

The Neuroscience of Effective Learning & Teaching Workshop

Dubai Oct 10th, 2015

The workshop will feature insights on learning from academic researchers on neuroscience for education, techniques on how to address learning differences for better outcomes in the classroom, a summary of the scientific principles of learning that students rely upon to learn effectively, and some common challenges students' face that can sabotage learning. Parents and teachers will learn how to effectively identify a precise learning struggle and, most importantly, what can feasibly be done to remedy these.

ACADEMIC RESEARCH

Harvard and Johns Hopkins University are pioneers at integrating the fields of neuroscience and education in order to infuse their ongoing brain-based research on learning into the practice of teaching. The two schools collaborate and disseminate their original research findings with schools globally through a small network of institutes they support, such as the Center for Transformative Teaching and Learning (CTTL).

For example, Johns Hopkins research led to a workshop for teachers on "Connecting Brain Research with Effective Teaching", led by Dr. Mariale Hardiman. The Harvard Graduate School of Education in partnership with the CTTL launched a study to discover how student happiness impacts motivation and academic achievement, led by Dr. Christina Hinton.

DISSEMINATION

The CTTL's mission is to create and innovate in the field of Mind, Brain and Education Science to allow teachers to maximize their effectiveness and students to achieve their highest potential. The CTTL conducts original research through its association with academic researchers at Johns Hopkins School of Education and Research Schools International, which is led by faculty at Harvard University's Graduate Education. The results of these research collaborations are disseminated to schools through multi-tiered professional workshops and publications for teachers, school leaders, and policy makers.



THE CENTER *for* TRANSFORMATIVE
TEACHING & LEARNING
AT ST. ANDREW'S EPISCOPAL SCHOOL

IMPLEMENTATION



COGx provides evidence-based programs that improve learning ability by enhancing cognition through a methodology that relies on scientific principles of learning. COGx programs improve a student's ability to learn effectively through customized programs that identify, target and strengthen deficient cognitive areas. The proprietary methodology teaches students proven techniques for learning, delivers drill and practice exercises to strengthen the areas of relative weakness, and coaches to ensure metacognition. This ensures gains transfer into the classroom for better learning and that gains are sustainable. The individualized process allows students to become more confident, effective and self-aware learners.

LOCAL PRESENCE

kidsFIRST medical centers are a leading provider of educational and medical services to students and schools in the UAE. Through the partnership between COGx and kids FIRST, the latest research in Neuroscience and Mind, Brain and Education is made available to empower teachers with practical insights and students through customized programs to enhance learning ability.



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Mariale Hardiman

Vice Dean, Academic Affairs
Professor of Education, Clinical
Director, Neuro-Education Initiative
Johns Hopkins University School of
Education

The Brain Targeted Teaching Model

Talk Synopsis

New and ongoing findings from the neuro and cognitive sciences have produced a vast frontier of knowledge on how the brain processes, stores, and retrieves information. As educators at all levels have increasingly recognized their role as consumers of this emerging knowledge, translating brain research into instructional practice often becomes a challenge for educational practitioners. This presentation will offer educators practical application of research by linking it with the Brain-Targeted Teaching® Model—a pedagogical framework for using research in the neuro- and cognitive sciences as well as research-based effective instruction to guide teachers in planning, implementing, and assessing a sound program of instruction for all learners.

The Brain-Targeted Teaching® Model presents six stages, or “brain targets” of the teaching and learning process. The components include (1) establishing the emotional climate for learning, (2) creating the physical learning environment, (3) designing the learning experience, (4) teaching for the mastery of content, skills, and concepts, (5) teaching for the extension and application of knowledge, and (6) evaluating learning

Speaker Bio

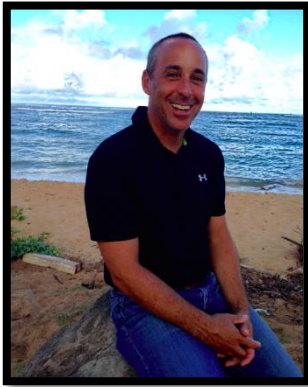
Mariale Hardiman, Ed.D. is Vice Dean, Academic Affairs, Professor of Clinical Education, and Co-founder and Director of the School of Education's Neuro-Education Initiative (NEI) at Johns Hopkins University. The NEI has been recognized as an innovative cross-disciplinary program that brings to educators relevant research from the learning sciences to inform teaching and learning through the JHU's Mind, Brain, and Teaching masters and doctoral courses and professional development programs. Her research and publications focus on enhancing educational practices through techniques that foster innovation and creative problem-solving. Current research includes how knowledge of neuro-and cognitive science influences teacher practice and teacher efficacy beliefs.

Before joining Johns Hopkins in 2006, Hardiman served in the Baltimore City Public Schools for more than 30 years. As the principal of Roland Park Elementary/Middle School, she led the school to its designation as a Blue Ribbon School of Excellence. With the use of the Brain-Targeted Teaching® Model that Hardiman developed, the school was recognized nationally for innovative arts programming. Hardiman presents nationally and internationally on topics related to the intersection of research in the neuro- and cognitive sciences with effective teaching strategies, including meaningful integration of the arts. Hardiman has significant experience in educational leadership development and education for children with disabilities. Hardiman earned undergraduate and Masters of Education degrees from Loyola University Maryland and a Doctorate of Education from Johns Hopkins University.

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Glenn Whitman

Director, The Center for
Transformative Teaching & Learning

Educational Neuroscience, Learning Differences, and Student Achievement: *What Teachers, School Leaders, and Policy Makers Need to Know*

Talk Synopsis

Mind, Brain and Education Science is the most innovative thinking being applied to enhancing teacher quality and student achievement today. However, few teachers and school leaders understand how the brain learns, works and changes. Teachers and school leaders are clamoring for models of school-wide integration of the principles and strategies of this science that will help them better support the different ways all students learn. The CTTL in partnership with university researchers and faculty, has developed a multi-tiered professional growth framework that informs, validates and transforms how teachers teach and students learn. Workshop participants will see how this framework can be applied to their own school settings as well as leave with a set of next day, research-informed strategies, that will allow them to differentiate their instruction.

Workshop outcomes:

1. Obtain insights on foundational research and strategies in educational neuroscience to help teachers address the learning differences that exist in each of their classes or programs.
2. Learn how to apply and measure three types of research to how they design their classes and work with each of their students.

Speaker Bio

Glenn Whitman directs the internationally recognized Center for Transformative Teaching and Learning (www.thecttl.org) at St. Andrew's Episcopal School (U.S.A) where he also serves as the Dean of Studies for grades Preschool through 12th grade. Glenn is a former Martin Institute for Teaching Excellence Fellow and author of *Dialogue with the Past: Engaging Students and Meeting Standards through Oral History*. Glenn is the co-editor of *Think Differently and Deeply*, the national publication of the CTTL that has been distributed to over 6000 teachers, parents, school leaders, and policymakers in four different countries (U.S.A., Canada, England, and China).

Glenn's most recent publication is, "Assessment and the Learning Brain" that can be found in *Independent School* magazine. He is also blogger for Edutopia (www.edutopia.org) and the co-author of the forthcoming book, *Neuroteach*. Glenn earned his MALS from Dartmouth College and a BA from Dickinson College and is a leader in translating research in how the brain learns to enhance teacher quality and student achievement.

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Dr. Cindy Ward Sandler
Psychologist

I have a train in my brain
but sometimes it gets
stuck: *Understanding
how the brain functions
in learning*

Talk Synopsis

For many children, learning comes easily as they acquire skills at a similar pace with their peers. However, for others, learning doesn't flow. It is as if the brain has a series of train tracks and sometimes the "train" goes off the rails, gets stuck, speeds too fast, or misses the turn only to end up in the wrong location. Dr. Sandler will present what happens in the brain when learning takes place and what can go awry. Join her for this important and entertaining look at learning and the brain.

- I. What happens in the brain when we are learning
- II. What is processing
- III. What can go awry in the learning process

Speaker Bio

Dr. Cindy Ward Sandler, an experienced licensed psychologist, specializes in child and adolescent learning and development. She received her Ph.D. in 1979 from the University of Maryland and over the years has provided counseling, diagnostic assessments, workshops and served as a public speaker. Her practical application of information about how a child learns and processes, provides the foundation which supports the child as he/she learns through the years with success.

In addition to working directly with children and families, Dr. Sandler is a popular public speaker on a multitude of topics including: learning, development, teaching strategies, and parenting. Co-hosting The Learning Connection and Team Radio, both call-in talk shows, provided the community-at-large access to her insight and advice. Dr. Sandler is a board member and advisor for Camp Attaway, a therapeutic day camp for children with behavioral and emotional challenges.

Over the years, Dr. Sandler's experience has led to her drive to create and support programs which provide direct intervention in brain development, as well as strengthen ways a child thinks in order to be the best learner he/she can be. Bringing this interest, along with her expertise in brain development and learning.

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Javier Arguello

Executive Director, COGx

**Understanding the Impact
of Academic Failure &
Success: *how does this
shape us, our abilities and
opportunities?***

Talk Synopsis

Successful learners develop habits that reinforce abilities and benefit from the positive emotions associated with their experiences learning. Emotion, cognition and behavior converge for students who experience academic success.

Unfortunately, the opposite happens for students who fail to learn effectively. A perfect storm of negative emotions and bad habits build around weak cognitive skills making it hard for students to disrupt the negative feedback loop that distances students from learning. Javier's talk will focus on the importance of understanding individuals holistically, to create frequent and constant "small wins" before experiencing large gains to improve their learning ability in a way that is meaningful and sustainable.

Key Takeaways:

1. A Holistic Understanding of Learning Differences
2. Science-based Principles of Effective Learning
3. The importance and relationship between automatic processing, executive control and memory for learning

Speaker Bio

At the age of 13, Javier was diagnosed as "mildly retarded". Intimidated by standardized tests and the prospect of continued academic failure at college, Javier didn't apply to a single university after High School. Javier attended a community college only to dropout after one semester. A decade later, Javier earned scholarships and graduate degrees from Yale and Harvard. He also earned a graduate-level fellowship and began to conduct research at MIT's Department of Brain and Cognitive Sciences.

His research on neuroscience applied to learning was driven by a desire to understand individual learning differences that prevent students from learning in traditional school environments to see if there were more precise ways of understanding the roots of individual learning struggles and potential ways to help students learn more effectively. This was the genesis of the COGx program for individualized cognitive training, now used by students in schools, learning centers and hospitals.

Javier is responsible for building partnerships to democratize access to the COGx methodology through a carefully selected network of organizations and professionals. Javier is also a public speaker, guest lecturer and writer. COGx was also the inspiration for a TEDx event in Washington DC in 2013 on neuroscience and learning.