

# INSTRUCTIONAL LEADER

Texas Elementary Principals and Supervisors Association

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## The Power of Non-Conscious Learning for Critical Literacy-Skill Acquisition

Using Brain Research to Accelerate Literacy-Skill Acquisition Across Grades PreK-5

Katie Garner, M.Ed.



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

Research shows that more than 99 percent of learning occurs at the non-conscious level—visual cues, sounds, experiences and feelings. “We are walking, talking sponges.” (Jensen 2008) Learning is fluid and effortless at this level—occurring naturally regardless of socioeconomic status, language, skill, ability or experience, and with no differentiation of instruction required!

Alternatively, conscious learning, the predominant means through which learners acquire skills in school, is far from fluid and proves anything, but effortless, for many struggling learners. It requires that a learner be not only ready and attentive, but put forth both a determined and directed effort as well. The conscious level of learning also requires that the individual needs of each learner be met in order for skill-acquisition to occur. Research suggests the three criteria essential for a learner to consciously “know that he knows” something are frequency, duration and modality. Once learners have experienced learning in their *preferred modality*, the *right number of times*, and *for the right length of time*, they own it (Bandler 1988). This is the research equivalent to the old adage, ‘Practice makes perfect!’ (a.k.a. “Use it or lose it!”)

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“Current brain research proves that it is well within our capabilities as educators to harness this tremendous power of non-conscious learning and transfer those most critical, complex and practice-based skills, to the easily accessible, non-conscious realm.”

The difference between these two very different states of learning is easily demonstrated by a typical student’s response to the following question, “What did you learn in school today?” The question prompts the common answer, “Nothing.” This typical exchange is in great contrast to the virtual diatribe likely to erupt upon asking the same student *what happened* in their classroom instead.

*“Well, right before lunch, Suzy got sent to the principal’s office for hitting Marcus in line. He’s the kid who can’t eat peanuts and speaks Portuguese, so he always has to stand right behind the line leader so the teacher will remember to keep him away from peanuts. Hmmmm...I wonder what would happen to him if he ever did get one? Anyway, Suzy already got sent to the principal like a million times this week so she acted like she didn’t care, but I could tell she did, cause her face was really red and she looked ready to cry. Anyway, after Suzy was gone, Marcus started to get really excited. I could tell because he was jumping up and down. I think he thought that he would get to take Suzy’s assigned job as line-leader, but I knew he wouldn’t, cause I remembered he had gotten a time-out yesterday and that meant Jerry would get to be next. I think Jerry already figured that out too, cause I noticed him smiling kinda funny when he saw Marcus dancing around, all happy and everything. Oh! And guess who gets to be the line-leader if Jerry goes to time-out...me!!! But I doubt that’ll ever happen. Jerry’s so quiet, he never gets in trouble...well, except for that one time at the beginning of the year when...”*

And on and on it goes—the learner enthusiastically expounding in great detail about the inner-workings and social dynamics of his classroom, both *analyzing* and *hypothesizing* as he goes. Non-conscious learning has rendered him a virtual expert!

Herein lies the awesome power of the non-conscious mind: Regardless of an identified need or label—be it LD, ESL, ADD, AG, EH or any other of the countless varieties of diagnosable acronyms—this content is deeply embedded within the learner, established through personal and meaningful connections to that which the learner was *already* familiar, i.e., a context which immediately triggers non-conscious learning to occur. Learners are highly capable of both critically analyzing and diagnostically assessing all of the information they acquire in this way. Despite this, traditional education and instruction focus on conscious learning—consisting of mostly rapid, passive, and often superficial acquisition of random, disembodied information—specifically in the area of literacy-skill instruction.

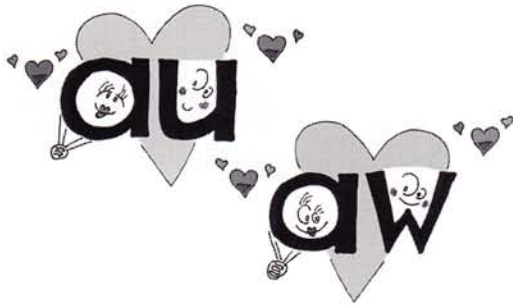
Current brain research proves that it is well within our capabilities as educators to harness this tremendous power of non-conscious learning and transfer those most critical, complex and practice-based skills, to the easily accessible, non-conscious realm.

**“Deep learning provides a context for understanding in which passion and insatiable curiosity flourish.”** -Stephanie Pace Marshall

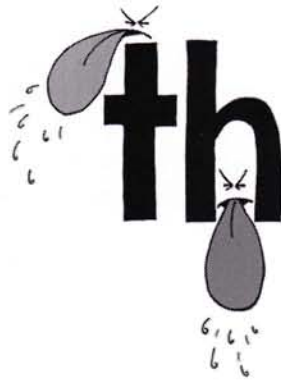
The secret to successfully transferring skill-based academic content from that which must be consciously *learned*, to that which can be non-consciously *acquired*, lies

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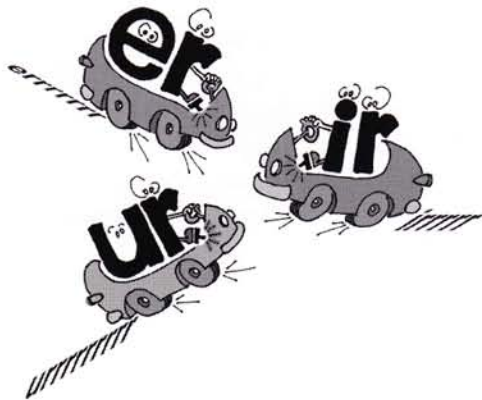
The following *Secret Stories* excerpts (Garner 2008) provide instructional examples that facilitate deep learning for non-conscious, literacy-skill acquisition.



These letters are  
IN LOVE  
and whenever they have to sit  
rightnexttoeachother  
in a word, they get  
SO EMBARRASSED,  
that they always put their heads  
down and say  
“ahhhhhhhhh...”  
(August, awesome, awful, etc.)



These two should never be together - EVER!  
Yet, pick up any book,  
and turn to any page,  
and there they sit -  
TOGETHER!  
And every time they are,  
they always  
STICK OUT THEIR TONGUES  
and say  
“thhhhhhhhhhhhhhhhh!”  
(the, this, them, etc.)



These guys are  
terrible, awful, horrible  
NO GOOD drivers,  
and so they always have to  
SLAM ON THE BRAKES  
“errrrrrrrrrrrrrrrrrrr!”  
(bird, turn, her, etc.)



Whenever three friends play,  
one always is left out!  
So when THESE three play -  
poor little 'o' is the one that gets  
left out of the fun!  
And that's why  
whenever they're together  
they always say,  
“It's just US!”  
(ridiculous, joyous, conscious, etc.)

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## Literacy-Skill Acquisition

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within a very specific instructional context—one in which learners are engaged in what researchers refer to as deep learning. A learner engaged in deep learning is both active and reflective. “Deep learning provides learners with a context for understanding in which passion and insatiable curiosity flourish—weaving a virtual tapestry of connections that grounds one’s learning in the roots of personal meaning and purpose.” (Marshall 2006) It is only by embedding these seemingly random phonemic skills within real-life contexts that they acquired through non-conscious learning. (See Secret Stories excerpts on page 3.)

As all substitute teachers know, learners can be quite assertive at times in their attempts to provide what they deem as relevant information about their classroom, often resulting in sharing far more than the substitute needs or even wants to know. Even learners who speak little-to-no English will find a way to share by way of hand-gesturing! Not a single learner in the room can forgo the temptation to explain all of the many reasons why Jimmy and Johnny can’t sit together and each involving a lengthy and detailed description of past incidents that had occurred whenever this rule was not followed.

By embedding phonemic-skill content within familiar learner-scenarios and experiences, it becomes as easy and effortless to identify the two letters that shouldn’t be together, and the sound they will make, as it would be to tell the substitute all about Jimmy and Johnny!

Encapsulating skills in this manner prompts a reassignment of responsibilities within the brain. The phonemic-skills depicted above may now be stored and retrieved using the exact same neural pathways engaged by the learner when sharing information about classmates with the substitute. This is because both sets of information now reside in the same area within the brain.

It is within this conceptualized-framework that even the most complex, phonemic skills are rendered easily-accessible to *all* learners. What was once abstract and meaningless content is now transformed into naturally occurring, personally relevant, and readily predictable entities over which learners may now exercise control for purposes of reading and writing. Skill-acquisition at the non-conscious level is akin to slipping in the backdoor, which is always wide open and easily accessible.

As educators we acknowledge the tremendous potential for applying brain research for the improvement of teaching and learning. It was for this purpose that Harvard University, Massachusetts Institute of Technology (MIT), Yale and Boston University collaborated to create the first interdisciplinary forum for researchers, parents, clinicians and educators to examine new research findings with respect to their applicability both in classrooms and clinical practice.

It was in this venue that I had the privilege of presenting both an institute and workshop on the practical classroom applications of the medical and neural research. The most

valuable experience of my participation was the opportunity to co-present “Brain Plasticity: Reading and Intervention” with Dr. Kurt W. Fischer, Director for the Mind, Brain, and Education Program at Harvard, and Dr. Guinevere F. Eden, Director for the Study of Learning at Georgetown University. Each of us had an allotted time in which to draw specific focus on our particular area of expertise with regard to the topic. It was quite apparent to all those who were able to see our panel’s table where my likely area of expertise lie. On my side of the table were odd assortments of laminated materials—consisting of both early and intermediate-grade writing samples of various colors, shapes and sizes—all of which seemed to somehow take up at least two-thirds of the panel table. On the opposite side (remaining third) of our table, there were two perfectly stacked piles of slightly oversized, crisp manila envelopes—each containing a color-coded and categorized MRI brain-scan image.

While seated at this table waiting for my turn to speak, I glanced out over my large pile of writing and noticed the expressions on the faces of many in our audience. It was quite obvious that they were all distinctly aware of this imposing nexus between education and neuroscience—each attempting to become increasingly versed in their ability to connect the two for their own purpose. It was in that moment that I came to realize that the three of us were all delivering the same message, each in our own professional vernacular, and striving to reach our respective peers.

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Our singular message: Neuroscience speaks loud and clear to educators, but it is up to us to hear the message. We need to be more creative about *what* we teach, as well as *when* and *how* we teach it. Educators must take the lead, and just as physicians adopted the findings of biomedical researchers and transferred laboratory knowledge to the bedside, it is educators who must uphold the responsibility of bringing neuroscience into the schools.

This is not to say that keeping a pace with the neuroscience explosion is easy, especially in today’s political and economic climate, but the need to do so has never been more critical. Our children cannot wait. As Albert Einstein said, “The significant problems we have cannot be solved at the same level of thinking with which we created them.”

## Author

*Katie Garner, M. Ed., is a nationally recognized speaker, author and educational consultant.*

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