will you "power down" at home: from 4:00-6:00 or 7:00-9:00 PM?
- Choose your own seat.
- Choose topic: one, two, or three for your writing assignment.
- Will you take notes with a: pen, pencil, colored pencil, or thin-line marker?

- Do you want to answer the Lesson Review questions on paper or out loud?
- Do you want to do your presentation as a: report, make a slide presentation, or create a website?
- Do you want to work independently, or with a partner?
- Do you want the lights on or off?
- Do you want to have music on or off? (Instrumental music, only.)
- Would you rather work on the floor or in your seat?
- Do you want to do your assignment by writing, reading it out loud, or acting it out?

Teach Brain-Friendly Organization Skills

This recommendation correlates with Level 2 of the Success Pyramid (Self-Management) and Region 2 of the brain (the Front Brain).

In education, these skills are often called "study skills." Explicit instruction of study skills is best to introduce as early as 5th grade (age 10-11), with scaffolded support through 7th-8th grade. (Although, it's *never* "too late" to provide study skills instruction.)

Students benefit most when their school presents a unified system for organizing papers and managing assignments. Such a system prevents confusing contradictions from different teachers. Additionally, students must receive explicit instruction in how these systems work.

NOTE OF CAUTION: It is extremely important that these "systems" focus on ultra-efficiency. Do not saddle students with a dozen or more different folders and notebooks. That's too many supplies for students to manage across multiple locations: home, bus, locker, 5-7 different classrooms a day, and back to the locker, bus, and home for the day. The more supplies required for a system, such as highlighters or color-

coded papers, the more likely the system is to break down. The more actions required, such as the expectation to 3-hole punch papers, the less likely a student is to comply.

The Front Brain has a limited power supply for managing organizational tasks, so **brain biology dictates that efficiency is essential.**

Facilitate Learning Through Connections

This recommendation correlates with Level 3 of the Success Pyramid (Learning) and Region 3 of the brain (the Back Brain).

Since the brain only learns by connecting new information to something it already knows, education must embrace the three ways to develop connections:

- Through previous knowledge and life-experience.
- Through hands-on experience.
- Through asking questions.

How to Learn Through Previous Knowledge and Life Experience

Educators have long been encouraged to "activate prior knowledge" of students. In fact, formal lesson plans begin with something called an "Anticipatory Set." This is where the teacher is expected to describe how he plans to help students connect the information they're about to learn with something they already understand. However, the "anticipatory set" is often overlooked in the classroom.

Students MUST see the connection between what they already know to what they are about to learn. If students do not understand how to connect new learning into their existing understanding of the world, all they will accomplish is "rote memorization."

Therefore, we must make every effort to promote CONNECTIONS to experiences students have had and/or facts, concepts, and ideas they already understand. Without "connection," there is NO learning.

Some ways to "activate prior knowledge" include:

- Sharing stories.
- Sensory experiences.
- Guided imagery.
- Use of visuals (photos, models, charts, diagrams, illustrations, and videos).

How to Learn Through Hands-On Experience

"Hands-on, experiential" learning is the most natural form of learning for human beings. Therefore, it is highly engaging. Just look at a toddler learning how to walk and exploring his world; everything is a bonanza of learning opportunities! But, it all comes from touching, experimenting, trying, "failing" (which is a very negative word for simply "getting feedback"), and trying again.

Maria Montessori believed the hands were an extension of the brain. Neuroscience has now confirmed that to be true. In fact, in the very first stage of human development, the zygote (single cell) splits into three cells. One of those cells develops into the circulatory and skeletal system. Another cell develops into the immune system and organs. The third cell becomes the brain and skin.

In other words, the brain and skin are so interconnected that they are formed at the same time, from the same, original cell!

Some ways to encourage hands-on learning include the use of:

- Math manipulatives.
- Multi-sensory letter tiles.
- Games that promote engagement.
- Experiments.
- Real-world problem-solving/innovation (e.g., running a school store, newspaper, postal service, or creating a micro-business).
- Technology that promotes engagement from the learner and provides immediate feedback.

How to Learn Through Asking Questions

Questions naturally activate connections to the Back Brain. The Back Brain is very powerful and deeply connected.

When we ask a question, our brain automatically prepares neuron wires that are primed and ready to make connections. This is how we develop long-term understanding and recall.

The key is for students to know *how* to ask questions about new content. One of the most basic questions students can ask themselves during lectures or while reading a textbook is, "Why is this information here?" Or, "Why is my teacher sharing this information?" Ultimately, this question should prompt the student to connect the new information to the main topic.

The most powerful leverage-point for "*asking* questions" lies in textbooks. Specifically, in the visuals. Students should read their textbooks before class, paying close attention to the visuals.

Visuals are so powerful because:

- The brain can process visuals instantly (versus text, which requires several additional layers of decoding and interpretation).

- Visuals and their captions capture 30-80% of the information in the text. (The visuals in 1st-6th-grade texts typically communicate 60-80% of the main information. College-level texts communicate approximately 30% of the main topics through visuals.)

Students should "read the visuals." This process includes three steps:

1. Looking at the picture, image, or chart.
2. Reading the caption.
3. Asking themselves, "Why do I think this visual is here?"

The third step is the most important because it is the question that forges a connection. Students should attempt to answer this question by determining a connection between the image and topic of the chapter (typically described in the chapter title).

Sometimes, their guess may be wrong. That's okay.

The most important part of this process is simply that their brain made a connection. If they made a mistake, their brain will surely notice it later, when they read the black-and-white text or listen to a related lecture.

If their prediction was wrong, the brain's Emotional Center gets involved and works to correct the prediction quickly. Emotions create extra-strong connections in the brain, making mistakes a very powerful learning tool.

"Reading the visuals" in a text prior to a lecture also improves *listening* comprehension. The visuals act as "listening anchors" during a lecture. Students can make better connections with lectures when they can "visualize" related visuals.

Conclusion:
Solutions to the Three Core Problems with Education in the United States

In summary, the solutions to each of the core problems with education in the United States are:

Core Problem #1: There is a serious motivation crisis among our students. Change the conversation in classrooms and schools to "HOW are you smart?" To inspire confidence, learning must begin with a strengths-based approach.

Core Problem #2: There is a lack of relevance in our curriculum. Modify curriculum and instruction so that it is relevant to the content and skills needed in the real world. This strategy promotes engagement and allows students to make real-world connections that are biologically vital for effective learning.

Core Problem #3: We are using completely irrational and ineffective models for learning. The solutions to Core Problems # 1 & 2 automatically address 2/3rds of the equation for building more effective models for learning: inspire motivation through a focus on students' strengths, make curriculum relevant, and teach brain-friendly strategies for communication and organization. Finally, encourage students to make connections through: previous knowledge, hands-on experience, and asking questions.

-Chapter 6-
The Simplest Leverage-Points in Reading, Math, & Skills Instruction

In every core domain of learning (reading/math/skills), there is another core element of effective instruction that is so simple, it is often overlooked. However, we ignore these core elements at great expense to our budgets and to the eternal frustration of our greatest asset... our students!

To be clear, the Success Pyramid still applies. We must always approach instruction with the perspective of building confidence for our students (Tier 1) and providing explicit organization/self-management instruction (Tier 2). The keys listed below are areas in which to focus instruction as it relates to Tier 3 of the Success Pyramid, "Learning."

Reading

Reading instruction must be aligned to the circuitry of the brain. The brain utilizes three primary cueing systems to read:

- ✓ Visual (Sound-symbol decoding)
- ✓ Meaning (Context of the reading material)
- ✓ Syntax ("Rhythm" or "cadence" of a sentence; "What sounds right?")

Effective reading instruction must embrace all three cueing systems. There never should have been an argument between "Phonics" vs "Whole Language." The answer is… BOTH!

Every reading challenge I have ever encountered as a reading specialist (and as a parent) has been diagnosed and understood according to the three cueing systems. I have explained this framework for reading instruction in

my comprehensive but efficiently short book, *Cue to Reading: How to Identify & Fix Any Reading Challenge...Quickly!* That book is included as BONUS in the back of this book.

Math

We all know math is a progressive subject; one skill builds on another, and another, and so on. What's missing in most math instruction is the *concrete* concept before graduating to the *abstract* concept.

Hands-on is key! The hands are an extension of the brain. With hands-on materials, preschoolers can learn algebra!

The intention of "Common Core Math" was to encourage greater *conceptual* understanding of math. However, most examples of Common Core math implementation have left out the concrete, hands-on instruction. (Or, the hands-on instruction is not fully sufficient.)

A thorough and methodical hands-on approach to teaching math builds *concrete* understanding. Concrete understanding is a critical foundation for success with mathematical *concepts*.

There is no need to reinvent the wheel. Dr. Montessori meticulously developed a thorough, hands-on, curriculum for math that is still relevant today. She accurately predicted that "math literacy" would become as important to the 20th Century and beyond as language literacy had become in the 18th and 19th centuries.

Once the concrete understanding of math is solid, students would do best if continued math instruction included software that provides immediate feedback. "Mistakes" are powerful learning tools, but only if students get immediate feedback to learn from the process.

Skills for Self-Management

As the Success Pyramid illustrates, self-management skills are a critical gateway to learning. (In education, these skills are commonly known as “study skills.” In special education, they are known as “executive function skills.” In the workplace, they are known as “soft skills.”) As explained in the previous chapter, these skills are hiding in plain sight as the Common Core Anchor Standards.

To effectively teach these skills, we must align instruction to the circuitry of the brain. This includes skills for: planning, organizing, learning, communicating, and solving problems. We must understand how the brain works, then develop strategies accordingly. This process will ensure maximum efficiency and effectiveness.

When teaching skills for planning and organizing, brain biology requires that we focus on *efficiency*. The Front Brain manages these skills; the Front Brain needs strategies with as few steps as possible.

When teaching skills for: learning, communicating, and solving problems, brain biology requires that we develop *as many connections as possible*. The Back Brain manages these skills. The Back Brain thrives on creating as many connections as possible by: creating questions, connecting to previous knowledge/experiences, engaging in real-life experiences, multi-sensory exploration, social interaction, and more.

Skills instruction will only be effective if the skills and strategies taught to students are carefully aligned to brain biology.

-Chapter 7-
Special Education:
It Doesn't Have to Be So Difficult!

Students with Intensive Physical and/or Cognitive Impairments

Approximately half of all special education students have physical or cognitive impairments requiring more intensive therapies and/or interventions beyond the Success Pyramid model.

HOWEVER, the Success Pyramid model is still core to achieving success with these students. Complete Human Education is just as important for their ability to grow and be the best version of themselves as possible. They will only be able to reach their full potential when they are educated according to our shared basic needs as human beings, as modeled in the Success Pyramid.

Do *students* have learning disabilities? Or, does *our system* have a teaching disability?

Maria Montessori taught children labeled as "uneducable" and "idiots" to surpass their normal peers on standardized tests. My own son was diagnosed with "severe dyslexia" as a first-grader. We moved him to a Montessori school; within nine months, he was reading "on level" with no additional intervention.

Don't get me wrong… I am not criticizing special education teachers. Special education teachers are the most dedicated and compassionate educators I meet!

But, special education teachers *and* students are both stuck in a flawed

system. It's a system that finds it easier to slap a label on students --telling them something is wrong with them-- than to teach *everybody* correctly from the beginning.

Nearly 50% of today's special education students have been diagnosed with learning disabilities.[1] These "disabilities" are largely a result of our failure to teach according to human development. We are totally ignoring the brain biology of learning and millions of students are needlessly suffering.

When we understand the brain biology of learning disabilities and adopt a mindset of Complete Human Education, we won't have "learning disabilities," only learning *differences*.

What Is a "Learning Disability?"

Before we can truly understand learning disabilities, we must understand how the brain is designed.

The fact is, most people don't really understand how learning disabilities work. Most "experts" don't even understand the brain biology of these conditions; they are experts only in the *symptoms* of the conditions. That expertise can be helpful, but it leaves a lot of room for guessing about solutions.

A simple understanding of how the brain works can provide incredible clarity…

How Our Brains Work

As described in Chapter 4, our brains have three major regions that govern the learning process. These sections are responsible for different functions, such as:

- The Emotional Center of the brain processes emotions and monitors for safety threats.

- The Front Brain collects all information from our five senses, interprets the meaning of those signals, then makes decisions about how to respond to them.
- The Back Brain processes all learning and problem-solving.

Within each of these sections, there are smaller, more specialized sections that process: movement, language, visual input, music, logical information, intuitive information, etc.

The following digs a bit deeper into how these sections communicate with one another…

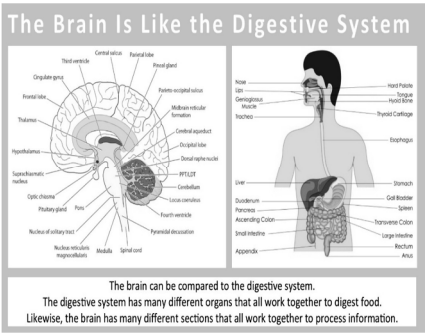
Our Brain Is Like Our Digestive System: Many Sections to Serve One Function

The brain is not ONE organ; it's a collection of many different sections that work together to process wide varieties of information, just like our digestive system.

We all know that the stomach has a different function from the liver. The liver has a different function from the small intestine. And the small intestine has a different function from the large intestine.

Yet, these different organs work together to accomplish one function: digesting food.

For a more dynamic illustration of how learning disabilities work, see my video series, "The Brain Biology of Learning" at: StudySkills.com/brain.



Likewise, the brain also has many different sections, each with distinct functions. The parietal lobe has a different function from the cerebellum. The cerebellum has a different function from the thalamus.

But, these sections all work together in the brain to accomplish *one* function: processing information.

The Brain Is an Electrical Organ

Just like your toaster, your brain runs on electricity. This electricity is powered by chemicals in your brain, such as: norepinephrine, dopamine, serotonin, and many others.

In fact, you brain is nothing more than a collection of electrical wires called neurons.

You have over 100 billion neuron wires in your brain! It's an extraordinarily complex arrangement of wires. Yet, it's an extraordinarily simple system. Each one of those neuron wires works just like a string of party lights.

You have over 100 billion neuron wires in your brain! Yet, each one of those neuron wires works just like this string of party lights.

In the brain, signals of electricity travel along each circuit to different sections. When a signal reaches its destination, a connection is made and information is processed.

The same is true with a string of party lights. When the electricity reaches each bulb, a connection is made and the bulb illuminates.

As you know, when you plug in a string of lights, every bulb lights up instantly, even though each bulb is receiving a separate signal. This is how the wires in your brain work, firing connections across different regions of the brain faster than the speed of light.

For example, when you watch a movie, different regions of your brain actively collect various visual, verbal, musical, and environmental cues. In fractions of a second, these different regions collect information, process it, and share it with each other to help you make sense of the movie.

The Brain Biology of Learning Disabilities

Learning disabilities are nothing more than weak neuron signals between specific sections of the brain.

These sections of the brain have a reduced amount of brain chemicals that power neuron connections. As a result, these sections have a reduced capacity to manage the specific function each was designed to do.

For example, a student with dyslexia likely has a couple sections of the brain with a reduced amount of brain chemicals. One of these sections might process language. Another section might process symbols (such as letters). With reduced levels of brain chemicals, these sections send and receive fewer signals across neuron wires.

By definition, a learning disability is limited to *only* one or two sections of the brain. Otherwise, the diagnosis is a more comprehensive cognitive impairment.

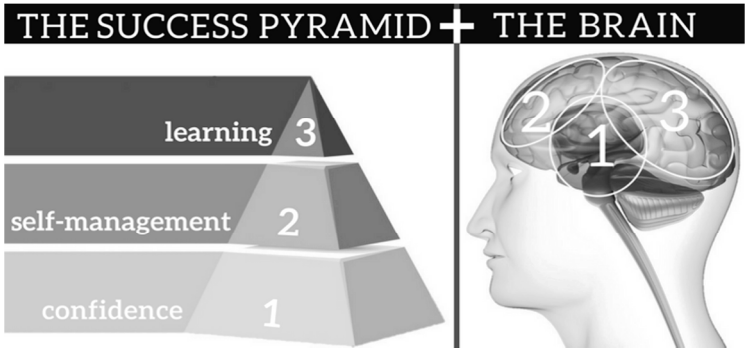
Unfortunately, we don't yet have the scientific tools to measure brain chemicals and activity in every individual

student. However, it is important for students to understand that these challenges are limited to just a couple of very small areas within a much larger --and stronger-- brain.

We can help them use their strengths to build detours around their challenges.

How to Solve & Prevent Learning Disabilities

Start with the Success Pyramid.



Since learning disabilities are a biological function of the brain, it remains optimal to follow the Success Pyramid described in previous chapters. In fact, students with learning challenges are most in need of the progression outlined in the Success Pyramid.

Success Pyramid Level 1: Confidence

Obviously, students with learning challenges are extremely susceptible to having little or no confidence. As we now know, confidence is the gateway to any learning. So, we must start by emphasizing students' strengths.

As outlined in Chapter 5, teach students about the Multiple Intelligences. Search for each individual's super powers!

Students can only grow and learn when they are confident in their abilities and free of fear.

Success Pyramid Level 2: Self-Management Skills

Next, students must learn explicit strategies of self-management. These skills include: communication, organization, time-and-task management, professionalism, etc.

"Self-management" skills are commonly referred to as "executive function" skills in special education. (In general education, they are called "study skills." In the workplace, they are called "soft skills.") Regardless of what you call them, the Front Brain manages these skills.

The primary point of break-down for nearly all students with learning challenges is a lack of self-management skills. Our education system does not explicitly teach these skills. We expect students to learn them naturally, through observation.

However, students with learning disabilities struggle the most with "observing" unspoken cues. Remember, they've got a lot of broken neuron circuits. They don't have the bandwidth to notice as much in their environment as we expect. Even if they do observe certain behaviors, their neuron circuits often break-down before the observations can be processed.

Therefore, it is critical to provide explicit instruction of these self-management (executive function/study/soft) skills!

We must also ensure that the explicit skills we teach are as efficient as possible. We are working with problems caused by restricted brain power. Therefore, we need to teach strategies with as few steps as possible.

The more efficient a strategy is, the less brain power it will require.

The less brain power a strategy requires, the more successful students will be.

This explicit instruction and efficiency is not just optimal for students with learning challenges. It's optimal for *all* students. As human beings, we all prefer clear and efficient solutions.

Finally, we must ensure that students learn these strategies through as many multi-sensory and hands-on ways as possible. The reasons for multi-sensory instruction are explained in the following section…

Success Pyramid Level 3: Learning

Now that students have confidence in themselves and have developed some self-management skills, we can focus on optimizing the learning process.

The key to optimizing learning disabilities is to use stronger sections of the brain to build new circuits around the weaker sections – much like building a detour.

How Do We Build Detours in the Brain?

In Chapter 4, we covered that *all* learning is a process of making connections; new learning can only happen if we can connect new information to something we already understand. This is true for *all* learners.

So, to optimize learning, we must optimize as many connections as possible. This includes connections to:

- previous knowledge and experiences
- feelings and emotions
- observations

- interactions with others
- things we can touch and manipulate

In this circuit, the lower section has three bulbs that are not receiving signals. They represent a weak section of the brain, also known as a "learning disability." To work around this challenge, we can build circuits using stronger areas of the brain. It is possible to literally build detours *around* the learning disability

Obviously, the more we can optimize learning connections for *all* learners, the better. However, optimizing the *number* of learning connections for students with learning challenges is critical.

These connections are how we build "detours" around learning disabilities. The more connections we can build to new information --through hands-on practice, peer discussion, real-world experience, etc.-- the more successful "detours" will be.

Multi-Sensory Interventions

Multi-sensory interventions have always been very popular strategies for students with learning disabilities. The reason? "Multi-sensory" is simply another term for "making many connections."

Most of us intuitively know that hands-on learning activities are extremely powerful. In fact, the ability to touch and manipulate objects activates brain circuits from several sections of the brain at one time.

The same is true of "social" learning. When we can explore a problem with another person (teacher or peer), exchange ideas, and get immediate feedback, we are activating multiple sections of the brain.

The more we can teach new concepts through touch, social learning, and as many other senses and positive emotions as possible, the more successful students will be at building their own "detours."

Of course, multi-sensory learning is optimal for *all* learners. This is one of the core reasons why learning disabilities don't exist in a (real) Montessori classroom.

Dr. Montessori Discovered These Solutions Over 100 Years Ago

Through 50 years of careful observation, Maria Montessori witnessed the power of social and tactile learning across all students, all ages, and multiple cultures. As a result, she designed her classrooms to promote collaboration. She also designed extensive hands-on teaching materials that are still relevant today.

Dr. Montessori believed that "the hands are an extension of the brain." 100 years later, neuroscience confirms this to be true. We now know that our brain and skin developed

together --out of the same originating cell—when we were embryos. Our hands contain significantly more neuron connections to the brain than any other part of our body.

As human beings, we were designed to learn through our sense of touch, feeling and manipulating objects. We were also designed to learn from each other, through collaboration and communication.

We were *not* designed to learn through abstract representation of concepts presented in lectures and textbooks. This disconnect, along with a lack of explicit self-management instruction, contributes to most cases of "learning disabilities."

When all instruction is provided in a human-friendly way (according to the Success Pyramid), multiple brain connections are built. Without struggle or special interventions, we automatically use stronger sections of the brain to build detours around weaker sections.

Students Must Understand How Their Own Brains Work

When students are diagnosed with learning disabilities (including ADHD or autism), all they hear is "Something is wrong with me. I must be stupid."

Show students how their brains work with our dynamic videos, including:

The Brain Biology of Learning Disabilities

The Brain Circuit: How the Brain Works

The Learning Circuit: How Learning Works

The ADHD Circuit: How ADHD Works

The Autism Circuit: How Autism Works

The Learning Disabilities Circuit: How Learning Disabilities Work

The Motivation Circuit: How Motivation Works

All videos are posted at: StudySkills.com/brain

It's no surprise that the #1 complaint I hear from special education teachers is that their students are totally apathetic:

"They don't understand their disability."
"They don't believe in themselves."
"I see their potential, but they don't."
"They are so hopeless!"

Learning disabilities are nothing more than a biological --or "medical"-- condition.

When we are diagnosed with a "lacerated intestine," we are sent to the hospital. We are fixed. We even get flowers and are celebrated as we are wished a "speedy recovery."

So, when our students are diagnosed with a learning disability (including ADHD or autism), we must do everything in our power to help them understand the biological side of their challenge.

When they understand the simple biology of what's happening in their brain, the problem is no longer a moral failure. They no longer need to feel "stupid." Instead, it

becomes a medical situation. A medical situation with real solutions. Solutions that provide HOPE.

And, then, they can celebrate. Because they will discover that they CAN be successful.

Conclusion

Across the United States, nearly half of all special education cases are learning disabilities. However, these "disabilities" are largely a result of our failure to teach according to human development. We are totally ignorant of the brain biology of learning and millions of students are needlessly suffering.

Learning disabilities are nothing more than a weak power supply in a few, small sections of the brain. We can use stronger sections of the brain to help students build "detours" around the weaker sections.

If we follow the model of the Success Pyramid and provide Complete Human Education in a way that is consistent with how our brains work, we can eliminate most learning disabilities.

As the Success Pyramid illustrates, the core foundation for success is that each student must have confidence in their strengths. **Without confidence, every other effort is futile.**

The next level of the Success Pyramid is "self-management." This is typically the area where students with learning challenges break-down. **They need *explicit and efficient instruction* on skills for: communication, organization, and time-management.**

The final level of the Success Pyramid is "learning." **The way to optimize learning for *any* learner is to make as many connections to new information as possible.** The best way to build learning connections is to provide instruction with social

and multi-sensory support. These methods generate a massive number of neuron connections across the brain. These connections are what allow us to build “detours” around learning disabilities.

Finally, students must be empowered with a clear understanding of how their brains work and how learning disabilities work.

The Brain Biology of ADHD & Autism

Learning disabilities, ADHD, & autism are all very similar… at least from the perspective of brain biology.

Just like learning disabilities, ADHD and autism are caused by neuron brain wires that do not properly connect. This situation is most often caused by a lack of electrical power in the brain.

The brain runs on electricity, just like your refrigerator. People who've experienced "brown-outs" know what happens when there is not enough electricity; their lights, refrigerators, and all other electrical appliances go out *sporadically*. The same thing happens in an ADHD and autistic brain; a low power-supply in the brain means sections of the brain go out sporadically.

The brain gets its power from chemicals, such as: serotonin, dopamine, adrenaline, etc. But, some brains simply can't produce enough brain chemicals. Or, they may struggle to regulate brain chemicals and maintain "normal" levels of connections. The result is ADHD or autism.

ADHD is caused by a low power-supply in just one region of the brain, the Front Brain.

Autism is caused by inconsistent power in any of the other regions of the brain. For this reason, autism is called a "spectrum" disorder. The different symptoms and severity of those symptoms depend on: the affected regions of the brain, the brain chemicals involved, and the amount of each brain chemical.

"Executive function" (EF) is a common challenge for people with autism. EF is managed by the Front Brain. So, if someone with autism has EF challenges, the problem is happening in the same region of the brain that causes ADHD.

Learning disabilities are caused by inconsistent power-supplies to a limited number of sections in the Back Brain. For this reason, many people diagnosed with autism are often diagnosed with learning disabilities. The truth is, both symptoms share the same biological cause.

The solutions for building effective detours in the brain to manage these conditions remain consistent with following the *Success Pyramid for Effective Learning*.

Part II:
Practical Implementations of Complete Human Education

In Part I, I focused on the core problems of education in the United States, a simple model for effective learning, how that model helps us resolve our top problems, and key characteristics of effective instruction in: math, language arts, and self-management skills.

We then discussed how this model relates to special education.

In Part II, we will look at how to *implement* the principles of Complete Human Education by looking at existing instructional and political models. This section concludes with a simple matrix of how to construct an ideal school system of Complete Human Education.

-Chapter 8-
Ideal Instructional Models

In Part I, I described "solutions" that any one teacher could theoretically incorporate into an individual classroom. But, as a former classroom teacher, I fully realize there is a vast difference between the "theoretical" and the "practical" capacity of any one person.

Clearly, these individual solutions would be much easier for teachers to implement –and have a much greater impact on students—when supported through the curriculum, by the administration, and by the culture of the school.

The following instructional models are just a few of many examples that provide effective, school-wide frameworks for supporting the solutions described in Part I. They are by no means considered a comprehensive sample. They are simply provided to illustrate how these principles can be put into action.

Montessori Philosophy & Curriculum

Maria Montessori first sought to understand principles guiding effective learning –based on the natural development of children and young adults-- then developed a comprehensive curriculum according to these principles.

Of all educational psychologists and specialists to ever live, Maria Montessori was the only one to develop a comprehensive curriculum for putting her theories into practice.

For this reason, you will see that the "Ideal School System" matrix outlined in the Conclusion is built on the Montessori Model of Human Development and largely incorporates Montessori curriculum and materials. The Montessori legacy

has been proven over 100 years. It has transcended all socio-economic and cultural boundaries.

So, if solutions have been discovered, why not use them?

The scope of Montessori's full curriculum is well beyond that of this book, but her work is congruent with the *Success Pyramid for Effective Learning*. Within the context of the Success Pyramid, her philosophies can be neatly summarized into four principles that allow students to SOAR:

- **Provide *S*tructure.** Learners naturally need boundaries to keep from becoming overwhelmed, to ensure that the learning expectations are developmentally appropriate, and to assimilate with social expectations.
- **Celebrate *O*riginality.** Learners are empowered when they have an opportunity to make choices and explore personal interests.
- **Build on *A*ptitudes.** The very process of "learning" means stretching into unknown or undeveloped areas. Learners will be most effective when that stretching starts from a place that respects their strengths, creating a foundation of confidence for reaching deeper into the "unknown" territory of authentic learning.
- **Make it *R*elevant.** Students must know how the information they are learning connects to their life now, or in the future. They are always asking themselves, "Why do I need to know this?" This question is not coming from a "bad attitude," it's coming from their biology; their brain absolutely needs to understand these connections to properly organize new information in their brain.

Age-Appropriate Expectations

As content standards have grown more stringent in the past decade, students are being held to higher and higher expectations. Sometimes, it's good to hold students to elevated standards. However, those expectations must be within the students' intellectual, physical, and social/emotional development. In too many cases, our increased standards have placed an impossible burden on students; they are expected to perform beyond age-appropriate abilities.

Dr. Montessori observed that children and young adults all go through the same general development cycles, but those cycles can vary by up to three years.

For example, what one "normal" child is naturally able to do at age six may not come "naturally" to another child until age nine. However, that nine-year-old likely mastered some other skill three years ago that the six-year-old won't get for another three years. For this reason, Montessori grouped her students in multi-age cohorts so they could learn –and teach—each other.

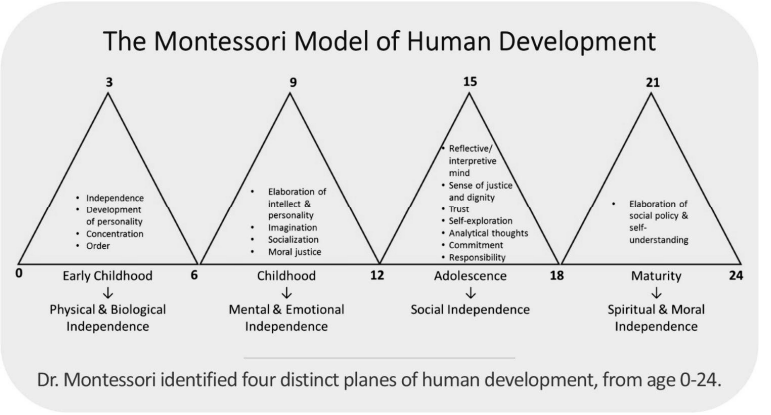
Every child grows in a unique pattern, with their own unique timing. Maria Montessori developed an instructional model that naturally accommodates this ebb-and-flow of child development.

Montessori on Human Development

Dr. Montessori was uniquely qualified to understand human development, versus "cultural influence." She was a medical doctor and a doctor of anthropology. She was exiled to foreign countries across the eastern and western parts of the world for more than half of her career.

Dr. Montessori concluded that human development is a 24-year process and established 4 distinct phases of the progression.

These phases of development are not linear, as we tend to assume. Students experience "peaks and valleys" throughout their development. At some points, they are learning and developing very rapidly; they seem to absorb everything. Other times are much slower and may even appear to include some regression. This is a normal pattern of human development.



Dr. Montessori identified four distinct planes of human development, from age 0-24.

Montessori on Physical Education

"One of the greatest mistakes of our day is to think of movement by itself, as something apart from the higher functions… Mental development must be connected with movement and be dependent on it. It is vital that educational theory and practice should become informed by this idea."

- Maria Montessori

Recent brain research confirms what Montessori always knew; movement and activity are essential to the process of learning. Scientists have confirmed that physical activity devlops the intellect; aerobic movement manufactures new

brain chemicals that provide power to the brain. And, the coordination of fine and gross motor skills builds channels for new neuron connections that are vital for learning.

Above all, Montessori believed that physical development was integrated with the complete learning process and core to the development of indepentent living. She also believed that movement and physical activity help to create peaceful children.

She encouraged freedom to move in the classroom, to work on the floor, or outdoors rather than being restricted to sitting for long periods of time at a desk. She developed materials to help children develop large and fine motor skills. She encouraged free play as a critical way for children to build muscle, coordination, and spatial/body awareness at *their own pace*.

As children get older, she encouraged the participation in team games for the development of physical and social skills. She also emphasized the need for children to learn and practice the principles of self-care with: an active lifestyle, healthy nutrition, and proper sleep. These skills may seem "obvious" now, but this was long before it was fashionable to teach them.

Montessori always viewed physical development and self-care as a critical –not optional— element of education.

Montessori on the Power of Gardening

"Gardening" may seem somewhat random. However, gardening is like a "super activity" that provides students with many benefits.

Dr. Montessori believed gardening provided students with an appreciation for "where all things come from" and expanded their sense of the world in a tangible and relevant way. She

felt it was important for students to connect with the Earth as the source of all life and that gardening gives students an appreciation for the development of life.

Gardening activities were incorporated in her curriculum for students of all ages.

Over the last several decades, studies continue to confirm there are countless benefits to gardening. It promotes a sense of ownership, develops responsibility skills, and has been proven to be healing for people who have suffered trauma. There are also neurological benefits to working with soil.

Gardening also correlates with all three layers of the Success Pyramid:

Level 1: Confidence - Students take a lot of pride and ownership in caring for their plants and crops, which boosts their confidence.

Level 2: Self-Management - The consistent care and maintenance of a garden helps students better understand their own needs for self-care and self-management. The process of caring for a garden also builds important organization skills. Working with others in the class to care for their garden promotes the development of communication and interaction skills.

Level 3: Learning - Witnessing the life-cycle of plants provides many opportunities for students to make connections of relevance across other areas of study, particularly in science and social studies. Caring for a garden presents many real-world math problems to solve and opportunities for relevant reading and writing activities. Many schools sell their produce to

the community, which then becomes a real-world lesson in math and economics.

Even if "gardening" does not directly match specific content standards, the pride, ownership, collaboration, and learning connections students make has a profound impact on their intellectual, physical, emotional, and social development. It is a powerful activity to help build a positive learning culture.

Green Pastures School

Green Pastures is a small, independent school tucked in a rural pocket of suburban Detroit. The school is home to 70 students from ages 4-14 (pre-K to grade 8).

Green Pastures Philosophy: Above all, the philosophy of the school is built on strengths. "Every child is a genius; our job is to nurture the child to let the genius shine through." Students are grouped in multi-age cohorts according to social/emotional and intellectual development, just as Montessori promotes. Teachers embrace social/emotional coaching as a comprehensive part of the learning environment.

Green Pastures Structure: Every cohort has a lead teacher, known as the "Morning Meeting" teacher. In Morning Meeting, students have their daily language lessons thematically connected with a science/social studies theme. (Language lessons and expectations are adjusted according to each student's ability.) Following Morning Meeting, students have a 15-minute "fresh air" break before returning to math class; math groups are also assigned according to each student's level.

The morning schedule is highly differentiated according to students' individual development. These placement decisions are made based on careful observation, assessment, and

collaboration of the teacher and parents. “Differentiation” has become an important value in education, but the effective execution of differentiation is still lacking across the USA. For Green Pastures, differentiation has always been core to their “Morning Meeting” instruction of math and language.

Green Pastures’ afternoon schedule is what really sets the school apart! The school operates on a trimester schedule. Every trimester, a wide variety of elective classes are offered. Each class meets for one hour, once a week. The afternoon schedule accommodates two one-hour sessions, for a total of 10 sessions across the week. Students of all ages select the classes they want to take for each afternoon slot. Some sessions may even be selected as a “free hour.”

Some examples of afternoon elective classes include: eco-jewelry, foldable books, box-building, cardboard construction, gardening, farming (includes a weekly visit to a nearby farm), computer programming, art, music, poetry, drama, set design, even a class about tea!

One semester -for reasons no one understands- Tea Class was so popular that it filled to capacity quickly, leaving many students out. So, one teacher volunteered to cancel a different class she was planning to teach to open a second Tea Class. This is a beautiful example of the school accommodating the students, rather than stuffing the students into a predefined, inflexible mold.

The classes fall into seven categories: literature, humanities, mathematics, physical sciences, arts, technology, and physical education. If students select two classes from each category throughout the year, they are recognized with a Renaissance Award at the end of the year. (In other words, they do not have to meet a quota, but are *incentivized* to sample a wide range of classes.)

The magic of Green Pastures' afternoon program cannot be overstated! At minimum, in one school year, students of all ages are given the opportunity to make at least 30 significant choices about their education. (Ten electives multiplied by three trimesters.) That's not even counting the "layers" within those decisions including whether to take a "free-hour," when to take them, and if they want to fulfill the category quota or not.

The students at Green Pastures are engaged and love to learn because:

1. The "whole" student is valued at Green Pastures; social/emotional and physical development is valued just as much as academic development.
2. Students are met "where they are at," particularly for language and math instruction.
3. The electives program provides many opportunities for: students' strengths to be explored and celebrated, their voices to be heard through the wide variety of choices, and for students to explore a wide range of relevant and high-interest topics.

Oakland Schools Technical Campuses (OSTC)

OSTC combines academic knowledge and technical career training to prepare students for high-skill, high-wage, and high-demand careers. Enrolled students spend half of their day at their home school and the other half attending OSTC.

OSTC provides curriculum and training in nine nationally-recognized career "clusters" that are developed around broad occupational areas. Each cluster provides learning experiences through different, yet related, career options. The nine clusters include:

- Engineering/Emerging Technologies
- Information Technology, Entrepreneurship, and Advanced Marketing (iTEAM)
- Health Sciences
- Transportation Technology
- Biotechnology and Environment Science
- Construction Technology
- Cosmetology/Human Services
- Culinary Arts/Hospitality
- Visual Imaging

Students typically attend OSTC for their last 2-3 years of high school. Each year, they choose a different career cluster. This allows students to explore at least two career clusters in depth. This exposure allows students to make informed decisions, based on practical experience, about post-secondary career training or education options. This experience prevents students from investing in an expensive, four-year college degree, only to get out in the "real world" and discover their chosen career is not what they expected.

The OSTC program naturally inspires motivation and engagement in students. First, the opportunity to *choose* a career cluster is a key element of motivation. In addition, the RELEVANCE of the real-world, work-based training program is extremely engaging. And, of course, the hands-on nature of the program is extraordinarily brain-friendly.

At OSTC, students can find their career direction, fulfill high school graduation requirements, earn college credits, join student organizations, and make new friends with similar interests.

-Chapter 9-
Building A School Culture:
Insights from America's Top Schools

If schools had no constraints of a regulated system, how would they prepare their students for the 21st century workplace?

To answer this question, I reached out to the "Top 100" private schools across the United States, looking for a glimpse into communities that are not subjected to the regulations of public schools. Headmasters from six schools agreed to be interviewed.

One headmaster quipped, "I'm not a fan of that notion of '21st century skills.' I don't think most so-called '21st century skills' are really that different from the skills that led people to be successful in the 16th century!" He confirmed I was talking to the right people!

The gracious headmasters and their respective schools included:

- Dominic Randolph, Riverdale School, Bronx, NY
- Nathaniel Conard, Pingry School, Basking Ridge, NJ
- Benjamin Williams, Cate School, Carpinteria, CA
- Concepcion R. Alvar, Marymount School of New York, New York, NY
- Glen Shilling, Detroit Country Day School, Bloomfield Hills, MI
- Tom Sheehy, Canterbury School, New Milford, CT

I prepared a consistent set of questions to ask each administrator (see the Appendix), but each interview quickly evolved into conversations with a life of their own. Yet, they

shared many parallel themes. In various ways, each educator was deeply connected to the *Success Pyramid of Effective Learning*. They didn't use the same language, but they were all acutely connected to the importance of providing: plenty of emotional support, structure and guidance for developing self-management skills, and promoting learning through the development of *authentic* connections.

To my surprise, what emerged from these interview-conversations was not as much about teaching "21st century skills" as it was about **building a human-friendly *culture* within a school community.**

In this chapter, I explore their collective insights within the framework of the *Success Pyramid of Effective Learning*.

Level 1 – Build Confidence thru Emotional Support

As we know from Chapter 4, emotions are the gateway to learning. Each of these "top schools" actively supports emotional development in four distinct ways: building relationships, encouraging collaboration, supporting individuality (of students *and* teachers), and encouraging failure. (Yes, failure.)

Building Relationships

"What do you find makes the biggest learning and performance difference for your students?"

I asked this question of every headmaster. Without exception, they all gave the same answer: "The relationships!" "The people." "Our teachers."

Ben Williams of Cate School said, "We take the best care of our kids. There's an intense focus on the well-being of our students." He went on to describe research from Williams College that examined what contributed to student learning in college. The most influential factor was the relationship

with professors, the ability to make a positive connection with the person responsible for teaching.

Relationship-building must include everyone in a school community… and it starts at the top! At Detroit Country Day School, Glen Shilling explained that all administrators are required to teach at least one class throughout the school year. This requirement keeps administrators connected to their students and to the challenges faced by teachers. It also makes the administrators more accessible to students. "We all love when we get to class," explained Schilling. "It's our sacred time." This one requirement builds many layers into the fabric of positive relationships across all levels within a school community.

The unanimous and visceral reactions from all headmasters about the importance of building relationships only reinforces what brain biology already tells us… *emotional support is critical for learning.*

Encouraging Collaboration

Another unanimous theme was collaboration: amongst students, amongst teachers, and between students and teachers. Collaboration across all levels emerged as a top component to each school culture.

Dominic Randolph of Riverdale talked about the effectiveness of discussion-based learning in the classroom. "It builds a culture where people are encouraged to ask questions of their peers and of their teachers."

Conception Alvar of Marymount Schools of New York, an all-girls school, really wanted me to come see her "girls in action!" She enthusiastically described most classes are set in a circle where 15 people share ideas, building upon each other, questioning each other. "It's not one person's answer, but a class discussion that gives it a meaningful twist."

Nathanial Conard described a very similar, perhaps identical, process used at Pingry known as the Harkness Method. The Harkness Method of collaboration is a cornerstone to Pingry's pedagogy.

Williams says collaboration is not only a key element of his school community, it's a critical element to workplace readiness. "We (know) the workplace is collaborative. It requires the ability to work with a broad range of people over a broad range of topics. It requires people to connect to a *team* goal rather than simply a personal one." Teachers at Cate seek every opportunity to provide collaborative learning experiences.

Collaboration amongst teachers was another essential element described in some way, by nearly all administrators. Several discussed the importance of building time in the schedule for teachers to collaborate with each other; to problem-solve and to plan cross-disciplinary lessons together.

Randolph believes team-teaching makes the learning experience more dynamic for his students. The most popular math/science class at Riverdale is a physics and calculus class taught by a 2-teacher team.

Alvar holds an academic council every week. "There's 12 of us who meet regularly to raise questions," she explained. "We ask, 'How can we enhance the experiences that the students have at this point?'"

Shilling explained, "There's a wealth of information within our teaching staff. We once had a '45-minute share session' that turned into 3.5 hours!"

Finally, there is collaboration between teachers and students. Alvar told of a new, 25-year-old teacher who was teaching a class called "Beta Visualization." The class had nine girls and

four teachers enrolled. “Yes!” she exclaimed, “they are all in one classroom together. The teachers are learning, too!”

Williams described that everyone at Cate is held to the same expectations. “Our mission statement doesn’t reference students and doesn’t reference faculty members. The same responsibilities accrue to every single member of the community.”

Supporting Individuality (of Students *and* Teachers)

Shortly before my interview with Alvar, her school hosted an alumnae reunion. She explained, “The question posed to [the alumnae on] the panel was, ‘What do you think is the greatest gift Marymount gave you?’ The answer that turned up over and over again was, ‘My voice! They allowed me to use my voice!’”

Of all the content, skills, and knowledge students acquired in their years at Marymount, it speaks volumes that so many would circle back to their “own voice.” Our sense of individuality is a critical foundation for building authentic confidence. And confidence is how we build long-term, intrinsic emotional support.

Cate School understands this critical gateway to learning. The core focus of their curriculum is to “Build student expertise in fundamental areas, while they *cultivate a sense of their own strengths and interests*.” Williams further emphasized the importance of knowing oneself, “The Cate experience is about ultimately knowing who you are. It’s a coherent part of our program, the question of identity, the question of voice, the question of our individual skills and aptitudes.”

For Cate, the first step in the process is making knowledge-of-self a core element of their school mission and curriculum strategy. Secondly, they have established scaffolded themes

that bear a remarkable resemblance to the three tiers of the Learning Success Model:

- 9th grade is the year of **Orientation** (to self and school community) & **Organization**
- 10th grade is the year of **Awareness & Responsibility**
- 11th grade is the year of **Connections & Purpose**
- 12th grade is the year of **Mastery, Self-Determination, & Leadership**

These themes establish a common language and expectation for students and staff, alike. The structure was established based on the natural, human development of students at each age and stage in their life. This is a beautiful example of how a school has implemented Complete Human Education at a macro level.

Cate continues to accomplish their mission of self-development through: extensive use of instructional collaboration (as explained in the previous section), a school-wide writing period "to allow students to begin to find their voice," and switching to a trimester schedule that allowed the school to build a much more robust elective system, all with a goal for students to reach their senior year with the self-knowledge and tools to lead their own independent inquiry project.

Randolph talked extensively about the importance of putting students in the drivers' seat of their own learning. "We are trying to build a community where the locus of self-control moves more and more to the student. The student has more choice, more ability to be able to feel that they're actually participating in their own education." He told about a group of students who drafted plans to redesign a classroom. Over the summer, those plans were put into action. The students spoke… and the school listened. "If kids feel empowered,

they're going to learn more effectively. They feel like, 'Ok, this school cares about my personal learning, not just trying to drive us all in the same direction.'" Once again, Randolph is keenly aware that respecting the individuality of each student is a key foundation for learning.

Creating a community environment that respects student individuality is very important. But, as Williams said about the expectations at Cate School, this respect applies to *everyone*. That includes the teachers.

The nation-wide trend in public schools is to regulate and mandate more and more content, standards, and assessments. **Teachers' voices are almost completely stripped from the classroom. This lock-down on teacher creativity is extraordinarily detrimental to the relationship-building and collaboration that is so critical for students' success.**

In every conversation, all six administrators conveyed an unwavering respect for their teachers, mostly in ways they didn't even realize. This is because they wouldn't think to do it differently. The culture of their schools and their mutual respect for fellow educators is as natural to them as the sky is blue.

Shilling said with gusto, "Our teachers are THE BEST!"

Mostly, the respect for the individuality of their teachers emerged in the discussions about collaboration. Sheehy proudly told about how his foreign language teachers were tweeting to students in their non-native language, encouraging their students to tweet back. "They're trying to get the students to be more colloquial and at ease, to go beyond the structure of the classroom." He described another teacher who was experimenting with diverse ways to implement a "flip classroom" model. Another teacher was

using film clips, primary sources found online, and YouTube videos of speeches from the 1920s to make history more "alive" in the classroom.

When I commented about the freedom and creativity his teachers obviously had in the classroom, Sheehy stated obviously, "Well, there is the assumption that our faculty members know their discipline."

Nearly all administrators said their schools provide a large budget for teacher professional development. "If a faculty member came to one of us in administration and said, 'I'd really like to go to this week-long workshop on how to be more engaging in student-centered discussions,'" explained Sheehy, "we'd be like, 'Yeah, absolutely!'"

There is an inherent trust in the professional judgement and creativity of their fellow educators that has largely eroded and been "mandated away" in the public schools across America.

Encouraging Failure

The big cry from employers today is the need for "critical thinking skills" amongst their workforce. All six administrators are keenly aware of the importance of these skills for students' long-term success.

But, they couldn't talk about "critical thinking skills" without talking about students' ability to handle failure. Critical thinking involves the ability to test different answers, to take risks. "And risk," as Alvar pointed out, "includes failure. Our students MUST be comfortable with failure!"

Our society is generally uncomfortable with failure. Most school cultures, driven by scores on tests and grades on report cards, completely shun failure.

But, "failure" is simply a feedback loop. It's a process that lets us know what works… and what doesn't. Williams took this notion further. "Education is not entirely about success and never should be. This [notion] is a major flaw in our system! I have a long-time friend who's an entrepreneur who said, 'I never want to hire someone who hasn't already failed.'"

Alvar reinforced her commitment to supporting failure, "My job as the headmistress is to continue to provide our teachers an opportunity to try something new… and to fail. Because everything where you try and you fail is not a failed lesson, but it's actually a very important lesson."

To quote the Disney movie, *Meet the Robinsons*, "From failure, we learn! From success… not so much!"

All administrators actively work against the grain of society to create a culture where risks are expected… and failure is accepted. *This environment is only possible because of the deep relationships of trust and culture of collaboration that permeates each school.*

Level 2 – Developing Self-Management Skills

"Most students can gain access to the information they need, provided they can discriminate between what is truth and what is simply noise. IT'S THE SKILLS! It's the ability to know what to do with information, to know how to work with other people, to make connections between various disciplines… that's the key!"

– Benjamin Williams, Cate School

All administrators agreed that, in the 21st century, content knowledge is *not* the objective. "It's a waste of time to focus on transferring information," said Conard. **"Instead, students**

need to know how to *get* information, *assess* information, and how to *use* information."

As we know from the Learning Success Pyramid, "skills" are the gateway to learning and discerning new information. "Self-management skills," specifically, are about being aware of the environment and managing behavior within it. If you look back to Cate's scaffolded, grade-level themes, you'll see the first two years are focused on the first two levels of the Learning Success Pyramid.

Williams explained, "We recognize that the ability to be a good student depends on a host of other things that are unrelated to academic work." While nearly all teachers and administrators in public schools know this to be true, the fact of the matter is that the school SYSTEM does not allow room to acknowledge this very real, foundational aspect of Complete Human Education.

For Cate, addressing the needs of the whole student is worked into a very intentional, macro-level structure of the school through grade-level themes. For other schools, the process of supporting the skills of self-management happens in a variety of other ways.

Skill Development

For most administrators, the notion of developing "skills" is something that naturally happens because of the relationships and collaboration that are a core part of their school cultures.

However, at Detroit Country Day, Shilling is very explicit and intentional about skill instruction. His middle school program has a mandatory study skills class for 6th graders. "We teach study skills to empower students to be successful. We teach a common approach to organization, time-management, and

learning strategies so that we can all share a common vocabulary and common expectations."

The Middle School Director at Detroit Country Day, Julie Bianchi, noted that the 6th grade study skills program has served a big boost to their middle school enrollment. "Yes, our high school has a waiting list. But, when parents learn that we offer this program in 6th grade, more and more of them are opting to send their children to us three years earlier, just so that we can provide the instruction and guidance in these skills throughout the middle school years. PARENTS know how critical these skills are!"

Cate also goes another step further than grade-level themes. Cate's freshman year includes a human-development program that meets twice a week. It covers everything from human sexuality and health to study skills. "If you're a freshman teacher," Williams explained, "you're also teaching students skills for managing life as an adult."

Mindset

Some administrators were more focused on *mindset.* Alvar sees the damage done by the notion in most schools that there is on only one right answer. "[We must foster] a mindset that will question answers and seek alternative solutions." Her teachers help cultivate this mindset through their collaborative lessons and special programs, including one program called "Fabrication Lab," where ideas are developed and tested.

Over at Riverdale, Randolph is focused on character development. "If you research what correlates with success, it's things like optimism, self-control, curiosity... The thing is, we have no assessment or feedback loops around those types of capacities." Randolph has taken this concern to heart by

developing a non-profit called Character Lab that's doing research around interventions for character development.

Level 3 – Promoting Effective Learning

"The greatest shift in the history of education is that the teacher is *no longer* the single source of information," Shilling said. "Technology is!

"I will be teaching my World History class, ask a question, and suddenly, everyone has their phone out, looking for an answer."

Alvar agreed. "The information that used to sit just with teachers in the past, is now already shared material. Anybody can access anything, anytime, anywhere."

So, if the technological device that rests in the palm of a student's hand hold so much information, what do they need to learn?

The coveted ability to "think critically."

Critical thinking seems to be an elusive thing to teach. Perhaps that's the case in a traditional "shove and test" environment. But, as Alvar pointed out, the role of the teacher has changed "from somebody who imparts knowledge to someone who [now coaches] students on how to process information, make judgements, and acquire wisdom to say, 'I don't need this.' 'That doesn't sound right.' Or, 'Let me take a look at this…'"

What Alvar is highlighting is that "critical thinking skills" hinge on students' ability to generate questions. And, according to all administrators, there's no better way to develop the art and science of asking questions than through collaboration.

Every administrator emphasized in some way --often in multiple ways-- the importance of group collaboration; it provides an authentic setting where questioning happens

> *"The way to create the mindset [of critical thinking] is to teach them how to question..."*
> – Conception Alvar, Marymount School of New York

naturally and immediate feedback is provided by the group. Group collaboration consistently models the questioning process and evolves into a "creativity" and "refining" process.

Relevance & Hands-On

To learn something new, the biology of our brain *requires* that we connect new information to something we already understand. Randolph reinforced the importance of making these learning connections, "Unless you actually *do* something with the knowledge or skills [you're learning], you probably won't actually learn anything."

Conard ads, "Memorizing information is really one of the poorest ways to acquire it for long-term use. You must have context for information. To the extent that you can make the school process more like the life process, including making connections and pattern-seeking, the better off everybody is."

Williams is also focused on the importance of emulating the "life-process." He is also committed to having his students make life-long connections with their learning. "These years, from 14 to 18, are the key formative years in a young person's education. This is where the spark is lit. The mind is awakened to its own possibilities. So, we're not thinking about preparing a kid for college, we're thinking about preparing for him for *life*."

The quickest way to make permanent learning connections is to present new learning in a way that students can see the connection to *why* they might need that new information… now, or in the future.

Noting the importance of relevance, Conard adamantly noted, "I *never* hear, 'When are we going to use this?'" His students developed the first high-school based credit union. They are volunteering with United Way's VITA (Volunteer Income Tax Assistance Program), where they make use of their financial literacy skills to assist other with tax preparation. His advanced Spanish students help translate at the local family court. Conard sees these "real world" experiences as a critical element of his students' success.

Alvar shared many similar examples of bringing relevance into her school building. "We have Fab Labs ("Fabrication Laboratories") here once a week. It's a bridge between their language arts and math class. They go in there and create something. They're learning how to do things like circuitry… but they are also learning how to work in groups." She also explained that her students coordinated and hosted the very first student-led professional development conference for educators. It's a novel concept… students teaching educators how they best learn!

Interdisciplinary Instruction (aka "Making Connections")

Nearly every administrator talked about the importance of interdisciplinary instruction. "We're doing a lot here to break down the silos between your historic disciplines," said Williams, "so that much of our instruction now is interdisciplinary, forcing our students to make connections across classes."

"Breaking down silos of disciplines" is a great summary of the transition education must make. Traditional education puts

individual subjects in a box: math, language arts, applied sciences, art, etc.

But NOTHING in real-life happens in an isolated box. There is not one problem in the real world that will enter our students' lives, announcing itself as a "math problem" or a "language arts problem." If our students only learn disciplines in self-contained, 45-90-minute blocks, they will not be able to connect that information to anything relevant. Without a meaningful connection, no learning happens.

"STEM (Science, Technology, Engineering, Math) is big now," continued Williams. "We're not so much big on STEM as much as we are crossing from the quantitative to the humanities and social sciences and being able to connect those."

Typically, schools turn to project-based learning to accomplish interdisciplinary instruction. Solving real problems replicates real life.

Alvar described a course her school is teaching called "Engineering/Interactive Design." It's a combination of engineering and art, where students design robots, circuit boards, and more that they submit for the Smithsonian Competition. Another course offered is called "Physics in Dance." As the name suggests, the course evaluates real-world physics laws and properties through the lens of dance.

Another example Alvar shared of project-based learning was a Museum Curation project that integrated humanities with English, history, art history, studio art, and even math… the culminating project requires students to curate a certain section of a museum. Students are required to secure their own funding for the project, so they must create a plan, develop written materials, make a persuasive presentation to ask for funding, and ultimately, create their museum

presentation. This complex integration of subject-matter and skills is excellent preparation for the demands of the world outside of the "silo" of the school institution.

Removing Advanced Placement (AP)

Both Williams and Randolph have removed AP from their curriculum to support more relevant learning opportunities. "With AP," Randolph explained, "there's such an emphasis on content and you have to get through so much content within a relatively short time frame, that things like critical thinking, communication and discussion-based learning aren't able to be taught. And **content-coverage is not the skill that you're going to need to thrive in the workplace."**

Cate School used to have 26 APs, according to Williams. "But, in the last five years, we have abandoned our AP program because those are essentially glorified survey classes that allow for little depth of inquiry and very little discretion."

One might wonder if the removal of AP classes has had a detrimental effect on college enrollment. "Actually, our college enrollment *improved* since we dropped the AP designation on our transcript," explained Randolph.

Design of Learning: Looking Beyond the Field of Education

When it comes to instructional design, Randolph addressed the elephant in the room. "Why do we persist in certain classroom strategies that [have been proven] to *not* improve learning? We should be starting with principles of effective learning and design backwards from those principles."

As an entrepreneur, I often see innovations happen when one industry "borrows" ideas from another. One of the most famous examples is the fast-food industry that borrowed the "drive-thru" concept from banks.

In education, however, it's rare to see such innovation. In fact, the field of education is generally closed to outside influences. Most educational conferences do not allow speakers/presenters from outside educational institutions! (It's no wonder education is desperate for reform!)

So, I was pleasantly surprised when three administrators – Randolph, Williams, and Conard-- said they specifically look outside of education for inspiration and ideas.

Randolph described that he looks at how other teams collaborate and organize themselves, such as the workplace, IDEO. "Looking at these effective examples are far more instructive than almost any school setting. We created a toolkit, designthinkingforeducators.com to help bring solutions to the question, 'How do you bring creativity to the act of being a teacher? How do you bring the ideas of humans into learning design? How do we humanize education more effectively?'"

Likewise, Williams seeks interdisciplinary solutions by attending conferences for other fields of discipline, specifically *not* built for educators. "I think it's very important that we learn from other industries," He emphasized.

Conard added, "We're constantly looking to transfer good ideas from other environments to the school environment and to find ways to get kids to be crossing over from the school environment into other environments."

The isolation of the education institution was something Dr. Montessori heavily criticized in her writings as early as 1909. She was adamant that the school environment must closely replicate the setting of the "real world." And while her principles for Complete Human Education will forever remain timeless (due to their direct connection to human development), she understood that settings and

environments will change. Over 100 years ago, she was petitioning that we must provide structure and support in settings that closely mimic the "real world," if we expect students to be successfully independent after schooling.

How does one accomplish this objective in a rapidly evolving society? Perhaps Williams said it best when he concluded, "I wouldn't say it's any one [strategy] as much as it is the momentum behind constantly assessing and improving [our approach]."

Bottlenecks

These administrators represent private schools with minimal interference and regulation, but they do not operate in a vacuum. There are still bottlenecks that prevent them from achieving their utopian vision for an educational community.

Parents

At the top of the list is the parents. All administrators spoke about the importance of educating the parents about their rationales and perspectives on pedagogy. But, that can only go so far. Many parents still have their sights set on benchmarks –such as "good grades" or acceptance into ivy league schools—that these administrators do not believe are long-term indicators of success. Alvar emphasized, "The kids get it. We get it. The parents don't get it. We continue to train and teach parents. But, that's why I agreed to do this interview… anything that could find its ways into the conversation at home will help the cause [of helping parents focus on more important characteristics of life-long success.]"

Colleges

These schools are also accountable to "post-secondary regulation" because they must comply with requirements from colleges and universities. After all, these prestigious

institutions are the goal parents have their sights set on when sending their children to private high schools.
Williams was very adamant about college as a bottleneck to education reform. “The expectations of colleges really seem to be the bottleneck to what is needed in the workplace,” he stated adamantly.

He acknowledged that his school “doesn’t have many great partners at the college level. More often than not, the colleges are looking for those ‘perfect transcripts,’ which don’t indicate perfect students. Instead, they indicate students who have worked well within the system, but they are not necessarily going to be kids who are going to advance at the next system.”

Williams continued to point out that the end-goal of college acceptance creates a very significant roadblock to developing tolerance for failure, as so many administrators cited as critical for lifelong success. “We’re always walking the fine line between trying to build innovative, entrepreneurial thinkers who are great collaborators, but are also *not* likely to fail, because nobody wants to see that on anybody’s transcript. That’s going to be an eliminator.

“To suggest that [students] are going to have a more powerful experience when they go on to college –where their classes are going to be significantly larger, they’re dealing with faculty members who [are only teaching] as a small portion of what they do—it’s a much less personal experience. The college experience has been dominated, as of late, by more the social experience than an academic one,” continued Williams. “I hardly think that’s the institution we ought to rely on to deliver the most powerful learning. It’s just not going to happen.”

While Williams was the most outspoken about this topic, nearly all administrators expressed that college acceptance presents some barriers. Randolph cited this "misalignment" across the three sectors of: K-12 education, post-secondary education, and the workplace as his primary reason for agreeing to participate in this interview. "This [misalignment] concerns me a great deal."

Grading & Assessment

Instruction is driven by assessment. But the question is, what are you ultimately assessing? As Williams asked, "Are you assessing an end-product or are you assessing all of the steps in between and how thoughtfully they were done?"

If schools are assessing *outcomes* rather than *process* or *thinking-skills*, instruction will be aligned accordingly. In the public sector, the increasingly greater demands on accountability through assessment is initiating a more destructive spiral than the issues schools are seeking to fix, primarily because current assessments are only measuring content-knowledge.

The "bottleneck" created by grading is that grades reinforce the wrong mindset; **the students' goal becomes the grade, not the merit of learning new things.**

As Carol Dweck, Ph.D. discovered through her ground-breaking research on "mindset," the emphasis on praising grades actually *destroys* motivation to learn.[1] Instead, **praise and attention should be given to the *process* (work/effort) associated with what those grades represent.**

At Riverdale, Randolph removed quarterly grades for 9th graders to avoid discouraging students too soon. "If someone got a C on their first English essay, what does that mean about their future English grades? It's highly predictive. So, we got rid of grades in that first quarter for ninth graders

because we believe that it sets up a stereotype track for those kids. It's very hard to get their heads out of that."

That's only the first step for Randolph. He's now trying to remove quarterly grades altogether. "We think [quarterly grades] sort of drives a frenzy around grading. We'd rather have a more 'holistic' read at the end of the semester."

Williams told the story of a student who had a 4.7 GPA. "How the hell do you end up with a 4.7 GPA? It's only a 4-point scale! We have inflated our grades to such a degree that they have less and less meaning. Students look for bonus points for advanced courses and the colleges are indulging this because they're constantly looking for higher and higher levels of achievement. Higher and higher levels of achievement don't always indicate higher levels of aptitude or potential."

Alvar added, "Often, it's the opposite!"

"What we are building through our current assessment systems is [a generation of] kids who are good at working *within* a system," lamented Williams. "But, they are not kids who can build a *new* system, which is what we need."

Randolph cited a problem with what's *missing* in assessment. "If you ask people and do research on what correlates with success, It's things like optimism, self-control, curiosity. The thing is, we have no assessment or feedback loops around those types of capacities."

What about standardized testing?

Randolph sees "feedback" as a far more critical element of the assessment-education spiral than testing. "Timely, ongoing feedback," he emphasized. "[We need] to move

away from this standardized assessment culture to more of a formative assessment culture."

Randolph also believes that "teacher workload" is a more effective benchmark to consider regarding assessment, because it directly impacts the quality of the students' feedback cycle. "Obviously, if a teacher is responsible for 150 students versus 40, they're going to be able to give 40 students more feedback, more often, with better quality."

However, Randolph acknowledges that schools are seeking external benchmarks. So, he recommends carefully selected standardized assessments, such as the CWRA+ or PISA, because of what they measure. CWRA+ (College and Work Readiness Assessment) measures critical thinking and written-communication skills. PISA (Program for International Student Assessment) is an international assessment for 15-year-olds that emphasizes students' functional, workplace-readiness skills.

Conclusion

Despite these common bottlenecks, the six schools represented in my interviews have all made significant gains in providing environments that cater to Complete Human Education. They provide philosophies and strategies that are universally accessible to any school system willing to work outside of the historically established norm.

-Chapter 10-
Finland: A Political Model to Follow

More than 30 years ago, Finland made dramatic changes to the political infrastructure of their school system. A generation later, they emerged at the top of the world in international assessments of education mastery and competency for managing "real-world" situations. They are one of the leading political models to investigate.

Finland has created a system that nurtures problem-solving and critical thinking skills. They have developed classrooms where teachers rarely lecture for full class-periods, but instead, allows students to determine their own weekly goals and chose the tasks they will work on… at their own pace.

They have accomplished all of this in an extremely diverse society; nearly 50 percent of the student population does not speak the native language as their mother tongue.

What Is Finland Doing?

The following are highlights I took from Linda Darling-Hammond's article, "Steady Work: How Finland Is Building a Strong Teaching and Learning System:"[1]

They decentralized education and put control at the local level. "Over the past 40 years, Finland has shifted from a highly-centralized system emphasizing external testing to a more localized system in which highly trained teachers design curriculum around the very lean national standards."

Reducing national administration empowers the community, local administration, and individual teachers to meet the needs of their students as they see fit; they are not required to adhere to rigid standards that are neglectful of Complete Human Education.

They place high levels of trust in their educators. Teachers are free to make autonomous decisions. This trust is facilitated by several factors:

- The process to become a teacher in Finland is limited and highly selective. Once a candidate meets the strict criteria, they are provided intensive training and collaboratively coached in the classroom.
- Certified teachers in the classroom are provided time for peer-collaboration each day to facilitate: cross-curricular connections, creative instructional ideas, and problem-solving. This frees teachers up to meet the needs of their students as they best see fit.

They have only ONE standardized test, from K-12: "Finland maintains one exam prior to attending university: the matriculation exam… Although it is not required for graduation or entry into a university, it is common practice for students to take this set of four open-ended exams that emphasize problem-solving, analysis, and writing." Employers in the United States would salivate over students who had been trained and encouraged to develop problem-solving and analytical skills!

They reduced heavy content standards. Previous curriculum documents exceeded 700 pages. Today, their math curriculum is less than ten pages. (The U.S. has accomplished this by adopting the Common Core, but we are still fumbling wildly with appropriate implementation.)

They educate to meet the needs of their economy. Schools in Finland provide a two-track high school system: one for college-prep and one for training in the trades. Both are equally valued in the society. This creates a win-win situation for students, who are free to choose the track that best suits their interests and aptitudes. And, it's a win for their

economy because they have highly-trained graduates to meet workforce demands.

One potential area of discrepancy, however, is that Finnish students do not start school until age seven. Maria Montessori and neuroscience both indicate that is four years too late! Brain development at the age of three is ripe for learning beginning literacy, mathematics, and social skills.

No Need to Reinvent the Wheel

Civic and political leaders who are serious about reforming the politics of education should visit Finland. From them, we can learn how to organize our political and funding structure for success!

If visiting Finland is not a viable option, there are plenty of videos available about Finland. Search for the following documentaries on-line:

- "The Finland Phenomenon"
- "Finland Education Success"
- Or, visit: studyskills.com/educators/finland-a-political-model-of-education-reform to see both videos.

Some educators are concerned that the most recent PISA scores of 2015 indicate Finland has slipped from its top position in the world. Some speculation is that other countries are aligning their instructional system to match PISA (which Finland does not do). Others speculate that dramatic budget cuts and high levels of recent immigration are eroding performance levels.[2]

Nonetheless, Finland remains ranked 12th in math, fifth in science, and fourth in reading. All of which is far better than

the U.S., which is ranked 40th in math, 25th in science, and 24th in reading.[3]

The latest rankings do not change the fact that Finland made significant changes… and saw significant results. We can study what changes led to their top success and what changes since may have impacted their slight decline. Finland remains an important case-study to evaluate as our country considers effective ways to improve education policy.

-Chapter 11-
Common Core:
Why It's the Worst & BEST Thing to Happen to U.S. Education

Very few things stir more controversy than the mention of Common Core. There are numerous complaints, but most seem to center on a few common arguments:

- "Common Core doesn't make sense."
- "The math is killing our kids."
- "Common Core doesn't teach American history, civics, or government; our children will not have an understanding or appreciation for what it took to establish our country or the fundamental principles for maintaining it."
- "Teachers hate it!"
- "Common Core is a violation of 'states' rights."

For a while, I bought into many of these arguments. Or, to be more correct, I assumed these arguments were based on truth. My experience with all educational movements over the years has been, "Same stuff, different name." So, when Common Core came along, I ignored it for a long while.

When I finally read the Common Core standards, directly from CommonCore.org, I was stunned! The standards --and information behind the creation of them-- were far different from what I expected.

Common Core Is the U.S.'s First Step in Following Finland

One thing Common Core has accomplished is narrowing the scope of required content. The United States has long been criticized for content standards that are "a mile wide and an inch deep."

In other words, we were throwing a lot of random stuff at students, but did not allow the time or capacity to dig deep into exploration or critical thinking skills; there was FAR TOO MUCH to cover! Common Core has narrowed that scope.

Another critical thing Common Core accomplished is bringing *relevance to the real-world needs of K-12 graduates*. Before one standard was written for Common Core, comprehensive research was done to consider the skills students needed to be successful in college and career.[1]

Those skills were carefully prioritized. With input from college faculty and employers, a list was first developed of "ultimate outcomes for graduating 12th graders."

These ultimate outcomes are now known as the "Common Core Anchor Standards." All standards, from K-12, are tied into these anchor standards.

In other words, all Common Core standards were derived from the Ultimate Question; "What do students need to be successful in college and the workplace?" It may seem obvious, but that key question had never been a focus of previous initiatives.

Common Core Is a Step in the Right Direction. But It's NOT Perfect.

Nothing can be perfect for 100% of the people in 100% of situations. However, the Common Core is a very important and useful framework that:

- Places emphasis on higher-order skills, versus rote memorization.
- Establishes a critical link between K-12 education and "the real world."
- Brings consistency to the expectations and outcomes that need to be met by our young people so they may be competitive in a global economy.

Am I saying that Common Core is clean of dirty politics? No, because I don't know if any "back-room conversations" may have been involved in developing the Common Core Standards. All I know is that the Common Core Standards[2] are aligned with data from employers[3] regarding skills needed in the workplace.

Am I saying that Common Core is the one salvation for education? *Far from it!* The entire system of education needs to become compatible with human development. If Common Core is implemented in a vacuum, without the context of Complete Human Education, we accomplish nothing.

Am I saying that all complaints about Common Core are WRONG? *Absolutely not.* Most arguments have merit, but the concerns seem to come from how Common Core is being implemented or a total misunderstanding of how Common Core is intended to work.

It took time for me to figure out the discrepancy between the "common-sense" of the Common Core standards and all the controversy. But, I've since talked to several dozen (maybe

hundreds?) of parents, teachers, and administrators from across the country. I've dug into every "anti-Common Core" video posted on social media. I read as many articles as I could find.

And I have come to some conclusions about the origins of the arguments against Common Core…

Origin of the Argument: "Common Core Doesn't Make Sense!"

The major source of controversy appears to be about *how Common Core is implemented*! To do Common Core justice, several things need to happen:

- We must shift our mindset from previous experiences in school.
- We must provide proper training for teachers.
- We must improve communication with parents.
- We must design and execute a thoughtful implementation plan.

Instead, most states have been mandating all new curriculum, all at once. This process is extraordinarily overwhelming to teachers. And, consequently, it is frustrating students.

A better approach would have been to implement Common Core in smaller phases. For example, start with language arts for K-2. Then grades 3-5, etc. Then, introduce the new math curriculum two years later. Make a strategic plan to cover any gaps for the incoming 2nd graders who did not have this instruction in K &1st grade, etc.

A better approach would have included training and support for teachers. Teachers particularly need time to digest the curriculum and prepare meaningful lessons. More

importantly, teachers need to understand the bigger picture behind Common Core.

As an educator-turned-*employer* that struggles to find competent help, I understand the bigger picture behind Common Core. However, I bet less than 5% of teachers were provided with thoughtful training behind Common Core. Instead, everything has been "shoved" at them, out of context, and with no support.

As a result, there is nothing but chaos and overwhelming frustration! No wonder Common Core doesn't make sense!

Origin of the Argument: "The Math Is Killing Our Kids!"

Frankly, most frustration against Common Core is related to math. In fact, it's a repeat of the "Chicago Math" controversy of the '90s. Both issues originated from the same source, the publication of the *National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics.* This document was first published in 1989 and revised in 2000. These "new" standards placed emphasis on conceptual understanding and problem-solving over procedural knowledge and rule-driven computation.[4]

"Conceptual understanding and problem-solving" better represent the skills needed in the 21st century workplace. Generally, this approach is a better match to human development and the natural ways we learn. However, the instructional approach is a dramatic shift from the style of "procedural knowledge and rule-driven computation" that most of today's adults received.

Everyone knows that math builds upon itself. So, beginning a radically different approach to math in upper grades is a real source of frustration for everyone: students, parents, *and*

teachers. It's especially frustrating when they don't understand the specific shift.

Here, again, implementation is key. You can't throw a whole new approach for teaching/learning math to 5th graders and expect them to be successful without a carefully considered transition plan.

Instead, teachers were simply given new math texts, with "new" approaches for math, and expected to run with it. This is a terrible thing to do to a conscientious teacher! I know, because I've been there.

Quick personal story to illustrate how critical <u>proper training</u> is for teachers…

> I was first introduced to Chicago Math as a new, 5th grade teacher. I had ZERO training for Chicago Math. My principal simply gave me the teacher's edition and wished me luck.
>
> To say I hated the curriculum would be a gross understatement!
>
> *Every single argument I've heard about Common Core Math is something I* experienced *while teaching Chicago Math that year. My stomach still flares in knots when I reflect on my misery of trying to make sense of that curriculum!*
>
> The following year, I took a job in a new school district. They also used Chicago Math.
>
> This time, they provided a day of training over the summer. That one day changed everything! I finally understood the reason behind the curriculum design.

> To my surprise, I discovered the curriculum was quite elegant! Chicago Math immediately went from being my greatest nemesis to being my favorite curriculum. All I needed was an understanding of the "big picture" and a walk-through of the curriculum materials.

The key to my transformed experience with Chicago Math was discovering a completely new mind-set. Both Chicago Math & Common Core are much more focused on developing thought-processing. "Traditional math" is much more focused on computation. If teachers and parents don't understand this shift –and the reason for it— the curriculum is doomed from the start!

In summary, Common Core Math is a transition from focusing on "computation skills" to building "thinking and problem-solving skills." This is a dramatic shift that impacts everything about math instruction! It requires proper training for teachers and parents. It also requires a careful transition plan for students. Without these elements, there will be mass chaos and frustration!

Origin of Argument: "Common Core Doesn't Teach American History, Civics, or Government!"

This is true. Common Core is focused specifically on "college-readiness" and "employability skills," because the United States is deep in a national "skills gap" crisis. Even our best students are at the bottom of the industrialized world.[5]

However, the creators of Common Core were not advocating that these subjects be omitted! Their intention was for states or local government agencies to fill in these requirements.

The following comes directly from CommonCore.org:

> *Q: Why are the Common Core State Standards only for English language arts and math?*
>
> *A: English language arts and math were the subjects chosen for the Common Core State Standards because they are areas upon which students build skill sets that are used in other subjects. Students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so the standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. It is important to note that the literacy standards in history/social studies, science, and technical subjects for grades 6–12 are meant to supplement content standards in those areas, not replace them.* ***States determine how to incorporate these standards into their standards for those subjects*** *or adopt them as content area literacy standards.*[6]

Ultimately, the Common Core is a compromise between "national" and "state/local" oversight. Adoption of Common Core is not an endorsement to strip all other content from the curriculum. It's merely a standard of performance expectations in the two most critical subject-areas for college and career functionality.

Origin of Argument: "Teachers Hate It!"

I've already described many ways in which teachers have not been given adequate support to effectively implement Common Core standards. Overall, teachers have not been given:

- proper training about the big picture behind Common Core,
- enough time or support to effectively develop implementation plans, or

- the opportunity to implement Common Core in phases to reduce teachers becoming overwhelmed.

But, there is one more problem that is far more destructive and poisonous to teachers… it's the lack of respect granted to teachers from government and school-district administration.

For some reason, Common Core implementation has become attached to rigorous micro-managing in the classroom!

That micro-managing is in *direct contradiction* to the intentions of Common Core, as noted directly on CommonCore.org:

> *MYTH: The standards tell teachers what to teach.*
> *FACT: Teachers know best about what works in the classroom. That is why these standards establish what students need to learn but do not dictate how teachers should teach. Instead, schools and teachers will decide how best to help students reach the standards.*[7]

Teachers are professionals; they are required to have more education than any other profession except medical doctors. When a person chooses to become a teacher, they choose a profession with limited options, a controlled pay scale, and a LOT of *expensive and required* training, paid at their own expense.

Despite these known limitations, teachers choose the vocation because they want to make a difference. But, with every day that passes, teachers' hands are tied tighter and tighter behind their backs. Their compassionate and creative energies are shut down. Teachers are not trusted.

For example, one school agency in my local area has prepared hundreds of "Common Core Lesson Plans" and distributed them to the school districts they service. Administrators of

the local districts handed those "lesson-plans-in-a-bag" to their teachers with the mandate to teach EXACTLY what's in that lesson plan. No deviating.

Teachers are now expected to follow a script! This process completely eliminates a teacher's ability to connect with their students in a meaningful way. They can't have fun with the curriculum; they can't make it engaging for their students. They don't have the time (or authority) to modify lessons if students are not understanding.

This process is NOT teaching. It's commanding! It negates the very reason teachers selected this vocation. And, it has NO place in an effective learning model for human beings.

This restriction on teachers is *not* just happening in one, isolated incident. It's a nationwide epidemic!

Origin of Argument: "There Is Far Too Much Testing!"

Currently, there is far too much emphasis on testing! But, these mandates did NOT come from Common Core.

According to CoreStandards.org:

> ***Are there data collection requirements associated with the Common Core State Standards?***
>
> *No. Implementing the Common Core State Standards does not require data collection. Standards define expectations for what students should know and be able to do by the end of each grade.* ***The means of assessing students and the data that result from those assessments are up to the discretion of each state*** *and are separate and unique from the Common Core.*[8]

The over-emphasis on assessment is coming from individual states, NOT from Common Core.

Which is ironic when you consider the next and final argument…

Origin of Argument:
"Common Core Is a Violation of 'State Rights!'"

Certainly, this argument is ideological in nature; therefore, there is not one "right" answer. I understand and sympathize with both sides. I want as little outside interference in my life --and my children's lives-- as possible.

Yet, I have visited schools across the country. I have examined all the data.

Consider the following…

First, we have <u>always</u> had a "national curriculum." It was disguised as 50 individual "state curricula" but it was all the same! I used to do "State Standard Alignments" for the world's largest text-book company, so I became intimately familiar with individual state standards. Every state simply copied the national standards, but made minor tweaks in wording and added a few unique outliers to claim it as their own. (Some may refer to this as "CYA Leadership.")

Our current education crisis is a <u>result</u> of *too much interference*. Finland provides a model for establishing a *streamlined* national standard of skills, while also scaling back the interference of administration that has no direct contact with students.

(WARNING: This will anger many people, particularly administrators working outside of the schools. Remember this fact when you hear arguments against reducing education administration! In truth, there will always be a

place for an effective, caring educator. But, certainly, all change and transition is intimidating.)

As previously mentioned, Common Core was developed as a compromise; it is an attempt to solve our national “skills gap” crisis in language arts, math, and skills-development, while allowing for local decision-making in all other areas of the curriculum.

Finland has illustrated how this can be a healthy compromise, specifically if we follow their lead by investing resources –and trust—in our teachers on the front line!

History Supports *Some* Federal Intervention

When our country was brand new and the ink was still wet on the Constitution, Noah Webster was a young student from Yale who made a critical observation.

Sitting at ports-of-call, he noticed people breaking out in fist-fights! People would meet at these ports from various colonies/states with vastly different dialects and varying vocabularies. They all spoke English, but in the days before audio and visual media, they couldn’t understand each other.

The fist-fights were the result of simple misunderstandings! Webster thought, "We'll never survive as a country if we can't understand each other! We can’t resort to settling our differences with violence instead of words."

Up to that point, Webster firmly believed in limiting federal power. He believed in protecting the rights of the colonies that had just become states. But, in an instant, he saw the critical need for unification across the states.

So, he created spelling, grammar, and reading textbooks specifically to teach the first generations of Americans a common language and establish a "native tongue.”* His

books were wildly successful and arguably vital for the stability of our young nation. They also funded the years of his research in compiling the dictionary, where he attempted to further regulate and "cement" a common vocabulary for generations to come.**

Even today, with *endless* access to audio/visual media, we still have several regional words and very distinct dialects. However, just two weeks ago I was able to sit at a table with several cousins from North Carolina and understand them clearly –even through their thick "drawl"-- because of Webster. He worked tirelessly for more than 50 years. He invested every cent and died penniless to secure a common language for our young nation. To him, it was a cause of national stability and security.

Today is no different; education is the critical foundation of economic development and, ultimately, our national security. The data regarding our global position in education is alarming! Just as Webster observed, this situation requires thoughtful consistency across the country.

**Initially, Webster had to travel to all 13 states to file copyrights for each of his textbooks. Eventually, he fought for federal copyright protection. (Another example of recognizing some inherent efficiencies at the federal level.) He's now known as the "Grandfather of the Copyright."*

*** Webster tried to bring standardized "spelling rules" to the English language to make the language more logical and less confusing. In some cases, he was successful. In most cases, however, he faced backlash. He found people were very sentimental about their language and refused new spellings, even if they were more logical.*

Conclusion

Common Core, as it stands in its unadulterated form on corestandards.org, is ONE step in a better direction for our country. But, so far…

Common Core has been one of the worst things to happen to education because of a very haphazard implementation process:

- Too much was mandated at one time.
- Proper training and support was not provided to schools or teachers.
- Common Core has been associated with a heavy emphasis on standardized assessments, which is not at all endorsed by Common Core.[8]
- Teachers on the front-lines have been robbed of all creative license; many are required to teach from scripts, which is in direct opposition to the intention of Common Core.[9]

However, if we can overcome the implementation deficits, Common Core can be the best thing to happen to education for several reasons:

- First and foremost, the Common Core bridges a fundamental gap existing between the training provided in K-12 and the "real-world" needs of the workplace!
- Common Core places emphasis on higher-order skills, versus rote memorization. This is a critical shift in the expectations of the 21st century economy.
- Common Core brings consistency to the expectations and outcomes needed of our young people so they may be competitive in a global economy.

- Common Core grants teachers the freedom to make decisions about how to help students meet these standards.
- Common Core provides a useful framework for meeting a national skills crisis in math and language arts, while also allowing states the freedom to determine all other subject standards.

Common Core is *not* THE ANSWER to solving our education crisis, it is merely a first step. It is the United States' first step towards following the proven model established by Finland.

-Chapter 12-
Looking Forward: Advice from a Futurist

Discussions about the future can be somewhat scary. What will the world be like with autonomous vehicles and artificially-intelligent robots running everything?

Futurecasting with a Futurist

Futurist, Brian David Johnson, shows us the undeniable role humans play in creating and designing their own future, and discusses how we can prepare future generations to be ready to create their future.

Johnson is the futurist-in-residence at Arizona State University's Center for Science and the Imagination. He provides insights on technology disruption leading to business opportunities and new models for business growth. He also challenges leaders to imagine what tomorrow will look like and to think about actionable visions for our future.

Johnson highlights a few key recommendations to consider as we look forward:

- **Coding is the international language of the future.** All students should be learning how to code.
- **Advice to a 6-year old:** Learn how to code *and* be human. You will need to communicate with machines, but never lose focus of the creativity that comes with being human.
- **How do we change the future?** People change the future when they change the story they tell themselves about the future they will live in.

- **Tools are just that… tools.** There's nothing special about the tools of the future. It's all about the humanity behind the tool and how we use the tool.

To see a video presentation of Johnson's insights for the future, go to: studyskills.com/educators/looking-forward-advice-from-a-futurist.

Regardless of what future date you might watch this video, the insights provided are evergreen; they will never go out of date! (Personally, I found the Q&A –starting at 26:52– to be most valuable to the topic of education reform.)

Conclusion

What is the best job security for the future? Be human. The industrial age was about what you could build. The information age was about what you know. The future will be about how you can collaborate with others and communicate via technology.

The language of the future… We must eliminate the current language of "either or" as it relates to technology and the arts, and replace it with an "and" that forever integrates the two.

-Chapter 13-
Conclusion: Creating an Ideal School System of Complete Human Education

The purpose of this book is to highlight and fix the core problem with education in the United States… *our utter disregard of human development*.

We heavily examined the brain biology of learning. We also examined the work of Dr. Montessori, which was based on her 50 years of scientific observation and has since been supported by decades of neurological research. Her methods are now backed by 100 years of success across all socio-economic and cultural boundaries. Finally, we evaluated several instructional models –including Dr. Montessori's— that successfully implement Complete Human Education.

On the following page, I provide a simple summary of how these recommendations can funnel into an ideal school system that supports Complete Human Education.

An Ideal School System of Complete Human Education

Ages	Intellectual: • Math • Language • Science • Self-Management Skills	Physical • Self-Care • Activity • Hands-On/Engagement	Social/Emotional Awareness • Social Policy • Spiritual Development
3-6	Montessori curriculum and materials for math, language, and life science.	• Montessori practical life • Montessori fine and gross motor materials • Gardening • Free-play	Montessori environment and curriculum builds self-awareness within a community.
6-12	• Montessori curriculum • Electives*	• Montessori fine and gross motor materials • Gardening • Beginning coding, robotics, & technology • Free-play • Introduction to fitness instruction • Intramural sports available	• Social support within the classroom. • Civic awareness within school and local community (e.g., visit local centers of government, provide volunteer service) • Training for independent living (beginning cooking, cleaning)

12-18	• Explicit instruction of self-management skills (study skills & soft skills) • Academics relate to career pathway with greater and greater emphasis on career-training. • Electives*	• Gardening • Coding, robotics & technology • Workplace visits • Fitness instruction • Competitive & intramural sports available	• Training for independent living (cooking, cleaning, paying bills, caring for self) • Social/special interest clubs • Aptitude, personality, and work-style assessments begin • Exploration of career pathways begin age 14+ • Specialized training age 15+ • Workplace visits • Soft skills training in workplace situations
18-24	• "Soft skills" instruction for the workplace • Academics relate to career training. • Electives* relate to career interests.	• Internships • Competitive and intramural sports available • Fitness opportunities available	• Internships • Specialized training • School-workplace transition support • Social/special interest clubs

*Electives should be age-appropriate and represent a wide variety of domains to inspire student *and* teacher interest. (See Green Pastures School in Chapter 8.)

Appendix

Common Core Anchor Standards

When taught in the context of Complete Human Education, the most powerful leverage-point for improving learning success is hiding in plain sight in the Common Core Anchor Standards. These "standards" are actually skills… "self-management skills" that promote success in school and are the most in-demand skills of the 21st century workplace.

Articles

The three articles listed below are some of the most popular posts from my website, StudySkills.com. They were referenced in previous chapters and provide deeper insight into specific strategies:

- How to Get Students in the "Green Zone" for Learning
- HOW Are You Smart?
- What Is Your Super Power?

Questions for the "Top 100 Schools" Interviews

See the questions I asked of all administrators featured in Chapter 9, *Building a School Culture: Insights from America's Top Schools*.

Sources

All sources referenced throughout the book are listed here.

Acknowledgements

It takes a village to write a book! My sincere appreciation to all who contributed to this book.

FREE BOOK BONUS:
Cue to Reading: How to Identify & Fix Any Reading Challenge...Quickly!

My best-selling book on effective reading instruction is included as a free bonus! *Cue to Reading* is comprehensive, yet efficiently quick to read. It was written as a guide for both parents and educators.

Common Core Anchor Standards; "Self-Management" Skills Hiding in Plain Sight

Despite all its controversy, the Common Core has made at least one move in a positive direction; attempting to connect education with the real-world needs of college and career.

The creation of Common Core began with one question: "What should a graduating 12th grader be able to do to be successful in college and/or in the workplace?" The Common Core committee researched needs cited by colleges, universities, and employers. From there, they refined a list of outcomes.

Those outcomes are called the "Common Core Anchor Standards." According to Common Core, "Anchor Standards" are the ultimate outcomes for graduating students. Every standard listed in Common Core, from K-12, ties directly to an Anchor Standard.

As you will see on the following pages, the Anchor Standards are all "self-management" skills, aka: "study skills" or "soft skills." By design, the Anchor Standards are aligned with the greatest needs of employers. But education only sees them as outcomes, not as skills that can promote acceleration or life-long learning.

The Anchor Standards provide the first viable bridge between "workplace development" and K-12 education. The only problem is, K-12 does not recognize this correlation or understand the powerful leverage-point this provides for dramatically increasing student performance.

Instead of waiting for these Standards to be achieved as "outcomes" for graduating 12th graders, we can teach these

Standards as skills to students as young as 6th grade. Skills that teach students how to learn, organize, and communicate have been proven to remove most of the friction learners experience in school. By teaching these skills in 6th grade and up, students then have many years of practice with applying these skills before reaching college or the workplace.

Teaching the Anchor Standards as "self-management skills" (aka "study skills" in education, "executive function skills" in special education, or "soft skills" in the workplace) is a win-win for: K-12, workforce development, for students, teachers, and families… The potential gains for our society and our country's ability to compete globally are exponential!

The Common Core Anchor Standards

Every Common Core Standard, from K-12, is correlated with one of the following Anchor Standards. These Anchor Standards were intended to be outcomes for graduating 12th graders. **In reality, they are skills that must be taught explicitly, before they will ever be attainable as outcomes.**

CCSS.ELA-Literacy.CCRA.R.1
Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

CCSS.ELA-Literacy.CCRA.R.2
Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

CCSS.ELA-Literacy.CCRA.R.3
Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

CCSS.ELA-Literacy.CCRA.R.4
Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

CCSS.ELA-Literacy.CCRA.R.5
Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.

CCSS.ELA-Literacy.CCRA.R.6
Assess how point of view or purpose shapes the content and style of a text.

CCSS.ELA-Literacy.CCRA.R.7
Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

CCSS.ELA-Literacy.CCRA.R.8
Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

CCSS.ELA-Literacy.CCRA.R.9
Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

CCSS.ELA-Literacy.CCRA.R.10
Read and comprehend complex literary and informational texts independently and proficiently.

CCSS.ELA-Literacy.CCRA.W.1
Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.CCRA.W.2
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

CCSS.ELA-Literacy.CCRA.W.3
Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

CCSS.ELA-Literacy.CCRA.W.4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.W.5
Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

CCSS.ELA-Literacy.CCRA.W.6
Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA-Literacy.CCRA.W.7
Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

CCSS.ELA-Literacy.CCRA.W.8
Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

CCSS.ELA-Literacy.CCRA.W.9
Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCSS.ELA-Literacy.CCRA.W.10
Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

CCSS.ELA-Literacy.CCRA.SL.1
Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.SL.2
Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-Literacy.CCRA.SL.3
Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

CCSS.ELA-Literacy.CCRA.SL.4
Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.SL.5
Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

CCSS.ELA-Literacy.CCRA.SL.6
Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

CCSS.ELA-Literacy.CCRA.L.1
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-Literacy.CCRA.L.2
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-Literacy.CCRA.L.3
Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

CCSS.ELA-Literacy.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.ELA-Literacy.CCRA.L.5
Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-Literacy.CCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary

How to Get Students in the "Green Zone" for Learning

by: Brian Willer, M.Ed., President of StudySkills.com

It's second hour in Mr. K's class. The bell just rang. Mr. K is ready to start his lesson.

But, here's what Mr. K doesn't know is lurking below the surface of the 32 bodies in his classroom:

> Nail thinks he failed his history quiz this morning, despite studying all night.
>
> Asha was just dumped by her boyfriend because of an untrue rumor posted on Facebook last night.
>
> Cody was just stopped by his coach in the hallway and reminded that Coach really needs Cody's best performance in the big game tonight.
>
> Mai has butterflies in her stomach because she's hoping today is the day that Cody will ask her to the homecoming dance.

"So, who's ready to learn about continuously compounding interest, today? What does it mean if interest is compounding continuously?

"Asha?

"Cody?

"Anybody?"

Mr. K wonders why much of his class seems to be on a different planet.

These are very heavy situations for students; how can they focus on "continuously compounding interest" with the flip of a switch?

They can't. They need your help.

How to Flip the Switch for Students

Here's how I combat the problem and inspire student motivation. (You won't find this in any teacher's textbook.)

Rather than jumping into the curriculum, I start with neutral ground. I begin each class with a teacher-lead activity. It takes no more than four minutes of class time. The activity is unrelated to the curriculum. It's high-interest, yet also predictable.

Here's my weekly schedule:

> **Monday: *"*My Crazy Weekend."** I share an amusing, but personal story of my weekend… students love to hear about the "real life" of their teacher!
>
> **Tuesday**: ***"*Tuesday's *Two-Minute Mysteries*."** I read a mystery from Donald J. Sobol's book, *Two-Minute Mysteries*. The students love to play "detective" and try to solve the mystery before I reveal the answer.
>
> **Wednesday**: **"*Would You Rather?* Wednesdays."** I read scenarios on a card from the old board game, *Would You Rather…?* For example, I might ask the class "Would you rather have five bottles stuck on the fingers of one hand for a year or have a bucket stuck on your foot for a year?" This always stirs up fun debate.

Thursday**: "Puzzle Thursday."** I read a riddle or display a visual puzzle for the class to solve; this is challenging, but engaging.

Friday: "**Bad Joke Friday."** I share a truly bad joke such as:
Q: When is a door, not a door?
A: When it's a-jar!
The students typically roll their eyes and groan. BUT, at the end of the semester, I often heard that "Bad Joke Friday" was their favorite activity!

What do I accomplish with these activities? Some would argue I've wasted valuable time in a setting where every minute counts. I would disagree. In under four minutes, I've cleared the "head trash" of 32 teenagers.

(NOTE: This activity works great with students of *any* age.)

I've reset their brains to a neutral state, or even to a positive and joyful state. Now, they're better equipped to learn about "continuously compounding interest."

Asha's grinning and shaking her head at my bad joke. Cody's imagining what it would be like to have five bottles on his fingers instead of whether he'll make the winning play. Mai solved the *Two-Minute Mystery* and is confident that Cody was impressed. Nail correctly answered a very challenging riddle and feels a little smarter.

I'm not suggesting that these activities will create world peace, but they do:

- Capture the attention of the entire class.
- Put a smile on everyone's face.
- Create a bond between the teacher and the student. And,

- Make for a smoother transition to the "real" curriculum.

Now when I ask, "What does it mean if interest is compounding continuously?" I might get an answer like, "The compounding doesn't stop?"

This might be the right answer or might be the wrong answer. But, at least it's an answer. The "Green Zone" activity gave me a starting point to get students *engaged* over the curriculum.

But Wait! There's More…

It wasn't until I had been using this strategy for several years that I discovered some unintended benefits. Over the years, as I've run into countless graduates around town, they often tell me how much those four minutes meant to them. For example:

- They thought it was cool that I cared about them enough to brighten their mood.
- They liked having something to look forward to at the beginning of every class.
- One student said, "Walking into class, I found myself thinking… 'I wonder what kind of ridiculous joke he has today?'" (This made me happy to know that their attention was already focused on my class *before* they even entered my door.)
- They were disappointed if I had a substitute teacher!
- Students perceived that I "cared" about them more than other teachers because of the "connection" that was made through mutual laughter and debate.

Getting Started

This is such a simple strategy, you could easily overlook its incredible power!

There is *so much* material available, the possibilities are endless! However, I've listed a few options to help you get started. Choose things that are age-appropriate for your students. Also, be sure to select things that appeal to you so your delivery will be authentic and natural.

Some resources include:

- Reader's Digest (rd.com) – particularly the "True Stories" or "Jokes"
- 5minutemystery.com
- mysterynet.com
- history.com/this-day-in-history
- Cards from board games, such as: *Trivial Pursuit®*, *Would You Rather®*, *Cranium®*, *Balderdash®*, *Truth or Myth®*, etc.

Good luck, and most of all…have fun!

HOW Are You Smart?

by: Brian Willer, M.Ed., President of StudySkills.com

We're asking the wrong question… Instead of "*Are* you smart?" we should be asking "*HOW* are you smart?"

As a society, we make this judgement of others all the time. Even the best teachers have thoughts like, "Kyle is a bright kid, he'll learn this quickly. But Rona will need more support."

But, *everybody* is *smart*… just in different ways.

Vivian is a teacher who reached out to us, asking for help. "Only 25% of my students are motivated! What can I do?"

After digging deeper, we discovered that her "at-risk" students had pretty much given up on education. They thought, "What's the point? I'm not smart. So, why bother giving any effort?"

Who Told Them They're Not Smart?!

It wasn't Vivian. It wasn't necessarily their former teachers. It's our *education system* that sends this message!

Traditional education only measures success by two factors: a student's ability to do math and to read/write (linguistics). We generally ask students to read, write notes, and compute math problems. Then, we assess their proficiency with a written test that consists of reading, writing, and/or mathematics.

We've trained students that there are only two forms of intelligence in the world… your ability to do math and your ability to read/write. That's why the SAT consists of three components… Critical Reading, Mathematics, and

Writing. And, the ACT consists of Math, Reading, English, Writing, and Science (which is mostly critical reading and math computations).

So, if you don't perform well in mathematics and linguistics, you typically don't perform well in school. Then, you quickly assume that you're "not smart."

However, what if we asked students, "HOW are you smart?"

This question already implies that you ARE smart and we just want to know HOW.

Meet Dr. Howard Gardner, Professor of Education at Harvard University. In 1983, Dr. Gardner proposed that there are eight different types of intelligence. He called them the Multiple Intelligences. They are:

- Spatial
- Bodily-Kinesthetic
- Musical
- Linguistic
- Logical-Mathematical
- Interpersonal
- Intrapersonal
- Naturalistic

We, at SOAR®, very much agree with Dr. Gardner's findings. That's why the 1st lesson in our curriculum addresses the Multiple Intelligences. We directly ask students "HOW are you smart?" Then, we give them an easy self-assessment that immediately gives them feedback. They instantly see which of the eight Multiple Intelligences is their strongest. Most of the time there's more than one.

Students now see HOW they are smart. (Many for the first time ever!) But, we don't just stop there.

Next, we show students what kind of fun, interesting, and successful careers are held by people in each of the intelligences.

When students can see a connection between themselves and a path to a successful and interesting career, motivation rises. Without that connection, students conclude, "Why bother?" Motivation plummets.

Can we blame them?

Vivian turned the low-motivation syndrome around in her classroom. She re-visited the "HOW Are You Smart?" lesson that covers the Multiple Intelligences. She built up her students' confidence. She drew the connection between their "smarts" and opportunities that were available to them in future careers. With that connection in place, she could take them down a new path… "Let me teach some additional skills to help you get to your future career."

If your students don't care, and motivation seems like it's at an all-time low, it's time to ask the question… *"HOW are you smart?!"*

Have your student(s) take an online Multiple Intelligences assessment at: miquiz.studyskills.com.

What Is Your Super Power?

by: Susan Kruger, M.Ed., CEO of StudySkills.com

Super powers are not just reserved for the Avengers™. We all have at least one.

You are probably "good" at a wide variety of things. But, there is *something* you're REALLY good at!

Something you do better than 90% of the population. That something is your Super Power.

What Is a "Super Power?"

Your Super Power is something you can't "NOT" do!

Most of the time, Super Powers come so naturally to us, it's easy to take them for granted. Usually, the only way to identify them is from other people's feedback.

They are usually evident from a very early age, even if they are only recognized in hindsight. In fact, your Super Power may be the root cause behind whatever you got in trouble over as a child.

In some cases, Super Powers may suddenly "appear" out of nowhere. That was the case for my friend, Marleine. One day, at age 35, she baked a cake for her nephews. Suddenly, she was creating masterpieces that soon earned her an invitation to participate on the TV show, *Cake Wars*!

Often, however, they are not as obvious.

What Is *Your* Super Power?

Does something come to mind instantly? Or, do you need some time to think about it?

Super Powers come in all shapes and sizes. They may be a specific talent --like Marleine with her exquisite cakes-- or they may be a more broad-reaching gift.

The best way to describe the wide variety of Super Powers is to share some examples. So, I've compiled a list of, what I believe, are the Super Powers for some people in my closest circle:

Brian (my husband and President of our company) – "Mr. Make It Happen!" If Brian decides that a certain project is worthwhile, it won't matter how impossible it seems, how much resistance comes his way, or how much work he'll have to do… he will devise creative solutions, convince everyone around him to get on board, and Make It Happen!

Ginelle (SOAR's Operations Manager) – "Dig in. Figure it out. Fix it." Ginelle loves to touch, dig, and ask questions. She can't help but fix things. Last week, we sent out a survey, asking for your feedback. By 9:30 AM, Ginelle realized something was wrong. When she couldn't contact Brian (who created the survey in his Google account), she figured out how to get into his account, dug around a bit, and fixed it. *Then* she left him a voicemail, apologizing for "breaking into" his account. (Which, of course, Brian didn't mind.) The point is, she couldn't "NOT" fix it!

Mark (my nine-year-old son) – "If I can dream it, I can build it." I sometimes wonder if our house will survive Mark's creativity. A few weeks ago, Mr. Make It Happen hosted a pirate-themed murder mystery party for a dozen friends. Mark was so inspired by all our pirate guests, he turned his bunk bed into a pirate ship with empty paper towel tubes and 11×17 sheets of card stock rolled into cannons. To create the mast, he wedged a broken carpet tube between the ceiling and the mattress on the upper bunk. While Mark is still young, I have no doubt that was evidence of his Super Power.

Maddie (my *almost* four-year-old) – "Fashion Diva." Maddie is still very young and has yet to learn the underlying *social skills* of fashion. ("No, Maddie, you CANNOT wear a nightgown to school!") But, she has some serious talent for assembling outfits, which was first evident at 18 months of age. For years now, she's been insisting on selecting her outfits *every* day. (God forbid if the must-have article of clothing is in the laundry!) This is often a source of frustration for me, but it's clearly coming from a deep source inside her soul. It's her Super Power.

Kevin (my 20-year-old cousin who is living with us and "interning" with our company) – "Energizing Personality." I'm still getting to know Kevin, but one thing I noticed right away is that his presence energizes the people around him. To him, it seems effortless, so he doesn't recognize it as a gift. I believe it stems from his kind soul and great sense of humor. Somehow, he communicates these traits almost imperceptibly.

Lucas (Our company's Financial Clerk) – "Attention to detail!" Lucas is the perfect person to manage numbers and data because he pays attention to very minute details. Lucas is working to overcome challenges with Aspergers. Like most people, his "challenge" in some environments and situations is a Super Power in other environments and situations.

Chelsea (Our company's Logistics Manager) – "I'm in touch with my inner child!" Chelsea is very dynamic and does a little bit of everything around here. Whatever she's doing, she does it with a smile. Whether it's wearing crazy hats to work or playing sword fights with my son in the middle of the work day, Chelsea makes her days fun!

Me – "Organization." Brian inspired this article based on a casual side-comment. We were discussing a new project in which he is taking the lead. We outlined the anticipated steps

and discussed one step that will involve organizing a massive collection of information. Brian said, “When we get to that point, I’m going to ask you to step in because that’s your Super Power.”

Why It’s *Essential* to Identify Your Super Power!

One of the most essential keys to success in life (which most people equate to “personal happiness”) is to harness your Super Power. It’s your God-given gift. You were meant to use it.

And it’s going to come “out” whether you can help it or not. If you are in situations where your Super Power is *not* an asset, your life will be an uphill battle. It’s much more valuable for us, and for society, if we put ourselves in situations where our Super Power can manage the “hard work” that 90% of the rest of the world doesn’t do quite as naturally.

The unfortunate thing about Super Powers is that we are rarely encouraged to use them. The closest most of us come to identifying our Super Power is when we graduate from high school and choose a college major or a job. That’s often the first time we are encouraged to think about what *we* want to do… and it’s a difficult adjustment after spending the first 18 years of our life being *told* what to do!

Super Powers are completely ignored in our education system. Instead, the focus is almost exclusively on deficits. “Raising test scores” doesn’t mean, “Let’s enlighten our students’ Super Powers!” Instead, it means, “Let’s look at what our students CAN’T do and fix it.” Certain skills are, of course, essential. However, the “fixing” of skills is rarely done in a setting that celebrates gifts, talents, and encourages students to identify their Super Powers.

This constant focus on deficits produces students who often ignore their natural gifts, thinking “success” requires difficult

work. They don't realize that they have a Super Power. If they do, they feel like they are cheating if they use it.

Your Super Power Is Also Your Kryptonite

Your Super Power will either work for you, or against you. As I said, it's the thing you can't "NOT" do. In the wrong setting, your Super Power can get you into trouble because it doesn't go away; it won't tolerate being harnessed for very long!

My Super Power of "Organization" has allowed me to create an effective curriculum and build a business. However, it can create a lot of anxiety. I'm always aware of how something *should* run, be assembled, or go together. If things aren't working smoothly (which is pretty much the nature of parenthood), it takes a lot of effort to squelch the anxiety. If I didn't have a positive outlet for my Super Power –and know how to keep the "dark side" in check (most of the time) -- parenting would be pretty miserable.

Brian's Super Power of "Make It Happen" is wonderful because he gets things done! However, sometimes that means things get done a little too fast. Like the airline tickets he purchased two weeks ago… for the wrong week.

Ginelle's Super Power of "Dig in. Figure it Out. Fix it." has an interesting Kryptonite-turned-Hero aspect. Originally, her natural need to touch things, dig in, and ask questions wasn't met with appreciation in school. So, she dropped out. However, after a semester of flipping burgers, she realized the value of an education and returned to high school with a commitment… to become a teacher that WOULD appreciate the tactile, inquisitive learners of the world. After all, she had to "fix it!" After years of struggling against her Super Power, she eventually figured out how to harness it!

Conclusion

Identify your Super Power. Become aware of how it works for you… and can work against you. Help your children and students identify their Super Powers, too! And, of course, encourage them to develop and harness their natural talents and gifts. This is the #1 way to inspire motivation… and set them on the path towards success!

Here's to your Super Power!

Questions for the "Top 100 Schools" Interviews

The following questions were used to guide all six interviews with administrators, as featured in Chapter 9

1. How did you get into the role you're in today? What was the path you took?

2. Have you worked at other learning institutions? How is your school unique? What has made your school a "lighthouse institution?"

3. Do you have a "lighthouse institution" that you look up to?

4. What are other schools do you admire and why?

5. How does the future workplace influence your curriculum decisions?

6. What skills would you say are the most important in the 21st century workplace and how is your school addressing them?

7. What do you find makes the biggest learning and performance difference for your students?

8. What do you like about your current programs?

9. If you could wave a magic wand what would you change in your school?

10. What is really working in education right now? What's the most influential new development in teaching/learning? What's most important about it?

11. What do you think needs to be changed in education?

12. VISIONARY: What's the most important thing you would like to tell the world about education today?

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Aunt Betty Hissong - As I write this, you are celebrating your 90th birthday! You've dedicated your life to young children through the legacy of Maria Montessori. If not for you, "Montessori" would never have become part of my life, let alone my calling. Thank you, Aunt Betty, for all you have done to keep Maria Montessori's critically important work alive. Happy 90th birthday!

Perry Marshall – Thank you for your persistent encouragement to "go bigger" and aim for education reform. You've been an unwavering source of encouragement as we "muck through the swamp" of this unchartered path.

Melvin Pillay – Your frequent (and always perfectly-timed) messages and prayers have been a vital source of encouragement for us. Thank you for being such a special source of support.

Richard Koch – You asked for my thoughts on education reform…next thing I knew, I was writing this book. Thank you for the inspiration!

The Oakland County Team – **Matthew Gibb**, thanks for all the doors you've opened… for all the so-called "little things" that mean so much more. I sincerely appreciate your continued faith and support. **L. Brooks Patterson**, thank you for your personal support to spread this message and for your dynamic leadership in Oakland County. Specifically, your *Elite 40 Under 40* and *Oakland Next* programs are serving to connect public and private sectors, which is critical for encouraging alignment between K-12 education and workforce development.

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Mark – Your light almost went dark. And it was *terrifying*! But, you have not only overcome every obstacle, you've *destroyed* every obstacle. You are a warrior! I am so proud of you for all that you've done, but more importantly, for all that you are… a very kind soul who is not afraid to stand up for what is right.

Maddie – Our life was so boring before you came along! You truly are our #PrincessWildCard 'cause we never know what to expect from you. But, we can always be sure it will be an adventure! I love that you've always known what you want… *always*. You have your own style. And you won't let anyone cross you. But, your compassion knows no limits.

Mom & Dad Kruger – There isn't anything you haven't done for us. Child care, home repairs & office reconstruction, editing, more editing… Most importantly, you've never, ever discouraged me from following my own path. I will never be able to fully appreciate what a true gift that has been!

Mom & Dad Woodcock – Likewise, there isn't anything you haven't done for us… lots of help with child care,

transportation, house projects, lots of encouragement and yummy chocolate chip cookies! Thank you for the unwavering support.

Brian – We've been to the brink together. Thank you for sticking through all the ups and downs to finally discover that 1+1=11. You've been my partner in every professional endeavor since we met as college freshmen. You've supported every one of my "crazy" visions and are the unsung hero of every project bearing my name. Thank you for always having my back. I love you.

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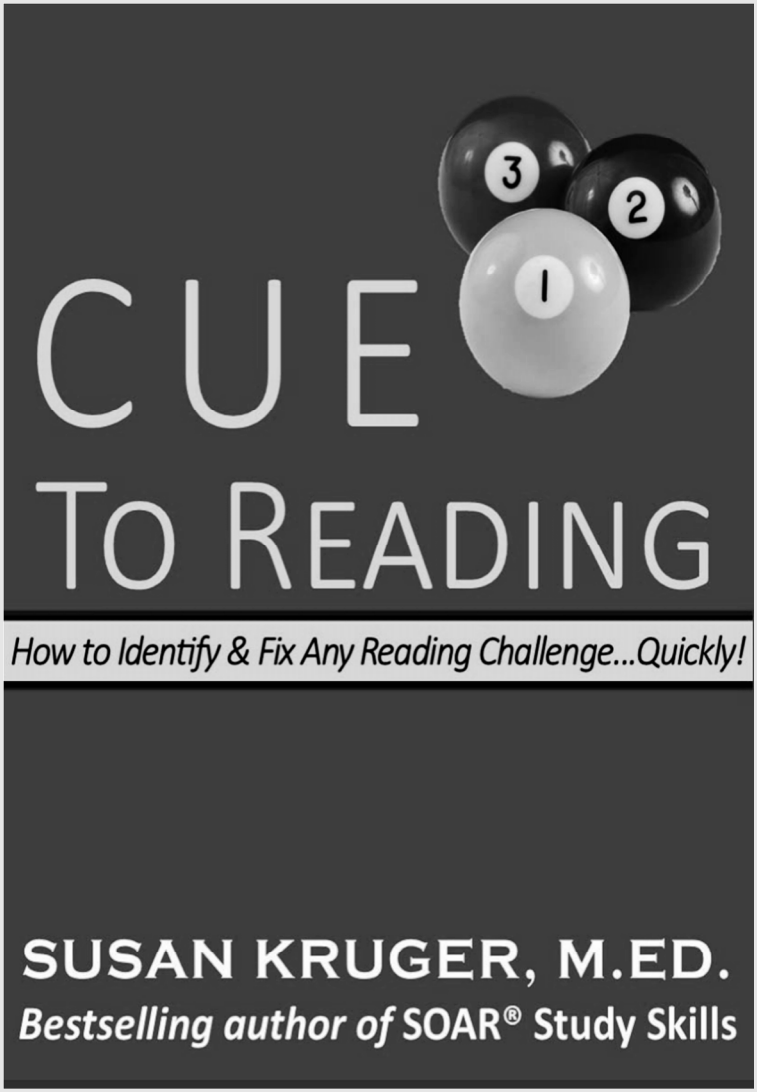

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Introduction

I'm a certified reading specialist with a "best-selling" education book. But when I suspected my son had dyslexia, I found it impossible to get help.

A mentor of mine experienced the same trouble trying to get help for his granddaughter. "Schools are not only ignorant towards dyslexia, they are *blatantly* ignorant!" he declared empathetically. "20% of students have a 'reading disability,' yet schools are completely not prepared, equipped, or trained to handle it!"

He's right. But I must admit, for my first several years as an elementary teacher, I didn't know what I didn't know.

There are fundamental flaws in the training of reading teachers… some of which I only learned after getting a graduate degree in reading. But, most of which I learned through extensive research, additional training, and "hard knocks" as I fought to get help for my son.

On the following pages, I share best-practices based on sound science. I share them in the context of specific examples with my son and other students to best illustrate strategies and to make them more personal.

Get FREE Bonus Materials!

A "Quick-Reference Summary" and "Reading Chart" are available at www.StudySkills.com/cuetoreading

-Section One-

Pinpointing the Problem:
Get It Right and Fix It… Quickly!

-Chapter 1-
When a Parent Knows Something Is Wrong…

My son, Mark, was diagnosed with dyslexia. We had specific challenges with his principal and reading teachers, forcing us to pull him from our neighborhood public school ¾ of the way through first grade and move him to a "new" school. It was a tough transition for all of us, but Mark was nothing short of a stoic trooper. After only two months at the new school, he'd grown rapidly and made great strides. The move was clearly a good one!

However, I had spent the better part of that school year feeling as if I was trapped in some type of invisible cage… begging, yelling, and screaming for someone to hear me. "Something is not right," I told his pediatrician and explained my suspicions. That led to a rabbit trail nearly twelve months long, involving several specialists and countless tests, but few answers.

I am a certified reading specialist. **I have authored the best-selling study skills book* for over eight consecutive years.** I know what I'm talking about. Nonetheless, I *humbly* shared my concerns about a reading disability with Mark's reading teachers. They turned up their noses to me and, in my son's words, were "mean" to him. I happened to be volunteering in the hallway one day and witnessed one of those interactions. It was stunningly awful!

Mark's principal shouted at me, saying *I* was the one holding him back. He leaned across the table, pointed his index finger in my face, and repeated himself; just to be sure his message was clear. "HIS MOTHER is the one holding him back!" he scolded. He then threatened to refer us to the court system

for Educational Neglect, which is full-fledged child abuse in the eyes of the court.

I couldn't make this stuff up; you wouldn't believe me if I did! But it is all true.

My husband and I were getting impatient! A full year was nearly over. We had no answers and very few (if any) people who truly supported our concerns. "He just needs to try harder," one of the reading teachers told me.

Most seven-year-olds do not NOT try; especially not Mark, who is an absolute "people-pleaser." I was sure he was giving us everything he had.

We needed more answers. My mom is a physician and recommended a nearby "Center for Human Development," sponsored by a nationally recognized hospital. The center had a great reputation for doing thorough neuropsychological evaluations, so we scheduled an appointment. We gulped at the hefty price tag, but it was our only option.

After several visits, the team of doctors and learning specialists diagnosed Mark with "severe dyslexia" and ADHD. (He had previously been diagnosed with ADHD.) We were given a thorough walk-through of his assessments and what could be learned from them. It was as close as I'll ever come to walking through Mark's brain and it was an interesting stroll! He's amazingly smart, but he has his challenges. (Sound familiar?) The test results were so revealing – and vindicating!

They congratulated us for being so proactive. One doctor explained, "Most people – parents *and* teachers – do not recognize a problem until children are much older. You clearly did your homework! You're on a great path!"

I cried tears of relief. My husband explained the "in-your-face" reprimand I had received from Mark's previous principal and his accusations of "educational neglect." They were appalled!

Meanwhile, I felt like someone had come along and quietly unlocked the "cage." Suddenly, I was no longer crazy. Now, when I "scream," people *have* to hear me… I have paperwork!

Two days after receiving this news, I shared the diagnosis with several colleagues during a meeting. Many of them knew various parts of the story and were all curious about our progress. As I began to elaborate, more tears fell. Several people dabbed tears from their eyes in sympathy. One of them was Stephanie.

Stephanie sat across from me. She looked at me with strong conviction. "Susan, I talk to parents *all the time* who are dealing with various issues like you… autism, dyslexia, ADHD – you name it. They all share similar stories to your experience. But I've never met a parent who is more equipped to handle this for her child *and* help a lot of other families along the way. You've got work to do!"

She was right!

So, I wrote this book. Don't let the short page-count fool you. This book is a comprehensive resource, covering the most essential information parents *and* educators need to know to properly identify and remediate reading challenges and disabilities.

** SOAR Study Skills: A Simple and Efficient System for Getting Better Grades in Less Time*

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A “Quick-Reference Summary” and “Reading Chart” are available at www.StudySkills.com/cuetoreading

-Chapter 2-
The Three Cueing Systems of Reading

Zimulis.

What is this word? How do you say it? How would it fit in a sentence? What is it describing? Do you have any ideas?

"I misplaced my trusty zimulis." – Did that help?

Now you know that a zimulis is a noun. Whatever it is, it's "trusty," so maybe it is some type of electronic device or a tool?

Now look at this photo:

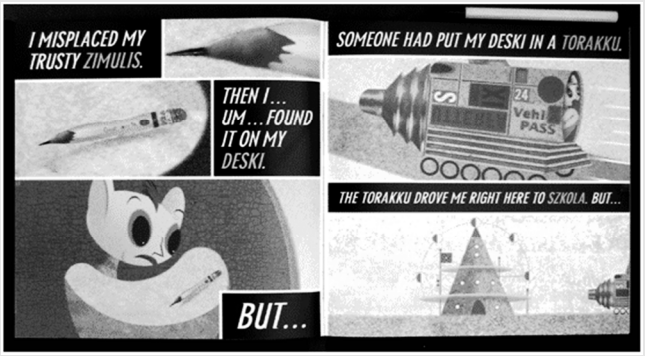

Photo from Baloney (Henry P.) by Jon Scieszka.

From this photo, you can finally determine that a "zimulis" is a pencil!

We've just wandered through the three cueing systems our brains use when we read. Every time we read, our brains align cues from these three systems to process words and their meanings. The cues are influenced by the unique combination of letters, words, and the situations in which we encounter them.

Those three systems are:

- ✓ Visual (graphophonic/decoding)
- ✓ Grammatical (syntax)
- ✓ Contextual (semantics/meaning)

Let's break it down...

At first, your only cue was the string of letters: z-i-m-u-l-i-s. This is a visual cue.

The second example put the word in a full sentence ("I misplaced my trusty zimulis.") and provided a grammar cue.

Finally, the picture helped you determine its meaning by providing context for the sentence.

To summarize:

> VISUAL CUE = The string of letters: z-i-m-u-l-i-s.
>
> GRAMMATICAL CUE = Identifying the part of speech by reading the word in a sentence. ("I misplaced my trusty zimulis.")
>
> CONTEXTUAL CUE = The setting and conditions in which that sentence was used. (In this case, an illustration provided the meaning.)

These cueing systems are the core of everything I understand about reading and every decision I make when I teach reading. (As a reading teacher, I make hundreds of "on-the-spot" decisions while coaching a struggling reader.) My understanding of these cueing systems specifically allowed me to recognize a problem with my son's reading at an early age – well before any of his teachers detected a problem.

In theory, the cueing systems are not a big secret. I just Googled "three cueing systems of reading" and got over 133,000 results! However, the lack of understanding I encountered among my son's teachers and administrators was shocking! Judging by the dozens of similar stories I have since heard, my experience is far from unique. Training in these fundamental aspects of the reading process is simply not adequate!

Why Are the Cueing Systems So Important?

You cannot effectively teach struggling readers if you do not know the areas in which they are deficient. Without this insight, all instruction is a shot in the dark. Sometimes, teachers get lucky and get it right.

Sometimes, they don't.

How Do You Identify the Breakdown?

You can identify a reader's weakest cueing system(s) by observing their "mistakes." This can be done with a formal assessment, but parents can gain tremendous insight with informal observations. In Chapter 4, I will explain this process in detail. Meanwhile, pay attention to your own use of the cueing systems and think about what cueing system you rely on the most. The more observations you make about your own reading, the more you will get out of the next chapter.

Get FREE Bonus Materials!

A "Quick-Reference Summary" and "Reading Chart" are available at www.StudySkills.com/cuetoreading

-Chapter 3-
Cueing into a Problem:
The Most Important Cueing System in Reading

What Is the Most Important Cueing System in Reading?

When I ask teachers this question during training sessions, 90% of them respond, "Visual!" Then I show them this message:

> I cdnuol't blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg. It is the pheonmneal pweor of the hmuan mnid! Aoccdrnig to rsceearh at Cmabrigde Uinervtisy, it dseno't mtaetr in waht oerdr the ltteres in a wrod are; the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig, huh???

Some people do not even notice the dozens of spelling errors in this message right away. When they do, they are shocked at how well they can read this paragraph. If our brains relied as much on the visual cueing system as we typically think, we would have to labor through each word to "reinterpret" it in our minds. Instead, most people can read this almost effortlessly.

The readability of this paragraph is about so much more than the "first and last letters being in the right place." The "phenomenal power of the human mind," refers to the other two cueing systems. The grammar and context cueing

systems are actively helping us anticipate words, making reading much more efficient than if we were strictly relying on visual cues alone.

This example also explains how we –as adult and highly proficient readers– can stumble while reading simple text. Our brains use the grammar and context cueing systems to anticipate words before our eyes ever see them. Once our eyes see the words, we occasionally find that they are not what we expected and we make a mistake.

For example, while reading to my kids one night, I read this sentence out loud: "As he said it so crossly that she knew there was not the least use in staying another minute."

The period at the end of that sentence caught me off-guard. I was waiting for something to explain what happened "As he said it so crossly…" I reread the sentence and discovered it went like this: "And he said it so crossly that she knew there was not the least use in staying another minute."

Much better! (This is an example of the grammatical cueing system at work.) Visual cueing is only 1/3 of the reading equation.

Traditional instruction used to focus only on phonics. For the better part of two decades, the "whole language" movement brought more comprehension strategies to the classroom, but at the expense of phonics. Then, "balanced literacy" entered the picture, teaching both phonics and comprehension.

However, even in a balanced literacy classroom, the assessment process is aligned with a linear view of reading; one that assumes the process of learning to read begins with decoding and ends with comprehension. It's as if learning to read is as straightforward as walking a tight-rope, moving from one narrow end, straight to the other.

Cueing into a Problem

At first, my son's reading trouble seemed like a paradox. I read to him nearly every night since he was an infant; his comprehension had always been strong. But, as he brought home "leveled readers" from school, I noticed him laboring through simple words. Reading was obviously painful for him.

Quite frankly, he sounded like a train-wreck! Amazingly, however, after he finished a book, he would correctly answer every comprehension question. There were times I was wrong about certain facts and he would challenge me, immediately turning to the exact page of the book to prove I was mistaken. His comprehension was remarkable!

I decided it was time for me to give Mark a formal reading assessment. His fluency (verbal accuracy while reading out loud) score was 82%. This is *very* low! For perspective, here's a widely-accepted breakdown of fluency rates:

> 95-100% is considered a proficient, independent reading level.
>
> 90-95% is considered an instructional reading level. This is the level teachers target to help developing readers grow and progress. At this level, it is expected that students will need support from their teacher to understand what they are reading.
>
> 89% or less is considered too difficult! Reading with this level of fluency is expected to be too frustrating, even with assistance from a teacher.

With a fluency score of only 82%, conventional wisdom says that Mark should not have understood anything he read in this passage. Even the test instructions said to stop the assessment immediately if the fluency rate was less than 90%

and try a lower level passage. But I proceeded with the comprehension portion of the assessment.

Mark scored 100% on the comprehension test!

This looks completely backward… unless you understand the power of the other two cueing systems! When you understand that the visual cueing system is only 1/3 of the equation, you can see the other possibilities.

I knew Mark had a strong vocabulary and comprehension skills. While he stumbled through words at a painfully slow rate, his grammar and context cueing systems worked overtime, using the words he did understand to make meaning of the reading. It was quite impressive!

The Parent-Teacher Conference

I met with Mark's reading teachers in March, while he was in first grade. They complained that hadn't grown one reading level since September. "He can sound out words, but he can't comprehend," they said. I was shocked that they could come to that conclusion after the results I had seen! After six months of working with my son in small groups, they clearly did not know him.

The problem was that his *fluency* did not allow him to move up to higher levels. He was stuck reading low-level books that used very short words in unnaturally short sentences. These books provided very few context cues. Since he could not read these "low level" books with a fluency rate of 95%, he was stuck.

The Wide-Open Secret

As I've already emphasized, the cueing systems are not a big secret, yet they are widely ignored, misunderstood, or simply underutilized. Had my son's teachers been equipped

to a do a miscue analysis, they would have drawn a completely different conclusion about his reading abilities.

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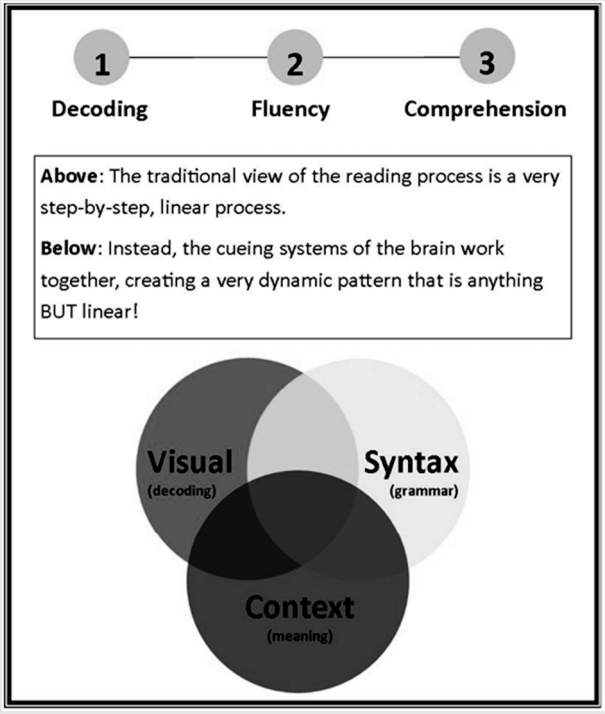
-Chapter 4-
When Mistakes Are Golden

By now you may be a little tired of all this talk about cueing systems, but they are the most critical element of reading instruction. I've had thousands of hours of training from my master's degree, several years of professional development while teaching, and years of additional training beyond the classroom. But, I always come back to the cueing systems.



In Chapter 3, I explained the common, linear assessments my son's reading teachers used. They were only measuring his reading fluency (verbal accuracy when reading aloud) and completely missed his comprehension skills.

Fluency tests, also known as "running records" (which are very popular), only measure the accuracy of the visual cueing system. My son was talented in the other two systems but his teachers did not discover that because their assessment tools assume that reading is a linear process, beginning with decoding/fluency and ending neatly with comprehension.

However, there is a more dynamic --and effective-- assessment. It begins exactly like a "running record," but adds another layer of analysis. This additional layer goes deeper into the cueing systems. It unlocks the mystery of what is happening in your struggling reader's brain.

The Miscue Analysis

I tell struggling readers that their "mistakes" are really signs of wonderful things their brains do to make sense of our crazy language! It usually takes a while to convince them this is true; they aren't used to thinking of mistakes as something "good." For a miscue analysis, however, they are gold!

In fact, they are not called "mistakes" because that word is misleading. Instead, they are called "miscues" because they are a signal that one of the cueing systems is not working properly. With some detective work, you can learn what cueing system(s) a student is using and how accurately they are doing so. You can also learn what cueing systems are deficient so you can efficiently remediate the reading challenge.

There is more than one way to do a miscue analysis, just like there is more than one recipe for baking bread. There are some basic ingredients, but many variables. There may be a few reading teachers who read my description and think, "That's not how I do it!" That's okay. I'll stick to the basics.

A miscue analysis is a process of documenting all miscues, then analyzing the cueing systems that generated each miscue. When administering a miscue analysis, the teacher will have two copies of the reading passage. The student reads one copy while the teacher takes notes on the other. The teacher records everything a student says that is not exactly as it is written in the text. In other words, the teacher records all miscues.

After the reading, the teacher goes back and formally analyzes the miscues. The key question they ask for each miscue is, "What cueing system was the student using to generate this miscue?"

For example, I gave a miscue analysis to a third-grade student named Kole. Below, I have analyzed three miscues he made within one sentence. It's a great example because it happens to include all three types of miscues:

> **The text said**: "Kicking strongly, he kept himself up above the water. He blew high burst pulse sounds with his flute."
>
> **Kole read:** "Kicking strongly, he kept himself up above the water. He blew a high burst plus sound with his flute."

Miscue 1: Inserted an "a."

KEY QUESTION: What cueing system was he using that caused this miscue?
I think he was expecting the second sentence to say something about blowing a breath, because the previous sentence was about struggling in the water. There is no visual representation in this sentence for the word "a," so he was clearly anticipating the word and must be using the context/meaning cueing system.

Miscue 2: Read "plus" instead of "pulse."

KEY QUESTION: What cueing system was he using that caused this miscue?
"Plus" and "pulse" look similar. Since "plus" does not make sense in this sentence, it seems clear that he was using the visual/decoding cueing system.

Miscue 3: Read "sound" instead of "sounds."

KEY QUESTION: What cueing system was he using that caused this miscue? Since Kole inserted an "a" in the first part of this sentence, he was expecting something to be singular, as in "a high burst sound" instead of "high burst sounds." He was struggling to keep the grammar consistent in this sentence, so I believe he was using the syntax/grammar cueing system.

These examples illustrate the thought process that goes into analyzing each miscue. There is some subjectivity to this process, but after analyzing 25 or more miscues, you will see clear patterns emerge.

What Do You Do with This Information?

The ultimate goal of a miscue analysis is to determine what cueing systems a student is using and how well they are using them.

80% of the time, you will find your struggling students fall into the pattern of being a "visual reader." A visual reader relies primarily on visual cues, identifying words only by "sounding them out." We call these students "word callers" because they read like they are calling off a list of words, not making sense of what they are reading. Since phonics skills are typically the first skills taught and the easiest ones to teach, you will often find students who are over-reliant on these skills.

The significant reason for doing a miscue analysis, however, is that visual readers do not sound like they know their phonetic skills. To the untrained ear, they will sound like they are struggling badly to sound out words, which leads many teachers and parents to think they need more lessons in phonics. However, on closer examination of their miscues, you will often find that they are *overusing* phonetic principles to guess at words.

Did I mention that the English language is crazy? There are many, many exceptions to the rules a phonetic reader uses. The only way to learn these exceptions is to develop a more mature "sight vocabulary" and better context and grammar cueing systems. Strategies for developing these skills are explained in Chapter 11 and 12.

The remaining 20% of your readers will exhibit a variety of patterns, typically utilizing a mixture of the three cueing systems. Some miscues in these cases are due to the visual cues from the letters, but these readers will exhibit a much greater number of "syntax" or "meaning" errors. They will start saying words that they predicted would be in the passage, which may not look anything like the word in the text.

For example, the sentence might be written as, "They were going to go swimming in the ocean," but the child might read, "They were going to go swimming in the water." The meaning of the second sentence was still intact, indicating that this child was using the "contextual" cueing system.

A Triangulated View

A good miscue analysis will analyze the student's <u>reading fluency</u>, <u>comprehension</u>, and <u>miscues</u> to get a full picture of the student's reading behaviors and abilities. This analysis is not scientific, and some ways to administer a miscue analysis

are more objective than others. However, I typically find that a general observation of the cueing systems is sufficient to determine the best instructional methods and to determine if any further testing would be warranted.

In my son's case, I knew from informal observations that something was wrong. So, I gave him a more formal assessment in the form of a miscue analysis. This gave me data (i.e., 1st-grade reading passage, 82% fluency, 100% comprehension) to share with his teachers and health professionals. The miscue analysis verified that he was very strong in two cueing systems and extremely weak in the third. These patterns are flags for a learning disability. From there, I needed standardized evaluations to give me a solid diagnosis.

This chapter is not intended to be an instruction manual on how to give or score a miscue analysis. There are many other books, videos, and other resources available for that information. At the present time, these resources are currently available:

Video: *Authentic Assessment – Literacy: Miscue Analysis* by Dr. Andrew Johnson of Minnesota State University-Mankato is available on YouTube. This six-minute video is very insightful and informative!

Book: *Miscue Analysis Made Easy* by Sandra Wilde. Written for teachers who want to study this topic with intense depth, this book is very comprehensive.

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-Section Two-

Important Things to Know

-Chapter 5-
The Brain Biology of Learning Disabilities

Will was nine-years-old and very bright, but he had a severe reading disability. When his mother asked me for advice, she described him as "illiterate." She was at her wits' end! Will's trouble with reading was making them both feel hopeless.

One of Millions

The first thing I told Will was, "You are not alone." Literally millions of students struggle with reading, which isn't surprising when you consider that reading is the most complicated mental task we learn as human beings. It's also fundamental to almost everything we do in the modern world.

I am one of those millions who have struggled with reading. I struggled all through elementary, middle, and high school, and only hit my stride when I discovered study skills in college. Much later, when I was 36, I discovered that I had ADHD and dyslexia.

I've already talked extensively about my son's reading challenges. But, with the right instruction, he was reading at "grade-level" within six months of his diagnosis – a major victory!

If you have a reading disability, you are not alone. Nor are you stuck "forever."

What Is a Learning Disability?

I knew the best way to help Will was to explain exactly what was happening in his own brain. A reading disability may feel big and all-encompassing, but it is something very small and localized.

The brain is made of many different sections, each handling different tasks. The section responsible for reading is one small part of a much larger whole. A person with a reading disability is not "dumb"; they do not even have a "weak" brain. Like most students diagnosed with a learning disability, Will was very intelligent. His challenge was limited only to reading.

It's important to remember that everyone is born with stronger and weaker areas in their brain. Every brain is different… better at some things and worse at others. When the weakness is with reading, we tend to notice it more than other issues because reading is so fundamental to school success. Unlike some weaknesses, a problem with reading is hard to hide or ignore.

But no part of the brain does its job alone. The various parts of the brain communicate with each other to process information. Each of the three cueing systems is rooted in three different parts of the brain. But, they work together to read. They share information with each through electrical wires. These "brain wires" are called "neurons."

Growing Neuron Connections

The brain is constantly making new neuron connections. It doesn't just communicate along fixed paths. Every time you learn something new or develop a skill, you create hundreds of new neuron connections, making new ways for the brain to communicate with itself. This process never continues throughout your whole life, so long as you keep learning.

This is a farily new discovery. It was only at the turn of this century when researchers discovered that the brain continues to grow. Previously, scientists thought the brain grew until about age five, then stopped. The truth is more encouraging: your brain keeps growing as long as you keep using it!

Building Yourself a Better Brain

You can build detours around the weaker parts of your brain. For example, many systems for dealing with reading disabilities use "multi-sensory" strategies to engage different senses when you read. These strategies help you get different parts of the brain involved in the task of reading.

You can use different parts of your brain to accomplish the same task. It's like using your legs to help you push something heavy when your arms, alone, aren't strong enough. Even though your legs do most of the pushing, your arms get exercise, too. Over time, the weaker part of your brain can get stronger as you use them, with help from the stronger parts.

It is possible to *outgrow* a learning disability. It takes targeted practice and exercise with the strategies described in the last section of this book, but you can build a network of supporting neuron connections around the weaker parts of your brain, until the weak parts become strong.

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-Chapter 6-
A Simple Learning Solution
Hiding in Plain Sight

Like my son, I have ADHD and minor symptoms of dyslexia. I always struggled in school, but didn't notice specific trouble with reading until middle school. Specifically, I had trouble *seeing* the text in my textbooks. When I looked at a page, a glare of white light slithered between the text and reflected back at me. It was very distracting and painful, in the same way that seeing a camera flash in the dark would hurt your eyes.

However, what I was seeing was constant and debilitating.

Mom took me to an eye doctor. "Everything's fine," he said. But I kept complaining.

After another year, Mom took me to another ophthalmologist. "Everything's fine," he said.

My mom is a physician and was hand-picking the top doctors from her large hospital. We had no reason to question their conclusions. I just thought I was crazy. But that didn't stop me from complaining.

Finally, Mom took to me to yet another eye doctor. "Everything's fine," she said. "But since she is complaining about glare, let's try a pair of glasses with tinted lenses."

They worked great and instantly stopped the glare! But there was one significant problem.

The glasses had *giant* lenses with a dark rose tint. I was already a shy and self-conscious eighth-grader; there was *no way* I was wearing those babies outside of the house! For a

while, I used them to read at home. Otherwise, I continued to suffer.

Over time, I developed a couple coping mechanisms. One was to do my homework in extremely dim light (which I still prefer). The second, and most effective, was simply to avoid reading my textbooks. That did not serve my grades very well (until I learned study skills), but my eyes were grateful.

Fast-Forward 25 Years…

While we pursued testing for my son over his learning disabilities, I took him to my eye doctor. Before the exam, I explained my concerns to the doctor. He insisted I had to meet a woman moving into his adjacent office. Her name was Karen and she was a counselor specializing in education issues. He suspected she may be able to help us, so he gave her a call.

Karen came right over to meet us while the doctor did a thorough vision exam on my son. "Everything looks great," the doctor concluded. "From what I can tell, his eyes can process everything just fine. However, I can't tell what the brain is doing with the information it receives from the eyes."

Karen quietly asked, **"Have you had him screened for Visual Stress Syndrome?"**

I Wasn't Crazy After All!

Karen explained that Visual Stress Syndrome causes a variety of challenges for people when they read. People with VSS complain that text appears to be moving, blurry, uneven, or flowing with "rivers of white." Due to the physical discomfort and erratic neurological signals, some students exhibit significant behavior problems because of VSS.

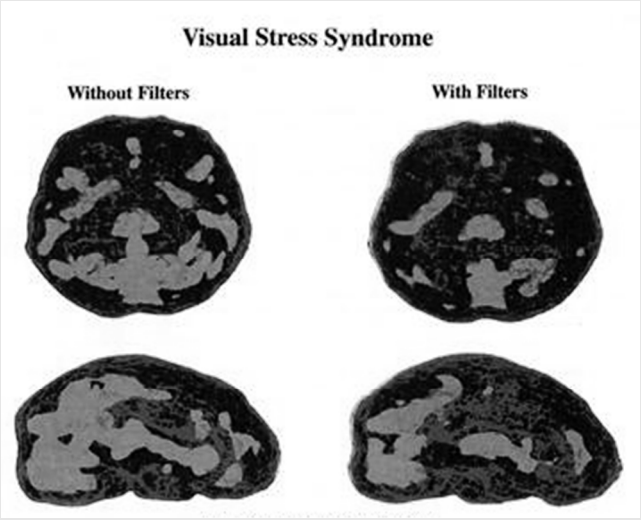
"Rivers of white" is a perfect description of my challenges. That was the first time that I had ever words that so effectively described my experience.

What Is Visual Stress Syndrome?

Like ADHD, dyslexia, and many other learning disabilities, VSS is a neurological condition. It is not an "eye" condition.

Imagine holding a prism in sunlight and seeing all the colors of the rainbow refracting from it. This is exactly how eyes processes light; they break light into colors and send neuron signals to the visual cortex in the back of the brain.

Researchers believe that people with VSS have optical receptors that are hyper-sensitive to certain colors of light. When the hyper-sensitive receptors are triggered, they send a surplus of electrical signals, creating an erratic pattern of activity in the brain. Maps of brain-wave activity seem to confirm this theory.



Source: Karen Smigelski

VSS Is More Common Than Most People Realize!

90% of students with learning challenges have VSS. Yes, that's right…90%!

Dr. Laura Weisel, a neuro and cognitive psychologist, collected data from over 4,500 students with a wide variety of learning challenges. 90% of these students tested positive for VSS.

But the Treatment Is So, So Simple

When I was in middle school, my eye doctor didn't know about VSS, but she was on to something when she prescribed tinted lenses.

Recommended treatments for VSS include:

1. **Glasses with tinted lenses.** (I wonder if sunglasses would work. Hmm…)

-OR-

2. **Colored overlays/transparencies to place over reading material.** (Change the background color on monitors when reading a computer screen.)

and

Colored paper for writing. Since you can't very well write on a paper with a color overlay, try colored paper. The colored paper reduces the overload of sensory input caused by white paper. This, in turn, reduces the discomfort of writing that is so common with struggling learners.

Color overlays and paper are the cheapest and fasted way to correct VSS. Color-sensitivity varies by individual, so each person will need to test the color overlay that works best for

them. In some cases, a combination of two colors will be optimal. The only way to know for sure is to try them. (Colored overlays are available at www.irlen.com.) Typically, they are only needed for one or two years. After a while, the brain learns to process the additional visual input and becomes less sensitive to the glare from white paper.

Speaking for myself, after learning study skills and learning how to read "strategically" during my first year of college, my dependence on the visual cueing system went down dramatically. As a result, reading became *significantly* more comfortable for me. However, since Karen introduced me to color overlays, I have found that my eyes do not get nearly as tired when I read. So, I can function just fine without the overlay, but I am much more comfortable with it.

How Do You Diagnose VSS?

The treatment for VSS is so simple and inexpensive, I recommend that you self-diagnose by trying colored overlays to see if they make a difference. Formal diagnosis, however, is available in some areas. (See www.irlen.com or www.powerpath.com.)

Oh, What a Difference!

I already mentioned that overlays clearly make reading more comfortable for me! As for Mark, he prefers Eye Lighters. Eye Lighters are clear, tinted rulers that help him track his place in the text. (Search Amazon for "eye lighters.) They serve the same purpose as an overlay, but they also help track your place in the text. Mark still struggles with dyslexia, but knowing about VSS has been very helpful for his reading… and handwriting!

On another personal note, my neighbor and her daughter both struggled with severe reading disabilities. Learning

about VSS has been miraculous for them… their struggles have nearly vanished with colored overlays!

Additional Notes from Dr. Laura Wiesel:

- **VSS should always be considered before testing for ADHD.** Visual attention tests are a common tool used in diagnosing ADHD. Therefore, VSS could cause false positives for ADHD. If color overlays have been found to work effectively for a student, the overlay(s) should be used during the ADHD testing.

- **Always get a thorough vision and hearing evaluation for any child who is suspected of having a learning disability.** Dr. Weisel specifically suggests asking your ophthalmologist to test binocularity. Binocularity describes how well your eyes coordinate with one another. 50% of students with learning challenges have binocularity problems. Dr. Weisel surveyed professionals testing for learning disabilities and asked if they screened for vision or hearing; none of them did. They all assumed that the individuals could see and hear just fine. This was my experience. I paid a lot of money to have my son tested for a learning disability, but I was never asked if he had hearing or vision evaluations. I scheduled those on my own.

- **Fluorescent lights are a major culprit!** If possible, classrooms should offer alternative lighting. Dr. Weisel suggests another alternative: in one section of the classroom, keep the lights bright. In another section of the classroom, remove one of the fluorescent tubes. In a third section of the classroom, remove two tubes. In the final section, remove three tubes. “Students will naturally gravitate to the area where they can best learn,” she says. (Taken from

"Learning Disabilities Study Shows Complex Issues Behind Learners' Struggles," KET ALQ, April 2008.)

- **VSS is beginning to emerge as a suspect in causing migraine headaches.** If you or someone you know suffers from migraines, this would be an interesting topic to research in the next few months/years.

- **The best color for overlays may not be the best color for lenses.** Colored overlays change the color of light reflected off the page. Colored lenses, however, work by changing the color of the light as it enters the eye directly. This difference is subtle, but quite significant. For this reason, you must test the best lens color independently from your preferred color of overlays. (The same considerations apply to background color on a computer monitor.)

- **To change the background color of your monitor on a PC,** right-click on the desktop and selecting "Preferences" or "Personalize." From there, select "Window Color and Appearance" and test background colors from the drop-down menu. (Sorry, I don't have instructions for a Mac.)

- **More information about Visual Stress Syndrome (a.k.a. Irlen Syndrome) is available at:** www.irlen.com and www.powerpath.com.

Conclusion

90% of students with learning challenges have Visual Stress Syndrome. It commonly coexists with other neurological conditions, but may exist alone. VSS causes symptoms that look like other neurological conditions. Therefore, if your child has any learning difficulty, you should screen for VSS by trying the colored overlays or consulting a professional.

Thank you to Karen Smigelski, MA, LPC, CAADC, of Willow's Edge Counseling for sharing her knowledge and resources regarding VSS.

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-Chapter 7-
Why "Reading Level" Is Overrated

One year, while teaching 3rd grade, a half-dozen students entered my class with a documented reading level of 7th grade or higher. These reading levels had been determined by their 2nd-grade teacher as she completed her end-of-year testing. Naturally, their parents wanted to be sure their children would continue to be challenged. Several of them visited me before school started, requesting that every book I assigned be at or above their child's reading level.

I supported their desire to challenge their children, but I had trouble honoring their requests. For one, our library had very limited options at the 7th- and 8th-grade reading levels. And the titles that were available, such as *The Midwife's Apprentice* and *The Unlikely Romance of Kate Bjorkman*, did not seem appropriate for young 3rd-graders.

Why Is "Reading Level" So Limited?

As you might guess, I had several conversations with them about the three cueing systems. I explained that the reading level they were given measured their child's use of the visual cueing system. The other two cueing systems represent 2/3 of the reading equation and needed to be considered, as well.

We also talked about the children's emotional development. Regardless of their intellectual abilities, they were still eight. The interests and emotional needs of eight-year-olds do not vary too widely. Third graders typically love toilet humor, and my students with the highest reading levels were also the most entertained *by Captain Underpants and the Perilous Plot of Professor Poopypants*. I took all of these elements into consideration when selecting reading materials for my students.

Strategies for Students with "Really High" or "Really Low" Reading Levels

Reading levels can provide valuable information if they are used in the correct context. They should be an indicator of general progress. Reading level should never be used alone, but always in relation to other data and observations.

If a child is truly reading beyond their age-level, you can challenge them with nonfiction text, which is typically more difficult than fiction. Of course, the child can also read advanced-level fiction stories that match their interests and ability to relate to the experiences described in the story.

However, there is nothing wrong with letting a child read text that matches their age-level. If a child is interested in *any* kind of book, regardless of how it matches their reading level, then they must be getting something out of it… which means they are *learning*. The learning may not be improving their reading level, but emotions are just as important and need attention, too.

On the flip side, struggling readers need the same consideration. Mark, is a good example. As I shared in Chapter 3, his reading level in 1st grade was very low, yet he had very strong comprehension. He clearly needed practice decoding and developing the visual cueing system. However, the low-level text used to practice these skills bored him to death! If his reading had been limited only to "Pig sat on a log. Pig sat and sat…" (as taken directly from one of his readers), he would have hated reading!

Fortunately, Mark knew that reading has much more to offer. We had been reading together since he was an infant. When he was in 1st grade, he asked me to read a very challenging book to him, *The Secret Garden*. (When I said "challenging," I mean it was challenging for *me* to read.)

Mark could understand the book because he could *relate* to it. He asked to read it because a special friend named our front patio "The Secret Garden." There are many correlations in the book to the garden that surrounds our patio; Mark wanted in on "The Secret." I was quite surprised how well he followed the story. He asked questions that told me he was processing the story and thinking about it from many different angles.

Our own, personal Secret Garden. You can't see much of the garden (which is to the right of this image), but this is a painting of our front patio, made by a friend. The creatures that visit us bear a striking resemblance to the book and prompted Mark's interest in an otherwise old-fashioned story.

In short, "reading level" is nothing more than a benchmark; it should never limit the type of texts that "struggling" readers are exposed to.

All readers should have an opportunity to "exercise" all cueing systems and be exposed to age-appropriate content. Listening to higher-level books being read aloud or via "audio" gives struggling readers exposure to age-level

interests, experiences, and vocabulary that are important for their growth. These experiences also help minimize reading gaps and nurture positive attitudes toward reading.

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-Chapter 8-
"He's Just Not Tryin'"

I have a personal rule… I call it the "Rule of Three." That is, when something comes to my attention three times in a relatively short span of time, I take notice. What is the world trying to tell me? The Rule of Three has helped me navigate simple observations and major life decisions.

One, Two, Three…

Most recently, the" Rule of Three" began while I was tooling down the expressway, blasting an old Neil Diamond song. (Say what you want about my taste in music, but with songs like "Sweet Caroline" and "Cracklin' Rosie," you'd be hard-pressed to find a better sing-along album for a sunny day.)

One song on that album, "Brooklyn Roads," is about Neil's childhood. I've heard it dozens of times over the years, but this time was different:

I can still recall
The smell of cookin' in the hallways
Rubber dryin' in the doorways
And report cards I was always
Afraid to show
Mama' d come to school
And I' d sit there softly crying
Teacher' d say, he' s just not tryin'
He' s got a good head if he' d apply it
But you know yourself…
It' s always somewhere else

As the words "he's just not trying" rolled out of my mouth, my stomach sank. I thought about my son and how I heard the same words from his teachers. Suddenly, this song had a whole new significance to me.

But "Red, Red, Wine" was the next track to play and my attention rolled along with the album and the highway. I didn't think much more about "Brooklyn Roads" until the next day.

Sixteen hours later, I was talking with my cousins at a pool party. Their 5th-grade son had just been diagnosed with ADHD, so we compared notes. As they described their son's struggles, they mentioned a comment they had heard from his teachers, "He's just not trying."

That was two!

Later that day, I sat down to write my next newsletter. Reading through comments from a previous newsletter, I noticed one from a mother, expressing concerns about her

son's reading ability. She described a variety of discrepancies she had noticed over several years. However, the central message from her son's teachers was, "He's just not trying."

There was number three!

This simple sound-bite, "He's just not trying," came to me three times in 48 hours. Of course, it resonated so deeply because I heard it so many times about my son. Yet I knew he was trying – very hard, too! I suddenly realized how many problems we overlook, rationalizing them away with this excuse.

I know that most of these comments come from well-intentioned teachers who are as mystified as the parents. Teachers are expected to have all the answers for learning challenges, but we don't. I'm a good example of this: I have a master's degree as a reading specialist, yet I had to learn a lot just to pinpoint my own child's struggles. Since many symptoms of learning disabilities are trouble with "easy" tasks, it is easy to assume that motivation is the root of the problem.

But *Every* Child Is Motivated!

Show me a two-year-old who is not motivated to learn things about the world. We are all born with a strong, innate desire to learn! If not, none of us would push ourselves through the immensely frustrating tasks of learning how to walk or talk. Yet, I get hundreds of calls from parents and teachers who are frustrated with students who "just aren't trying," just like little Neil Diamond.

Students stop trying because somewhere along the way they learned that the effort was not worthwhile. Can we blame them? If my friends constantly turn down my invitations, how long before I stop trying to invite them? If I

have a boss who is never happy, no matter what I do, how long before I stop trying to make him happy? We tend to respond logically to repetitive situations.

The same is true for our children. If they have truly stopped trying, there is a reason they have given up. Children who appear to "not be trying" are either trying very hard but struggling, or have tried before and determined their efforts were not paying off. Either way, if we ever find ourselves thinking, saying, or hearing that a student is "just not trying," that's a RED FLAG!

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-Chapter 9-
"I Hate Teaching Reading!"
The Journey of a Reading Teacher

It was my husband, Brian, who first suggested I change my grad-school major to "Reading." It was August. We were driving home from a week of camping on Michigan's west coast.

"Are you kidding?" I replied. "I *hate* teaching reading!"

I was supposed to start grad-school in a couple of weeks and was *not* looking forward to it! My goal was simply to get the credits needed to keep my teaching certificate. But, I had recently learned some disappointing news about the program in which I was registered.

As we rolled along, the solution seemed obvious to Brian, but not yet to me.

My Revelation

I had just spent several hours that week sitting around the campfire, reading a book assigned by my principal. She asked us to read it over the summer and I put it off for months. But it wasn't long before I was hooked! The book, *Mosaic of Thought*, by Ellin Oliver Keene and Susan Zimmermann, was about teaching reading.

It began with the authors sharing stories of their own experiences and those of other teachers, **all admitting that they were confused about how to teach reading effectively.**

One teacher quoted in the book said, **"I know what *not* to do, but I have no idea what I *should* do."**

That was me!

As a young teacher with low seniority, I had taught in three different school districts over the previous four years. Not one of those districts had an established reading curriculum or any reading materials. Somehow, I had been expected to teach reading using thin air and my own creativity.

However, until I read *Mosaic of Thought*, I assumed I was alone. My colleagues all seemed to have "figured it out," so I forged ahead on my own. I purchased dozens of books at the teacher's store and pored over teaching magazines for new insights and creative lesson plans. But deep down, I was frustrated. As I read the confessions of other teachers, I felt validated! I shared my excitement with Brian several times over that campfire.

Brian patiently reminded me of my new-found discovery. "Maybe you don't like to teach reading because you don't know *how* to do it." The freeway rolled along beneath us as I stared out the window, thinking long and hard about what he said.

He was right. I had not enjoyed teaching reading because I did not know *how* to teach it.

The next day, I changed my major. It wasn't long before reading instruction became my favorite part of the day! Soon, my students were just as jazzed as me!

I share this experience because I know my story is not unique. I had a bachelor's degree and a state-certificate declaring I was capable of teaching reading in all classrooms from pre-K through 6th grade. The problem was, my undergraduate training was only effective at teaching me what *not* to do. Like the teacher quoted in *Mosaic,* I didn't know what I *should* do. I didn't even know what I didn't know until Brian helped me connect the dots.

Most Teachers Are in the Dark

Teachers are not taught *how* to teach reading. They've learned a few things and have some resource books. Perhaps their school even has an established reading curriculum But, none of their training has ever focused on the fundamentals of the reading process or solid strategies to teach it.

This confuses parents. I once did a reading assessment on a friend's 2nd-grade son. His profile showed he was very strong with two cueing systems, but he struggled with decoding. I could see his struggles, but I was quite impressed with all the good strategies he was using and enthusiastically shared my observations with him and his mother.

A few months later, her son received an "F" on his report card for reading. My friend was completely perplexed! My enthusiastic observations didn't match her son's failing grade. How could she make sense of this contradiction?

All I could do was share my story. "Look," I said, "he struggles when he reads aloud. Clearly his teacher has not been trained to assess anything other than his oral reading. But this 'F' is not an accurate reflection of his abilities." We then discussed options to work with the teacher and help her son.

My journey as a reading teacher helped me understand my son's teachers. When they said that he needed to "just try harder," I knew they were rationalizing that which they didn't understand.

While it was frustrating, I also understood why they couldn't see the same concerns I did: they didn't know what they didn't know!

I have included this chapter to provide this important insight to perplexed parents and to vindicate dedicated teachers. Of

course, the remaining information in this book will help to bridge the gap!

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-SECTION THREE-

WHAT TO DO

-Chapter 10-
The "Power" Reading Strategy

One day, not too long ago, our computers were down and our productivity came to a grinding halt. With nothing else to do, I cleaned out my filing cabinets. One large drawer was overstuffed with reading materials from my days in the classroom. "This ought to be good," I thought. "Maybe I'll find some treasures to share in *Cue to Reading*."

However, much to my dismay, that three-foot stack of files was quickly whittled down to only a few inches of useful material. As I mentioned previously, before I really learned how to teach reading, I bought all kinds of materials from the teacher's store and scoured magazines for curriculum and creative lesson ideas. I organized all those resource books and chapters into files, hoping that my collections would someday make me a better reading teacher.

It was only now, with years of hindsight, that I realized just how much of those materials were "fluff." Most of my materials were just collections of novelties: various "fun" ways to do the same thing. Yet, interestingly, that "thing" was largely undefined. For example, "popcorn reading" was a new and exciting way to do "round-robin reading." But, what does either strategy actually teach? The objective is a bit fuzzy.

Weeding through that file made me realize just how much "muck" we must sift through when searching for meaningful lessons. Many of the resources we use for information or new ideas (especially the internet) are very murky!

With that said, there are many good resources available, too. The problem is trying to separate the good from the bad and not letting the *novelty* of a resource bog down the true objectives of effective reading lessons.

In the following three chapters, I will describe basic, foundational strategies for teaching reading. These will not be comprehensive lists, but they are very effective, brain-based strategies that are aligned to each cueing system. Each chapter can serve as a compass to point you in the right direction for your child's or students' needs.

An Accidental Discovery

First, however, I must share a story about a powerful way to support struggling readers… a strategy I initially discovered by accident.

Several years ago, Emilia entered my 3rd grade class with almost no reading skills. She could identify letters, but not words. When looking at a sentence, she could not tell where individual words began and ended.

Emilia did not qualify for special education because her IQ matched her performance. In other words, she was performing "as well as expected," so she did not qualify for additional support. That left it up to me, and I had no idea how to help her! However, I soon developed a plan.

I happened to be piloting a new, balanced literacy program for my district. The books came with audio recordings of the main story and "companion stories," which were shorter retellings of the main story, written at a lower-level. The companion stories were designed to be stepping stones to the main stories.

Every Monday, I began reading workshop by reading the Main Story aloud to the class. My students read along with their own copies of the book. During this time, I noticed Emilia. She attempted to track the text with her finger as I read aloud. But her finger wandered aimlessly around the page; she was totally lost!

One Friday, I invited her to the listening center and asked if she would like to listen to next week's story on audio. She was thrilled and threw on a pair of headphones! Instantly, she was drawn into the story and clearly enjoyed being in her own world for a while.

The following Monday, she was much more engaged in our class discussion; she even answered a couple questions! This was a first for Emilia! Her enthusiasm had been sparked and I wanted to keep it lit. So, I told her she could listen to the story as many times as she wanted during reading workshop. She was elated!

The next day, I invited Emilia to join a small group of students practicing the companion story. Although Emilia's reading level was much, much lower than even my lowest reading group, she sat quietly and "read" along with the others. I didn't know if she was learning anything at this point, but she was clearly feeling more positive, which was encouraging!

We continued this routine. On Fridays, she helped herself to the listening center and listened to the book we would be reading the following Monday. On Mondays, she joined the whole class read-aloud and discussion. Throughout the week, Emilia would listen to the same story on audio at least four or five more times. She joined more and more small-group sessions with me.

For the first few months, she was perfectly quiet, but very eager. Then, slowly, she began to read a few words aloud. One day, the other students in her small group cheered as she successfully read a page! It was a wonderful sign of progress.

By the time Emilia graduated 3rd grade, her reading level measured "middle 2nd grade level," with *solid* comprehension. This was quite an accomplishment for

someone who had started the year with the literacy skills of a preschooler! Emilia also proved than IQ is only an *indicator* and should never be considered a ceiling for a child. Everyone has great potential, if given the right tools!

Audiobooks were the perfect tool because Emelia could do repeated readings independently, without having to wait for adult assistance. Reading by herself, with the audio support, also removed the sense of pressure that comes from constant supervision. Audio books made age-level content accessible to Emilia. This accessibility then allowed her to participate in – and grow from – our discussions to build comprehension strategies, as explained in the following chapter.

Emilia relished the opportunity to read the stories multiple times because she could focus on different things each time. Sometimes she could focus simply on the meaning of the story. Other times she could concentrate on identifying and decoding words. Every reading helped her dig deeper and blend her comprehension with the print on the page. This strategy helped Emilia develop all three cueing systems fluidly, at her own pace, and according to what she naturally needed.

Listening to audio books while reading along with the text, is an extremely powerful strategy and should be included in *any* reading instruction or intervention plan!

What to Expect in The Next Few Chapters

The next three chapters will look at ways you can help struggling readers develop specific cueing systems. Obviously, you will need to first assess where they need support, then target those specific areas.

When it comes to applying these strategies, more is not always better. Chapter 14 will look at ways to keep things

time-efficient yet effective, especially for students with learning disabilities or ADHD.

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-Chapter 11-
Strategies for the Context/Meaning Cueing System

When students struggle with the Context/Meaning cueing system, they are struggling to make meaning when they read. This chapter is a list of the most effective and efficient brain-based strategies for improving comprehension.

Making Connections

Connections are the lifeblood of learning. Everything you have ever learned in life, you learned because you connected new information to something you already understood. It only makes sense that teaching students how to connect information they read, to things they *already understand* will dramatically improve their comprehension.

"Comprehension through connections" is the main theme of the book, *Mosaic of Thought*. Following suggestions from *Mosaic*, I would often read aloud to my students, then stop and explain my connection to the story. This always meant sharing a personal story.

My students loved this! Before long, they begged for reading time. "Miz Kruger! Tell us a story about your life!" Bringing my connections with the text to life for my students energized our classroom and their attitudes towards reading!

To build comprehension, always model your own connections. Then, encourage students to make their *own* connections. This process is the cornerstone of comprehension.

Making Predictions

Students must learn how to "monitor" their own comprehension. One way to do this is by making predictions before they read. Then, while reading, their brain automatically either confirms their predictions or corrects them. Either way, their predictions are like "water stops" along a marathon: check-in points that help monitor comprehension.

Think-Alouds

When my daughter was two-years-old, she would sit next to me as I read a book, quietly "reading" a book of her own. Obviously, she was just imitating the actions she could see. She had no idea what was going on in my head.

New readers do this, too; they imitate what they see. So, let's give them more to "copy."

Unless we specifically *show* them what's happening in our heads as we read, they won't know how to make predictions and connections. Model this typically "silent" process by thinking out loud as you read to students.

These think-alouds are very valuable for students. Personally, I didn't fully understand the concept of the "inner reading voice" until I was a senior in high school. When students understand this concept, they can shift into "high-gear reading" and become active readers.

The Picture Walk

A "picture walk" is a process of "walking" through a book before reading it. The process involves reviewing the pictures and making predictions about information or events in the

book. This procedure helps students get a sense of the storyline and match oral vocabulary to written text.

Picture walks are typically thought of as a strategy for early readers, but this is an effective strategy for students of all ages – even adults! When adults read a newspaper or a magazine article, the first thing they do is look at the pictures and read the captions to determine what they want to read. This confirms that visuals remain a powerful resource, even for advanced readers.

However, we devalue the use of visuals for students as they get older. By the time they are in 3rd grade, it's typically considered a sign of weakness if children rely on visuals to read. *Let's squash that notion right now!*

Read the Pictures

In my study skills program, I teach students to read textbooks with a strategy called "Read the Pictures." It worked miracles for me in college; I went from struggling in high school to graduating college with a 3.9 GPA.

To read the pictures, students first look at every: photograph, chart, graph, and visual in a book (or chapter). Then, they read the caption. Finally, they ask themselves, "Why do I think this picture is here?" (This third step forges important mental connections, as described below.)

"Reading the pictures" is so effective because 30-80% of the information in a textbook is presented in the visuals and captions! The pictures and captions communicate a lot of information in a compact form. They also help readers create a framework for comprehension. After students have "read" all the pictures, they begin reading the text. It will then be much easier to understand the black-and-white text because

the visuals allowed them to make connections with the content.

Graphic Organizers

Research strongly supports the use of graphic organizers to develop comprehension skills. When used with a strong sense of comprehension objectives, graphic organizers are an outstanding tool!

However, I hesitate to mention this strategy because searching for "appropriate" graphic organizers can quickly lead to a lot of useless fluff. For example, the top return on Amazon.com, after a quick search for "graphic organizers," is *The Teacher's Big Book of Graphic Organizers: 100 Reproducible Organizers*…

One hundred!? *Really?* That will frustrate and confuse both teachers and students!

Use graphic organizers with caution! If not used with caution, graphic organizers quickly become nothing more than worksheets, where the focus is on filling in the blanks correctly, instead of framing and organizing comprehension.

However, when used "properly," graphic organizers are a very powerful tool! Therefore, I recommend giving a graphic organizer to students only if you clearly see a match in structure between the text and organizer. Many reading program and content-area textbooks will provide appropriate graphic organizers for various reading selections.

If you do not have confidence in your resources, skip this strategy and focus on the connections, predictions, and use of visuals described earlier in this chapter.

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-Chapter 12-
Strategies for the Syntax/Grammar Cueing System

It can be difficult to tell when students are using the Syntax/Grammar system; Syntax often looks like one of the other cueing systems in a miscue analysis. Readers who rely on the Context/Meaning system are automatically using the Syntax/Grammar system in support. It is rare for students to rely on grammar and syntax without also making meaning. Nonetheless, it will happen occasionally.

The sign that the syntax system is taking the lead in a student's brain is when the student substitutes words that don't make sense within the content of the reading, but are the right parts of speech.

For example, the text might be: "Gramma told about how she walked seven miles to a one-room schoolhouse and how she taught in that same school."

But the student might read: "Gramma told about how she walked seven miles to a one-room schoolhouse and how she taught in that smelly school."

"Same" and "smelly" are both adjectives, but smelly does not fit the context of this story. Once again, these errors are hard to spot because they usually look like a "visual" miscue, or they will actually make sense, in which case they will look like a miscue influenced by the "meaning" cueing system.

Here are two strategies that target the Syntax/Grammar system:

Read-Alouds, Audiobooks, and Repeated Readings

Developing a sense of syntax in reading is about internalizing the rhythm of what "good reading" sounds like. Written language has a different tempo than spoken language, but the process of learning that tempo is the same for both. Just as two-year-olds learns how to speak by imitating the people around them, developing readers learn the cadence of reading through imitation.

As emphasized in Chapter 10, read-alouds (that is, reading aloud to students) and audiobooks expose students to good models of reading. Repeated exposure to "good reading" will develop these reading "instincts." The power of this process *cannot* be overstated!

Cloze Procedure

Do you remember Mad Libs? They are the zany word games where you blindly insert various parts of speech into a template and create silly stories. The cloze procedure is similar, minus the silliness. In cloze exercises, students are shown a passage with specific words replaced with blanks. Students "fill in the blanks" using context clues to determine what words would make sense. This strategy is good for students who overuse the visual cueing system because it forces them to use the other systems to determine meaning.

As students begin guessing possible words, prompt them to:

First, describe what type of word would fit. (For best results, start by covering only nouns and verbs.)

Then, have them list several words that would make sense in the blank.

Finally, expose just the first letter. Have students confirm or adjust their guess. This three-step process helps students

develop important "trouble-shooting" skills to improve comprehension and decoding.

A great tool for developing all cueing systems, especially the "syntax" system, is a book called, *The Reading Detective Club*.

***The Reading Detective Club* has been my go-to resource for years; the book is timeless!** Perfect for parents *and* teachers, it endures in my personal library because it is practical, efficient, and *inspiring* for young readers. The first half provides useful background information, but the real value is the second half, where Debra Goodman cleverly created "cases" to help readers solve the mysteries that they encounter in their own reading. It inspires a positive, "I can!" attitude towards reading through powerful, interactive detective cases. These activities really help students uncover their own use of all cueing systems, then pull them together to improve their reading quality and confidence. This book is one of my all-time favorites!

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-Chapter 13-
Strategies for the Visual/Decoding Cueing System

Students who struggle excessively with decoding may be dealing with a deficiency of working memory, which is often an element of dyslexia. Working memory is a "section" of short-term memory. It is where our brains store information in few-second increments, coordinate that information with other input (images, language, cueing systems), and put all of it together.

Working memory can be compared to the RAM on a computer. When our computers don't have enough RAM for a task, they get sluggish. The same thing happens to a brain with a deficiency of working memory.

The Visual/Decoding cueing system is most susceptible to a deficiency in working memory because it is based solely on symbols. The brain must first *process* the visual symbols, then translate the symbols to letters, then translate the letters to sounds, and finally, translate the sounds to words. This multi-step process relies heavily on working memory.

The following strategies will build the visual/decoding cueing system…

Multi-Sensory, Systematic Lessons

The best way to build working memory is to attach hands-on, multi-sensory cues to literacy symbols. This process allows the brain to access visual and sound cues from multiple sections of the brain.

There are two multi-sensory approaches that are widely used to help struggling readers with decoding: Orton-

Gillingham and Lindamood-Bell. Both programs are highly recommended by specialists I know and trust. Personally, I am not familiar with Lindamood-Bell, but I am very familiar with Orton-Gillingham (OG).

I enjoyed the multi-sensory approach and saw great value in OG. I was trained in the system several years ago; the training took over 30 hours and cost $2,500. (Fortunately for me, I got the training for free while working for an OG tutoring center.) However, the supplies were cumbersome; with several three-inch binders, books, and other materials, they have all sat in my basement storage room since the day I completed OG training. The system was *overwhelming*!

However, I have since found an OG program that had been brilliantly simplified! It's called *All About Spelling*.

***All About Spelling* is a very simple way to teach spelling and decoding using the OG process.** It includes the step-by-step instructions and "multi-sensory" lessons that are cornerstones of the OG method.

Since the program is so thorough and well-organized, our college-aged babysitter could tutor Mark with the program. She did not have any training in reading or education, but she had no problem facilitating the lessons.

Mark did so well with *All About Spelling*, I "opted" him out of his school's spelling program so we could have time to go through all the levels of the program. He loved it! His decoding blossomed after only a few months. His spelling skills grew at a steady rate, too. For more information, visit www.AllAboutLearningPress.com.

Read-Alouds, Audiobooks, and Repeated Readings

Yes, I'm repeating myself for a third time. As described in Chapter 10, read-alouds, audiobooks, and repeated readings are a powerful element of any reading instruction plan.

They are a highly effective component for students who need help with the Visual/Decoding system. Obviously, the more exposure a student has with matching audio input to printed words, the more his decoding abilities will grow.

Students who struggle with the visual cueing system, however, will need the additional, explicit instruction provided by a program like *All About Spelling* to support this integration process. Nonetheless, repeated readings also build the other two cueing systems, which will always be the stronger systems for dyslexic students, anyway. So, once again, the important of repeated readings with audio support cannot be overstated!

Side-Note: Handwriting

Students with working memory deficits often struggle with handwriting. Lots of guided practice with handwriting is essential. But this practice is only helpful with a systematic program. (By "systematic," I mean teaching letter formations in relation to one another, rather than as 52 separate shapes to memorize.) Systematic teaching of handwriting reduces the burden on working memory when students have to do reading and writing tasks together.

For handwriting, I'm a raving fan of *Handwriting Without Tears*. I can't say enough wonderful things about the careful and student-friendly approach used to develop this program. However, handwriting seems to be the greatest hurdle for students to overcome and I have not yet identified a fantastic short-cut. If your child continues to struggle with handwriting

after a few months of *Handwriting Without Tears* practice, consult with an occupational therapist.

Side-Note: Math Facts

Another symptom of weak working memory is difficulty memorizing basic math facts. For example, my son develops and solves algebra problems in his head, but struggles to answer "3 + 1." (No exaggeration.) His educational psychologist, whom I deeply respect and trust, has told us to "back off" the pressure. "Let him use his hands and a calculator. He will never be automatic with the basic facts. Let him use those tools so he can shine with his strengths, which is advanced problem-solving."

I have followed her advice and added modifications to my son's IEP, removing the pressure of math facts. Since that time, however, I found a program that adds "multi-sensory" context to learning math facts. The resources by HowBrite.com provide creative, multi-sensory tools for learning math facts.

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-Chapter 14-
Creating Effective Lessons for a LD/ADHD Student

When my son was a few months old and I was a new mom, I had no idea how or when to introduce him to solid foods. One night, I fell asleep while reading an article on the topic. It advised, “Let the baby test a bite or two at each meal for several days. Don’t expect him to get nutrition from the food at first. Just let him get used to the texture and slowly figure out what to do with it.” The last thing I read before drifting off to sleep was a warning not to overstuff the child. “If you push too much, the baby will just spit it all back up!”

The next morning, I went to a large, state-wide reading conference. Several teachers at my table were all from the same school district and eagerly told about an exciting new reading program they had organized to build fluency scores.

At the beginning of each day, as students entered the classroom, they met with a pre-assigned partner. Students read for one minute from specific reading passages, while the partner kept time with a timer. Then, partners switched. After reading, each student counted the number of words he or she read and recorded the total on a graph. The objective was to beat their best scores. They were competing against themselves and they loved it! (The strategy was from a wonderful program called, “Read Naturally.”)

The benefits of this daily routine far exceeded the teachers’ expectations: Students were eager to chart their daily progress. Fluency scores skyrocketed well beyond the goal. To everyone’s surprise, truancy rates dropped significantly; students were so excited for this daily challenge that they begged their parents to get them to school!

What Does This Have to Do With Baby Food?

Listening to this story, I was struck by the amazing power of a routine that took just five minutes a day! It reminded me of the article about baby food. Take small steps. Pace it carefully. Don't overstuff the baby (or the learner). Or, the food (information) will be regurgitated!

The real power of the successful reading program was not *one* five-minute session, but *several* five-minute sessions. Just like the baby food, one or two bites at a time… over several days.

Short Sessions, Repeated Over Time

This pace fits with what we know about the brain. When the human brain was first developing, humans mostly experienced stress in short bursts. When a caveman was in danger, the "fight or flight" response kicked in instantly, and hopefully resolved the danger quickly. When the threat was gone, the stress was gone. It did not linger for hours on end, day after day.

While many parts of the brain have evolved over time, the part of the brain that experiences stress has not changed much. The same part of the brain – the limbic system – handles the stress of learning something new and the stress of running from a bear. The limbic system is sometimes called the "lizard brain" because it is so primitive.

The lizard brain works best in short bursts. This may be the most important key to developing effective lessons for any learner, but especially a student taxed with a learning disability.

Elements of Effective (Intervention) Lessons

The Baby Food Lesson first helped me teach my son how to eat solid foods as an infant… and then then teach him how read as a first-grader. The more I learn about helping students with learning disabilities, the more I see that what works best for LD students is really what's most efficient for every learner.

Here are some of the most important elements in managing effective intervention lessons:

Short, Frequent Sessions

Take a cue from the caveman and keep it quick.

When my son had a lot of "catching up" to do in the summer following first grade, it was tempting to pack every available hour. His school provided two options: summer school that met for three hours a day, five days a week (for a total of 15 hours/week); or two one-on-one tutoring sessions with a teacher (for a total of 2 hours/week). His principal and I both felt he would do better with the *shorter*, more focused sessions.

However, I also hired our babysitter to facilitate three more tutoring sessions each week (for a total of 5 hours/week). I felt that one hour a day, five days a week would be optimal. Mark would get a lot of practice, but still have plenty of time to play, create, and do all of the things that make his brain explode with excitement!

Alternate Activities

Change it up to keep the brain engaged.

I broke each of Mark's hour-long tutoring sessions into three 20-minute segments; he would work on a different program in each segment. The primary goal that summer was to help Mark stretch his working memory, so I chose three programs that provided a good "working memory workout," including a phonics/decoding program (*All About Spelling*), a handwriting program (*Handwriting Without Tears*), and a software-based reading program (*Read Naturally*).

Each program required a different kind of output. The handwriting session was a paper-and-pencil drill. But, *All About Spelling* was more "hands-on" with letter tiles. The math program gave Mark a chance to work on the computer. Consequently, each 20-minute session felt different for Mark, which helped keep him engaged.

Keep the Pace Moving

The pace must be fast or Mark is sure to wander, get bored, and loose motivation quickly. Like many LD students, Mark has ADHD, which makes him a slow-starter and easily distracted. To address this concern, we let the timer lead. "Set the timer for 20 minutes and begin," I advised our sitter. "When the timer is done, stop and go on to the next thing."

The timer was key in dealing with bad days. Mark could be "on fire" some days and a "wet rag" on others. Our sitter was a very nurturing soul; she was likely to get sucked into Mark's downward spiral on the bad days.

She could easily spend a whole hour just coaxing and prodding him. Instead, I told her, "Expect the bad days. Don't worry about them and remain calm. Let the timer lead. If he chooses to lie on the ground for 20 minutes, that will be his choice. Don't get into a power struggle. The timer will ensure that the torture doesn't last more than 20 minutes…for either of you." We awarded reward points for each successful 20-

minute segment. So, if Mark spent his time wallowing on the floor, he was choosing not to earn points.

One word of caution, however: you don't always want to push the pace. If a student is "in the zone" happily making progress, and doesn't want to stop, let them go. During these periods, emotions are positive and the brain is ripe for learning! Take advantage whenever you can.

Sit, Stand, Lie on the Floor – Whatever It Takes

Over the years, I've had many parents and teachers ask *me* to tell their children (or students) that they should sit at a table or desk to do homework. Sorry, but I just can't do that.

There are times when a specific posture is important. For example, working on a flat surface when writing or tracking text while reading allows the hands to relax and work most efficiently with the eyes. However, in both of these situations, the child could be standing, or kneeling at a low table, or using a lap desk.

The body should be free to do what the body needs to do. When Mark went through the battery of "learning disability" tests, the process took place over six different sessions, spread over two months, with four different evaluators. All the evaluators noted that he preferred to stand and performed better while standing.

Cultivate Motivation

The best motivation comes from within the student. This is called "intrinsic motivation." It comes when children believe in themselves and see the value in what they are doing.

One way to stoke motivation is to help students monitor their progress so they can see their growth. Graphs, charts, and scores give them a good way to "compete" with

themselves and challenge themselves to keep growing. The impact that the reading graphs, described earlier in this chapter, had on my colleagues' students illustrates the power of intrinsic motivation. (*Read Naturally* continues to incorporate these highly motivating graphs into their software program.)

Another way to stoke motivation is to provide choices. Choices give students a healthy sense of control, which is important to keep them motivated.

One day, Mark decided that he was tired of working in the dining room and wanted to move tutoring to his bedroom. His bedroom was full of distractions and would have been a very cramped space for both him and the sitter. I didn't think it was a good idea.

However, I knew Mark needed to feel some sense of control in this situation so I offered a slightly different choice: "If you are willing to work in the dining room for the first two sections and cooperate with Katie, you can take the computer to your room to do the last segment." It was a good deal, a "win-win" for both of us.

I had another way of working "choice" into tutoring. Some would call it bribery, but I saw it is a healthy way for Mark to exercise his freedom of choice and learn that hard work provides rewards. For every 20-minute segment that Mark was on-task and cooperative, Katie recorded a "+1" on his tutoring chart, which was worth $1. Mark could earn up to $3 per session, which was a happy investment for me and good money for him.

When Mark was having a bad day, Katie would remind him that he was in the driver's seat. She would say, "You can do the work and earn a dollar, or you can keep rolling around on the floor. The choice is yours." She did not have to engage in a power struggle and Mark was free to make his choice.

Early in the summer, Mark suddenly decided he wanted a specific toy. We checked his chart to see if he had earned enough money. He was $2 short! And, it was a Friday… a Friday in which he chose to goof-off for two out of three sessions! He missed his opportunity and had to wait until Monday to earn that extra money. Those two-and-a-half days were a *long* time away for him! It was a tough lesson, but he got the message.

Remember: Small Bites

As with most things in life, *more* is not always better. It is easier for all of us to digest learning in smaller segments, but it is *essential* for students with learning disabilities. Trust the power of small segments and watch students thrive!

Get FREE Bonus Materials!

A “Quick-Reference Summary” and “Reading Chart” are available at www.StudySkills.com/cuetoreading

-Chapter 15-
What Do I Do? Where Do I Go?

A mother in St. Louis wrote to me, concerned that her son had a reading disability, and wondering what she should do next. Should she seek a tutor? If so, where could she find one? How could she get a diagnosis?

So many valid questions!

How do you know *if* you need help? What do you do? Where do you go?

Unfortunately, there is not a simple answer. The symptoms you observe, the support system you have (or don't have) in your child's school, and your geographical location are just a few of the factors influencing the answers to those questions. However, I will attempt to lay out a framework to help guide you along the way.

"Does My Child Have a Learning Disability?"
"How Do I Know if I Should Investigate?"
"How Hard Should I Push?"

Self-doubt can be a parent's worst enemy. These questions can paralyze you into inaction for years! However, you can take a systematic approach to these questions and "triangulate" your resources. That is, pull your information from three sources to get a well-rounded perspective on the situation.

Those sources are:

1) Data and observations from you, your child's teachers, and any other forms of assessment conducted on your child.

2) Your research of symptoms.

3) Your gut instinct.

1. **Data and Observations.** The first source of information is self-explanatory. Make a detailed list describing all your observations and reasons for concern. Then pull all the notes, progress reports, report cards, and other forms of assessment you have for your child. Look for patterns or correlations between your concerns and the documentation you already have. This process will give you more direction for the second source of information, your research.

2. **Research.** If you are reading this, you've probably already done your fair share of research. As you did with your "data and observations," evaluate your research for patterns and correlations. Does your research strongly indicate a specific condition? Can you provide stories or examples to support the symptoms you are observing? This will help you better identify the nature of your concerns and more effectively communicate with professionals when you begin seeking help.

3. **Your Gut Instinct.** This category should be given as much weight as each of the other two. While you want to remain objective in your pursuit of help, objectivity does not paint a full picture. I have spoken with many parents who had to fight hard to get help for their child because they *sensed* a problem was lurking just beyond the surface observations. Their child's teachers did not see the issue, the doctors did not understand the severity of the problem, and everyone blew-off their concern, saying "It will get better with time." If you get similar reactions yet remain unsettled, there is likely a reason! You are an

animal and animals have instincts. Trust yours, and keep fighting!

"Where Do I Go for Help?"

Start by sharing your concerns with your child's teachers, administrators, school counselors, and special education staff. If you do not get satisfactory assistance at the building level, check with special education administrators in your school district, county, and/or regional education districts. Also discuss your concerns with your pediatrician. Hopefully, these people will listen carefully to your concerns, point you in the right direction, and provide support.

But what if they don't? Speaking from my own experience, my child's school and healthcare professionals were either not listening to my concerns or did not feel they were valid. I've heard many stories from other parents that are far too similar. So you may have to dig a bit deeper.

If that is this case, leverage every resource you have! As with many things in life, networking may lead to an answer. Think about people you know in the healthcare or education professions. Share your concerns, ask them if they might have a suggestion or referral, and follow up on their leads. Of course, you must use your judgment through this process, but you will more than likely find someone who knows someone else who went through a similar situation. Those parents that have been through the trenches can provide good resources for your local area.

You can also find a listing of resources, organized by state, at: www.ncld.org. This site is sponsored by the National Center for Learning Disabilities. Take an afternoon to call every phone number listed under your state. Ask every live person who answers the phone what you should do next and

where you can go for help. This process would undoubtedly help you uncover valuable resources.

Our Friend in St. Louis

I wrote back to the mother from St. Louis. Since I am not personally familiar with resources in her area, I shared the NCLD.org website. I also shared the following:

> **I would encourage you to focus on a diagnosis at this point, rather than a tutor.** Your interventions will be so much more effective when you know exactly what you are dealing with. Also, getting a formal diagnosis would make your son eligible for assisted services throughout school and in his career. This is something he can always choose to use or not use, but the documentation would give him the *option*. Of course, this is assuming he has a learning disability. I can't say for sure, but if your gut tells you that he does have a disability, it is worth your while to investigate further.

The good news is that there is so much that can be done… at any age! More and more studies are confirming that the brain can "rewire" itself to overcome deficiencies at any age, if you know the right interventions to target.

A few months before we received a diagnosis for my son, I shared my concerns with a colleague. I said, "I can deal with whatever it is. I just need to know *what it is*!"

He replied, "You know, I have found in life that problems rarely remain problems once you have identified them." That is certainly the case with reading challenges. The most essential key to resolving these challenges is to identify the cueing systems students are using, so you can identify which systems they are *not* using. From that point, targeted strategies can be selected and "problems" can be resolved

quickly. Even the most severe cases of “struggle” can be resolved. Just ask my Emilia.

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Conclusion

This book is short and sweet. But don't let the short page-count fool you into discounting the power of the information provided. These pages include all of the fundamentals you need to solve nearly every reading challenge. Read them carefully and continue being a warrior for your child or students who struggle with reading!

Finally, don't forget to envelop them in lots of loving hugs and support their greatest passions. These are the keys to keeping them motivated as they build their skills with the cueing systems.

Please send me feedback at info@studyskills.com. (It will be forwarded directly to me.)

Best wishes!

Susan

Acknowledgements

This book has obviously been inspired by dear son, **Mark**. His positive, “can do” attitude has endured some difficult times, but he holds no bitterness. Instead, he fully understands that his struggles have allowed him to “help” other students through the research and work he’s inspired in me. But in truth, Mark is my inspiration. It’s a blessing and honor to be his mom.

I will forever remain grateful for the educators and healthcare professionals who opened their arms to support me when Mark was in trouble. It took a while before I found them, but that makes them all the more endearing. To the educators at **Brookfield Academy**: **Ms. Dawn**, **Ms. Mary**, **Ms. Lori**, and **Ms. Kim**. To the professionals at **Beaumont Human Development Center**, especially **Dr. Lauren Radtke-Rounds**, you provide such a valuable service! Thank you for giving compassion, direction, and hope to frustrated parents.

I have to thank **Dr. Ned Hallowell**, who graciously shared his stage and invited me to share the information in this book with his audience. That gesture helped me see just how important it is to get this information in to the hands of other parents. I am eternally grateful for his generous support and humble manner. It has been a privilege to be a first-hand witness to his genuine commitment of service and promotion of human connection.

This book would not be possible if not for the dedicated work of several staff members and consultants who helped me organize this information and manage all of the logistics of getting it published: **Corodon Fuller**, **Jean Hussey-Stone**, **Kevin Stone**, and **Emily Briggs**…you all rock! It’s a privilege to work with dedicated, hard-working, service-oriented people such as yourselves.

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I need to make a special call-out to Tom's grand-daughter, **Hannah Hoobyar**, who has worked very hard to overcome reading challenges. Hannah, you are inspiration to *anyone* who has ever experienced learning difficulties; your challenges have not slowed you down one bit. In fact, they seem to have only accelerated your path to success! Congratulations on publishing a book at age 14 (*Yoga for Kids: The Basics*) and for your massive fundraising initiatives for survivors of the Sandy Hook Elementary tragedy and 2013 Oklahoma tornados. I know your grandpa is so proud!

And, finally, the rock-solid foundation that is my family…I've been blessed to be surrounded by nothing but support my whole life. Even when my family they couldn't quite understand my vision, they trusted it. Their continued support comes so naturally to them, they probably don't even realize just how valuable it is! My mom and dad (**Ray & Cecelia Kruger**), siblings (**Dan**, **Greg**, & **Amanda**), **Mom & Dad Woodcock**, and **Grandma & Grandpa Willer**…thank you for your encouraging words and, in many cases, your contributions of child care!

To my vibrant daughter, **Madison**, who is now four years-old and so enthusiastic about learning her letters! You are my joy.

And to **Brian**, my ever-supportive husband who sacrifices much and puts up with more cranky moods than I'd care to admit when deadlines loom. None of this would be possible without your grand schemes *and* your day-to-day efforts to keep the business running, the house humming, the children well-loved, and my coffee coming every morning! I love you.

Appendix: Resources and Free Stuff

Free Stuff:

Cueing Systems "Cheat Sheet": Summary of Cueing Systems & Effective Reading Strategies:
www.StudySkills.com/cuetoreading

Evaluation Checklist: Guidelines to Identify Use of Cueing Systems: www.StudySkills.com/cuetoreading

Additional Resources for Parents & Teachers:

All About Spelling – Excellent, multi-sensory program for use by parents and teachers. Teaches students how to build skills for the visual cueing system of reading. (www.AllAboutLearningPress.com)

The Logic of English – Apps and other wonderful tools to teach reading – especially the skills for the visual cueing system – correctly. (www.LogicofEnglish.com)

Book: *Reading Detective Club*, by Debra Goodman – A wonderful collection of *fun* reading activities that build all three cueing systems for students. This book is one of my favorites to use with students!

Audio Books – Audio books are the *"*Power Strategy" for building reading skills! They *only* achieve their power when used in conjunction with other reading strategies. But repeated readings with audio support will make all of your child or student's efforts go supernova!

Read Naturally – This program is always very motivating for students and is excellent for pulling all three cueing systems together. (www.ReadNaturally.com)

Math Line – Great resources for learning basic math facts. (www.HowBrite.com)

Handwriting Without Tears – A superb program for teaching handwriting. I can't rave about it enough! (www.hwtears.com)

Irlen Color Overlays – Colored overlays help reduce debilitating glare off white paper. (www.irlen.com)

PowerPath – Find more information about Visual Stress Syndrome from the home website of Dr. Laura Weisel. (www.PowerPath.com)

Eye Lighters – Clear, tinted, plastic rulers that helps readers track text while blocking glare. (Available at Amazon.com.)

SOAR Study Skills – Home to more free resources to accompany this book. (www.StudySkills.com)

Book: *Mosaic of Thought*, by Ellin Oliver Keene and Susan Zimmermann – This book is designed to help teachers implement practical, thoughtful ideas for teaching comprehension in contemporary classrooms.

Miscue Analysis:

Video: **Authentic Assessment – Literacy: Miscue Analysis** by Dr. Andrew Johnson of Minnesota State University – Mankato. This six-minute video is very insightful and informative! (Search YouTube)

Book: *Miscue Analysis Made Easy* by Sandra Wilde. Written for teachers who want to study this topic with intense depth, this book is very comprehensive.

About the Author
America's #1 Learning Expert

Susan Kruger, M.Ed. is a certified learning specialist and former struggling student. She was shocked when she simplified a few study skills in college--and graduated with a 3.9 GPA! Since that time, she's taught thousands of students how to achieve the same sense of accomplishment and confidence with study skills.

Susan is the author of the international best-selling study skills book, *SOAR® Study Skills*, founder of StudySkills.com and RelevantEducation.org, Education Expert for *ADDitude Magazine*, Premier Instructor for *The Learning Annex* in Manhattan, and developer of the break-through model, *The Brain Circuit™.* In 2014, she was named the 1st place winner of the Oakland County Executive's "Elite 40 Under 40" competition. Microsoft Partners in Learning University has called her a "Global Expert in Education Innovation."

Her curriculum materials are used by 4,000+ schools nation-wide and are in 30+ countries worldwide. She's married to a fellow educator and mom to two dynamic children with "learning disabilities" who are soaring through school with confidence!