

It be-ith a sleepy morning in Ye Old  
**KINGDOM of NERVE.**

Not much happeneth until a message doth  
arrive from across the Synapse Sea to a  
lone Dendrite Spy Outpost, causing one  
solitary Dendrite Spy to payeth attention...

Ring,  
ring!



**Zzzzzz...**

Ring,  
ring!



**Zzzzzz...**

Ring,  
ring!

Huh?  
What  
is it?



Important incoming  
message from across  
Synapse Sea. Better  
pass it on to Central  
Nucleus Castle!

(Yawn)  
Yeah... no. I'm  
going back  
to sleep.



# Ring, ring!

Zzzzz... Huh?  
What already?



This could be  
important!

The ears. Lotta  
chatter out there.



What's  
the source?

Chatter? It's all  
chatter. Call  
me back when  
you have some-  
thing more.  
(click)



Ring,  
ring!

Ring,  
ring!

Ring,  
ring!

Ring,  
ring!

Ring,  
ring!

# Ring, ring!

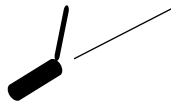
Ring,  
ring!

Ring,  
ring!

Ring,  
ring!

# WHAT?

Okay. We got the eyes  
and the ears and the sense  
of smell all registering  
this as something Central  
Command will want  
to know right now!



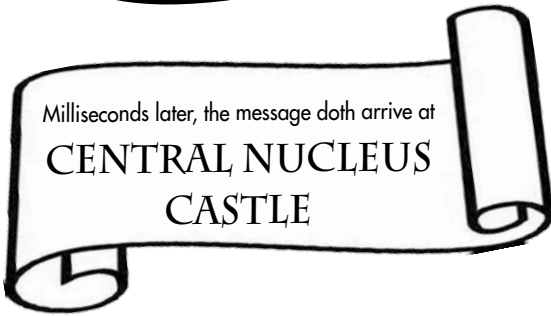


**You got  
the eyes?**

Aye. And you know  
what they say, "The  
eyes have it!"



**Alright already,  
I'll pass the message on.**



*Not by the hair of your  
chinneth chin chin.*



**Message from the front.  
Looks important. If you don't  
let me in I'm going to bust  
these doors down!**

*Oh yeah?  
You and whose army?*



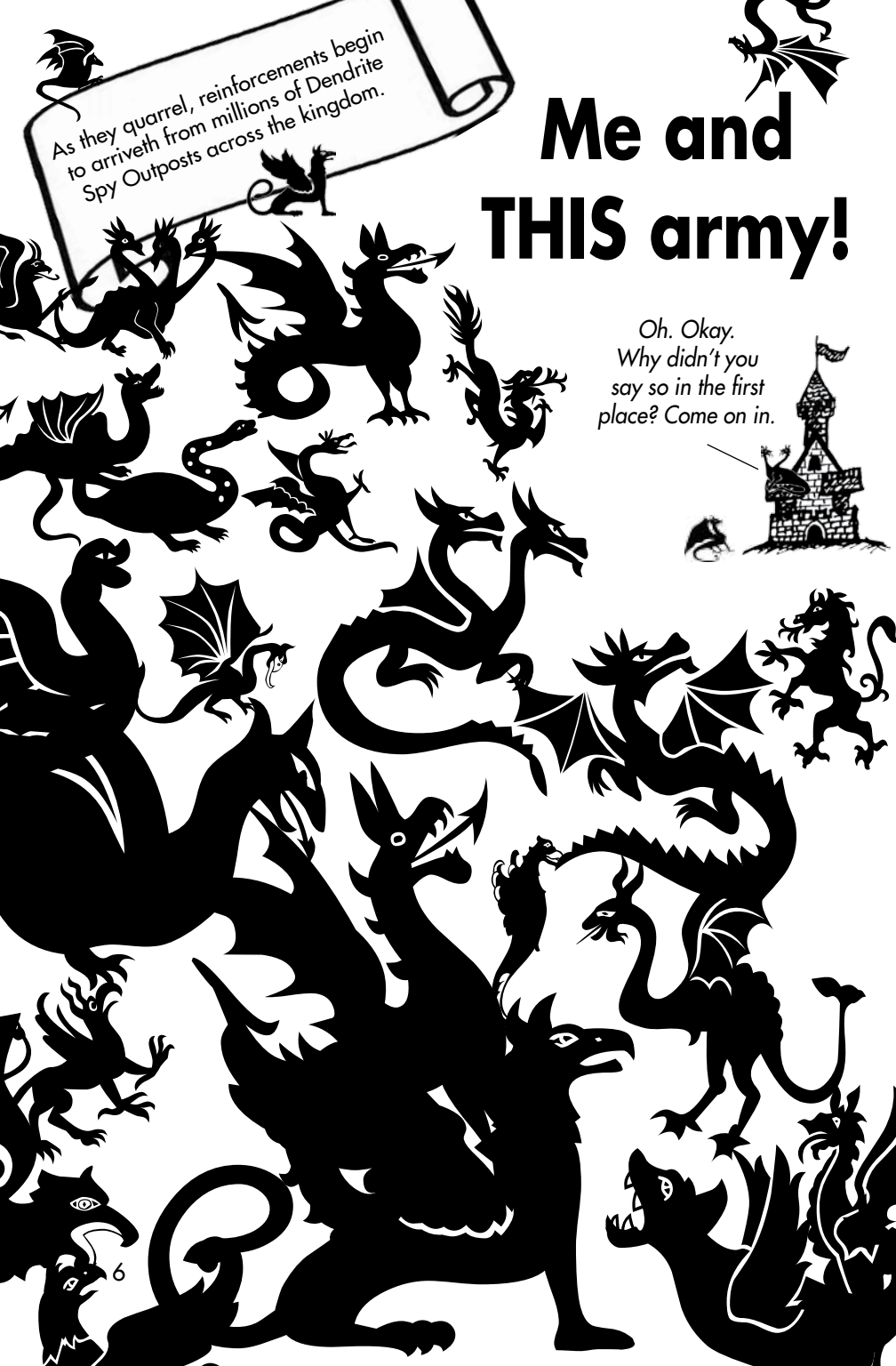


As they quarrel, reinforcements begin  
to arriveth from millions of Dendrite  
Spy Outposts across the kingdom.



# Me and THIS army!

*Oh. Okay.  
Why didn't you  
say so in the first  
place? Come on in.*



The message is taken instantly through the gates of Central Nucleus Castle, where the brilliant and ancient RNA Librarian decodes it, records it, and...

 RICH Learning

*Sendeth this immediately on down Axon Road to Synapse Sea and off to our neighboring allies! Forthwith. High hence be gone away!*



**Is 100 yards a second fast enough for you?**



Milliseconds later, the coded message flies down Axon Road, arrives at the shores of the Synapse Sea, is loaded onto little boats in little bags. Once at sea, servants immediately dumpeth the contents, which floateth across the open space and arriveth at millions of lone Dendrite Spy Outposts on the shores of 10,000 neighboring kingdoms where...

Ring, ring!



**Zzzzzzz...**

Ring, ring!

Ring, ring!

Ring, ring!

**Zzzzzzz...**

Ring, ring!

Ring, ring!



**Zzzzzz....Huh? What is it?**



**YOU GETTETH THE PICTURE?  
HERE ENDETH THE STORY AND  
BEGINNETH THE BOOK OF...**







# **RICH** **Learning**

The Brilliant Neurology and  
Crazy-Effective Fun of Brain-Based  
Learning on Arts-Based Platforms

Dr. Rich Melheim

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To my “special class” reading teacher  
who I don’t remember but I’ll never forget  
because she didn’t make me feel stupid  
just because I couldn’t read.

Out loud.



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**Let's  
begin!**

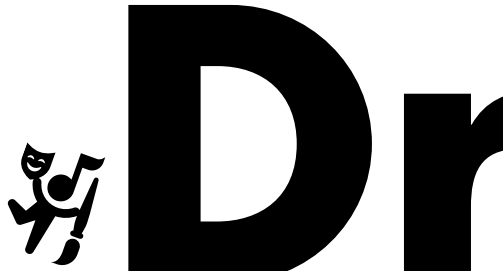


**Recognize.**  
**Identify.**  
**Comprehend.**  
**Harness.**

That's RICH Learning in a nut shell. There. Now you don't have to read the book. You've got it. Put it down and walk away.

Okay. Maybe not.

RICH Learning is a no-brainer for anyone who doesn't have an extra nickel to spend on education but desires to enlist the most valuable tools of all to light the human brain on fire and spark curiosity, joy and a life-long love of learning. It is a no-brainer for anyone who wants kids to be both more attentive and more retentive. It is an approach to education that embraces the arts at the core of all learning. At the core of all learning. Did I mention arts at the core of all learning?



I will begin with a neurological argument for the use of music, movement/dance, theater/play and visual arts as the **optimal** strategy for engaging brains – young and old. To bolster this argument, I will then offer a quick crash course on the molecular, cellular, and structural basis of memory and meaning-making in the human brain. I will next explain my own reading disability, and the quest it sent me on across the country and across the globe to understand the



# 睿启博士



# Rich

neurology of reading and, eventually, the optimal systems to employ for teaching anything to anyone. By the time you are finished with this, you may see applications from preschools to Alzheimer's units.

I will conclude with a case for including the arts at the core of all education, beginning as early as possible. As early as possible. Did I mention as early as possible? See if you don't agree: Even a poor child can

have a rich learning experience if you simply:

- **Teach** the way the young brain learns best
- **Employ** the tools the young child loves most
- **Engage** primary caregivers every night in every home
- **Leverage** the best tech available as teaching assistants, and
- **Train** and pay teachers at a higher level

How are we going to pull this off? Allow me to give you a hint...

Once the music kicks in  
Little feet leave the floor.  
Kids start dancing,  
Jumping, prancing,  
Laughing, spelling,  
Learning, yelling,  
Bodies bumping,  
Hearts a-pumping,  
Who could ask for more?

- More **oxygen** – to make the brain more attentive.
- More **glucose** – to make the brain more retentive.
- More **brain fertilizer**. (Google BDNF.) This magic elixir and memory fixer is a nerve enhancer that courses through the body when you move, move, move. It super-charges your blood to build more neurons in the brain and body, more connections in the neurons in the brain and body, and more receptors on the connections in the neurons in the brain and body.

More oxygen. More glucose.  
More BDNF. And one more thing.



Less stress.

**Cortisol** – the stress hormone – is sopped up when you exercise. This bad stuff constricts blood vessels and restricts the flow of oxygen, glucose and BDNF to the brain. So get up, get moving and rid of it. Then water up! Lungs, which are made mostly of water, tend to dehydrate and need water to absorb more oxygen. Now your brain is ready to learn. Grab the books, quick! You have about 20-25 minutes with the brain at **maximum** alertness and learning ability before the neurochemicals wear off and... it's time to jump up, sing and dance all over again!

\*Photos from Dr. Rich's second set of living lab tests in Chennai, India. See more at [www.richlearning.com](http://www.richlearning.com).





I.

## **Introduction: RICH Learning and the Young Brain**

“If the child is not learning the way you are teaching, then you must teach in the way the child learns.”<sup>1</sup>

Over the last 50 years, technologies have not only transformed the delivery systems for information; they have also transformed how we learn, what we learn, when we learn, where we learn, why we learn and how we recognize, identify, comprehend and harness new information.

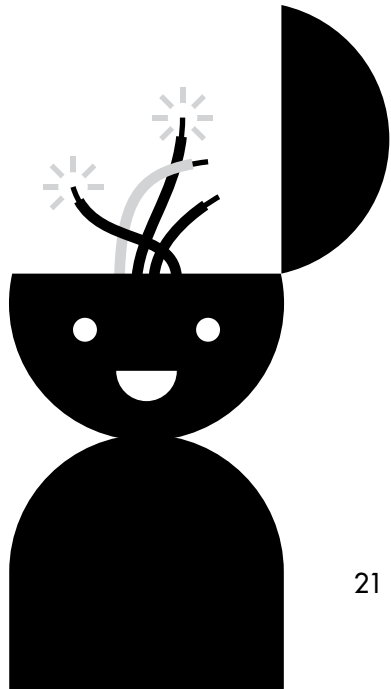
Rita Dunn

Nicholas Carr, in his provoking book *The Shallows: What the Internet is Doing to our Brains*,<sup>2</sup> argues that the Sumerian writing system, the printing press, the radio, the television – each new technology humans have employed *en masse* – has literally changed the structures of our brains:

“Media work their magic, or their mischief, on the nervous system, itself.”<sup>3</sup>

Each successive media we embrace has literally rewired the circuitry inside our heads. To misquote Winston Churchill:

“We shape our technologies; thereafter they shape us.”



| :

## **Flannel-Graph Teacher in a TGIF World**

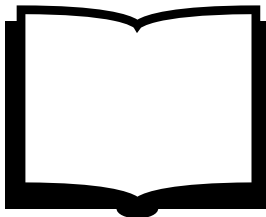
2005 was a watershed year in the history of human technology. Across the globe it came and went without much notice in educational circles. Among First World teenagers, it marked the year that raw time spent on television was surpassed by raw time spent on the Internet. For all practical purposes, the television era ended and the Internet era began. My doctoral mentor, Leonard Sweet, refers to this as the TGIF<sup>4</sup> (Twitter, Google, iPhone, Facebook) Era.

The netzeins of this brave new jungle are a different breed than those of the oral, book, radio and television generations that came before them. They will not sit passively in a desk and watch your “show.” For this entire generation, one might argue the show is over. The show is over.

Did I mention the show is over?

This generation has little patience and zero interest in parking in a chair to absorb a one-way stream of information being taught, presented or preached at them. They require a much more involving,

Gutenberg Era: 1440+



engaging and interactive learning environment or they won't stick around. Or, more properly, they'll sit there in the chair, but their hearts and minds will be off in a galaxy far, far away. The unspoken new mantra is this:

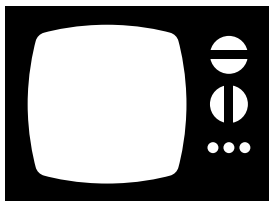
"If I'm not engaged in the conversation... I'm out of here!"

The lights will be on, but no one will be home. Sadly, when it comes to education, most of our schools have yet to enter the television era even

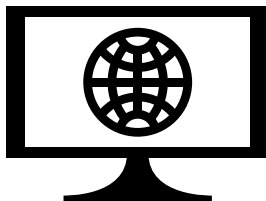
though most of our youth have already left it.

To breach the cyber wall and reach this new mind, a change in educational philosophy and practice is slowly being implemented in some more progressive classrooms around the world. But for the most part, this tectonic rewiring of young changing brains has yet to be understood, embraced or even acknowledged. Most of our classrooms from kindergarten to grad school continue to live with old models, old methods, old technologies – or no technologies at all – and an Old World understanding

Television Era: 1960+



TGIF Era: 2005+



I:

of what good teaching, proper classroom management, and effective education looks like.

## **Changing Brains, Changing Approaches**

Methods, models and materials that may have worked for teaching the Gutenbergs are proving woefully inadequate for reaching the Googlebergers. Educating this post-

Gutenberg/post-television/neo-Google brain will require dreaming, scheming, testing and tweaking new approaches, strategies, technologies and *talk-knowledgies*. The one-way information exchange and social contract that traveled from professor to student in lecture halls of the Gutenberg World (“Sit still while I instill”) and from blinking screens to couch potatoes in the more recent television





world (“I will delivery entertaining information for 7 ½ minutes as you watch passively and listen”) must give way to richer and more varied interactive teaching approaches if it is to work in the TGIF world. But where do we start?

Fortunately, recent tools for discovering the world **inside** our heads have made learning about learning much clearer and more comprehensible today. Through the advent of precise brain-scanning tools – particularly fMRI and PET Scans – we have learned more about the human brain in the last five years than we have learned in the last 5000 years. Thanks to these new tools, we are now able to watch the learning brain light up, grow, change, and think in real time before our very eyes. With these new technologies and tools in hand, education itself has been given a powerful

new gift: a window into the learning brain.

What new technologies and tools appear to be **most effective** for maximizing attention, retention, teaching and reaching the Googlebergers? Which methods, models and media might we manipulate to capture the minds and hearts of the tech-savvy denizens of this new Internet jungle?

I’d like to suggest a brand new set of brain-enriching tools and technologies at the core of all education, starting as young as possible. What might these radical new tools and techs be?

# The Arts





How's that for new?



?




Yes, the arts. It's that simple.

And it's that complex.

Bear with me as I begin with a brief look at the neurology of learning, itself, and move on to the crazy-effective fun you are going to have educating the post-Gutenberg/neo-Google generation when you begin designing and implementing brain-based learning on arts-based platforms.





Brain-based learning on  
arts-based platforms.



# II.

## **Patterns, Firings & Wirings**

"Your brain craves patterns and searches for them endlessly. In the absence of adequate sensory input, it will even make its own."<sup>5</sup>

Thomas B. Czerner, MD



We begin with a most important insight into the learning brain: The brain likes patterns.

There.

How's that for revolutionary? Now you don't have to read the rest of this book. You've got it. Put it down and walk away.

Okay. Maybe not.

If you have ever seen a person doodling patterns and shapes on a notebook during a lecture, you know the Czerner quote (left) is true. If students aren't recognizing any relevance in what the teacher is presenting – if they see

no patterns or connections to their own lives – their brains will subconsciously create their own patterns for them. Literally.

The brain loves patterns. It organizes itself around patterns. It is constantly searching for patterns to store, patterns to retrieve, and new patterns to connect with existing patterns in its memory array.

The brain hungers to make sense of the world. To do this, it needs to recognize patterns. Once the brain is efficient at recognizing a set of patterns, it begins to do amazing things.

Like...

|| :

# Read this if



# you can:

I cd'nuolt blveiee that I cluod aulacty uesdnatnrd what I was rdanieg! The phaonmneal pweor of the hmuan mnid! Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttar in waht oredr the ltteers 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 wsan't a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh? yaeh and I awlyas thought slpeling was ipmorantt!<sup>6</sup>

I cdnuolt blveiee that I clud autlctly  
uesdnatnrd what I was rdanieg! The  
phaonmneal pweor of the hmvuan  
mind! Aoccdnig to a rscheearch  
at Cmabrigde Uinervtisy, it deosn't  
mittaer inwaih oredr the lltteers in a  
word are, the olny iprmoatnt tihng  
is taht the frist and lsat lltteer be in  
the rghit pclae. The rset can be in  
taotl mses and you can siltl raed.

It wsan't a porbelm. Tihis is bcuseae  
the huamn mnid deos not raed evrey  
lleteer by istlef, but the wrod as a wlohe.  
Amzanig huh? yaeh and I awlyas  
thought slpeling was ipmorannt!

ould  
actually  
reading  
of the h  
to a res  
Univers  
who o  
are, the  
that the  
the rgh  
total m

It wasn  
aus

Because you were already familiar with the patterns of the letters in the words, you didn't even need to see the letters in the right order for your brain to take over and unscramble the words. Your brain did the work for you, all because of the re+cognition, identification, comprehension and harnessing of formerly embedded patterns.

- **Recognize**
- **Identify**
- **Comprehend**
- **Harness**

That is how the brain learns. That is the foundation of RICH Learning. It's a no-brainer because it's a whole brainer. And it's no work at all once you saturate your brain with and embed the proper patterns. Let's apply this to reaching and teaching minds and hearts in the post-television world.






II :

How to Get RICH  
in Four Steps:

The page features a large, light gray paw print in the background. Several smaller, dark gray paw prints are scattered across the page, some overlapping the text. The text is arranged in four lines, each starting with a large, bold letter: **R**ecognize, **I**dentify, **C**omprehend, and **H**arness.

**R**ecognize  
**I**dentify  
**C**omprehend  
**H**arness




## R



The “R” in RICH Learning stands for recognize. How can the brain re+cognize anything if it hasn’t first *cognized* it? In order to cognize anything new, you must first encounter it in a way that connects the “new” with something you already knew – an existing pattern embedded in the brain. Make this connection to an existing pattern and your brain automatically pays attention. (Note the words “pay attention.”) If a new bit of information, stimulus, or experience is cognized in a way that connects it to existing relevant patterns, the new information is tagged as relevant enough for storage and future retrieval rather than removal. If tagged for retrieval, it becomes even more easily and efficiently re+cognized every time it is retrieved.

Teaching the way the brain learns starts with cognizing the “new” and connecting it to an existing pattern in a way that is worthy of attention first, and then re+cognition.

## I



The “I” in RICH Learning stands for identify. Once you re+cognize a footprint in the snow, a scratched letter on a page, a fleeting smile on the face of a friend, or the sound of wind rustling in the trees, you must next identify what those sensory inputs mean. That footprint in the snow? Is it a deer or a panther? That scratch on the page? Is it a letter? A symbol? A word? That fleeting smile? Was it really a smile or a smirk? The wind in the trees? Was it merely a breeze or



## II :

something more sinister? Identifying the footprint in the snow, the scratchings on a page, the look in a friend's eye, the wind in the trees – this is the second essential step in learning anything new. But recognizing and identifying aren't the same as learning. Long-term learning takes two more steps.

**C**  
The “C” in RICH Learning stands for comprehend. In a 100-yard-a-second flash across the neural network, the brain begins to make sense and meaning of that footprint in the snow, that scratch on the page, that smile, that rustling wind. The more areas of the brain (and body) that connect to the new information being presented or re-presented, the faster, more reliable, and more long-lasting the

comprehension will be. (Hold that thought. It will come in handy when we begin connecting the eyes to the ears to the muscles to the emotions using song, dance, art and theater as primary teaching tools.)

That footprint in the snow. What does it mean? This is an important question.

If it is the footprint of a deer, it might mean “Food!” If it is the footprint of a panther, it might mean “I’m food!”

I’d better comprehend this! Recognizing, identifying and comprehending properly are important skills to learn. They could have life or death consequences.

What is a footprint in the



snow? It is a symbol, a sign, a representation of something else. What is a letter on a page? It is a symbol, a sign, a representation of something else. The brain is brilliant at re+cognizing embedded symbols and translating them to meaning. It actually loves to do so. The very first “reading” we did as human beings was not the reading of words. Long before the Sumerians scratched symbols in clay to represent the sale of barley bushels and beer, human beings were “reading” symbols. We were cognizing, then re+cognizing patterns, shapes and symbols, and translating them to meaning. Panther or deer? Barley or beer? Today we also learn to “read” long before we learn to read. A two-year-old can re+cognize the McDonalds sign and differentiate it from the Burger King sign.

What are they doing? They are recognizing symbols and translating them to meaning. That’s reading! That scratch on the page: Maybe it is the letter C. How might I comprehend what it means? If I have been taught English, I know it might represent a sound like “K” as in “Cat” or a “C” as in “Ice” or “Cinnamon.” Which is it? The brain can’t comprehend or determine any meaning until it takes the *context* of the *content* into account.

Outside of the context, the content is meaningless.

When it comes to reading, our eyes dart forward 14-16 letters and backwards in a series of instant jerks and freezes called saccades and fixations. Desperate

|| :

to find a pattern that will help us make sense of the word and the world, the brain searches for clues to meaning in the context surrounding the new information. What are the other letters, words and hints around this letter? The content of the letter, the word, the sentence, means nothing without the context. That's the second most important insight into the learning brain: Stuff around you matters.

There.

How's that for revolutionary?


That fleeting smile: Yes, it was a genuine smile. Or was it? Maybe that person likes me. Or maybe they're pretending to like me. Hmmm... What are they after? I have cognized and re+cognized the smile. I have identified it as a

smile. But hmmm.... how might I comprehend what it really means? What are the other clues around the smile? Can I "read" the intent in that person's eyes? In their voice? In their body posture? What might I comprehend from the context?

The wind rustling in the trees: Sounds like the weather is changing. Maybe rain tonight! Look around the sound. What colors are in the clouds? How fast are they moving? What do I smell in the air? What do I feel on my skin? What else might I cognize, re+cognize and identify that will allow me to comprehend the meaning of the wind?

When it comes to attention, comprehension and long-term retention of any new information, that which surrounds the letter, the

footprint, the symbol, the smile, the wind, makes all the difference in the world. Without a recognizable, identifiable context, the content is obscure. Maybe even meaningless. Outside of the context of recognizable patterns, there is no meaningful content. This is true neurologically. It is true psychologically, sociologically, educationally and ontologically. (Google that word.) That which surrounds a word makes all the difference in its meaning. That which surrounds a child makes all of the difference in their world.



Before we can make any difference for the children around the world, we must first make a difference in the world around the children.

Your surroundings frame and shape your potential, identity, meaning and future. Everything from the art you hang on the walls to the music you play in the halls to the thoughts you place in a child's head before they drift off to sleep at night defines and refines or constricts and confines who they are and who they will become. A rich child can become very poor if they experience mostly negative, cold, understimulating and impersonal surroundings. A poor child can become very rich if exposed to great warmth, great dreams, stimulating ideas, positive touch and genuine encouragement. Rich and poor are not so much a state of finances as they are a state of minds and "mines" and mindings and surroundings.

Recognizing, identifying and comprehending are the

## II :

first three steps in RICH Learning. If connected to rich patterns, they will grab your attention, but until the final letter in RICH comes in to play, there will be neither long-term retention nor deep meaning in what you are trying to teach.

## H

The “H” in RICH Learning stands for harness. Until you harness that new learning and do something with it, it really isn’t yours. Once you apply the new to the “knew” and work it through to your advantage, it begins to hardwire itself into your brain and it becomes part of your intellectual and emotional toolbox. What does it mean to harness new information? That footprint in the snow? You may have re+cognized and identified and comprehended it to be a deer track. So what? Maybe

now you can follow up on it, harness the knowledge and eat well tonight.

When it comes to early reading, to harness means to take that new letter, put it together with other letters that surround it, turn it into a word and figure out how to use it.

That fleeting smile? Maybe you re+cognized and identified and comprehended it as genuine. Maybe that person really does like you and the two of you have a future. But unless and until you harness that knowledge and follow up on it, it does you no good. Maybe it’s time to cook up some venison stew to take along as a gift?

That wind rustling in the trees? Better seek shelter. If it rains, your venison stew won’t cook on the fire and you will have no future with that new friend.

Recognize, Identify,  
Comprehend, Harness.  
That is how a baby learns to  
see, hear, crawl, reach, walk,  
talk, and make sense of the  
world. That is also how they  
learn to manipulate their  
grandparents into buying  
them the sugar cereal in the  
grocery aisle when their  
parents aren't looking.  
That is how a child learns to  
turn squiggles and wiggles  
and circles and lines into  
sounds and words and  
sentences and texts and  
tweets and maybe even  
500-page novels about  
star-struck Vampire lovers  
who will make them weep  
one day when they are  
hormonal teenagers.

Recognize. Identify.  
Comprehend. Harness.  
That is how a human learns  
to find food, hunt, eat,  
reproduce, and navigate  
through the jungle, the  
sophomore year, the subway  
system and the SATs.

Squiggles and  
wiggles and  
circles and lines  
Make up the  
Alphabet, sounds  
of all kinds  
Put them together  
and you can  
spell words  
You can make any  
word you've ever  
heard  
You can use letters  
- they have sounds  
- letters - they make  
words - letters -  
they spell things  
like L-E-T-T-E-R-S  
Letters.

from the song "Letters"  
in the movie "Skool"  
(listen at [www.richlearning.com](http://www.richlearning.com))

|| :

## Attention, Retention, Tension, Detention

What's the biggest problem in schools today? One might argue we have an epidemic of attention problems. Recognize. Identify. Comprehend. Harness. All of these things help the brain pay attention.

RICH Learning is all about enriching the brain with experiences that help it recognize, identify, and comprehend new information, then take that new information and collide the "new" up against the "knew" to harness the attention, creativity, innovation, curiosity, and long-term retention power of the brain in a way that enriches your life. How do you set up the brain to "re+cognize" anything? How do you create complicated patterns that can fire and wire and be retrieved the moment you want or

need them? How do you teach something that will have both attention and retention? Something that will be meaningful today and be remembered the rest of your life? That's the trick. But it isn't really a trick at all.

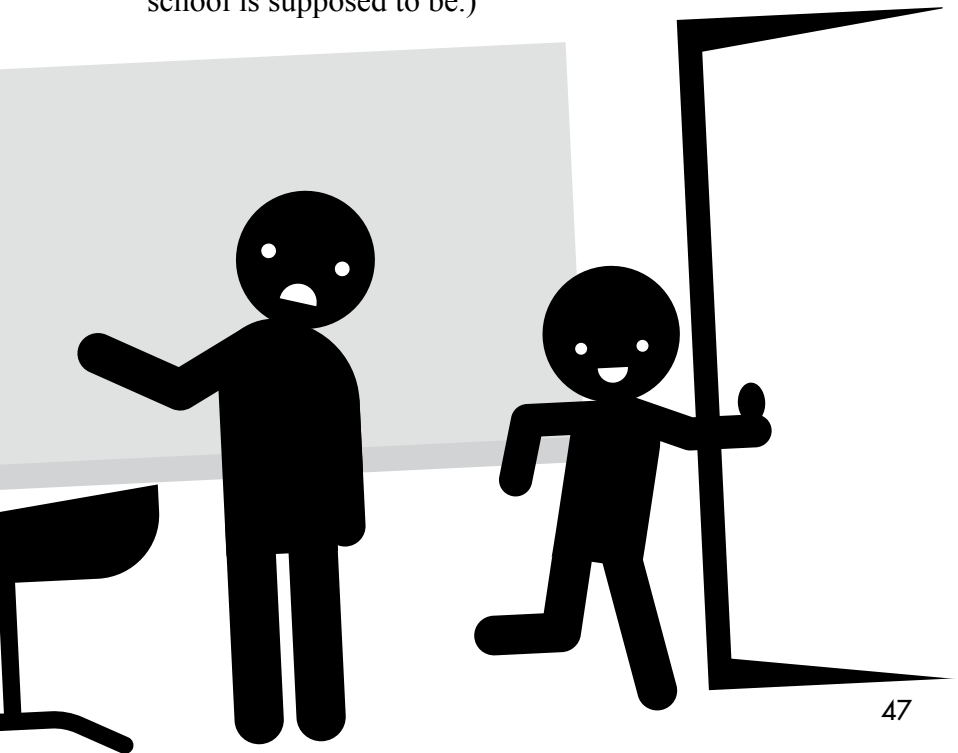
You already know how to do it. You've known how to do it since childhood. It's actually a no-brainer for anyone with half a brain.



It has more to do with theater and less to do with lectures. It has more to do with singing and less to do with talking. It has more to do with movement and less to do with a desk. It has more to do with how you first learned to walk, talk, draw, wiggle, jiggle, giggle and play and less to do with school. (At least less to do with the current picture of what school is supposed to be.)

It has more to do with the neurological reality of teaching the way the brain learns and less to do with classroom management. It has more to do with the arts and the hearts and less to do with class and sitting on your...

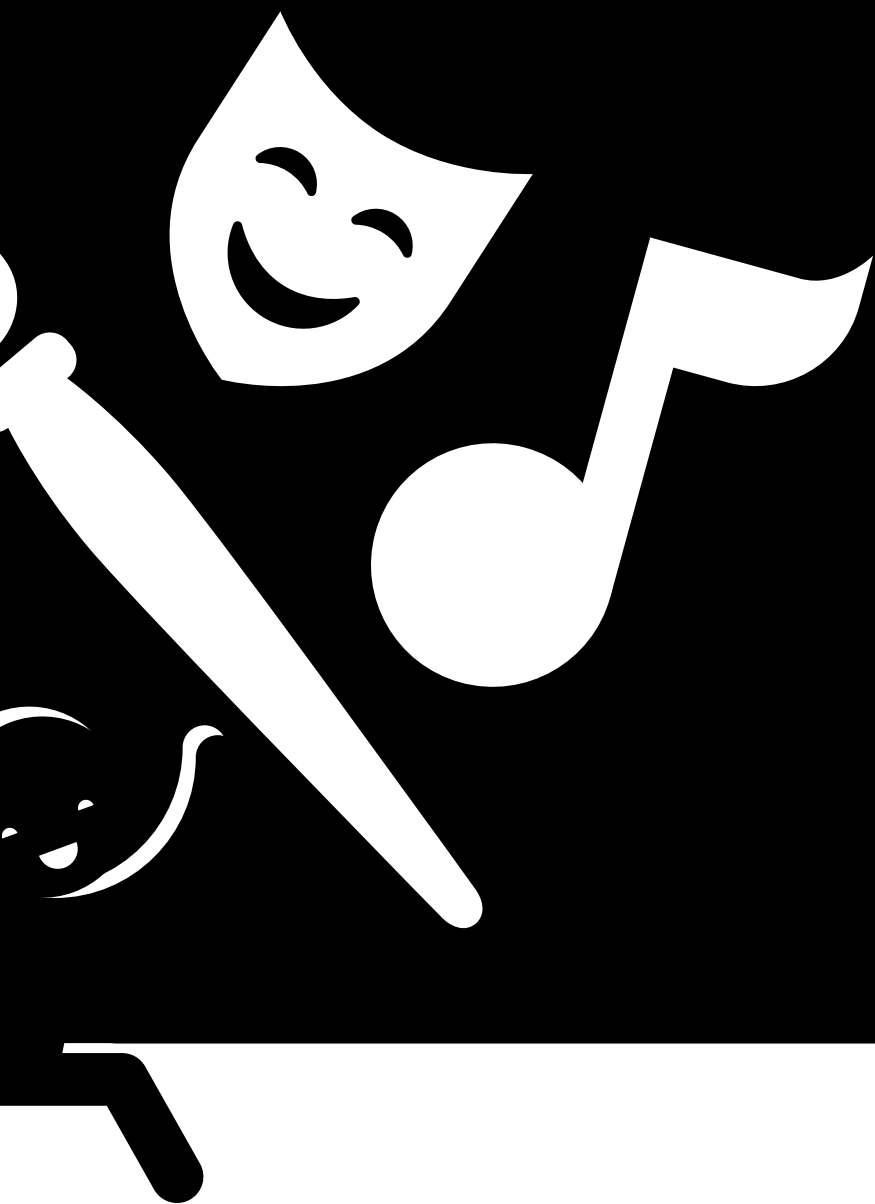
It is brain-based learning on arts-based platforms. And it's an absolute blast.



For a  
moment,  
let us exit  
the world  
of the  
classroom  
and enter  
the world  
of the arts.









# **RICH** **Learning** **and the** **Arts**

“Art is the lie that makes us realize the truth.”<sup>7</sup>

Pablo Picasso

Before we begin designing optimal, meaningful, neurologically sound, effective and memorable systems for new learning, it is important to understand what learning is not.

Contrary to popular belief, a new thought, fact, or memory is not a bit of information. It is not stored like you store words on a page, letters in a book or data on a hard drive. Perceptions, thoughts and meaningful memories are sets of electro-chemical signals passing through the brain and body at 100 yards per second in a synchronized firing – a simultaneous array of electrochemical waves.

Like a movie coming over Netflix, a memory is a firing and flashing of energy in integrated meaning-making patterns. What are the absolute best tools to input these patterns for maximum attention and retention? What are the optimal techniques to both teach the concepts today and make them readily accessible years from now at the drop of a hat? What are the technologies available that spawn maximum creativity, innovation, team work and the skills knowledge workers will need to thrive in the world workforce of the 21st Century? The Arts.

What? Why? Because the Arts engage significantly more sensory input devices into the learning process. Because the Arts connect significantly more areas of the brain, body and

environment into the learning process. Because the Arts supply the brain with significantly more oxygen, glucose, endorphins and brain fertilizer for the learning process. Because the arts enable and engage significantly more creativity, innovation, collaboration and team working skills in the learning process. Oh yeah, and they're fun, too, so the learner has a significantly deeper interest in and commitment to the total learning process.

There. You have it. Now you don't have to read the rest of the book. Put it down and walk away.

Okay. Maybe not.

Let's look at four arts that don't cost a nickel but are worth a million bucks neurologically and educationally.

III :

# A. Why Teach with Music?

"Every kind of music is good, except the boring kind."<sup>8</sup>

Gioachino Rossini

Repeated Patterns Repeated Pattern  
EMOTIONAL PATTERNS EMOC  
PATTERNS AB BING PATTERN  
Patterns Precision Pattern  
PATTERNS EMOT  
EMOTIONAL PATTERNS  
Precision Pattern  
EMOTIONAL PATTERNS  
Repeated Pattern