Targeting Social Emotional Learning Channels for Accelerated Phonics Skill Instruction

Using Secret Stories® Brain Based Method to Accelerate the Pace of Existing K-2 Reading Curriculum and Phonics Skill Instruction.

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CONTENTS

Executive Report

This document will provide the reader with an overview of traditional, “cognitive-based” vs. “affective-based” (social-emotional) phonics skill instruction at the preK-2nd grade levels. It will examine the inherent obstacles associated with exclusive use of traditional core reading and phonics instructional programs, including limiting early learner-access to the alphabetic code over multiple grade level years, as well as the instructional challenge of imparting abstract (letter sound/phonics) skills to early age, concrete-level thinkers. It will address the importance of understanding the brain science so as to shift reading instructional practice from brain antagonistic to brain compatible. It will also explore learning loopholes for bypassing inherent areas of early (and struggling) learner weakness to target areas alternative areas of strength. It will further explore the critical variable of teacher-preparedness at the beginning grade levels to provide the early, intensive and expert level of literacy instruction required to successfully teach all kids to read.

About this Document

This document provides an overview of the research that supports Secret Stories® brain-based approach to reading instruction as a “backdoor” delivery method for early and accelerated phonics skills mastery, and its use as a critical base of support to any existing reading and/or phonics program at the PK-2 grade levels and above, as needed.

Phonics Instruction—The Process and Problems

Understanding phonics means understanding the relationship between letters (written language) and their sounds (spoken language). (Moats, 2014). It requires the reader to have an awareness of the Alphabetic Principle, which explains how the letters and letter patterns represent sounds (Lyons & Ghetti, 2011). Phonics instruction teaches students about the relationship between letters and sounds, however effective phonics instruction teaches students to associate sounds with the corresponding letters and letter patterns so that students learn to encode (write) and decode (read) words using the sound-symbol correspondence. This is a strategy that all good readers demonstrate (Ehri, 2005). Mastery of the relationship between letters and sounds 'unlocks' the reading and writing code for early readers. Although there are a number of approaches to teaching phonics, not all are equally effective, nor do they make use of brain science.

When it comes to early reading instruction, the gap that exists between what we know and what we do is wide. The National Reading Panel identified five essential elements for reading instruction: phonemic awareness, phonics, comprehension, vocabulary and fluency. Of these elements, phonics is the area in which early readers are most deficient.

Research clearly shows that phonics is the cornerstone of effective, early reading instruction. "For reading scientists, the evidence that the phonological pathway is used in reading and is especially important in beginning reading is about as close to conclusive as research on complex human behavior can get" (Seidenberg, 2017, p. 124).

In order to become a reader, one has to develop these phonological paths. There are several ways to do this, but no way has been found to be more effective than explicit decoding instruction (focusing on units of sound, or phonemes—not on cueing systems). Children need to become fearless code breakers, not left in the dark to guess. Many educators, however, continue to ignore this well-proven fact. Shanahan and Shanahan (2017), explain that educators should focus on what the research says students need to learn to read, rather than focusing on elements that have no basis of evidence.

Teacher Preparedness and Effectiveness, To Teach Reading

Research has shown that developing students' effective, early decoding proficiencies is an essential task of primary grade teachers. Less-known is how ill-equipped and unprepared many teachers are to provide the early, intensive and expert literacy instruction needed to successfully teach all students to read (Allington, 2011). According to Dr. Kathleen Rastle,

> There has been a long history of debate over which method, or mix of methods, should be used to teach reading. Some people continue to advocate using a variety of meaning-based cues, such as pictures and sentence context, to guess the meanings of words. However, our research is clear that reading instruction that focuses on teaching the relationship between spelling and sound is most effective (University of Royal Holloway London, 2017, p. 1).

Additionally, surveys conducted by the National Foundation for Educational Research have repeatedly shown that primary schools employ many teachers who, despite the overwhelming research, still cling to a random assortment of mixed methods, an approach Dr. Michael Pressley describes as a "disastrous strategy." Pressley contends that the problem is that there are too many ineffective teachers. He estimated that up to a third of the teachers he has observed over the years, are weak when it comes to literacy instruction (Pressley, 2002).

Furthermore, according to Fountas and Pinnell (1996), teacher expertise is a critical variable in effective reading instruction and yet few teachers have adequate training or are equipped with the tools to teach phonics. Teaching phonics is not intuitive, and most teachers in early grade classrooms today have received little to no training on how to do so effectively. A recent systematic review of the literature on the knowledge and preparedness of pre-service teachers in both Australia and America confirmed concerns about the content of teacher education courses (Meeks, Stephenson, Kemp, & Madelaine, 2017). The published survey results indicated that pre-service teachers rated their preparedness to teach early literacy skills as anywhere from not prepared/not confident, to somewhat or moderately prepared, and to not at all confident about teaching struggling readers. When these teachers were asked what knowledge they had about specific components of early literacy instruction, such as phonemic awareness and phonics, studies found that a very low number of pre-service teachers had adequate knowledge about phonics (terminology and instruction) and the structure of the English language.

Reading is not a natural task and children are not biologically prepared to do it by evolution. This differs greatly from spoken language acquisition. Therefore, teachers must be aware that many of the reading steps that they take for granted are not at all obvious for young children (Dehaene, 2009).

> If teachers don't have clear purchase on what it takes to become a good reader and what some kids might be missing, then their instructional successes will be fortunate accidents. The same can be said for professors who prepare teachers and for the principals and coaches who supervise them (Shanahan, 2017, p. 1).

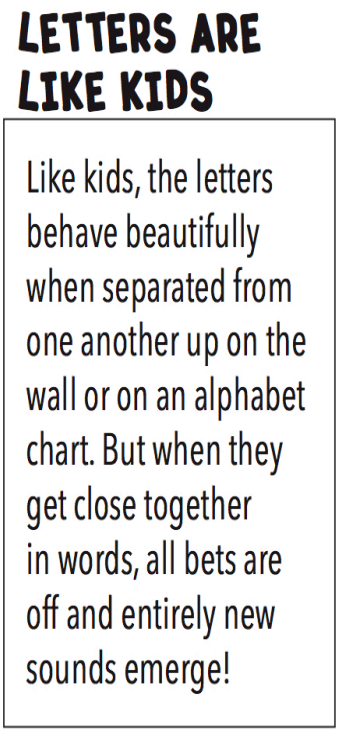
Early literacy research suggests that there are three kinds of kids: Those who are easy to teach to read, those who are hard to teach to read, and those who are very hard to teach to read. Yet, only 25% of kindergarten and first grade teachers fall into the category that research suggests can teach almost everyone to read, with 50% of teachers capable of teaching only those in the easy to teach group, and the remaining 25% unable to teach almost anyone to read (Stuhlman & Pianta, 2009). Worse still is that the 25% of teachers who were unable to teach almost anyone to read were also responsible for 75% of all referrals and retentions. Furthermore, Gates & Yale (2011) notes that the difference between the most and least effective teachers in a building is twice as large as the difference between the most and least effective schools in the nation. Allington (2011) and Sanders (1994) report that students who had three consecutive years with effective teachers, achieved 50 percentile ranks higher than those who had three years with less effective teachers. This lack of early grade teacher expertise in literacy skill instruction results in overreliance on worksheets and skill practice pages from traditional core reading and supplemental phonics programs, which are largely worthless and make up what Adams (1990) called the "inherently intractable, slow, inefficient" (p. 292) basic phonics curriculum.

The empirical research reviewed shows that the most effective literacy teachers integrate two major aspects of instruction. They incorporate the codes of written language with uses and purposes of literacy that are meaningful to the learner.

> On one hand, they provide extensive opportunities for pupils to read and respond to children's literature and to write for a variety of authentic purposes. On the other hand, they attend to the codes of written language: sound symbol correspondence, word recognition, spelling patterns, vocabulary, punctuation, grammar and text structure (Hall, Larson, & Marsh, 2003, p.316).

It is essential that teachers at the beginning grade levels both understand and are prepared for the many hurdles and pitfalls inherent in early grade, literacy skill instruction. According to Dr. Richard Allington, "What really matters is ongoing, professional development for PreK, kindergarten and first grade teachers," further noting that, "No amount of remediation or retention can compare with high quality, professional development for PK, K and 1st grade level teachers." This is the only way to ensure that teachers are equipped with the knowledge and tools needed to provide the early, intensive and expert literacy instruction required to teach all kids to read (Allington, 2013).

Delaying Early Learner Access to the Whole Alphabetic Code:



The fact that research suggests that poor readers read poorly because they are taught poorly at the earliest grade levels is often attributed to teachers' overreliance on core reading and phonics programs for phonics skill instruction. The typical timeframe allotted letter sound and phonics skill introduction spans three to four years, and yet, Allington (2013) emphasizes that three to four years is a long time to make learners wait for access to the whole code. It is common practice for early learners to spend an entire kindergarten year on mastering the individual letters and sounds, despite the research that shows the ability to identify all of the letters and sounds by Halloween in kindergarten is a primary predictor of later student reading success (Allington, 2013).

Implementation of a core reading and/or phonics program by which learners acquire only bits and pieces of the code, dispersed over multiple grade level years, does not provide beginning grade level learners with the tools they need to fully engage in the reading and writing experiences that occur throughout the day in the classroom; nor does this planned "fragmentation" model of instruction equip them with the tools they need to read or write about what is personally meaningful to them.

This accepted practice of delaying learner-access to the "whole" code needed for reading and writing puts those at the earliest grade levels at the greatest disadvantage. This disadvantage occurs because learners at the beginning grade levels acquire only minimal access to letter sounds and phonics skills. This severely limits their ability to partake in the many rich, literacy experiences that are woven throughout the instructional day. These disadvantages are compounded by the fact that the small parts of the alphabetic code they do know, which are the individual letters and sounds, will often appear contradictory to the sounds that letters make (together) in actual text. Our language is ripe with letter sound inconsistencies, and will appear even more so to beginning grade level learners since the letters in isolation almost never seem to make the sounds that they are supposed to when they come together in real words. Take, for example, the letter *t.* Kindergartners are taught, "*T says turtle, tuh, tuh, tuh,"* despite the fact that the overwhelming majority of the time, *t* won't actually say "tuh" when it is observed in text, as per high frequency words like: the, this, them, they, those, there, then, etc. And yet, *th* isn't formally introduced until late fall or early winter of first grade in most core reading and/or phonics programs. For beginning readers, such blatant instructional discrepancies can feel like the reading equivalent of a wild goose chase.

Furthermore, because experience is the best teacher, the most direct pathway to becoming a reader and writer is to read and write. However, with only limited access to phonics skills, learner-motivation to do so is severely hindered. The most effective instruction occurs when teachers consciously integrate skills with authentic literacy experiences. Pupils are encouraged to apply their literacy skills in a variety of reading and writing situations, with literacy permeating the curricula (Hall, Larson, & Marsh, 2003).

Disadvantages of "Use-it or Lose-it" for Phonics Skill Mastery:

Without meaningful explanations to offer learners about why letters do what they do, core reading and phonics programs can provide only abstract, phonics-based "rules" to be memorized and not the logical understanding that the brain craves. Compounding this problem is that without any meaning with which to foster genuine learner-understanding, mastery of these skills is relegated to "use it or lose it" for which every learner has their own unique threshold for using a skill enough so as not to lose it. It is unfortunate that vulnerable learners who need the most "use-it" time for skills to stick often receive the least, not only at home, but at school as well. And, as they progress to higher grade levels, they no

longer receive instruction on the lower grade level skills they haven't yet mastered. In fact, recent intervention studies found considerable evidence showing that reading difficulties in most beginning readers are not caused by biologically based cognitive deficits intrinsic to the child, but are actually related to the opportunities provided to children when they are learning to read (Vellutino & Fletcher 2005). If however, we are able to understand something, then we don't need to memorize it.

Traditional phonics instruction often relies solely on rule-based methods and rote memorization of letter sound skills, which is neither preferred, nor developmentally ideal for the early age learners to which it is delivered. For many learners, it marks the beginning of what quickly emerges as an "un-level playing field" in literacy learning. Recent intervention studies found considerable evidence showing that reading difficulties in most beginning readers are not caused by biologically based cognitive deficits intrinsic to the child, but are actually related to the opportunities provided to children when they are learning to read (Vellutino & Fletcher 2005). Moreover, the inherent nature of the phonics "beast" is that mastery relies upon rules to be memorized and not genuine understanding. For this reason, even upper grade and adult age learners often struggle with these "threshold" skills to future learning. If however, we are able to understand something, then we don't need to memorize it.

Information that is readily understood does not have to make its way through the "use-it-or-lose-it" buffer and is therefore ready for immediate use. Ideally, "use-it" time on phonics skills would be spent on actually *using* the skills for the purpose they are taught, for reading and writing, not rote practice of the skills, themselves. But, understanding requires meaning, something that letters and sounds do not have, which is why traditional core reading and phonics programs must rely on the less-desirable, skill-based "use-it-or-lose-it" practice for phonics skill mastery.

Tapping Brain Science for Accelerated Learning:

Pinker (2009), echoes that children are wired for sound, but print is an optional accessory that must be utilized. This information on human nature should be the starting point for discussions on how to teach children to read and write. According to Dr. Timothy Shanahan (2017), most educators have been misguided on the ideas about the nature of reading and ultimately how to teach it effectively. All of the familiar techniques were devised before we had a scientific understanding of reading, and are based on theories that we now know are wrong.

A true science of reading is emerging. For centuries, effective teachers discovered through experience what strategies to use and how to implement them in the classroom. However, they did not know why the strategies worked or did not work on different occasions. Studies in cognitive neuroscience provide the why. When teachers know the why, they can be more masterful in applying instructional strategies (Sousa, 2006). As educators, we must ask ourselves if the approaches and strategies we employ with students are based on solid research, and whether or not they can be supported with scientific reasoning (Fischer, Daniel, Immordino-Yang, Stern, Battro, & Koizumi, 2007). “By bringing to light their cerebral foundations, cognitive neuroscience studies of reading can help spread the word and eventually lead to a more systematic and rational approach to reading education” (Dehaene, 2009).

It is essential that educators be familiar with brain compatible practices and practices that are brain antagonistic, too. Based on what we currently know about the structure and function of the brain, brain compatible teaching emphasizes the way the brain naturally learns (Sprenger, 2013). Lessons that are brain compatible enable teachers to target instruction to areas of learner strength and bypass areas of inherent weakness. Additionally, brain compatible practices create opportunities for teachers to include strategies that are multisensory; appealing to as many senses as possible through movement, visuals, sounds and props. Alternatively, brain antagonistic practices diminish proper brain function due overreliance on explicit memory pathways.

Teachers must understand the differences between brain compatible and brain antagonistic instruction. Additionally, principals must evaluate teacher effectiveness, particularly in regards to the delivery of early grade reading and phonics skill instruction, to ensure that it aligns with the brain rather than in opposition to it.

Aligning Instruction with the Brain’s Need to Pattern:

The brain is often referred to as the ultimate pattern-making machine, seeking and storing memories based on patterns, or repeated relationships between ideas. This system facilitates our ability to interpret the world—and all the new information we find throughout each day—based on prior experiences. Simply put, patterning is the brain’s way of doing things—coding, storing, connecting, and retrieving information (Willis, 2008).

Because beginning grade level learners have such limited access to the code and thus, only minimal awareness of the sounds that letters make in

text, they are unable to pattern-out (i.e. make sense of) why letters come together and make the different sounds that they do in text. To compensate, teachers often must rely on the rote memorization of sight words to help students "read." This memorization effort is not only developmentally inappropriate for early age learners, but also requires a vast amount of instructional time and resources (assistant and volunteer time, activities, material, etc.). Sight word memorization is also far from ideal from a brain based learning perspective. Stanford University's study on sight words and the brain show how different teaching methods affect reading development. According to Stanford Professor Bruce McCandliss' Stanford University Study (2015),

> Beginning readers who focus on letter-sound relationships, or phonics, instead of trying to learn whole words, increase activity in the area of their brains best wired for reading. In other words, to develop reading skills, teaching students to sound out "C-A-T" sparks more optimal brain circuitry than instructing them to memorize the word 'cat,' and the study found these teaching-induced differences show up even on future encounters with the word. This groundbreaking study provides some of the first evidence that a specific teaching strategy for reading has direct neural impact (p. 1)

Additionally, rote memorization requires brain storage, which is not limitless. The human brain must discriminate which concepts and ideas should be placed into the working memory on its way to the long-term memory. It takes approximately 30 seconds for this process to occur. In deciding what to remember, our brains ask *"Does this make sense?" and "Does this have meaning?"* Of these two criteria, meaning appears to have a greater impact on the probability that information will be stored for recall, especially if it has personal meaning. According to Dr. Mary Helen Immordino-Yang (2017), that feature of our biology makes perfect evolutionary sense, as one would not expend energy and effort trying to process random things that have no personal importance. Doing this would be a waste of energy. This has important implications for the way in which teachers design their lessons, especially in subject areas that inherently hold no personal meaning for learners, such as phonics skill instruction.

Engaging Multiple Memory Systems with Multisensory Instruction: Studies have revealed that more than 99 percent of learning occurs at the non-conscious level and that the non-conscious mind is responsible for the bulk of our mental processing. Learning at this level is effortless, and includes visual cues, sounds, experiences, and

feelings processed by multiple memory systems and in varied learning domains (Asher, 2009). In contrast, the conscious mind works much more slowly, and is overall less adept and efficient at processing information. For these reasons, it can be said that the non-conscious mind is more intelligent than the conscious mind (Williams, 2017).

The three main domains of learning are Cognitive (thinking), Affective (social/emotional "feeling") and Psychomotor (physical/kinesthetic). While the most commonly utilized learning pathway for classroom instruction is the later developing Cognitive Domain, learning should ideally take place in all three domains. By introducing information to the brain from as many angles as possible, more neural connections are created and strengthened. Effective teachers are able to seamlessly combine the three domains into each lesson. As a result, student learning is more holistic and multidimensional. The more systems and modalities teachers utilize for learning, the stronger the learners' ability to receive and retrieve the information. It is important to remember, there are also many students who have difficulty with one domain, but do better with another (Sprenger, 2013). By employing a variety of instructional strategies that engage multiple modalities and pathways for learning, information is more likely to be stored in the different learning networks, providing learners with more avenues for both retention and retrieval.

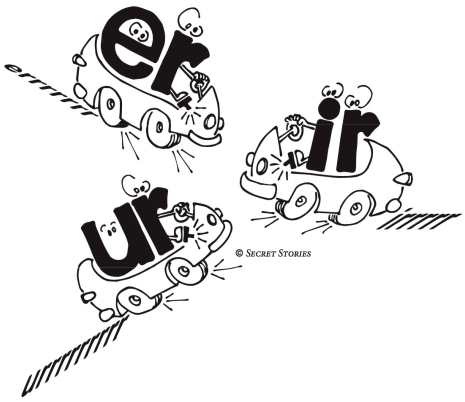
While the cognitive "thinking" domain requires conscious effort and attention be applied for learning, the affective "feeling" and psychomotor "physical" domains do not. Learning occurs naturally and non-consciously through these neural networks. Unfortunately, current methods of instruction, particularly phonics instruction, do not adequately make use of the brain science and are ineffective at successfully engaging the whole brain for enhanced student learning.

Tapping Body Intelligence for Accelerated Reading Skill Mastery:

Children are active learners and therefore it is critical that teachers, particularly those at the earliest grade levels, understand the importance of successfully integrating psychomotor (physical/kinesthetic) learning into daily instruction. There is a large collection of research that proves what many have suspected all along, that human bodies are meant to have ample opportunities to move, and, as a result, learning is enhanced when movement is embedded in instruction. Movement primes the molecular processes that help form memory (Chaddock-Heyman, Hillman, Cohen & Kramer, 2014). Most of what we know and use on a daily basis has been learned through some sort of mobile experience and not from sitting idle in

a classroom. Studies prove that the body remembers as well as the mind, and for certain learners, even better. This is especially true for very young learners whose cognitive processing centers are often underdeveloped. This is also true for many struggling, older learners. For these learners, physical/kinesthetic learning proves to be a far more reliable means of skill acquisition than traditional cognitive processing (Asher, 2012). Ultimately, teachers who have an understanding of body intelligence are better able to incorporate targeted physical movements into their lessons for enhanced learning and skill retrieval.

Anexample of incorporating movement into instruction would be to encourage learners to pretend to "slam on the brakes" as if they are driving a car, while saying *"Errrrrrrrrr!"* This accompanies teaching the *er, ir* and *ur* phonics patterns in words like: her, bird, turn, etc.



Intentionally adding movement to enhance learning is referred to as embodied learning. This practice has been shown to enhance recall and aid in the transfer to long-term memory. Incorporating the physical action when retelling the story about *er, ir,* and *ur* triggers immediate recall of the associated sound. This is because what fires together is wired together in the brain. Therefore, performing a task or recalling information that causes different neurons to fire in concert strengthens the connections between them (Immordino-Yang, 2017). In this way, learning becomes non-conscious and effortless.

When considering the vastness of our body's intelligence, it is no wonder that our muscles are capable of holding memories. Muscle memory, also known as motor learning, is a form of procedural memory that involves consolidating a specific motor task into memory through repetition. When a movement is repeated over time, a long-term muscle memory is created for that task, eventually allowing it to be performed without conscious effort. This process decreases the need for attention and creates maximum efficiency within the motor and memory systems (Krakauer & Shadmehr, 2006).

Understanding the research on body intelligence also enables teachers to take advantage of muscle memory as an access point for early and

accelerated mastery of individual letter sound skills. This is crucial, given the traditionally slow pace of individual letter sound instruction at the earliest grade levels, which can often take an entire kindergarten year or more to acquire. This is despite the research on early literacy showing that a primary indicator of later student reading success is a student's ability to master the individual letters and sounds by Halloween (Allington, 2013). By tapping into learners' muscle memory as a "backdoor" alternative pathway for skill acquisition, we can shorten this timeframe to an average of just two-weeks to two-months, both for kindergarten and pre-kindergarten learners (Garner, 2016). Lyons and Ghetti (2011), noted that children, as young as four years of age, benefited from phonemic awareness and letter sound instruction when the instruction was presented in an interesting and entertaining way.

Activating early learners' muscle memory for effortless, non-conscious letter sound retrieval, rather than relying on underdeveloped, cognitive centers to process, store and retrieve it, is parallel to "giving" learners the skills, rather than teaching them. This is most easily done through singing. Triggering non-conscious, muscle memory for retrieval of the individual letters and sounds is easily accomplished through the engagement of the mouth muscles in such a way as to follow a familiar path from the letters to their sounds. In this way, even learners as young as fours year old are easily able to retrieve all of the individual letter names and sounds, including long and short vowel sounds and hard and soft consonant sounds (Garner, 2016).

Teachers' ability to understand and make use of the brain science allows them to better incorporate muscle memory into instruction, while avoiding the otherwise inherent pitfalls associated with this type of motor-based learning, such as autopilot regurgitation of skills that can severely limit their use. It is essential that early grade level teachers are equipped with the knowledge and understanding of how to take advantage of these learning loopholes that are rooted in the physical/kinesthetic domain. Doing so allows teachers to bypass areas of early learner-weakness and tap into alternative areas of strength, thereby shortening the arduous path to literacy skill mastery for beginning learners.

Activating the Brain's Emotional Systems for Deeper Learning:

"It is literally neurobiologically impossible to think deeply about things you don't care about" (Immordino-Yang, 2017, n.p.). Deep understanding depends on making emotional connections between concepts. Emotion

guides our learning. If something is emotionally stimulating, it is marked for memory and prioritized for learning in the brain (Zull, 2011).

Students do not just develop intellectually in schools, but also socially and emotionally. Despite our understanding that emotions have an impact on learning, some teachers are still unsure how to incorporate emotions into their lessons. Short-term memory consists of two components: in a brain area that initially processes incoming information for just a few seconds, known as immediate memory; and where information is consciously processed for an extended period, is known as working memory. Sense and meaning are among the major criteria that the brain uses in deciding what to encode into long-term memory (Sousa, 2006). One of the greatest challenges that teachers face with phonics instruction is how to teach something that doesn't make sense in a meaningful way that actually makes sense.

The brain seeks meaning and relevance, learning best on a need-to-know basis. However, traditional phonics instruction only offers arbitrary rules for letter sound behaviors with no meaning. Additionally, the individual letter sound skills that are taught at the earliest grade levels are often irrelevant to the sounds letters actually make in text. According to Dr. Geoff Petty (2014), traditional methods of instructional delivery and focusing curricula on key concepts must change. It is vital to align instruction with that which is important to learners. Information presented must be grounded in personal meaning or future relevance. Sousa (2006) emphasizes that while most teachers spend a significant amount of time making sure that their presentations make sense, they don't often do enough to make sure the learning is meaningful and relevant to students. Instructional focus should target strategies that enhance retention of learning and on curricula that students perceive as relevant to their lives. The best and most durable learning occurs when content sparks interest and is relevant to a child's life (Immordino-Yang, 2015). Moving instructional practice from what is fundamentally brain antagonistic to brain compatible requires students know how, and for what, information is to be used.

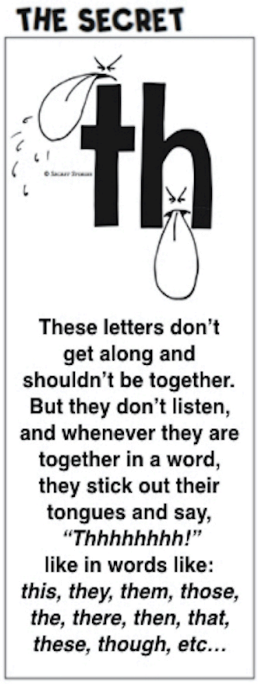
Understanding the affective learning domain and the important role that social and emotional interactions play in learning can have a great impact on teachers, particularly as it relates to the brain and brain development. The brain develops back to front, which is important to understand as it is not until the frontal lobe makes enough connections for higher level thinking takes place. The earlier-developing, affective feeling networks are more primed for learning than the slower developing, higher level, executive processing centers. Thus, brain maturation is an extremely important aspect of early learner development. An understanding of the

process is critical to appropriate early grade instruction and lesson design (Corsini, Craighead, & Weiner, 2010).

One way to activate early learners' affective learning networks is to draw on their social and emotional interactions and experiences. This process helps them to construct meaning for increased understanding (Immordino-Yang & Damasio, 2007). The emotional connection that can result from teachers making learning personally meaningful and relevant to students is what differentiates rote assimilation of material from deep mastery and durable learning. According to Immordino-Yang (2017), meaningful learning occurs when teachers are able to help their students create an emotional connection to what might otherwise remain abstract concepts, ideas or skills. This is true even in academic subjects that are traditionally considered unemotional, as deep understanding depends on making emotional connections between concepts. While this might seem like a daunting task, research has shown that doing so reaps huge rewards in the form of increased learning and achievement (Immordino-Yang, 2017). The ability of early grade teachers to fuse emotional learner-connections to abstract phonics skills is a critical step in leveling the current "use-it-or-lose-it" playing field of rules and rote-based practice on which so many learners will not succeed. Emotional engagement and personal relevance are the tools that have the most potential to improve the educational experience of every learner, in every classroom.

Accessing Backdoor Social Emotional Learning Channels:

Infusing phonics instruction with meaningful social and emotional learner-connections creates an easily accessible "backdoor" for learning that accelerates access to the alphabetic code and increases early (and struggling) learner-momentum in both reading and writing. According to Katie Garner, author of *Secret Stories—Cracking the Reading Code with the Brain in Mind* (2016), cloaking phonics skills as "secret" stories to explain the behavior of letters when they get together aligns with the way in which early learners think and learn on a daily basis.



One example of this connection in Secret Stories® is used to explain the *th* sound. Kids know that when friends are angry and not getting along, they will sometimes stick their tongues out at each other. Students can learn

that there are two letters that do this, too! Those letters are *t* and *h*, and because of their bad behavior, they are never allowed to sit together in words…but they don't listen! Pick up any book and look on any page, and there they sit, side by side, sticking their tongues out and saying *"Thhhhhhh!"*

The social and emotional "feeling" networks act as a backdoor delivery system for phonics skill instruction. Channeling phonics skills through the affective learning domain shifts the instructional emphasis from skill practice to skill understanding, and thereby accelerates learner access to the whole reading and writing code. Within this "social-emotional" instructional context, the sound for *th* — which core reading and phonics programs deem a "first grade level" phonics skill— is as easy for kids to remember as who isn't allowed to sit together in class. In this way, skills are given rather than taught, as learning is non-conscious and effortless. Because it has been fused with their feeling networks, early grade level learners can understand, store and retrieve the information just as easily as their older, more developmentally ready peers. This is, yet another example of how what's used together can become fused together in the brain (Immordino-Yang, 2017).

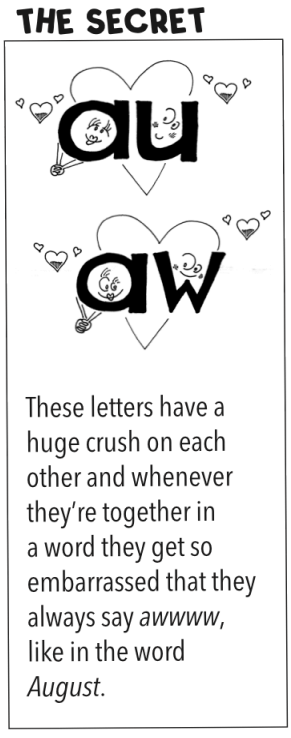
Recognizing that learning is essentially the formation of new or stronger neural connections, it makes sense to tap into already-existing pathways for new skill acquisition, rather than focusing instruction on rote memorization of rules and sight words. Teachers who understand and make use of the brain science can take advantage of this loophole for learning by aligning new skill instruction with learners' already existing social and emotional awareness and understanding. According to Dr. Judy Willis (2009), when new material is presented that helps students see relationships between concepts, they generate greater brain cell activity and achieve more successful long-term memory storage and retrieval. By cloaking abstract, phonics skills in social and emotional disguises, neural engagement is triggered in the affective learning domain, forging stronger connections for deeper learning and easier skill retrieval. This shift in instruction is in stark contrast with that of traditional core reading and phonics programs, which target the underdeveloped and less reliable, executive processing centers through rote memorization of letter sound and phonics skills.

In effect, the brain science provides teachers with a road map for cheating the brain by sneaking "hard-to-teach" skills through the brain's backdoor (the affective learning networks) rather trying to force them through the front (the higher level, cognitive processing centers). Through this

strategic, instructional delivery, teachers can intentionally trigger activation of one neural network over another. Doing so repeatedly causes the brain to change and adapt as a result of those experiences. This process is known as brain plasticity (Fischer, Bernstein, & Immordino-Yang, 2007). Modern research has demonstrated that the brain continues to create new neural pathways and alter existing ones in order to adapt to new experiences, learn new information, and create new memories (Kolb & Gibb, 2011). Students' brains are physically growing and changing every time they learn something. The brain possesses the remarkable capacity to reorganize pathways, create new connections and, in some cases, even create new neurons. The implications of this research on teaching and learning are game changing, particularly for those working with early grade level learners. Teachers who know how to elicit this transfer of learning are able to design instruction to circumvent areas of inherent weakness and target areas of strength.

Putting the Whole Brain to Work with Story-Based Learning:

The easiest way to trigger engagement in the affective learning domain is through stories. Stories establish supportive conditions in the brain for learning and remembering, acting as a sort of memory enhancer. The structure of a story provides a sort of mental map upon which new information is more easily laid. Even in algebra or history, when the new information is presented in a familiar story form, the memory structure facilitates the brain's retention of that information (Willis, 2009). Moreover, concepts presented in a story-based format receive a higher level of priority in the brain, often using an emotional hook to engage curiosity (Immordino-Yang, 2017). Evolution has wired our brains for storytelling; they are woven into our DNA (Speer, Reynolds, Swallow, & Zacks, 2009).



Stories can put the whole brain to work and are the most effective way to activate multiple areas of the brain, simultaneously. Research shows that the more widespread the connections, the deeper the learning. Stories activate the emotional centers of the brain that aid memory, and unlike with direct instruction, skill content delivered through

storytelling promotes the formation of multi-layered memories that result in deeper learning experiences and easier skill retrieval. Additionally, the brain becomes more active when telling or listening to a story, prompting higher levels of learner-engagement. The benefits of embedding abstract skill content into stories is a great pedagogical strategy because it increases learner-curiosity and the thought processes that support it. If a student is not interested in a topic, they probably don't have enough knowledge or experience in that area to develop the sense of curiosity. In situations where students lack interest, it is the job of the teacher to expose them to the relevance of it (Immordino-Yang, 2017). For early grade teachers, as well as those working with struggling readers at the upper grade levels, it can be difficult to foster learner-curiosity about letter sounds and phonics patterns. This is why the affective learning domain is the ideal doorway through which to channel these critical skills. Targeting phonics skill instruction to learners' already-existing frameworks of social and emotional experience and understanding sparks a genuine learner interest and increases the level of learner engagement.

Sparking Curiosity for Learner Driven Instruction:

Curiosity requires an emotional hook and a baseline understanding. It is motivating and it leads you to engage with and follow things that you notice (Immordino-Yang, 2017). Thus, when a learner asks "why," it means that they know enough to know that something isn't right, and are motivated to get to the bottom of it (Garner, 2016). Dr. Immordino-Yang (n.d.) stresses the inherent subjectivity and skillfulness in this process, explaining that,

> You have to know what's worth noticing and what's not worth noticing. It is an inherently nuanced, implicit and emotional process. Students recognize that a skill is important, and potentially useful, but don't actually fully understand it. This creates a curious state—one in which learners explore and notice, and then follow what they have noticed and try to play it out. Students question themselves throughout this process about whether or not they fully understand it. And through this self-reflective process, learners can potentially gain new understanding of something else that might be related, or new connections.

A learner that is engaged in this deep learning process is both active and reflective. This deep learning state provides a context for understanding in which passion and insatiable curiosity flourish, weaving a virtual tapestry of connections that grounds ones learning in the roots of personal meaning and purpose (Marshall-Pace, 2009).

Curiosity is an aroused state of the brain that has complex and interconnected processes at play. When students are curious, they are open, safe and in an intellectually playful place in which they can explore (Immordino-Yang, 2015). In this optimal learning state, learners begin to drive their own learning and instruction, which is the evolutionary ideal. The most highly effective teachers place the "why" at the center of what they do, followed by the "what" and the "how" (Stronge & Tucker, 2013). Yet, many of our educational practices in traditional educational environments directly undermine a learner's development of a proclivity toward a curious mind state. Beginning grade level learners spend countless hours memorizing hundreds of sight words with little instructional time left to acquire the building blocks needed to read and write. Within this common instructional scenario, the instructional emphasis is placed on teaching the reading and not the reader.

> When teachers overly focus on the acquisition of the building blocks, students miss the application opportunity. If you overly focus on the acquisition of the building blocks, kids don't have a sense of how to apply those things in the world. If you overly focus on the world, they may notice problems, but have no skills with which to solve the problems. They need a balance of both" (Immordino-Yang, n.d.).

To achieve this balance in reading, beginning learners must be given access to as much of the code as possible, as soon as possible, so as to make sense of their daily experiences and interactions with text. It is simply not possible for beginning readers to steer themselves in an active, strategic and adaptive way when working with text, armed only with random bits and pieces of the alphabetic code. "Once learners become curious about something and recognize that it's truly interesting and important, they can focus themselves to dig in and pull up those building blocks skills" (Immordino-Yang, 2017, n.p.).

Transitioning from Learning to Read to Reading to Learn:

While core reading instruction at the primary grade levels focuses mainly on decoding, the instructional momentum shifts to that of comprehension at the intermediate grade levels. Ideally, learners will have crossed over the instructional hump by third grade, having "learned to read" so that they can "read to learn." Oftentimes however, struggling learners can have a difficult time making this critical transition, often expending too much effort on the decoding the text, with little left over to actually digest it. This division of mental processing power can result in the appearance of a comprehension deficit to intermediate grade teachers, whereas it can more likely be attributed to the lack of a learners' automaticity with text.

Only when learners are able to decode text with little to no conscious processing does the brain have enough space and energy to fully attend to the higher-level process of comprehension (i.e. drawing inferences, making predictions, pulling information from text, etc.).

Research validates the need for continued phonics instruction for struggling students into the upper elementary grade levels, especially for ensuring encoding (writing) fluency. “Children who can’t read much by age nine are in serious trouble. By then, teachers expect them to have finished learning to read and to start seriously reading to learn” (Snow, 2015, p. 2).

The most commonly cited theoretical framework for understanding how reading comprehension develops is the *Simple View of Reading* (Gough & Tunmer, 1986) which states that understanding of written text is the product of decoding and listening comprehension. Decoding refers to the ability to convert print into sound and to read fluently. The *Simple View* implies that when decoding skills are poor, they will place important constraints on reading comprehension. According to a recent meta-analysis (García & Cain, 2014), there is a strong concurrent correlation between decoding and reading comprehension.

The main finding from these studies is that reading comprehension can be largely predicted from listening comprehension and word decoding (Lervag, Hulme, Melby-Lervag, 2017). Given the time, energy and resources that upper grade teachers spend working with struggling readers on comprehension, it is important to know that these efforts often treat only the symptom and not the root cause–lack of automaticity with text.

Impact of Secret Stories® on Existing Reading Curriculum and Phonics Instruction

Secret Stories is a brain-based solution to the age-old problem of how to teach meaningless phonics skills in a meaningful way. It provides a much needed supportive framework to existing reading curriculum and phonics instruction that is explicit, systematic, and multisensory in its approach. It is also based on the brain’s system for learning.

It serves as an open-ended, cross-grade level, teacher tool-kit that provides the logical explanations for letter sound behaviors that the brain craves. These logical explanations are shared in the form of “secret” stories; the secret reasons why letters make the sounds that they do. Based on a foundation of emotional connections and social experiences,

each short, sound story becomes a strong memory-holding template and provides a much-needed framework for memory construction.

Working seamlessly with existing reading curriculum and instruction, Secret Stories breaks down the grade level walls of phonics skill instruction that delay learner-access to the whole reading and writing code. Sharing Secret Stories within the context of existing reading curriculum and phonics instruction fosters a learner-driven approach to accelerated phonics skill introduction. This approach aligns with the brain's need to know and actively engages all students in the learning process. This differs greatly from traditional reading curriculum and phonics skill instruction in which disjointed letter sound skills must be spread across multiple grade level years, and delivered during designated reading blocks.

By cloaking phonics skills as "secrets" that learners *want* to know, they are easy to teach and can be shared as needed, *whenever* and *wherever.* The secrets are encountered throughout the entire instructional day, in this way, teachers are easily able to incorporate multiple goals into a daily lesson. Thus, providing what researchers refer to as "instructional density." Instructional density is one of the most striking characteristics of practices in high achievement classes (Wharton-McDonald, Pressley, & Hampston, 1998). The most effective teachers stuff every minute of every lesson with information (Torgesen, 2004). These teachers are expert re-teachers that distinguish themselves in their ability to teach literacy all day. They motivate learners by varying the breadth, depth and speed of literacy lessons with up to 20 different skills taught in a single hour (Hall, Larson, & Marsh, 2003). In contrast to the research, core reading and phonics program lessons tend to focus on a single teaching goal, with teachers unable to deviate from their intended plan to seize an incidental learning opportunity.

Infusing daily literacy instruction with Secret Stories helps teachers to meet the needs of all learners because it sparks natural curiosity and prompts social and emotional engagement by targeting the affective "feeling" networks for skill acquisition. By fusing meaningless letter sound skills with learners' already existing, social and emotional understanding, a far more reliable pathway for learning emerges— one that is already deeply entrenched within the learner.

Works Naturally With the Brain to Enhance Learning:

Secret Stories drastically differs from traditional core reading and phonics programs in that it aligns instruction to work naturally with the brain, rather than in opposition to it. It provides early grade learners with open access to the *whole* reading and writing code by making use of more readily accessible, non-conscious learning channels. This makes Secret Stories one of the most highly effective reading instruction concepts available to educators.

By targeting instruction to the earlier developing, affective learning domain and attaching meaning to letter sound behavior that would otherwise have none, Secret Stories shifts phonics instruction from brain antagonistic to brain compatible. Targeting instruction to bypass common areas of early learner-weakness (i.e. developmental readiness, cognitive processing, auditory discrimination, etc.) and tap into alternative areas of strength (i.e. non-conscious perception, social emotional awareness and understanding, body intelligence, etc.) is a cornerstone of Secret Stories instruction and design. Armed with this knowledge, teachers can better align their existing reading curriculum and instruction with how our brains actually learn best.

Simultaneous Skill Acquisition:

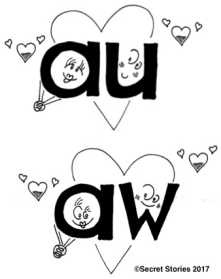
A guiding premise behind the Secret Stories instructional design is that beginning readers and writers can't do much with only bits and pieces of the alphabetic code, and that three to four grade level years is far too long to wait for the rest of it (Allington, 2013). By taking advantage of the brain science and tapping back door learning pathways for earlier phonics skill access, beginning grade level learners need not wait years for comprehensive access to the code. They can have the skills in kindergarten. This is important because the more tools early learners bring to the table, the more value they can take away. Therefore, learners at the earliest grade levels should ideally own as much of the alphabetic code as possible, as soon as possible, if they are to take the most value away from the ongoing reading and writing experiences that occur daily within the classroom.

Secret Stories makes use of stronger and more reliable neural pathways to accelerate individual letter sound mastery (taking just two weeks to two months, via muscle memory) while learners simultaneously acquire phonics patterns, shared as "secrets" (a.k.a. Secret Stories). This

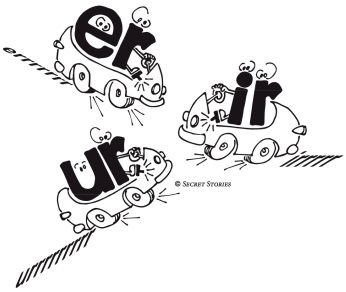
simultaneous skill instruction ensures that beginning grade readers and writers have access to what they need to read and write what they want, with no designated waiting time required for skill introduction. Phonics skills are shared in context throughout the entire instructional day, supporting learners' "need to know" as the driving force behind their instruction. "Instruction in letter-sound relationships is of little value or utility unless the child is interested in using those letter–sound relationships to read or write" (Adams, 1990). By maximizing early learner access to the alphabetic code, learners at the earliest grade levels are empowered with the ability to read books that are of genuine interest to them, and to write the stories that they want to tell. Their ability to engage with text in ways that are meaningful to them serves to motivate ongoing reading and writing experiences, which in turn, increase their overall level of skill ability. There is evidence that almost everything, from phonemic awareness, to phonics, to comprehension, can be developed through independent reading and writing. This experience is, by far, the best teacher (Allington, 2011).

Accelerates Early Learner Access to the Reading and Writing Code:

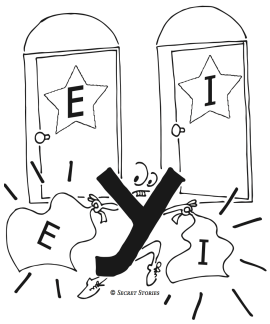
The brain seeks meaning and relevance. It is vital that we teach children within a context that is meaningful to them. If something does not make sense, the brain will drop it (Miller, 2005). Secret Stories forges meaningful connections to otherwise meaningless letter sound skills in order to make them relevant to learners, and thereby mark them for memory in the brain. As a result, beginning learners are easily able to retain and retrieve them for immediate use in both reading and writing. The logical explanations Secret Stories provides help beginning and struggling, upper grade readers to make sense of the many different sounds that letters can make in words.



For example, knowing that *au* and *aw* have huge crushes on each other and that they always get embarrassed whenever they have to sit together in words makes it easy for even very young learners to recall their sound— *"ahhhhhhh"* . This allows them to read and write words like: August, awful, awesome.



Likewise, knowing that the letters *er, ir* and *ur* are terrible drivers makes their sound equally easy for learners to retrieve—*"Errrrrrrrrrr!"* and then use it to decode words like: bird, her, turn.



It is especially fun for learners is to catch Sneaky Y® using the capes that he stole from Superheroes E and I to make *their* superhero sounds, as in words like: mommy, candy, by, July, etc. But, they also know that *y* will only be sneaky when he is at the end of word where he thinks no one will see him. When he's at the beginning of a word, he tries to be a good line leader and will make the sound that he should— *"Yuh-Yuh-Yuh"*— in the words: yes, yellow, you. But, if you're wondering about words like: they, play, May… that's another "Secret!"

Letters are also on their best behavior whenever Mommy e® is nearby, especially the vowels! Anytime Mommy e® is at the end of a word (or one letter away from another vowel) she will tell any vowel she can reach, "You say your name!" (i.e. bite/ biter, skate/skater, hike/hiker) But, when Mommy e® isn't around, or is too far away to reach, the vowel will be short and lazy, just like you would be if your mommy wasn't around to make you do what you should! (i.e. bit/bitter, but/butter, run/runner) And like all moms, sometimes Mommy e® just has to get out of the house, and when she does, she puts a Babysitter Vowel® in charge, and the babysitter will do exactly what mom would if she were there, which is to tell any vowel that's one letter away, "You say your name!" (i.e. motor, making, hibernate).

Knowledge and understanding of these non-conscious, social structures plays a major role in early learners' everyday lives. These structures underlie nearly every thought and action, and can be seen as the underpinning for daily behavior and decision-making. Secret Stories strategic alignment of letter behavior with learners' own behavior instantly equips inexperienced and struggling learners with the ability to easily assess the most likely sound behaviors of letters in text. This is done with the same decision-making framework that drives their daily behavior in the classroom.

In contrast, when teaching positional sounds of *y* is taught as a phonics-based "rule," is can be difficult for even upper grade learners to grasp. In contrast, the non-conscious learning of these sound symbol relationships prompts an almost innate awareness and understanding in the learner.

> "Beware of the stories you read or tell; subtly, at night, beneath the waters of consciousness, they are altering your world."
>
> Ben Okri

"The non-conscious mind is the reason we are capable of having, and understanding, so many unspoken rules, particularly with regard to social interaction" (Williams, 2017, p. 1). If the same sound symbol information had to be processed by the conscious mind, it could take hours, even days, to form. It would likely become so overwhelming to beginning (and struggling) learners that they would be distracted past the point of functioning, or at least, functioning quickly (Williams, 2017). The main reason that teachers find it so difficult to teach students how to read is not that they don't know how to read, but that they don't know why they know how to read, and so they cannot explain it. Secret Stories provides the meaning that is necessary for teachers to make phonics make sense to students.

Activates Social Emotional Learning for Phonics Skill Mastery:

Secret Stories equips learners with everything that's "in the box" when it comes to letters and the sounds they make. Learners are able to think outside the box when working with unfamiliar text. Underscoring the traditionally slow pace of phonics skill introduction with Secret Stories drastically increases early learner-momentum in both reading and writing far beyond just simple decoding. The ability to relate personally to the letters to understand why they do what they do empowers early and struggling upper grade learners to easily identify the most and next most likely sounds of letters in text. For example, the simple, social framework of Mommy e® and Babysitter Vowels® instantly equip inexperienced learners with the ability to assess whether a vowel is most likely going to be long or short, even in longer, multi-syllabic words that they have never seen before. It makes little instructional sense for teachers to spend an hour each day on having students memorize handfuls of sight words when

sharing just one “secret” would empower them to read and write thousands— and with no “summer slide” (i.e. loss of skills).

Most traditional core reading and phonics programs introduce both the long and short vowel sounds in kindergarten, yet provide no means for determining which sound is most likely in words. This is because traditional reading curriculum and instructional methods rely mainly on phonics rules like “silent e,” or learner awareness of open and closed syllables (i.e. “vowel consonant vowel” patterns) for this purpose, which are typically not introduced until first and second grade, respectively. Some phonics programs will employ arbitrary, yet child-friendly stories about “Magic e” or “Sparkly e” to make these key concepts more interesting to learners, but these are only minimally effective. First, they apply only to simple, one-syllable words that end with an e; and second, their stories must be explained and practiced before they are ready for learner-use, as their meaning is not rooted in something that learners already understand (i.e. existing frameworks of social and emotional understanding).

Secret Stories provides learners with the deep level of skill ownership required to successfully navigate unfamiliar text. This, in turn, sparks the higher-level, cognitive networks to engage. It is within this higher-level thinking and deep learning context that inexperienced and struggling learners are able to critically analyze and diagnostically deduce the most likely and next most likely sounds for letters in text. This deeper level of thinking and learning is a natural learner-state that is a hallmark of Secret Stories instructional framework and lesson design. Within the instructional context of Secret Stories, students are not recalling sight words and memorized phonics rules, but are actively engaged in deducing letter sound behaviors based on a variety of scenarios that are meaningful and relevant to them. With implementation of Secret Stories, engagement is ongoing across the entire instructional day in all content areas, as literacy

Word Doctor Diagnosis

“I was trying to read the word *July* on the calendar, and at first I didn’t recognize the Sneaky Y™ at the end, so I sounded it out making *y’s* regular sound. When that didn’t work, I realized that he was being sneaky, and would be making either his *e* or his *i* sound. So first, I tried the *e* sound, but I got the word *Jul-EE* and I knew that wasn’t right, ‘cause there’s no month that’s called *Jul-EE*! So then I tried the *i* sound, *Jul-I*, and guess what? I got it! Without anybody’s help, I got the word! It was *July*!”

permeates the curricula. In this way, Secret Stories achieves maximum instructional density, transforming daily reading and writing experiences into a virtual playground for critical thinking and deep literacy learning.

The style of learning where the teacher has all of the answers and students must try to discover them is not how the brain learns best.

> Teachers need to appreciate that learning is a really broad thing. It is how a person organizes their thought processes over time. It's building up resources that they have to call upon to be able to make sense out of what's going on, to make predictions, and solve problems" (Immordino-Yang, 2017, n.p.)

The instructional premise behind the Secret Stories is also supported by a recent Stanford University study on sight words and the brain. It was noted in this study that as long as participants used the letter-sound patterns, they were able to read words they had never seen before, and most importantly, that there is no need to memorize what can be understood (McCandliss & Noble, 2003). This recommendation, however, is of little value to teachers at the earliest grade levels, whose overreliance on sight words is most often due to early learners' gross lack of skills in comparison to the required level of text assessments. To compensate, beginning grade level learners must memorize hundreds of sight words prior to the end of second grade, thereby putting greater pressure on teachers to prioritize the "reading" over the reader.

In stark contrast, learners who know the Secret Stories are able to decode approximately 95% of the most commonly memorized sight words by applying what they know about letter sound behavior and thinking outside the box to determine letters' next-most likely sounds. The brain loves novelty, and we become more mindful when we encounter novel stimuli that do not fit established categories, and when we are motivated to engage in systematic thinking, rather than lapse into mindless processing (Zimbardo & Leippe, 1991). The brain grows through enrichment, and development advances when learners experience a challenge just beyond their level of present mastery (Sprenger, 2013). In other words, when opportunities arise, learners think outside the box! Knowing the "secrets" equips learners and teachers with everything that's in the box so they are able to think outside it. This is where the real learning fun begins!

Summary of the Impact

According to Allington (2013), the key to effective classroom reading lessons is both teacher expertise and a reading plan that is rich and coherent. In order to improve early literacy success, teachers must become experts in literacy instruction and lesson design, as it is here that changes need to be made.

With Secret Stories, teachers gain both knowledge and understanding of how our brains learn best. Complex phonics patterns are simplified, as is the brain based process of how to teach them. To do this, Secret Stories makes use of the same back door learning channels for teachers that it does for students so that learning is non-conscious and effortless. Unlike core reading and supplemental phonics programs that provide only sequential, and often scripted lessons, Secret Stories builds up the knowledge skill base and tool set of the teacher. This process instills a high level of instructional expertise that's needed to successfully teach all students to read. In the end, enhanced reading proficiency is determined by classroom teachers and their ability to provide expert and exemplary reading instruction. Studies suggest that such highly effective teaching cannot come from a package. Exemplary teaching is based on children's needs, not regurgitation of a common script (McGill-Franzen, 2000).

Secret Stories is not a program, but an open-ended, brain based phonics tool kit for teachers that is designed for cross-grade level use. Cloaking phonics skills as secrets makes them important— something that learners are curious about and want to know (Immordino-Yang, 2017)— making them meaningful and relevant, and therefore, easy to teach and learn. These skill-based secrets can be shared whenever and wherever they are encountered, across all subject areas, and throughout the entire instructional day, from as early as preK and kindergarten. The more "secrets" learners know, the more they can read and write independently, using the visual posters to recall the sound pattern connections. In this way, Secret Stories not only supports, but also accelerates the gradual release of responsibility. The ultimate goal of instruction is that students will eventually be able to apply information, ideas, content, skills, and strategies to various situations. Secret Stories was designed to create learners who are not dependent on others for information and ideas. In order for students to reach this level of independence, students need the opportunity to practice completing independent tasks. The organization of

Secret Stories encourages continued support while increasing students' personal responsibility for their own learning.

Secret Stories multi-sensory and "dual-track" approach to explicit phonics instruction is both systematic and learner-driven, so as to align with both the research on most effective phonics instruction and the brain's need to know for prioritized learning. Its dual-track approach to skill acquisition ensures that, unlike traditional reading programs, letter sound and phonics skill instruction is not delivered only during designated reading blocks and spread across multiple grade level years. Secret Stories accelerated access to the whole reading and writing code from the earliest possible grade levels is what makes its use as a supportive base to core reading instruction so critical.

Current and traditional methods of phonics instruction do not adequately make use of the brain science and are ineffective at successfully engaging the whole brain for enhanced memory and learning. It is essential that teachers, especially those at the earliest grade levels, are equipped with the knowledge and tools needed to provide the early, intensive, and expert literacy instruction that's required to teach all students to read. Teachers who can harness the power of the brain are better able to deliver high quality, literacy and phonics skill instruction. They are able to circumvent areas of inherent learner weakness, activating alternative areas of learner-strength, and engaging more neural pathways for stronger learner-connections and deep literacy learning. This is what the Secret Stories accomplishes. Weaving abstract letter sounds into stories makes them interesting, activating the brain's positive emotional state and hooking the information into a strong memory template. Secret Stories brain based approach to phonics skill acquisition makes it one of the most highly effective reading instruction concepts available to educators. Simply put, Secret Stories makes phonics make sense.

Conclusion

It is essential that educators be familiar with brain compatible practices and practices that are brain antagonistic. Based on current research on the structure and function of the brain; brain compatible teaching emphasizes the way the brain naturally learns (Sprenger, 2013). Instructional lessons that are brain compatible teach to the multiple intelligences, appealing to as many senses as possible through movement, visuals, sounds and props. Alternatively, brain antagonistic

practices diminish proper brain function due use of explicit memory pathways. It is essential that teachers understand the differences between brain compatible and brain antagonistic instruction. Teachers who are more effective in this brain compatible style of instruction are able to provide their students greater learning opportunities.

The key to effective classroom reading lessons is teacher expertise and a coherent and rich reading plan. Core reading and supplemental phonics lessons alone offer teachers the least powerful instructional options. In order to increase student success in the area of literacy, educators need to change their instructional design. Teachers must first accept that an instructional change needs to occur. Changes need to occur in the way lessons are designed, planned, and implemented. Teachers need to place the "why" at the center of what they do, surrounded by the "what" and the "how." Improving the quality of early literacy instruction and developing the expertise of every teacher will result in a significant improvement in student learning and success.

Principals must also evaluate to determine teacher-effectiveness, particularly in regard to the delivery of phonics skill instruction, to ensure that it aligns with the brain, rather than in opposition to it. Moving phonics instruction from brain antagonistic to brain compatible empowers beginning grade teachers to circumvent areas of inherent learner-weakness (developmental readiness, cognitive processing, auditory discrimination, etc.) and tap into areas of strength (social emotional awareness and "feeling" based understanding).

Understanding of brain science and its implications for teaching and learning is an invaluable asset in today's classrooms. Educators who are prepared with knowledge about how the brain receives, stores, and processes information are better equipped to provide students with optimal learning opportunities through which critical literacy skills are more easily acquired. Ultimately, it is up to school leaders to ensure that teachers know not only what to do, but why to do it. This understanding is especially valuable with regard to phonics skill instruction.

The ongoing advances in brain research speak loud and clear to today's educators, but it is up to school leaders to ensure that the message is heard (Fischer, 2008). Understanding why some students don't learn to read is essential to catching those most vulnerable before they fall.

Principals must understand the inherent hurdles and pitfalls that teachers face with phonics skill instruction, particularly at the earliest grade levels. They must be capable of clearly identifying the role that phonics plays in effective reading instruction and provide ongoing staff development opportunities for teachers. Professional development in these areas is crucial to ensure that teachers, particularly those working at the earliest grade levels, are able to provide the early, intensive and expert literacy instruction that's needed to successfully teach all kids to read.

Resources for Secret Stories®

SECRET STORIES® Material:

https://www.thesecretstories.com/buy/

Secret Stories® CLASSROOM Kits - **BOOK, POSTERS & MUSICAL BRAIN TEASER CD - (different poster options)**
Kits contain ***everything necessary for effective Secret Stories® instruction*** across the elementary grade levels, from Pre-K - 5th (and above)

Secret Stories® Add-On Items for CENTERS & TAKE-HOME USE

Secret Stories®
FLASHCARDS
(all Secrets)
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Secret Stories®
PORTA-PICS
(set of 25)
#2013 $65.00

Secret Stories®
PARENT
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Secret Stories® REPLACEMENT Poster Packs* - **POSTERS ONLY** ***"secrets" (sound stories) are NOT included***
Please NOTE:** ***DO NOT *purchase this item if you do not already own the book and CD - "secrets" (sound stories) are* ***not*** *included.*

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Secret Stories®
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#2015P $62.50

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DECORATIVE
SQUARES
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Workshop Information/Staff Training
by Katie Garner, Secret Stories® Author

https://www.thesecretstories.com/workshops/

About Katie Garner, M.Ed.

Katie Garner, M.Ed. (author of *Secret Stories® Cracking the Reading Code with the Brain in Mind)* is an internationally known education author, keynote speaker and literacy consultant with over twenty years of experience in elementary grade classrooms and a passion for infusing neuroscience into literacy and learning. Her backdoor approach to phonics skill mastery, via the social emotional learning "affective" networks, shifts the paradigms associated with early reading instruction and has gained national recognition with the No Child Left Behind, Reading First, and RTI Initiatives. Katie is a keynote and featured speaker at educational conferences across the United States and abroad, including an ongoing keynote series at the Vulnerable Learners Summits with North American literacy leaders, Dr. Richard Allington *(What Really Matters for Struggling Readers)* and Dr. Anne Cunningham *(The National Early Literacy Panel "NELP" Report*). Her dynamic presentations include brain-changing strategies and techniques for boosting existing reading instruction with the latest neural research showing how our brains learn best. Katie's practical and proven methods for bringing neuroscience into the forefront of literacy learning have been shared in both lecture and panel discussions at Harvard University and MIT as part of the Learning and the Brain Conference and Research Consortium, and are the subject of an upcoming, professional development book series.
http://www.KatieGarner.com

ABOUT THE AUTHOR

This white paper was authored by Dr. Jill Buchan. Dr. Buchan is an Assistant Professor of Education at Upper Iowa University in Des Moines, Iowa and is also President of Jill Buchan Consulting. Buchan has been a leader in the field of education for almost two decades. She earned her bachelor's degree in elementary education from Upper Iowa University. She continued her studies at Drake University where she earned her Masters of Science degree. Most recently, she earned a Doctor of Philosophy degree from Capella University with an emphasis in special education leadership.

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