

15th Annual
Hawker Brownlow
**Thinking &
Learning**
Conference

www.hbconf.com.au

MARCUS CONYERS

SATURDAY 19 MAY

Session 2

Leading with the Brain in Mind - Part 2

MELBOURNE

DR MARCUS CONYERS

Dr Marcus Conyers is an international keynote speaker with a passion for improving human performance through original frameworks for connecting mind, brain, well-being, and leadership research to practice. He is the co-author of 20 books, including *Positively Smarter: Science and Strategies for Increasing Happiness, Achievement, and Well-being* (Wiley, 2015), *Smarter Teacher Leadership: Neuroscience and the Power of Purposeful Collaboration* (Teachers College Press, 2016), and *Introduction to BrainSMART® Teaching* (Hawker Brownlow Education, 2018).



Dr Conyers is co-developer of the world's first doctoral minor in Brain-Based Leadership and the first Educational Specialist and Master of Science degree programs in Brain-Based Teaching (BrainSMART® Programs) in partnership with Nova Southeastern University. He serves as a research supervisor for the Ph.D. program in Professional Practice: Psychological Perspectives with Canterbury Christ Church University. Research for his Ph.D. with the University of Westminster focused on improving practice through application of the education, mind, brain, and implementation sciences.

A message from Hawker Brownlow Education

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KEY POINTS FROM DR MARCUS CONYERS'

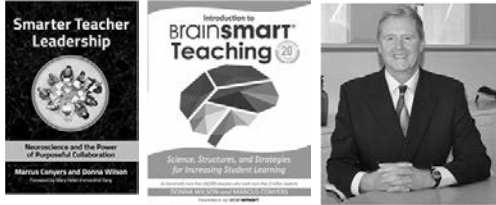
Leading with the Brain in Mind

This presentation will provide leaders with a framework for applying principles of teacher leadership within a neurobiological understanding of learning and leading. Participants will learn a “spectrum” of teacher leadership opportunities to enhance a shared vision of school improvement, and be introduced to the POWER model for teacher leadership, emphasising the implications of brain plasticity for lifelong learning, opportunities for collaboration, metacognitive strategies, a positive climate for learning and how to build on successful results. Educators implementing this model for teacher leadership can better support effective teaching and leading from preschool to high school.

Objectives and Outcomes:

- **Connecting neuroscience to leadership**
- **POWER framework for effective leading**
- **Toolbox of leadership strategies**

Leading with the Brain in Mind



Marcus Conyers, PhD

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Our Focus Today



- * The neuroscience of learning and leading
- * POWER Lens for teacher leadership
- * Brief overview of BrainSMART model for increasing student learning
- * 10 key leadership strategies

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“The whole function of education is to alter the brain.”

Nobel Prize winner Eric Kandel



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What is Leading with the Brain in Mind?



Leading with the Brain in Mind is about supporting positive brain change at all levels. A specific focus is on the purposeful collaboration of teachers in ways that support effective instruction and increased student learning.

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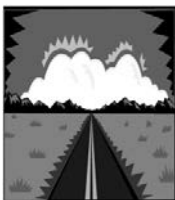
The Brain is the Engine



- * It produces all the learning.
- * It produces all behavior.

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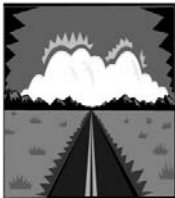
Curriculum is the Road



- * Students arrive at different points along the road.
- * Instructional effectiveness is key to how much progress students make.

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Curriculum is the Road



Teachers working together in purposeful collaboration is key to improving instruction.

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BrainSMART® Processes Increase L.P.H.



- *L.earning
- *P.er
- *H.our


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Process x Content = Results
(How We Teach) x (What We Teach) = Results

D.L. Wilson & M.A. Conyers
BrainSMART: 60 Strategies for Increasing
Student Learning

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Effective Teaching Makes the Difference




A student starting at the 50th percentile could move to the 79th or 95th percentile

Source: ASCD Linking Teacher Evaluation and Student Learning, Tucker and Stronge

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Effective teaching made a 44 percentile points difference in Dallas




- * Students with 3 years of effective teaching moved from the 63rd percentile to the 87th
- * Students with 3 years of ineffective teaching dropped from the 58th percentile to the 40th

Source: ASCD Linking Teacher Evaluation and Student Learning, Tucker and Stronge

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Well-Led School = Gain of 23 Points




An Average Student in a "Good School Will Score 23 Points Above One Attending a Poor "School"

Source: Rosenthal & Hunter


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Leading with the Brain in Mind is about connecting education, mind, and brain research to practice at all levels.



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POWER Model for Connecting Education, Mind, and Brain Research to Leadership

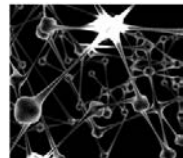


Teachers working together through the process of purposeful collaboration

- * Potential & Plasticity
- * Opportunities
- * Work Smarter
- * Encouragement
- * Results

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership
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Potential Fueled by Plasticity: Experience-Dependent Synaptogenesis



- * Emphasize role of brain plasticity and malleability in facilitating learning.
- * Nobel laureate Carl Wieman stated it often takes a year for this understanding to occur.

D.L. Wilson & M.A. Conyers,
Five Big Ideas for Effective Teaching
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Neuroplasticity:
We Can Now Scientifically Redefine Potential



Potential can be redefined as the capacity, fueled by the brain's plasticity, for acquiring the knowledge and skills to achieve at a higher level of performance when the proper conditions are present.

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Neuron



- * Nucleus
- * Dendrites
- * Axon

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Your brain is powered by
some 86 billion neurons



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Your brain can make more connections than there are stars in the Milky Way Galaxy...



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Learning creates new connections



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Strategies for Making Connections



- * Novelty
- * Challenge
- * Practice
- * Feedback

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Never question ability.
Always improve strategy.

D.L. Wilson & M.A. Conyers,
*BrainSMART: 60 Strategies for Increasing
Student Learning* p. 100

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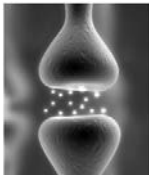
Teachers are particularly encouraged to
discover that...



- * Learning changes the structure and function of the human brain.
- * Research suggests you can grow more neurons and make connections throughout your life as you learn!

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Plasticity is influenced by proper conditions for
active learning, thinking, and improvement
across educators' careers.



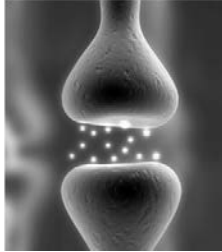
Plasticity facilitates ongoing improvements in professional practice when the opportunity for meaningful learning is available.

- * Teachers who have studied with us like to say that "old dogs can learn new tricks." They know that more mature teachers can, in some ways, learn better than their younger peers, applying lessons from their professional experience to connect new learning with prior knowledge.

M.A. Conyers & D.L. Wilson, *Smarter Teacher Leadership*

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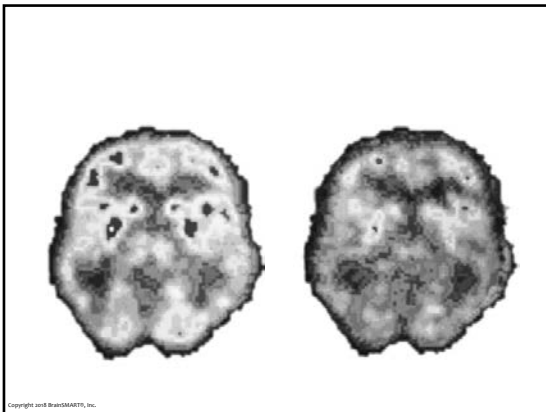
Neurotransmitters, Plasticity & Lifelong Learning



During engagement the brain releases chemical neurotransmitters that enable brain change, or learning.

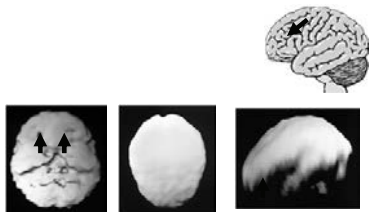
Merzenich,
Soft-wired: How the New Science of
Plasticity Can Change Your Life

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The Prefrontal Cortex: CEO of the Brain



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Full Brain Leadership



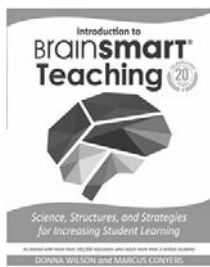
Back: Receives sensory information
 Left: Repeats existing behaviors
 Right: Generates new ideas
 Front: Implements new ideas

* Opportunity to learn more tools to increase student learning and time to share what works with colleagues

Process x Content = Results
 (How We Teach) x (What We Teach) = Results

D.L. Wilson & M.A. Conyers
 BrainsMART: 60 Strategies for Increasing Student Learning

Dr. Donna Wilson's & Marcus Conyers' **BRAINSMART**™ Instruction



S.tate
 M.eaning
 A.ttention
 R.etention
 T.ransfer

Keys To Raising Student Achievement



- * Teaching in ways the brain learns best
- * Teaching students specific thinking & learning tools

Source: Wilson & Conyers

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What is Happening in Classrooms?

- * 70% of instructional time was spent talking to students.
- * Barely 5% was designed to create students for student's anticipation for needing to respond.
- * Not even 1% required some form of open response involving reasoning or perhaps an opinion from students.

Source: Goodlad's A Place Called School page 229

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Increasing Student Achievement By Teaching Cognitive Skills Explicitly

- * Students taught specific cognitive skills in one study moved from the 50th percentile to the 64th percentile. (Hernstein).
- * Students moved from the 50th percentile to the 79th percentile. (Van Gelder and Bissett).

In Executive Intelligence by Justin Menkes

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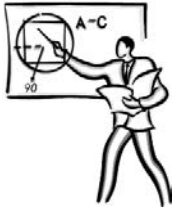
Sample Strategy: Rocket List
(From BrainSMART: 60 Strategies for Boosting Test Scores)



- * Integrates linguistic and nonlinguistic modes
- * Connects to many modalities of learning

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Strategy: Nonlinguistic Representations

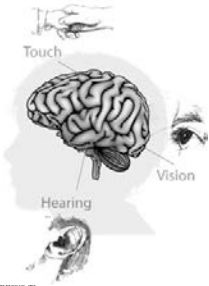


Percentile Gain 27

Source: MCREL

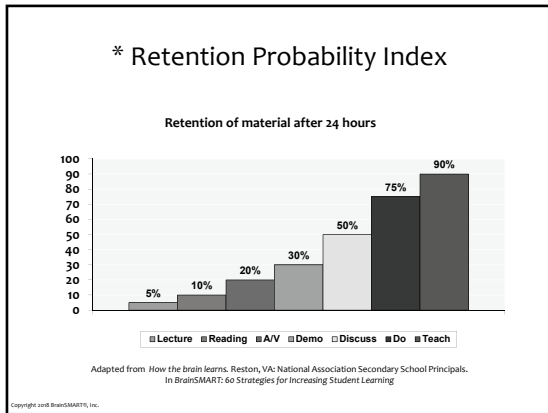
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Teach so students use multisensory learning pathways.



Lots of strategies we teach pair visual, kinesthetic, and tactile pathways with words and concepts to increase memory.

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Work Smarter with Metacognition

METACOGNITION
Practicing and Applying Cognitive Assets

What good would plasticity be without metacognition, the mind's overseer?

- * Some essential questions:
- * How am I teaching so all my students learn key content/skills? [Clear Intent]
- * Are all my students learning key content/skills? [Monitoring]

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership

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Work Smarter with Metacognition

METACOGNITION
Practicing and Applying Cognitive Assets

What good would plasticity be without metacognition, the mind's overseer?

- * Some essential questions:
- * Which strategies am I using that are effective, and what do I need to learn? [Evaluation]
- * Who do I know who might assist me with this lesson/unit? [Purposeful Collaboration and Practical Optimism]

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Teacher leaders put research into practice through a spectrum of strategies

SPECTRUM OF LEADERSHIP OPPORTUNITIES

RESEARCHING Enhanced Pedagogy	SUPPORTING New Teachers	LEADING Professional Development	PRESENTING Best Practices	PARTICIPATING in Peer Reviews	ENGAGING Parents	ADVOCATING for Educational Policies	LEADING Alongside Administrators
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← Engage in Purposeful Collaboration →

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Encouragement




- * Shine the spotlight on classroom success stories.
- * Recognize and celebrate colleagues' unique strengths and contributions.
- * Contribute to a positive environment.
- * Spread the word about the power of a practical optimism to support learning.

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Smarter Teacher Leadership

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By using frameworks and strategies based on learning science, teachers can increase student achievement with hands-on/minds-on learning...



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Teacher leaders flourish sharing new knowledge they've learned about how brains learn



- * The approach affirms the expert knowledge teacher leaders have of their schools, students, content, and communities.
- * Education, mind, and brain research provides knowledge and strategies for increasing student achievement beyond the knowledge teachers usually already have.

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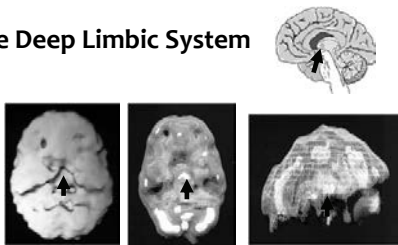
Teacher leaders flourish sharing new knowledge they've learned about how brains learn



- * Teachers use new frameworks, key principles, and strategies.
- * When they see that the ideas and strategies work, they like to share and model with colleagues in their schools and districts.

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The Deep Limbic System



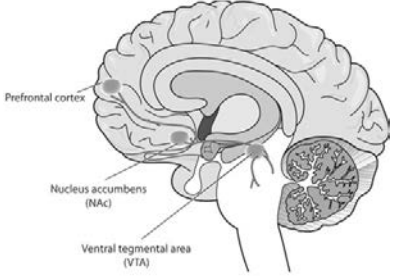
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Key Deep Limbic Functions

- * Sets emotional tone
- * Tags events as important or not
- * Determines motivation
- * Promotes social participation

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The Brain's Reward System



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Results: Some successes around the U.S. and world



Build school reform on a solid pedagogical foundation.
[Shanghai: Mind, brain, & education science and teachers working together]

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership

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Results: Some successes around the U.S. and world



- * Spread the word about the importance of teaching *with* and *for* metacognition. [Some U.S. schools]
- * Build collective capacity through work together. [Ontario, CA]

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership

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Results: Some successes around the U.S. and world



- * Set high expectations for teaching and learning. [Diverse Calif. high school]
- * Encourage "all in" involvement and shared commitment to systematic improvement. [Norfolk, VA]

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership

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Results: Some successes around the U.S. and world



- * Forge strong partnerships between administrators and teachers. [British study]
- * Take what works from around the world and make it your own. [Finland]

M.A. Conyers & D.L. Wilson
Smarter Teacher Leadership

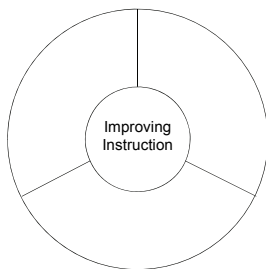
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The Human Brain Is Social

Human brains are designed to learn in relationship with others. Siegal's research indicates that humans learn how to relate through limbic and frontal connections in the brain.

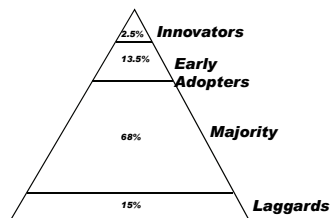
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Strategy 1: Make improving instruction the number one leadership priority in schools



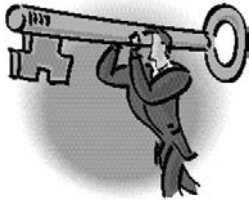
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Strategy 2: Focus on your best to inspire the rest



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Strategy 3: Influence With integrity



The ability to read others and to build rapport will give you more power to understand, motivate, and positively influence!

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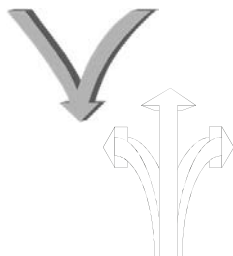
BrainSMART Barcode for the Brain: Read the 7 S.T.R.I.P.E.S.



* This system will give you more power to understand, motivate, and positively influence!

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Sameness — Difference



- * Go to same places
- * Do same things
- * Uncomfortable with change

- * Different experiences
- * Want to positively change their lives

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Towards — Away



- * Moving towards
- * Optimistic
- * Moving away
- * See risks
- * Want to avoid problems

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Reactive — Proactive



- * Respond to emergencies
- * Do not think of future
- * Great at planning
- * Invest energy in future

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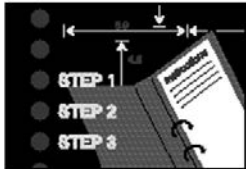
In Time — Through Time



- * In the moment
- * Full attention on moment
- * Good time planners
- * Often focus on the next task or meeting

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Procedures — Options



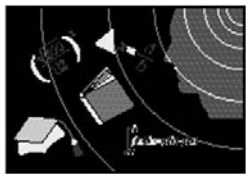
- * Procedures people like sequences of steps
- * Options people like to create their options

External — Internal



- * Externals are good at reading others' views
- * Less interested in others' views
- * Experience to make up mind

Specifics — Big Picture



- * People with specifics code focus on details
- * Great at editing
- * Interested in connections and whole

Reading the Stripes

- * Sameness Difference
- * Towards Away
- * Reactive Proactive
- * In Time Through Time
- * Procedures Options
- * External Internal
- * Specifics Big Picture

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Strategy 4: Praise with Precision



The power of
praise

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4th and 6th Grade Math
Students Over 5 Days



- * Ignored
- * Criticized
- * Praised

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Guess how much each group improved in percentage terms



- * Ignored
- * Criticized
- * Praised

(The smallest improvement was 5%)

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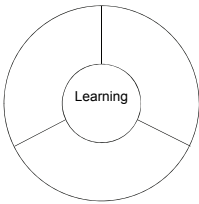
The Results

- * Ignored improved 5%
- * Criticized improved 19%
- * Praised improved 71%

Source: How Full is Your Bucket, PP 51

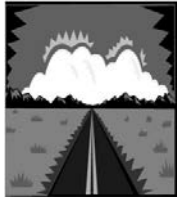
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Strategy 5: Focus on the 20% that Produces 80% of Results



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Strategy 6: Ensure that teachers have a teachable curriculum



- * Trim content down to what is essential and what is supplemental.
- * Focus on BrainSMART mini lessons for vital content.

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Strategy 7: Listen, learn, and lead
H.E.A.R. SMART Listening Skills



- * H.alt
- * E.ngage
- * A.nticipate
- * R.eplay

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Strategy 8: Be great in
8-minute chunks



- * Leading takes a lot of energy
- * Pulse your practice in roughly 8-minute chunks

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Strategy 9: Lead With practical optimism



- *Personal
- *Pervasive
- *Permanent


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Practical Optimism Strategies

- * SAVE the Positives
- * Delete the Negatives
- * Focus on the T.N.Ts
- * The
- * Next
- * Time

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Model Practical Optimism
Mirror Neurons



When we see someone do something, the same neurons they used are activated in our own brains

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Strategy 10: Plan effectively

- * Situation—What is our most important task now?
- * Mission—What do we want to achieve?
- * Action—What action do we need to take?
- * Resources—What resources do we need?
- * Timeline—When will we do the work?


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Strategy 10: Plan effectively

- * Situation—Improving classroom instruction is the key to increasing student achievement
- * Mission—Improve student achievement
- * Action—Effective professional development
- * Resources—Time and budget
- * Timeline—Schedule optimum dates

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Our Focus Today

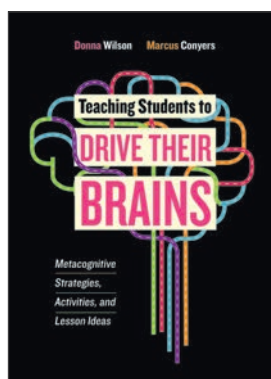


- * The neuroscience of learning and leading
- * POWER Lens for Teacher Leadership
- * Brief overview of BrainSMART model for increasing student learning
- * Key leadership strategies

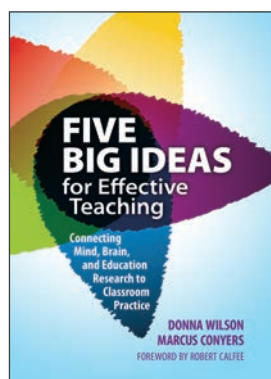
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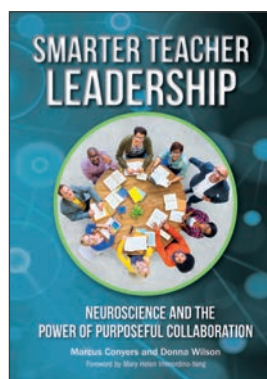
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	117002	Teaching Students to Drive Their Brains: Metacognitive Strategies, Activities, and Lesson Ideas	\$32.95
	TCP0676	Five Big Ideas for Effective Teaching: Connecting Mind, Brain and Education Research to Classroom Practice	\$32.95
	TCP4179	Smarter Teacher Leadership: Neuroscience and the Power of Purposeful Collaboration	\$35.95
	HB6623	Introduction to BrainSMART Teaching: Science, Structures and Strategies for Increasing Student Learning	\$49.95
Total (plus freight) \$			



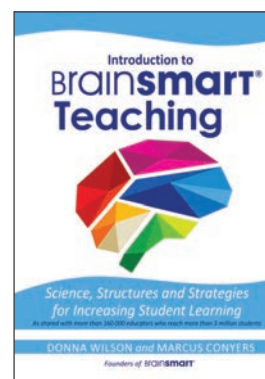
117002 • \$32.95



TCP0676 • \$32.95



TCP4179 • \$35.95



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