The Teaching Brain: An Evolutionary Trait at the Heart of Education

By Vanessa Rodriguez with Michelle Fitzpatrick.
The New Press, 2014

Vanessa Rodriguez taught humanities in the New York City public schools for more than ten years and is now a doctoral candidate at the Harvard Graduate School of Education. In The Teaching Brain, Rodriguez sets out to answer the question, “So what, precisely, is teaching?” She offers a simple, transformative introductory answer: “Teaching is a human, evolutionary skill.”

All humans are constantly involved in social interactions, and although not all social interactions involve teaching, all teaching moments do involve social interactions. In her introduction, Rodriguez says, “I taught because the act of teaching spurred growth within me; it meant something to me, and contributed to a more intelligent, informed, and connected world.” Further in her introduction she notes, “In the midst of my graduate-school research, I made a startling—and it turns out, profound—connection between the cognitive psychology and neuroscience I had been studying and the practice of teaching: for all we know about the nature and science of learning, especially the discoveries in brain research, we have grown very little in our insight into the teaching process. I came to understand that we all do it, this act we call teaching.”

The Teaching Brain is organized into three sections: Part One debunks older models of teaching from Pavlov and Skinner to “Teach Like A Champion” where knowledge is simply poured into the learner like water. It also highlights misguided theories and education policy reforms, including the over-emphasis on standardized testing and No Child Left Behind, which have had such a major negative impact on education.

Part Two begins with an overview of the science behind the learning brain and goes on to outline a revolutionary new framework for understanding the teaching brain as an interactive system generated by both the student and the teacher.

Part Three provides a meaningful discussion of how this new framework can be of use to teachers and education reformers, and includes a summary of exciting new neurobehavioral research that uses the latest in imaging technology related to interpersonal brain interactions.

In addition to reviewing an immense body of others’ research, Rodriguez has done primary research not only with professional teachers, but with children beginning as young as one-year olds, continuing with elementary aged children, middle-schoolers, high-schoolers, on up to the elderly. She realized that young children “teach” their peers how to play a board game, and as anyone who teaches adolescents has experienced, most of them can teach adults tons about using the computer, iPad, or iPhone! As grandparents, my wife and I often turn to our eight-year-old granddaughter to show us how to play a new board game, and we constantly ask our own adult children how to do something on our laptops.

This reminds me of Margaret Mead’s provocative little book, Culture and Commitment: A Study of the Generation Gap. That text, presented in March 1969—the height of the youth revolution of the ‘60s—described three types of human culture: “postfigurative, in which children learn primarily from their forebears, configurative, in which both children and adults learn from their peers, and prefigurative, in which adults learn also from their children.” Mead quite insightfully noted, “We are now enter-
ing a period, new in history, in which the young are taking on new authority in their prefigurative apprehension of the still unknown future.” In the launch of Mead’s book at the “Man and Nature” lectures at The American Museum of Natural history in conjunction with the Museum’s centennial celebration in 1969, Mead continued, “Today, nowhere in the world are there elders who know what the children know, no matter how remote and simple the societies are in which the children live.” Lastly, she offered this still-timely recommendation, “We must create new models for adults who can teach children not what to learn, but how to learn and not what they should be committed to, but the value of commitment.”

I believe Vanessa Rodriguez would agree with Margaret Mead because Rodriguez states, “Teaching is an innate and natural human cognitive ability,” and “all humans demonstrate a ‘theory of mind,’” referring to a person’s ability to understand what is going on in the mind of another human. Rodriguez then offers this overview/summary:

As we age, our natural ability to teach moves from proto-teaching [e.g. infants’ basic, concrete level of teaching] to demonstration, then explanation and eventually contingent [interactive, response-oriented] teaching. On a basic level, this means that teaching, like learning, becomes more complex as we develop over time. This is hugely important because typically we don’t think about teaching as a skill (or set of skills) that changes over time, but rather something more static. We also tend not to think of teaching as something that children do regularly. Nor, even though common sense signals it to be true for people of all ages, do we often think of teaching as something that exists outside of a classroom.

Part Two of The Teaching Brain, “It’s All About Systems,” begins with a chapter on “Understanding the Learning Brain.” Here Rodriguez outlines four key concepts of her new model of the “learning brain:”

1. Learning is dynamic and changes over time.
2. Learning is both cognitive and emotional.
3. Learning is context dependent: some children will learn better in certain situations, with certain supports, and learn less well in others.
4. Learning is interactive: it is a social enterprise that happens in concert with a variety of active factors in the learner’s environment, including teachers, parents, peers, textbooks, apps, and so on.

“What do we really mean by teaching? Do we all have the same thing in mind when we conceptualize teaching? Who should we trust to say what teaching is, and how does this play out in schools? How can we even begin to transform education policy or practice unless we all understand what teaching really means?

Then, based on her Theory of Mind, Rodriguez presents two critical lessons that are the foundation of her new definition of teaching:

1. Teaching is a process. It is an interaction that occurs between humans who express a desire to connect with each other and join their knowledge. Both people benefit from the collective knowledge and the interchange, and this kind of interaction can and does happen everywhere: within and outside classrooms, with and without formally trained teachers.

2. Teaching is a natural human act. Teaching is a uniquely human endeavor that we employ when we want to join together and become one mind.

This in turn takes us to one of the most important chapters in the book, “Becoming An Expert Teacher.”

In order to teach, one must process information both as a teacher and as a learner. There is not some wholly separate brain that is our teaching brain. Instead, identifying the teaching brain is an attempt to highlight several patterns within brain processing that characterize the complexity of how expert teaching develops—from basic reflexive processing through forming multiple abstract systems of teaching.

These “patterns within brain processing” are what led Rodriguez to a “comprehensive theory of the learner’s brain, that involves the following “The Five Awarenesses of the Teaching Brain.”
1. **Awareness of the Learner**—As teachers process student-centered information, they begin to form a theory of mind, theory of cognition, theory of memory, and theory of emotion of the learner.

2. **Awareness of Interaction**—Based on extensive interviewing of teachers, Rodriguez suggests there are four categories of interaction with a student: connection, collaboration, mutual effects and synergy.

3. **Awareness of Self as a Teacher**—As the leader in this interaction, the teacher gathers information both from the learner and from herself and then processes what is necessary for the interaction to be beneficial for the learner.

4. **Awareness of Teaching Practice**—Teachers’ awareness of their practice occurs during moments where they are cognizant of all the ‘stuff’ that makes up their teaching - not just their pedagogy - could have to do with more tangible procedures such as routines, organization, and time management... and could also involve less tangible methods that they utilize to help them create their classroom culture and ensure continued learning... and how flexible they are when unanticipated challenges arise.

5. **Awareness of Context**—many aspects of awareness of context intersect with elements defining other awarenesses... outside the tense politics of education into the equally tense realm of current events, what is happening socially, politically, and economically in the larger world has great bearing on our teaching.

In the chapter on “Your Teaching Brain,” Rodriguez offers a series of surveys to be self-administered to help a teacher assess her own understanding of these five “awarenesses.” I suggest that readers of this review answer the following questions, an example of Rodriguez’s personal teacher surveys. (Note, singular pronouns below have been edited to reflect NSRF’s policy of gender-inclusiveness.)

**Theory of Mind**

- Do you know how your learner is feeling when they get frustrated during a teaching interaction?
- Have you considered how your student’s friends affect the way that they learn?
- How much do you think about the effect that family dynamics have on the progress of your learner?

**Theory of Cognition**

- Have you considered what your learner can recall when they are working independently, versus what they can recall when in a group setting?
- Do you think about how working with friends or family affects your learner’s memory?

In the final chapter, “The Teaching Brain and Next Steps for Education Reform,” Rodriguez offers some exciting new developments involving the latest in neuroimaging methods being employed to observe the neural activity of brain interaction in the emerging new field of “two-person neuroscience!” This research involves simultaneous recordings of electroencephalography that actually measures the synchrony in the brain activity of two people engaged in a face-to-face activity together.

The preliminary results are showing that, across various pairs of people, two regions of the brain considered to be implicated in social functions such as empathy were simultaneously interactively engaged! Researchers also found that when participants synchronized their bodily movements, they showed corresponding changes in the same regions of their brains, regions involved in forming mental representations of oneself and social/emotional attitudes. Another recent study was conducted recording simultaneous neuroimaging of teacher-student interactions. While teachers used the Socratic teaching method to help students solve math problems, activity of the prefrontal regions of the brain of the teachers and their students was recorded simultaneously using the “wireless functional near-infrared spectroscopy (fNIRS)” technique. Researchers found that where students arrived at the correct answer, teachers’ and students’ brain activity “danced at the same pace.” Rodriguez thus asks, could a more successful teaching process be reflected in neural synchrony? And could neural synchrony possibly be a precursor to successful learning?

Stay tuned!
#BlackLivesMatter

The urgency of coaching for equity

By Dave Lehman, NSRF National Facilitator and Connections Executive Editor, and Luci Englert McKean, NSRF Assistant Director for Operations and Connections Managing Editor

By many people’s reckoning, the United States is in a state of emergency, and the #BlackLivesMatter movement continues to draw everyone’s attention to catastrophic, systemic racism. Right now, it is especially important to remind ourselves, as Critical Friends Group Coaches and Facilitators, of a core element of our NSRF Mission: “to foster educational and social EQUITY” (emphasis ours).

With our mission in mind, we offer a brief review of key NSRF protocols and other resources to help you address the current situation with teachers, administrators, parents, students, and the general public.

Statistics you should know

Our classrooms and schools are central to the development of our young people, and yet nationwide statistics clearly show that the experience of young black and brown students is vastly different than whites.

Black children, who make up just 18% of preschoolers, account for 48% of all out-of-school suspensions before kindergarten. Before kindergarten! Black students were expelled at three times the rate of white students. Black girls were suspended at higher rates than all other girls and most boys. According to the U.S. Department of Education, African American students are more likely to suffer harsh punishments—suspensions and arrests—at school.

Thus, it is paramount to address issues of equity among all children of all races, as they become the next generation of adults. We must assist students in developing the personal qualities of character to bring about a more just, unbiased, equitable and compassionate society.

For the sake of clarity, let’s begin with the following definition from the Aspen Institute from its excellent article, “10 Lessons for Taking Leadership on Racial Equity”

“RACIAL EQUITY: When people in a society have equal chances to reach their full potential and are no more likely to encounter life’s burdens or benefits just because of the color of their skin.”

At the NSRF, we work with the tools that we have developed over 20+ years to improve communication, collaboration, and problem-solving—our protocols and activities. Additionally, we are always on the lookout for more and better ways of applying our protocols and creating new ones toward our mission. Dave Lehman, one of our long-time Na-
IN THE BLACK TRADITION OF THE CALL AND RESPONSE, #BLACKLIVESMATTER IS BOTH A CALL TO ACTION AND A RESPONSE TO THE WAYS IN WHICH OUR LIVES HAVE BEEN DE-VALUED.

WHAT ARE YOU DOING TO MAKE SURE THAT #BLACKLIVESMATTER?

WHAT DOES #BLACKLIVESMATTER MEAN TO YOU?

SUBMIT A POST

Photo Credit: www.blacklivesmatter.com, Clicking this image will allow you to submit a post to the BlackLivesMatter Tumbler blog.

Current NSRF protocols & activities can help

In the meantime, many other NSRF protocols and activities are useful in addressing issues of equity, including:

- Tuning Protocol
- Dilemma Analysis Protocol
- Dilemma Consultancy Protocol
- All data protocols
- All text protocols
- All observation protocols
- Discussion-based protocols like Chalk Talk and Affinity Mapping

Many of our older, original protocols and activities were specifically edited for equity purposes:

- Tuning for Equity
- Equity Stances Activity
- Equity Protocol
- Suggestions for Bringing Student Work for Equity Conversations
- Equity Perspectives: Creating Space for Making Meaning on Equity Issues
- Looking at Student Work: Building the Habit of Looking at Equity
- Provocative Prompts for Equity
- Classroom Equity Writing Prompt
- Diversity Rounds
- Equity Bibliography: this document is dated, but the references are still, unfortunately, quite timely and useful

The Connections Archive is another great resource.

Previous issues of Connections contain important articles, reviews, and links for all educators. We encourage you to to review these articles if you haven’t read them, or haven’t read them recently:

- November 2014 - “Ten Multicultural and Equity Websites for Teachers” and a book review of More Courageous Conversations about Race, by Glenn Singleton
- Summer 2012 - Book Review of We Can’t Teach What We Don’t Know: White Teachers, Multiracial Schools by Gary Howard
- And we have not (yet) offered book reviews of some other excellent recent books on the topic, but we would like to recommend two that we have found particularly helpful:
- White Teachers/ Diverse Classrooms: Creating Inclusive Schools, Building on Students’ Diversity, and Providing True Educational Equity edited by Julie Landsman and Chance Lewis
- ‘Multiplication Is For White People’: Raising Expectations for Other People’s Children by Lisa Delpit
- Last, we often link to exceptional resources on our NSRF Facebook page. We encourage you to “like” our page, and then make a point to “follow” us, and also to “like” and “share” several resources on that page. (Unfortunately, it takes a combination of those actions in order for Facebook’s underlying algorithms to continue to show you updates to that page.)
- Recent links have included these:
  - “I, Racist,” by John Metta on the ThosePeople website
  - “From White Guilt to White Responsibility” by Hannah Bonner on the Ministry Matters website
  - A TED talk entitled “How to Fix a Broken School: Lead Fearlessly, Love Hard,” by Linda Cliatt-Wayman

What are YOUR favorite social media links about race, equity, and education? Please share them on our Facebook page and spread the word!
“I don’t see color, kids are just kids.”

This classic NSRF Connections article by Tanisha Davis-Doss is reprinted from the Fall 2006 issue.

“When you say you do not see color, you are telling me that you do not see me.”

I have heard this statement over and over in my years of education, and quite frankly, I’m terrified rather than being impressed. Educators tell me this continually, and I believe they want me to be impressed with their color-blind philosophy, but I am not. Let me tell you why.

When you say you do not see color, you are telling me that you do not see me. So, if you say you don’t see color and kids are just kids, you are telling me that you are ignoring specific details that comprise the character and being of individual children.

Each child comes into your classroom with different experiences, needs, thoughts, and perspective. That child’s color has a great deal to do with their experiences, needs, thoughts, and perspective. Take me for instance; I have many identities that make me who I am.

I am black, I’m a woman, and I’m an educator, just to list a few. Black is the most essential identity because it is the one element that I am judged on every single day of my life.

Before society sees a woman, they see a black woman; before society sees an educator, they see a black educator. With both positive and negative implications alike, it is how I am viewed once I step outside of my home each day.

If I am being judged day to day by the color of my skin, how can we ignore the color of our students? When we teach, we must realize that the students coming into our classrooms have not necessarily had the exact same experiences that we may have had. Judging those students on our own experiences and biases leads to institutionalized racism, so I ask you, how can you not see color?

I am not asking you to allow the color differences to prevent you from being a thoughtful educator, I am simply asking you to be aware of those differences and allow yourself to live in “awareness.” Living in awareness simply means that you realize the differences, you don’t feel compelled to apologize for the differences, and that you consider those differences when you are working with all students.

Please do not read my message and confuse the term color with low-income. The two are not the same. Low-income children does not equal children of color. I am stating this for my colleagues teaching in private schools and privileged neighborhoods.

Just because a student of color comes from a middle-class family, does not mean that student is now “raceless.” No disrespect to Ruby Payne, but we educators tend to hide behind the poverty issue when speaking on racism and the two are different entities. Each adds to the disproportionate circumstances in our nation’s school buildings, but they are not the same.

I get discouraged at the end of our trainings when participants make comments like, “I like the training, but leave the equity stuff out, kids are just kids.” I’m even more discouraged when I realize these educators are teaching children, and I’m not sure I have succeeded in my goal of energizing them about CFG work.

To me, CFGs give us a tool to live in “awareness,” so if a participant in my training still feels that “kids are just kids” at the end of the week, I feel as though I have failed that educator, but most importantly, I have failed their students.

Although the NSRF is currently in development of new materials related to equity, some of our past articles are still quite important and relevant. This issue includes two, on pages 3-5. If you have comments on these reprinted articles, please email us.
When white educators discipline students of color

In discussing the achievement gap, educators often talk about the need for relevant and representative curriculum for students of color. They discuss the need to recruit more educators of color. They also discuss power and the reality of white privilege. At my current school we hold “courageous conversations” to build a dialogue across boundaries of race. There is rarely a discussion, however, of white educators teaching, and needing to discipline, students of color. Why do we need to think about what happens when a white educator disciplines a student of color? For me the answer begins with what’s happening at my school.

Despite a wonderful diversity that is truly valued by the entire community, despite having a series of well-attended and well-received “courageous conversations” that involve staff and families in diverse and growing numbers, the majority of discipline reports I receive as vice-principal are for students of color, and this is in a school that is 55% white.

Beyond the reinforcement of stereotypes that lurk behind these numbers lies another, very practical, point. When discipline works, by holding students accountable in a way that they feel is fair and aimed at helping them grow, those students are able to get back to work. When students get back to work, instead of resisting or shutting down, they are less likely to misbehave again or as often, and more likely to make academic progress.

While ideally the staff of a public school would mirror the diversity of its student population, the fact is that most teachers who work with students of color in a diverse public school setting are white. As one of those white educators, I have long been encouraged to move beyond the notion of color-blindness, beyond the mantra to “treat all kids the same.” Given that a person’s race is an important part of his or her identity, this makes perfect sense to me.

When I approach a student of color, being of different races is going to play a role, almost always unspoken, in our interaction. More recently, I have also been encouraged to think in terms of my own race, to think of my whiteness as a racial identity that proffers privilege, rather than as the unacknowledged norm against which others are measured.

Many of my white colleagues may not agree with me, but I believe that one of the biggest obstacles for white educators to working successfully with students of color, especially in the area of discipline, is a fluid mix of guilt, fear, and anger that ebbs and flows within most white educators in our relationships with students of color and their families. Guilt, fear, and anger are often hidden unconsciously behind genuine good intentions, and sometimes evolve into a sense of powerlessness to “help,” which hardens into simple anger.

While there is clearly such a thing as white privilege, it is unearned, because none of us chooses the color of our skin. Any thoughtful person who enjoys an unearned privilege is going to experience some guilt in the enjoyment of that privilege.

As a result, white educators often try to convince students of color and their families that they want to “help”—“help” them achieve at a high level, “help” them achieve to the same level as the white majority. When and if that “help” fails to result in high achievement and positive behavior, though, guilt can easily give way to fear. It might be that the students of color who fail to achieve reinforce stereotypes that a white educator holds reluctantly and secretly, and fears will be discovered. It might be the fear of being misunderstood in the effort to hold students of color to a high standard, and of being branded a racist. How then, given the prevalence of color-blind thinking and white privilege, should white educators strive to work with students of color, both in terms of academics and discipline? Below are four simple ideas: focus on goals, use baseline measurements, share specific data, and give balanced feedback. When educators focus on goals for students as individuals, based on measurement of long-term improvement, within the context of a long-term relationship that builds over time, they may simultaneously acknowledge race and transcend some of its barriers.

When educators help students set goals for their development, they are accomplishing several things.

First of all, the interaction is completely student-centered. It is the difference between saying to a student, “I don’t want you to disrupt my classroom,” and saying, “I want you to earn a 1 or 2 for behavior, but today was a 4.” Second, the goals suggest that the relationship is ongoing and has a future. When the student doesn’t meet expectations for academics or behavior, then the discussion is about what happens tomorrow, rather than what went wrong today. This is expressed by saying to that same student, “Can you make sure tomorrow is a 1 or 2?” Third, long-term goals move the relationship away from the tense barriers of race toward the more rewarding and fulfilling relationship between guiding adult and receptive child. Finally, when measuring progress toward long-term goals, students may quickly experience some success and leave behind some of the lingering sense of unfairness.

“Look at what you’ve accomplished this year. There are
no 3s on your report card.” When student progress is measured against a baseline of the student’s own past performance, and over a long time frame, we communicate to the student, “This is where you are now.” This approach avoids a deficit model, and instead builds on strengths. It avoids comparing to other students, or dwelling on past failures or misbehavior. Once the baselines are established, then specific feedback on progress toward long-term goals may be shared with the student and family. Even if a student is doing very poorly, avoid sweeping generalizations such as, “He’s doing badly in my class.” Instead, share specific data: “His test scores have gone down from 75 to 50 and his homework has gone down from 80 to 40. I’m concerned because we set a realistic goal for this term of having his grade go up from C to B.”

Specificity is especially important in describing behavior where the specter of subjectivity, color-blindness, and white privilege come into play. Specificity communicates fairness and objectivity, sets out clear goals for students, and helps parents ally with the school in working with their children.

Describe the specific behavior in a nonjudgmental tone: “I asked him to take off his hat. He did, but put it back on a minute later. In the end I had to ask him to take it off four times.” Parents are in a much stronger position when they can say, “Do your homework and keep your hat off in the classroom,” instead of, “You’ve got to do better and stop having an attitude.”

Feedback to students and families should be balanced between positive and negative, and presented within a long-term future perspective.

If a student doesn’t respond to limits during class, for example, confront the misbehavior calmly and, whenever possible, privately. Avoid focusing on behavior that is not directly connected to achievement or the orderly functioning of the school. Avoid code words like “disrespect” or “attitude” which may communicate dislike to parents of color, and serve to cut off, instead of nurture, a working relationship. Instead, try to balance positive and negative feedback, always in the context of future development.

Given the burdens and challenges that students of color and their families carry in attending public schools, it may seem unfair to focus on understanding the struggles of a group of educators privileged by the color of their skin, and often unaware of the ways that they have missed opportunities to work successfully with students of color. As a practical matter, though, understanding these struggles has a potentially profound payoff for students of color, and for white educators. Educators, students, and parents who are comfortable communicating with each other, and believe that they are working together in a spirit of fairness and shared concern for children, have a much better chance of succeeding in working together to educate those children. We also have the opportunity then to be enriched by our differences, rather than confused or frustrated by the difficulties of our work together.

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“This training introduced me to a supportive group of colleagues. I did not have this before this training.” ~ A new coach in Toronto

“I learned that the protocols are really useful in bringing out our ‘best selves.’ They drew me into the activities in a way that nudged me towards being fully present. I developed a greater awareness of the effect of my behavior and how it might benefit or hurt the rest of the participants.” ~ A new coach in Michigan

**To enroll or get details, click for the NSRF website or call 812-330-2702!**
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4. **Awareness of Teaching Practice**—Teachers’ awareness of their practice occurs during moments where they are cognizant of all the ‘stuff’ that makes up their teaching - not just their pedagogy ... could have to do with more tangible procedures such as routines, organization, and time management... [and] could also involve less tangible methods that they utilize to help them create their classroom culture and ensure continued learning ... [and] how flexible they are when unanticipated challenges arise.

5. **Awareness of Context**—... many aspects of awareness of context intersect with elements defining other awarenesses ... outside the tense politics of education into the equally tense realm of current events, what is happening socially, politically, and economically in the larger world has great bearing on our teaching.

In the chapter on “Your Teaching Brain,” Rodriguez offers a series of surveys to be self-administered to help a teacher assess her own understanding of these five “awarenesses.” I suggest that readers of this review answer the following questions, an example of Rodriguez’s personal teacher surveys. (Note, singular pronouns below have been edited to reflect NSRF’s policy of gender-inclusiveness.)

**Theory of Mind**
- When you observe your learner’s behavior, do you consider what has made them act in that fashion?
- Have you considered your learner’s context when deciphering their actions?

**Theory of Cognition**
- How much do you consider the learner’s developmental ability when teaching them?
- Do you consider how your learner understands the information you have shared with them?
- Have you considered whether your learner understands and processes information in the same way that you do?
- How does the student’s developmental trajectory impact how you instruct them?

**Theory of Emotion**
- Do you know how your learner is feeling when they get frustrated during a teaching interaction?
- Have you considered how your student’s friends affect the way that they learn?
- How much do you think about the effect that family dynamics have on the progress of your learner?

**Theory of Memory**
- Have you ever thought about how far you have to push your learner to recall what you know they know?
- Have you considered what your learner can recall when they are working independently, versus what they can recall when in a group setting?
- Do you think about how working with friends or family affects your learner’s memory?

In the final chapter, “The Teaching Brain and Next Steps for Education Reform,” Rodriguez offers some exciting new developments involving the latest in neuroimaging methods being employed to observe the neural activity of brain interaction in the emerging new field of “two-person neuroscience!” This research involves simultaneous recordings of electroencephalography that actually measures the synchrony in the brain activity of two people engaged in a face-to-face activity together.

The preliminary results are showing that, across various pairs of people, two regions of the brain considered to be implicated in social functions such as empathy were simultaneously interactively engaged! Researchers also found that when participants synchronized their bodily movements, they showed corresponding changes in the same regions of their brains, regions involved in forming mental representations of oneself and social/emotional attitudes. Another recent study was conducted recording simultaneous neuroimaging of teacher-student interactions. While teachers used the Socratic teaching method to help students solve math problems, activity of the prefrontal regions of the brain of the teachers and their students was recorded simultaneously using the “wireless functional near-infrared spectroscopy (fNIRS)” technique. Researchers found that where students arrived at the correct answer, teachers’ and students’ brain activity “danced at the same pace.” Rodriguez thus asks, could a more successful teaching process be reflected in neural synchrony? And could neural synchrony possibly be a precursor to successful learning?

Stay tuned!
Preconferencing tips for Critical Friends Group coaches

Steps:

1. Describe — Have the presenter describe what they want to present. They should include the context, what they have done so far, and what they would like to get out of the protocol.

2. Clarify — Ask the presenter any clarifying questions you have to make sure you clearly understand what they are trying to present.

3. Match — Choose a protocol that you think will ensure the outcomes that the presenter desires. Discuss the selection with the presenter, confirming that the protocol will deliver what the presenter expects.

4. Refine — Ask the presenter for their focusing question. As needed, help them refine it based on the information you heard in the previous steps. This might be the longest step in the pre-conference, especially if the presenter is struggling with a dilemma. Presenters generally know that they want something to change, but they may not be sure exactly how to describe what they want. Asking a presenter a few probing questions, (such as, “When you were talking about X, you seemed concerned about Y. With that in mind, do you really want ____________________ or is _________________ more what you’d like?”) Remember, focusing questions are never questions with a yes/no answer and often start in this fashion, “How can I...” or “How can we...”.

5. Prepare — Ask the presenter to prepare for the protocol itself by:
   - Reviewing the protocol steps with them and, if they are not familiar with the protocol, telling them how many minutes they will have to present the problem
   - Asking them to do some reflective writing ahead of time that describes what they wish to present, its context, and any other information that they think the participants will need to help them
   - Bringing their focusing question to the protocol session
   - Asking them to review the “Giving and Receiving Feedback” text so they are prepared to make the most out of the feedback they receive

6. Thanks — Thank the presenter for their time in working with you and the group to help us all improve our practice, student achievement, and the school culture.

Michele Mattoon is the Director of the NSRF, an International Facilitator, and CFG Coach. Prior to leading NSRF, she taught first and second grade at Harmony School for more than 20 years. Email her at michele@nsrfharmony.org.

If you’d like to be informed as soon as the new book is available for purchase, email us!
Shout-out to researchers

Have you written a thesis or dissertation on a topic associated with Critical Friends Group® work or NSRF® protocols?

Now and then, we hear from someone seeking published research on the efficacy of Critical Friends Group® work, or the use of protocols in the classrooms. We’re happy to share research we have on file, but realize that it’s a bit dated. We expect some of you can point us to fresher research. If you know of any studies we should know about, too, please contact luci@nsrfharmony.org. Thanks so much!

Shout-out to EVERYONE!

What do you think? How are we doing with the new design and content of Connections, and with the new website?

We’re working hard to eliminate bugs and add all current members and member-coaches to the new website. We really want to hear feedback from you, whether you have warm or cool feedback to share … especially if you’re having a problem finding something you need!

Please send comments of any variety to luci@nsrfharmony.org. We appreciate it!

Want to write for Connections?

Submit your ideas to luci@nsrfharmony.org and let’s talk. Authors of published articles receive one free year’s subscription to NSRF.