

Parents Council

O F W A S H I N G T O N

CONNECTING SCHOOLS ▪ SHARING IDEAS ▪ ENGAGING PARENTS

BEST PRACTICES FORUM

***A Child's Brain:
What Schools Know and How It
Impacts Learning, Teaching, and Parenting***

Hosted by:

St. Andrew's Episcopal School

March 8, 2017

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March 2017

Dear PCW Member School Community:

A special thanks to all who attended the 2017 Best Practices Forum entitled ***“A Child’s Brain: What Schools Know and How It Impacts Learning, Teaching, and Parenting.”*** Thanks also to St. Andrew’s Episcopal School (SAES), Robert Kosasky (Head of School), Blair Kaine (Director of Advancement), and Lur Egan (Administrative Assistant) for hosting and organizing us, and to everyone in the technology department for helping us!

A final thank you to our wonderful and insightful forum panelists as well: Tia Henteleff, Primary Teacher, Concord Hill School, Chevy Chase, Maryland; Rodney Glasgow, Head of Middle School and Chief Diversity Officer, SAES, Potomac, Maryland; and Emily Sanderson, Director of Studies, Flint Hill School, Oakton, Virginia. Each panelist shared extremely valuable experience, strategic best practices, and practical takeaways that will certainly help teachers teach, parents parent, and children learn across the lower, middle, and upper school grades and beyond.

The Best Practices Forum series began in response to feedback from our member school community, seeking more dialogue and information on topics relevant to parent and school communities. Aside from the panelists and three schools highlighted at the Best Practices Forum, each Parents Council of Washington member school had the opportunity to submit its best practices on this topic as well. Materials collected within this e-binder showcase those chosen practices from participating member schools. Please use this document as a resource to prompt further discussions or explore questions in more depth in your schools and your families.

Also feel free to share the ideas and practices contained in this e-binder with your Head of School, Dean of Students, Division Heads, and parent community. Thank you for your support of the Parents Council of Washington.

Sincerely,

Parents Council of Washington
2016-2017 Board of Directors



Parents Council of Washington presents the

2017 BEST PRACTICES FORUM

*A Child's Brain:
What Schools Know and How It Impacts
Learning, Teaching, and Parenting*

Wednesday, March 8, 2017

St. Andrew's Episcopal School
8804 Postoak Road, Potomac, MD 20854

8:30am to 9:00am – Light Breakfast

9:00am to 11:00am – Program

How Do Our Schools:

- ❖ Assemble research at the forefront of education?
 - ❖ Track and evaluate education research?
 - ❖ Share research with faculty, staff, parents, and students?
 - ❖ Integrate research into school policies and curricula?
 - ❖ Showcase best practices?
 - ❖ Recommend programs or techniques that have met with success?
-

Join us for a panel of enlightening presentations by:

- **Tia Henteleff**, Primary Teacher, Concord Hill School
- **Rodney Glasgow**, Head of Middle School, St. Andrew's Episcopal School
- **Emily Sanderson**, Director of Studies, Flint Hill School

Learn more and RSVP at www.parentscouncil.org.

2017 BEST PRACTICES FORUM

Speaker Biographies

TIA HENTELEFF

Concord Hill School

Tia Henteleff received her BA in Cultural Anthropology and Religious Studies from the University of California at Santa Barbara and her MA from Stanford University in Curriculum and Teacher Education with an emphasis in the arts. Upon graduating from her MA program, Tia continued to stay involved at Stanford University and worked in their laboratory pre-school, Bing Nursery School. Bing Nursery School on Stanford campus is home to many famous and influential studies including Walter Mischel's Marshmallow Test and more recently, Carol Dweck and Jo Boaler's work on growth mindset. Tia has taught different age groups, but has focused her work with 4 and 5 year olds. Influenced heavily by past experiences teaching in Reggio Emilia-inspired schools and her time at Bing, Tia has been teaching Pre-K at Concord Hill School in Chevy Chase, MD for the last 12 years. In 2012, Tia received her first grant allowing her to research brain development and cognition in young children. Since that time, she has continued the research, published several articles on the topic, has given workshops for teachers as well as workshops for parents, and has presented at local and state conferences. Tia also works with The Center for Transformative Teaching and Learning and is a member of the design team for the Science of Teaching and School Leadership Academy. She lives in Silver Spring, MD with her husband and three children.

RODNEY GLASGOW

St. Andrew's Episcopal School

Rodney Glasgow is a noted speaker, facilitator, trainer and activist in the areas of diversity, equity, and social justice and has given a number of keynote presentations, delivered workshops, and offered consultation to schools and organizations nationwide. He was a member of Call-to-Action, the advisory board to the Vice President of Equity and Justice for the National Association of Independent Schools. He is an advisory board member for the Family Diversity Projects, Inc. and serves as co-chair of the Diversity and Education Committee of the Board of Trustees for Sheridan School in Washington, DC. He is one of the founding members and now Chair of the National Association of Independent School's annual Student Diversity Leadership Conference, a 20-year-old training ground drawing over 1500 high school students nationwide. In 2014, Rodney launched the National Diversity Practitioners Institute, an intensive summer program that is now a highly respected training ground for school leaders. Rodney is a featured writer in the book *Diversity in Independent Schools*, and he wrote the prologue for the recently released *One Teacher in Ten in the New Millennium: LGBT Educators Speak Out About What's Gotten Better... And What Hasn't*. Rodney received the 2008 People of Courage Award from the City of Worcester for his work.

Rodney is a graduate of Harvard University with a joint degree in Afro-American Studies and Psychology, holds a Master of Arts in Organization and Leadership from Columbia University, and is currently working on a Doctorate of Education in Human and Organizational Learning from George Washington University. Rodney is also an independent school alum, having graduated from Gilman School in his hometown of Baltimore, MD. An experienced educator, trainer, and administrator for students and faculty in grades kindergarten through post-graduate, Mr. Glasgow has been the Diversity Coordinator at Graland Country Day School, Assistant Head of Upper School and Director of Diversity for Worcester Academy, and is currently the Head of Middle School and Chief Diversity Officer at St. Andrew's Episcopal School in Potomac, MD.

EMILY SANDERSON

Flint Hill School

Emily Sanderson is the Director of Studies at Flint Hill School. In her thirteen years at Flint Hill School, she has also served as History Teacher, Innovation Teacher, History Department Chair, Acting Innovation Chair, Director of Online and Blended Learning and the Dean of Faculty. Previously she taught History and served as the Student Activities Coordinator at Trinity Episcopal School in Richmond, VA. She earned a Master's Degree in Teaching in Secondary Social Studies from the College of William and Mary and a Bachelor's Degree in Russian Language and Literature and History from the University of Virginia. She presents regionally and nationally on Design Thinking, Online Learning, Innovation in Education and Professional Development for teachers.



BEST PRACTICES FORUM SUMMARY

A Child's Brain: What Schools Know and How It Impacts Learning, Teaching, and Parenting

WELCOME AND OPENING REMARKS

PCW President Kathy Stallings opened the event with a warm and generous welcome. She thanked St. Andrew's Episcopal School (SAES) for hosting and introduced SAES Head of School Robert Kosasky.

Mr. Kosasky echoed Ms. Stallings' welcome and congratulated PCW for selecting the important topic of "A Child's Brain" while noting the great significance it has for students, parents, and educators alike – all need to know about this topic and be informed. Also . . .

- Brain science is not a fad; it is relevant today and will continue to be in the future.
- There is an explosion of science in this field, and it is rapidly changing.
- But, that does not mean everything educators did in the past is no longer valid.
- Having a growth mindset and being life learners are key components of education.
- As a foundation, we must understand how students learn and keep them learning.
- We know too that happy students learn more.

After the welcome and comments by Mr. Kosasky, PCW Board Member and Program Chair Susan Newell greeted guests and expressed thanks to SAES, panelists, and all attendees from PCW member school communities. She noted that the panel of experts would be sharing their knowledge and best practices to engage participants, but also to encourage continued conversations about how to use brain research to inform what we are doing in our homes and in our schools with and for our children.

Next, Ms. Newell reviewed the agenda, presented the topic, and introduced the day's panelists:

- ❖ **Tia Henteleff, Primary Teacher, Concord Hill School**
- ❖ **Rodney Glasgow, Head of Middle School, St. Andrew's Episcopal School**
- ❖ **Emily Sanderson, Director of Studies, Flint Hill School**

PANELIST TAKEAWAYS FOR PARENTS AND EDUCATORS

From Tia Henteleff, Primary Teacher, Concord Hill Lower School, Chevy Chase, MD:

- While developmental patterns emerge among children of the same age, each brain is unique and heavily influenced by experience. It is common for children to skip or repeat stages.
- Pressuring children to learn a subject before their brains are ready forces the use of immature neural networks thus impeding stronger neural networks to develop naturally.
- Whether we are talking about a 5-year-old or a 15-year-old, learning through play (object, locomotor and social play) activates several brain regions and enhances attention, memory, executive function skills and joy.
- Children begin their schooling as inquisitive explorers. When children are intrinsically motivated to learn and operate in an environment that encourages inquisitiveness, children feel better and learn more.
- Cognitive Skills and Emotional Intelligence have enormous impact on success in school and life and not only **can** be taught but **should** be actively taught.

From Rodney Glasgow, Head of Middle School and Chief Diversity Officer, St. Andrew's Episcopal School, Potomac, MD:

- *What is "normal" cognitive and social behavior for 11-14 years, and what does research say about it?* Teenage brains are engaged in ongoing synaptic pruning; and emotional highs and lows are normal and expected.
- *What should schools know about the brain at this age, and what should it compel them to do as they foster learning?* Simply put, focus more on skill development essential to this age group as continual learners rather than content development.
- *How can parents best help their children with school at this age?* Allow them to fail and discover the answers on their own; but also be there when really needed.
- *How can parents best help their children with identity development, emotional regulation, and social cognition at this age?* Give them space and validate emotions.
- *What can I expect from my 6th grader by the time they are leaving 8th grade?* A completely different person.

From Emily Sanderson, Director of Studies, Flint Hill School, Oakton, VA:

- The useful concept of ... "yet" - Encourage a growth mindset!
- Technology – Think healthy diet of digital candy and digital veggies.
- Encourage students to develop passions to promote innovation.
- Take time for conversation/build relationships with your students/children.

PANELIST PRESENTATION SUMMARIES

LOWER SCHOOL PRESENTATION

Tia Henteleff

Primary Teacher, Concord Hill School, Chevy Chase, MD

Your Child's Brain – A Basic Introduction of Neuroanatomy and Development

- An understanding of the structure and function of the neuron is essential for understanding how cognition happens in the brain.
- The secret to learning something is in the art of connecting neurons to other neurons.
- The prefrontal cortex (i.e. executive function skills) is the last part of the brain to fully develop – not until mid-twenties.
- Early years have extreme importance for the creation of neural networks – healthy establishment of networks at a young age is incredibly important to future learning.
- Emotions and learning are completely inseparable.
- We can help the process by scaffolding the learning process to mold connections.
- Importance must be placed on the importance of learning executive function skills and positive character traits.
- Children need ongoing opportunity for structured and unstructured play and free choice to help select the topics for learning and play.

MIDDLE SCHOOL PRESENTATION

Rodney Glasgow

Head of Middle School, St. Andrew's Episcopal School, Potomac, MD

The Middle School Brain and Adolescent Development – The Question Should Not Be "What Were You Thinking" but Rather "How Were You Thinking"?

Cognitive Learning

- An 11-14 year old brain is no longer growing as it reaches adult size by age 10, but is still changing and rapidly so – about as fast as the change in a 0-5 year old brain.
- Adolescence is the key time for synaptic pruning – editing the information in the brain and strengthening the routine functions in order to be more efficient
- Synaptic pruning – repetition makes synapses stronger; our brains prune and hone connections over time.
- Dopamine release is at a high in the adolescent brain – this means that things that feel good really feel really good (and things that feel bad feel really bad).
- The rise in dopamine levels accompanies a rise in risk-taking and pleasure-seeking behaviors, which has implications for impulse control, decision-making, and executive functioning.

- “Cold” cognition (thinking without emotional attachment) is sound by age 15; “hot” cognition (thinking that evokes emotion or arises from emotion in the pre-frontal cortex) is still in development until about age 25.

Social Learning (see Matthew Lieberman, *Social: Why Our Brains Are Wired to Connect*)

- Brains are wired for social interaction.
- The state of our brain in “resting” mode resembles our brain in “social” mode.
- Brains register social success like physical pleasure/social failure like physical pain.
- Social encoding enriches storage and retrieval.
- Brains are motivated by SCARF (Status/Certainty/Autonomy/Relatedness/Fairness)

Implications for the Classroom/Home

- There are ways to tailor the learning environment to the brains of adolescents. We now know that students need to:
 - move every 10-20 minutes or so;
 - encounter struggle (middle schoolers thrive on failure; it does not typically bother them; it is the adult reaction to failure that is bothersome);
 - enjoy discovery through struggle (this is key to how middle schoolers learn);
 - be exposed to alternative assessments that focus on and measure what matters;
 - learn from formative assessments/feedback (feedback in the moment, not tied directly to an ultimate grade but steering them proactively in action and effort);
 - meet with novelty and unconventional situations (to encourage development);
 - experience a social skills class – students can and should be taught directly;
 - be left to do things on their own (with an adult to catch them when needed);
 - understand processes that enable them to discover answers themselves; and
 - receive constant validation of their emotions.

UPPER SCHOOL PRESENTATION

Emily Sanderson

Director of Studies, Flint Hill School, Oakton, VA

Upper School Brains: Innovative Mindsets, Digital Candies & Veggies, and Authentic Learning

- We must develop innovative minds – growth mindset with creative reasoning. Kids today are figuratively training for the Olympics, but they do not yet know what sport they will play. The ability to learn and re-learn is ongoing.
- Technology is powerful in education and a tool for innovation. We need to guide students to use it for good - to create, not just consume, and to maintain a “healthy tech diet” of digital candy AND digital veggies.
- Authentic learning is what we want for our students. Our vision is to teach them to: Take Meaningful Risks, Be Yourself, Make a Difference.
- There is a hidden curriculum that we must actively encourage – helping students to develop passions, promote innovation, and grow into ethical citizens who embody core values and recognize their role and responsibility as global citizens.

QUESTION AND ANSWER SESSION

How do learning disabilities (ADD/ADHD) relate to this research?

Glasgow: At St. Andrew's Episcopal, we try to teach as if all middle schoolers have ADHD and give them the same accommodations because, at this stage, they all benefit from the accommodations and should have them.

Henteleff: What is good for a child with ADHD is good for all children. We try to always accommodate all.

How do you deal with "Continuous Partial Attention"?

Sanderson: We all struggle with this. Even as adults. Mindfulness is supposed to counteract this phenomenon and at Flint Hill they teach the skills to children to actively attend and control their impulses. Teachers who use technology in the classroom manage this.

Glasgow: This can make teaching very difficult. "Teaching today is like managing a circus; students are expecting and used to so much stimuli all the time." The days of sitting and paying attention for 40 minutes are over. Students (and adults) feel that they can pay attention to multiple interests at once, but the truth is that they cannot.

Henteleff: The reason mindfulness meditation has become so popular in schools is precisely because of this phenomenon of continuous partial attention. I teach mindfulness meditation in my classroom. The practice of mindful meditation helps us direct our intention with purpose and gives us the skills to focus for extended periods of time and avoid distractions. There is overlap here with executive function skills.

Please describe "Emergent Curriculum."

Henteleff: Emergent Curriculum is designed to meet the interests of that particular class of students. As opposed to "Units," the curriculum *emerges* from the students' interests. By paying close attention, we notice what they want to learn more about. We test out the topic to make sure it garners interest from all and then we jump into long term projects that explore the topic from as many angles as possible (as we want to build as many dendritic connections as possible). For example, one year we studied the brain as a result of a conversation about where dreams come from. If children pick the topics, they are intrinsically motivated, naturally inquisitive, happy, and take ownership of their learning.

How do you incorporate failure in the academic curriculum?

Sanderson: Design thinking is a great way to do this.

Glasgow: It is already present. For children, the small struggles can be as impactful as what adults consider big struggles (such as divorce, death, etc.). Another way is to switch from being content heavy to skills heavy.



2017 Best Practices Forum Questionnaire

A Child's Brain: What Schools Know and How It Impacts Learning, Teaching, and Parenting

Please consider some or all of the following questions in preparing your submission:

- How does your school track and evaluate education research? Who is responsible for such efforts?
- How is education research shared with appropriate faculty and staff? with parents? with students?
- How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?
- Please provide examples of education research your school has found valuable.
- Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.
- Are there new programs or techniques that your school would recommend to parents? to students?

Please feel free to provide additional information as well.

Please make sure to include in your submission a few basic techniques or best practices that parents can employ at home to help their students thrive.

Submissions must be e-mailed in a WORD document to administration@parentscouncil.org with 'Best Practices' listed in the subject line.

Thank you!

2017

Best Practices Forum

PCW Member School Submissions:

'A Child's Brain'

BULLIS SCHOOL

Coeducational, grades 2-12, non-denominational, college preparatory, day school in Potomac, MD, 810 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

The Head of School serves as the Chief Academic Officer and works closely with the Administrative Team (Director of Curriculum, Divisional Principals and Assistant Principals) to identify important education research, which may inform the practices at Bullis.

How is education research shared with appropriate faculty and staff? With Parents? With Students?

- Education research is shared in a number of ways with instructional and support staff: Professional Development days, Divisional Staff meetings, Professional Learning Community meetings (PLCs) and during Grade-level Team meetings.
- During advisory, class time or special programming, teachers share educational practices with students.
- For parents, Bullis provides regular divisional principal coffees and special evening programs.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade level of the students?

Bullis thoughtfully and deliberately infuses education research into the school's policies and curriculum.

- Instructional Council meets bimonthly to discuss curricular changes and upgrades as well as share education research, which might best inform student learning.
- Teachers infuse metacognitive strategies into their teaching to inform students of successful learning strategies.
- Bullis has a Director of Learning Services which heads up a team of Learning Support specialists to provide learning support for students and teachers in all divisions. These specialists lead teacher-training sessions, work one-on-one with teachers and students to share best practices and support the mission of the school.
- In the Upper School, our largest division, the Bullis Academic Center, located in the Marriott Family Library, supports Upper School students and teachers to optimize a student's learning experience. The Academic Center also houses a fully functioning Writing Lab staffed by a member of the English department for students who seek writing enrichment or help with various writing assignments.

Please provide examples of education research your school has found valuable.

- The Growth Mindset by: Carol Dweck
- Learning and the Brain Research - Learning and the Brain
- Design Thinking - Stanford School of Design
- Grit: The Power of Passion and Persuasion by: Angela Duckworth

- Mindfulness by: Mindfulness School Curriculum

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

(2016-17 school year)

- Middle School: Common Sense Media program for students and parents
- Upper School: "Stay Strong: Reframing Failure," workshop for parents created by Bullis
- Learning Support Team and the Grit Professional Learning Community
- Director of Learning Support Services appointed this year
- Director of Cross Divisional Curriculum appointed this year

Are there new programs or techniques that your school would recommend to parents? To students?

- Techniques of Mindfulness - Division clubs and health classes
- Common Sense Media guidelines for social media use
- How to move from a fixed mindset to a growth mindset - Carol Dweck
- Study Skills Course for 6th grade students - Learning and The Brain

CONCORD HILL SCHOOL

Coeducational, age 3-3rd grade, nondenominational, day school in Chevy Chase, MD, 100 students.

Concord Hill School inspires children to embrace and enjoy learning during the early childhood years. Our Five Core Values—Knowledge, Character, Respect, Play, and Community—guide our dynamic academic and social curriculum. As an inclusive school community, we nurture each child and prepare our students to become responsible, caring, and contributing members of society.

The essence of Concord Hill, our Five Core Values form the foundation for every decision we make. These values anchor our teachers and students, providing a consistent beacon of guidance for educational approaches, problem solving, classroom activities, discussions, priorities, and research. Because of our uniquely small size, tracking and evaluating educational research is a collaborative effort shared by all faculty members. Teachers are actively involved year-round in outside professional development opportunities, guest speakers are frequently invited to present topics relevant to our mission and core values, and we share our collective educational expertise through in-house training and research round tables.

Concord Hill's research-based curriculum is evaluated by faculty on a regular curriculum analysis cycle. To enhance our curriculum, individual projects and ideas inspired by current research are often tried in classrooms and shared among faculty to enhance the overall program. Current research topics that inform our practice include brain development in education, engagement and play, emotions and learning, executive function, growth mindset, and social cognitive skills.

Since 2011 our faculty has identified neuroscience in education as an area of focus (also known as Mind, Brain, and Education), and have engaged in expanding our knowledge about the topic, as well as how best to put it into practice in the classroom. Concord Hill educator Tia Henteleff spearheaded these efforts and continues to share her extensive research with faculty and parents through various workshops and numerous articles.

Research shows that children benefit from a basic knowledge of how the brain develops and how neural networks are created. Tia, along with Concord Hill's Curriculum Coordinator Mary Anton and Science Teacher Colleen Kapsch, collaborated to create a curriculum that teaches basic neuroanatomy as well as the concept of neuroplasticity to students in Grades 1–3.

Research also suggests that emotions impact attention, memory, learning, and behavior. One of the leading scholars on this topic, Yale University's Marc Brackett, has created a program that provides teachers with the tools to effectively teach children about emotional intelligence. The program, known as R.U.L.E.R. (Recognize, Understand, Label, Express, and Regulate), is an acronym for the main skills we strive to teach our children about emotions. During the summer of 2016, three Concord Hill faculty members enrolled in the extensive three-year course at Yale University, beginning with Anchors of Emotional Intelligence. Throughout the 2016–17 school year, the teachers have presented training sessions for faculty, and plan to fully integrate the training into our school's social curriculum during the 2017–18 academic year.

According to research there is great power in teaching children how to be reflective about their own thinking. For this reason, Concord Hill's faculty incorporate practices to develop and enhance their meta-cognitive skills across various disciplines. Research also demonstrates that

people consolidate knowledge and create stronger neural networks when asked to teach another. For this reason, Concord Hill will often ask older children to teach or tutor younger children. Additionally, such practices help us create a culture of inclusiveness and belonging that we are confident help our children learn and thrive.

Parents are also an important part of the Concord Hill community, and sharing best practices and the theories behind them is one of our priorities. For this reason, faculty members contribute articles to the school bi-annual publication, the Concord Hill Courier, that is distributed to current and alumni families. We hope that parents include books vetted by our teachers and librarian in their personal libraries, and participate in faculty-led workshops presented specifically for parents featuring topics such as “Brain Development and Curriculum” and “Reading and the Brain.”

FLINT HILL SCHOOL

Coeducational, grades JK-12, college preparatory, day school in Oakton, VA, 1100 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

The Director of Studies, the Division Directors, and Instructional Support Team and the Department Chairs regularly read, discuss as a group, and post in weekly newsletters for faculty articles and studies that relate to the mission of vision of the school. After attending conferences and workshops, faculty and staff reflect on the experiences and submit examples of new program and information in a Professional Development Library.

How is education research shared with appropriate faculty and staff? with parents? with students?

Division Directors share weekly newsletters with faculty/staff and the school shares weekly newsletters with parents. As a part of these communications, research and articles are shared with the community. We also run many programs for parents, students and faculty through morning coffees, evening programs and in the school day programming.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

At the conclusion of each year, faculty and Division Directors review policies and procedures and make adjustments to better meet the needs of students and families and to incorporate new research. Curriculum is reviewed by departments every three years through a curricular strategic planning process.

Please provide examples of education research your school has found valuable.

- Carol Dweck and the research around growth mindsets
- Academic coaching training for faculty and staff through Jodi Sleeper-Tripplett
- Mindfulness Training for faculty, staff and for students through Minds Incorporated
- Responsive classroom and Developmental Designs through Origins
- Universal Design for Learning through Landmark College Linda Hecker and Cast.org
- Technology and Online Resources & Parenting in the Digital Age through the Family Online
- Safety Institute Research
- Visible Thinking through Project Zero
- Project Based Learning through The Buck Institute
- Technology Integration Best Practices through Apple Education

LONDON SCHOOL

Single-sex, all boys, grades 3-12, nonsectarian, college preparatory school in Bethesda, MD, 680 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

At Landon, our Associate Head has been the point person for tracking and evaluating education research. Based on current trends, we have selected mandatory faculty readings, moderated discussions (sometimes in coordination with our counterparts at Holton School) and training opportunities (in recent years these have included Mel Levine's *All Kinds of Minds*, Carol Dweck's *Mindset*, Mahzarin Banaji's *Blindspot: Hidden Biases of Good People*). As another example, last summer a group of faculty members attended the *WIS Summer Institute for Teachers (WISSIT)/Project Zero Conference*, and we plan to send additional faculty this year.

How is education research shared with appropriate faculty and staff? with parents? with students?

For some topics, we have moderated discussions with all faculty and staff, followed by smaller discussions by Division and then by Department. Depending on the content, we may discuss how to incorporate that research into the classroom (*All Kinds of Minds*) or have dedicated Assemblies with facilitated follow-up discussions in Advisory groups (*Blindspot*).

In the past, we have had curricular review groups in both the Middle School and Upper School. In addition, we have had Peer Collaboration in the Upper School once per cycle, in which faculty are broken up into groups across departments. Currently in the Upper School, we continue to hold regular lunchtime Teacher Talks, in which colleagues discuss "clinical pearls" and best practices, and how they apply to their specific areas of study.

Education research is shared with parents through division level newsletters, messaging pertaining to specific topics, through presentations by guest speakers, grade specific parent-student programming, and parent conferences.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

In the Middle & Upper Schools, we incorporate education research didactically into *Wellness/Foundation* classes. In the Upper School, for example, Form III (Grade 9) students meet six out of eight days for this class. Topics include everything from sleep, stress, memory & the brain, time management and goal-setting to cyber-responsibility, the bystander effect and adolescent mental health. Similarly, the Middle School has a *Wellness/Foundation* curriculum. In the Lower School, it's a less formal curriculum, which is largely driven by the Division Head.

In terms of research as it relates to social & emotional functioning, we have a number of programs in each division. In the Middle & Upper Schools, we have ethics assemblies at least once per eight-day cycle where students (and faculty) draw lessons from the

experiences of peers and teachers. In a typical year, boys in those divisions will hear almost 90 speeches in all.

Middle & Upper Schoolers also meet regularly with faculty advisors, either one-on-one or in a group setting to discuss anything from ethical issues to issues going both within our community and in the outside world.

Please provide examples of education research your school has found valuable.

Research has shown that mentorship programs can be invaluable in terms of the quality of students' experience. More specifically, research has shown that having a mentor who shows up consistently and asks questions about various aspects of a student's day can have enormous positive effects on how that student feels about his community, and how much he "buys in" to that community – *consistency*, authentic warmth and curiosity are the secrets to the mentorship. We have incorporated this into the way that we set up and deliver the Upper School/Lower School Buddy experience, and it has become a very strong and positive program in the school since we incepted it several years ago. In a school like ours, with a teacher/coach/mentor model, we are able to incorporate the mentorship research in both didactic and more progressive ways.

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

We have tried to take what we know about the developing teenage brain – and specifically what we know now about the later development of the prefrontal cortex, which has direct influence on organization, impulse-control and decision-making – and use that information in practical ways. Some of those ways are ingrained, such as our eight-day schedule (in which a particular class such as Math, Science or English is delivered at a different time of day on each day per cycle) or providing a break at 10:05 each day in which students can grab a sandwich or piece of fruit to get their blood-sugar back up. Others are somewhat newer, such as our providing a detailed daily planner to each freshman coming to Landon, providing instruction in *Foundations* as to how to use the planners effectively, and asking Advisors to review those planners during Advisory time. Still others are brand new, such as our offering of Mindfulness Breaks once per cycle.

Are there new programs or techniques that your school would recommend to parents? to students?

Landon is developing a Parent Education and Partnership Committee to enhance parents' participation beyond social and fundraising activities. The goal of the committee is to create a yearly calendar of education opportunities by expanding access to moderated discussions that in the past may have been presented to one specific grade; adding additional programming that requires both parent and student attendance at meetings pertaining to underage drinking, bullying, digital rights and responsibilities; and presentations relating to character and civility. The committee will also look to further develop its partnership with outside groups like PCW, PEP, IBSC and collaborations with other independent schools nearby.

MARET SCHOOL

Coeducational, grades K-12, college preparatory, day school in Washington, DC, 650 students.

Maret School prides itself on serving the needs of a diverse community of learners. Importantly, we acknowledge that one of the ways in which our community is diverse is in the diversity of ways children learn in our K-12 classrooms. We are careful to model and promote what Carol Dweck has termed a “growth mindset”—that we are all capable of high achievement in all aspects of school life (creative, athletic, academic) as long as we understand that we must practice and allow our competencies in these fields to grow. We are thoughtful and intentional about providing a variety of learning experiences that will meet students where they are and help them progress through our program.

Maret has long been committed to understanding how children’s brains work and develop. As a community, we have read books about the subject (all faculty members read *Brain Rules* by John Medina one summer), we have welcomed numerous speakers on this topic, and we have provided faculty with in-house professional development that has brain science and differentiated instruction as a central theme. Currently, a group of faculty is spending time learning together about the most recent brain research and how awareness of it can improve all classrooms. Faculty have attended numerous regional and national conferences discussing brain research, and divisional Learning Specialists make periodic presentations to the faculty within their divisions sharing the latest brain research.

Three years ago, Maret modified its mission statement. The new mission statement ends with the sentence “We develop the mind, nurture curiosity, welcome challenge, embrace joy, and build community that is equitable and inclusive.” All of the phrases within this statement prompt us as teachers to understand brain science better. In particular, the focus on equity and inclusion in the classroom has led classroom teachers and administrators to read deeply in this area. A favorite reading that has led to rich discussion is Zaretta Hammond’s book *Culturally Competent Teaching and the Brain*. Her insights into why understanding brain science is important for teachers working across difference have formed the centerpiece of several professional development workshops at Maret. Significantly, Maret’s Committee on Equity and Inclusion and the department chairs discussed passages from the book and planned how to share ideas with faculty as a whole.

We even engage students in this process. Many teachers ask students to think metacognitively so that they begin to understand how they learn—and give their teachers feedback about how they learn. A new Upper School course, *Topics in Psychology*, requires that students learn a lot of brain science; the students are about to launch a research project about learning and the brain in cooperation with Lower School classrooms. We have featured assembly speakers on these topics, too, asking students to consider how their sleep patterns, their reactions to setbacks, and their understanding of their own identity plays a role in how their brains work.

We at Maret see every teaching member of the faculty as responsible for both learning about the latest brain research and applying those learnings to our classrooms. In this thoughtful approach, teachers and instructional leaders don’t chase current fads but strive

to apply lessons supported by excellent research. We focus on the actionable as we work to make our classrooms optimal learning environments for all our students.

NATIONAL PRESBYTERIAN SCHOOL

Independent, coeducational, preK-6th grade, day school in Northwest, Washington, DC, 300 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

National Presbyterian School (grades N-6) has a Director of Studies who, in addition to managing the curriculum infrastructure and the school's approach to professional development, is the chair of the Educational Research and Innovation Committee. This longstanding committee brings together teachers and administrators from various grades and disciplines within the school to review educational research in elementary education. Conversations about research take place in person and on-line via an internal blog. Additionally, under the guidance of the Director of Studies and using a documented curriculum change process, teachers incorporate best practices in the classroom in an intentional manner.

How is education research shared with appropriate faculty and staff? with parents? with students?

Relevant research is shared regularly through the NPS committee structure and informally to the community at large through online links to articles and studies. Faculty meetings are also opportunities for conversations about the latest educational research and best practices. NPS keeps its parent body up to date on research by sharing relevant articles with the community in the weekly communication, Backpack Express. The Director of Studies also attends monthly Parents Association meetings to offer curriculum updates and will share research at that time as well. Lastly, students learn about relevant research in a developmentally appropriate manner through their teachers. Often this is through conversation, or through activities, or in the case of older students, through child-friendly articles.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

Educational research into best practices in childhood education is an important component of the NPS curriculum, however the school is always mindful to balance new research with the NPS mission. As a result, NPS developed a curriculum change management model so that new ideas are incorporated into the curriculum in a strategic and intentional manner regardless of the age of the students.

Please provide examples of education research your school has found valuable.

Over the past 5 years, NPS has found great value in research tied to Social-Emotional Learning (SEL), Character and Ethics education, and Harvard's Project Zero studies on Visible Learning and Global Competency.

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research. Are there new programs or techniques that your school would recommend to parents? to students?

Much of the research on SEL and Character and Ethics education supports the mission, philosophy, and pedagogical approach of NPS. With the support of the school's two counselors and chaplain, NPS homeroom teachers are able to infuse best practices in these areas into daily lessons. The school's multi-year adoption of Project Zero ideas across all grade levels and disciplines has created a robust culture of thinking and learning. We encourage you to visit our website, www.nps-dc.org to see our curriculum guide and learning in action and/or schedule a tour to learn more.

NORWOOD SCHOOL

Coeducational, grades K-8, day school in Bethesda, MD, 440 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

Administrators, subject area coordinators, and all faculty receive and share numerous publications through conferences and professional association memberships. When research correlates in any way to our mission and philosophy, it is shared departmentally and often more widely.

How is education research shared with appropriate faculty and staff? with parents? with students?

The principals team leads the effort to disseminate information to faculty, staff, and parents. This happens in meetings, professional development, professional reading groups, department gatherings, etc.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

Educational research and recommendations are integrated into policies and curriculum when they support our mission.

Please provide examples of education research your school has found valuable.

A few examples of education research we have found valuable:

- Differentiation (Tomlinson, Heacox, etc.)
- Mathematical Mindsets (Boaler)
- Making Thinking Visible (Project Zero)

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

Examples of practices:

- Mixed ability groups and more homeroom-based teaching in the lower school, and a wider variety of assessment types school-wide (based on differentiation)
- More open-ended math problems school-wide (based on mathematical mindsets)
- More thinking and discussion protocols school-wide (based on Making Thinking Visible)

Are there new programs or techniques that your school would recommend to parents? to students?

See above.

ST. ALBANS SCHOOL

Single-sex boys, grades 4-12, college preparatory, day/boarding school in Washington, DC, 585 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

- There is not a specific person that does this, though I subscribe to several psychology of education journals, and faculty, in general, will spend their summers (often with stipends, though sometimes not) diving in to "research" for the purposes of reshaping their classes the next year
- The Deans are often at the forefront of sharing relevant readings, trends, and reports from IBSC (International Boys School Coalition), NAIS, and other professional organizations
- Faculty lounges are places with the *Chronicle*, *Independent School Magazine* and other periodicals can be found

How is education research shared with appropriate faculty and staff? with parents? with students?

- Students: in the classroom and in advisories, though LS students are still learning about what exactly "research" is
- Faculty: electronically

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

- Our Curriculum Review is tackling this head-on, in all ways -- resultant will be integration, where needed/desired
- And absolutely yes, re: grade-level, and also "ability" level

Please provide examples of education research your school has found valuable.

- Life Skills Curriculum: "Our Whole Lives" text series, as well as social-emotional research on protecting the emotional lives of boys, enhancing wellness, and educating parents on best practices
- IBSC: How to Teach Boys
- Willingham: helping boys remember
- Sarah-Jayne Blakemore and her work on the adolescent brain
- Professional days on Empathy and Addiction

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

- Curricular: ongoing (happening now)
- Social-emotional: life skills, advisory periods (Compassion Curriculum in Form I)
- Academic: IBSC research has impacted pedagogy a great deal

**Are there new programs or techniques that your school would recommend to parents?
to students?**

- Our Whole Lives (for faculty at other schools)
- Blakemore and her work on the brain
- Willingham
- Book: Empathy and its Development
- IBSC: *Teaching Boys* manual is quite good

Edited and submitted by Fred Chandler, Head of Lower School, St. Albans School

ST. ANDREW'S EPISCOPAL SCHOOL

Coeducational, grades preK-12, Episcopal, college preparatory, day school in Potomac, MD, 525 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

St. Andrew's Episcopal School is the home of the internationally recognized Center for Transformative Teaching and Learning (CTTL), the school's research and development arm. In 2016, the CTTL and St. Andrew's became the first pre-collegiate organization to win the International Mind, Brain, and Education Society's "Mission Award." The CTTL's mission is to create and innovate in the field of Mind, Brain, and Education Science research to allow teachers to maximize effectiveness and students to achieve their highest potential.

The CTTL ensures that 100% of St. Andrew's Preschool through 12th grade faculty has training and on-going professional development in Mind, Brain, and Education Science research. This thorough commitment to faculty growth drives teacher recruitment and teaching excellence for every St. Andrew's student, including our most academically advanced students.

The CTTL also offers training and support for thousands of private and public school teachers internationally. It works particularly closely with Teach for America faculty in the greater Washington region.

The CTTL's Head of Research evaluates and shares MBE research with the St. Andrew's faculty. Such evaluation is done in close partnership with individual faculty at Harvard's Graduate School of Education as part of St. Andrew's membership in Research Schools International, a select group of international schools that conduct cutting-edge research, lead professional development, and disseminate research findings to the broader educational community. St. Andrew's has equally strong partnerships with researchers at the Johns Hopkins Science of Learning Institute and the Johns Hopkins School of Education. Such school/university collaboration ensures that St. Andrew's teachers remain on the cutting edge of the MBE field and allows them to work directly with leading university researchers in evaluating and translating research from the lab to the classroom. The chief beneficiaries of this work are St. Andrew's teachers and students, who now use research to inform how they teach more effectively and learn more efficiently.

CTTL leadership also oversee the Finn Student Research Fellows and the Omidyar Faculty Research Fellows. Each year, 7 faculty members and 7 high school students are selected as CTTL fellows. The fellows collaborate with our university partners to form, conduct, and analyze an original research study to improve teaching and learning at St. Andrew's. The CTTL student and faculty fellows travel to Harvard's Graduate School of Education each spring to share their experience and receive feedback on their research.

How is education research shared with appropriate faculty and staff? with parents? with students?

Mind, Brain and Education Science research is shared with St. Andrew's faculty in multiple ways:

- When teachers are hired at St. Andrew's, they participate in a 3-day educational neuroscience workshop in which they are introduced to a framework and common

language that informs every St. Andrew's teacher's thinking about his or her curriculum and his or her students.

- The CTTL's monthly virtual newsletter, *The Bridge*, provides faculty with a closer look at a specific research-informed topic such as differentiated assessments, quality feedback, and meta-cognition. To sign-up and to receive a copy of *The Bridge* go to www.thecttl.org/neuroteach.
- Each year, St. Andrew's Preschool through 12th grade teachers receive ongoing professional development through journal articles, book readings or workshops. In the spring of 2016, the CTTL and faculty from Harvard's Graduate School of Education designed a two-day Mind, Brain, and Education Science workshop for the St. Andrew's faculty.
- Every two years, the CTTL produces another volume of its internationally recognized publication, *Think Differently and Deeply*. This publication is a collection of two-page stories, written by St. Andrew's faculty, that describe how they use research to inform, validate, and transform their teaching and student learning. Since 2015, *Think Differently and Deeply* has been distributed to over 10,000 public, public charter, and private school teachers, leaders, and policymakers.
- Monthly faculty meetings provide the opportunity for the St. Andrew's faculty to explore topics through a research-informed lens such as quality homework, assessment and feedback, and how to most effectively design a class period that keeps students engaged and intrinsically motivated.
- Faculty members follow the CTTL on Twitter (@thecttl) and contribute to and read the CTTL's research-informed blog that also includes posts from St. Andrew's students and alumni.
- In 2017, the CTTL is launching a Science of Teaching and School Leadership Academy that is partially funded by a \$250,000 Educational Leadership Grant from the E.E. Ford Foundation. The Academy is designed in collaboration with faculty at Harvard's Graduate School of Education and the Science of Learning Institute at Johns Hopkins University.
- The CTTL has developed a first-of-its-kind Mind, Brain, and Education Science Research Engagement Professional Growth Pathway for St. Andrew's teachers to enhance their MBE knowledge, skills, and attitudes. This four-tier pathway moves teachers and school leaders from a "novice" understanding of MBE research and strategies to a "leader" level.

leading research throughout a division/school

*developing a culture of
being a research-informed
school/teacher*

*looking independently at
research and conducting
classroom-based
research to gauge impact*

*understanding the teacher,
adult learner's brain*

*discipline, grade-level
specific application of
MBE research*

*growth mindset, brain plasticity, emotion & cognition, identity threat
and validation, neuromyths and neuroanatomy as it relates to learning*

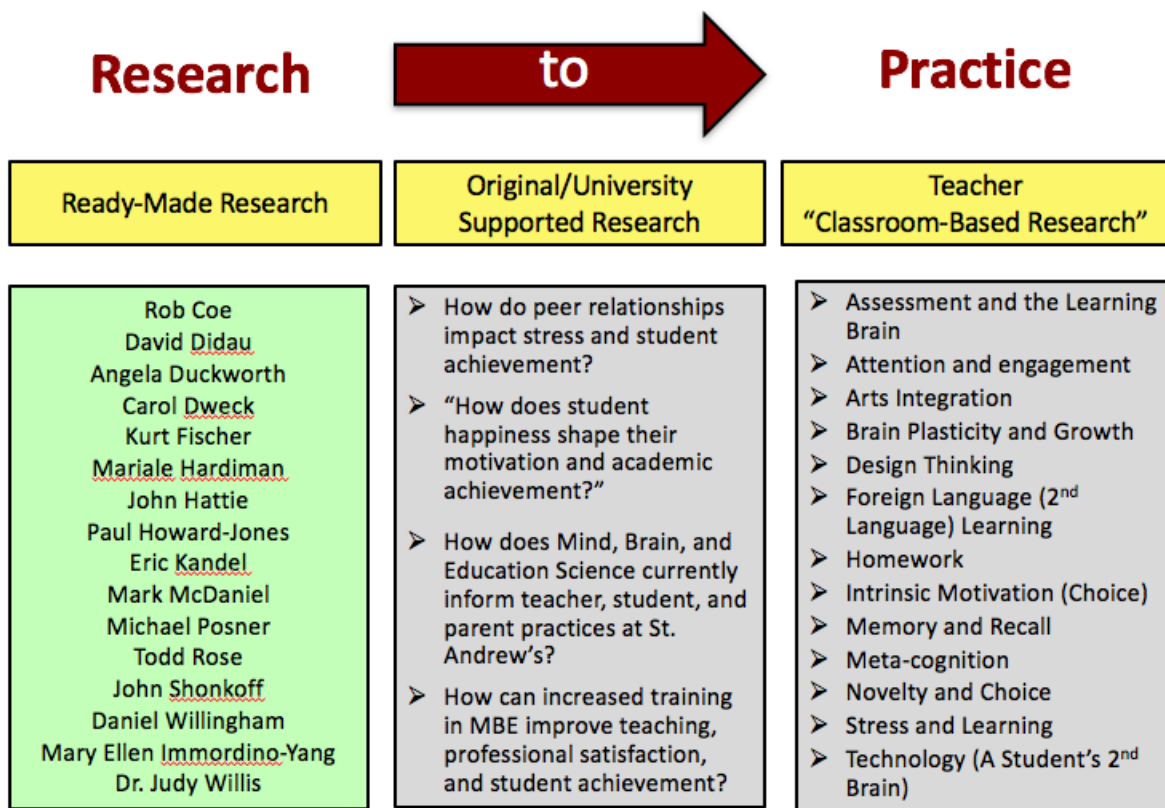
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How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

It is expected that 100% of St. Andrew's Preschool through 12th grade teachers will use Mind, Brain, and Education Science research to inform the design of their classes and work with each individual student. Teachers are expected to take on the 10% challenge each school year, as highlighted in the book *Neuroteach: Brain Science and the Future of Education* that was co-authored by the CTTL's Director and the CTTL's Head of Research. This challenge asks teachers to use research to inform, validate, or transform 10% of their teaching each school year. Teachers hold themselves accountable for their yearly research-informed goals and action steps through St. Andrew's on-line professional development software. Goal setting and ongoing reflection are important for both teachers and students at St. Andrew's and align with the understanding that, "It is only a dream until you write it down, and then it becomes a goal."

Please provide examples of education research your school has found valuable.

St. Andrew's and the Center for Transformative Teaching and Learning look at educational research in three ways. The first is "ready-made" research, which is research that is available and has been replicated and most likely evaluated in a peer reviewed journal. Second, St. Andrew's leverages its partnership with university faculty to conduct original research studies with its teachers and students. Third, St. Andrew's teachers apply a classroom-based research protocol to conduct studies with their current students. The chart reflects the names of some of the researchers that inform the thinking of the St. Andrew's faculty as well as research questions the school has explored with its university partners and its individual faculty.



Some of the most valuable research has come from three original research studies that were designed by St. Andrew's and its university partners. "How do peer relationships impact stress and student achievement?" was the first research study St. Andrew's did with faculty from Johns Hopkins School of Education. A year later, as a partner of Research Schools International, St. Andrew's sought qualitative and quantitative data to explore a key school belief that led to the following research question: "How does student happiness shape their motivation and academic achievement?" St. Andrew's hypothesis is that students and parents do not have to choose a school where students are happy or choose a school where students are academically challenged. In fact, a school can be both an academically challenging and joyful place for each individual student. This research study validated that St. Andrew's students are overwhelmingly happy at school and the study correlated to enhanced intrinsic motivation with academic achievement. A follow-up, causal study is planned to further explore this question. The most recent original study at St. Andrew's involved teachers, students, and parents. In this study, we examined the current and accurate understanding of each constituency's knowledge, skills, and attitudes toward Mind, Brain, and Education Science. These results led to a new workshop for St. Andrew's teachers, the sharing of research-informed strategies with students, and important conversations with parents.

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

Based on research, St. Andrew's recognizes that one cannot separate emotions from learning and that every student brings his or her own identity to school and each class. Under the leadership of the Head of Middle School Rodney Glasgow, a nationally recognized diversity facilitator, St. Andrew's prioritizes teaching its faculty the latest multicultural education research. Additionally, St. Andrew's takes great care of the social and emotional learning of students through its commitment to the Responsive Classroom Program for grades PK-5.

St. Andrew's is also a school that values not only the academic achievement of each of its students, but also the effort each of its students puts into their scholastic responsibilities. Therefore, the school offers academic and effort grades. In order to bring greater objectivity to evaluating a student's effort, St. Andrew's used research from Carol Dweck and Angela Duckworth to create an Effort Grade Rubric so that students will understand the skills, attitudes, and knowledge that they need to demonstrate to meet the Effort Grade Honor Roll standards and to understand the correlation between one's deliberate effort and one's enhanced academic achievement. The St. Andrew's Lower School has taken a deep dive into the research and practices around mindfulness and in 2016, St. Andrew's began looking at its daily schedule through a research-informed lens. In addition, the CTTL's student research fellows are currently conducting two projects. On the school's Postoak Campus that is the home to grades 3-12, the CTTL Student Research Fellows are exploring the question, "What is quality homework that intrinsically motivates students and deepens learning?" On the school's Village Campus, which is the home to grades Preschool through 2nd grade, the CTTL Student Research Fellows are exploring the question, "How do outdoor learning spaces engage and motivate students differently than indoor learning spaces?"

Are there new programs or techniques that your school would recommend to parents? to students?

Parents are their children's first teacher. They also become teachers as well as psychologists each night as their children tackle homework and prepare for assessments. Therefore, while St. Andrew's and its Center for Transformative Teaching and Learning feel it is absolutely essential that every teacher and leader at a school understands the research behind the learning brain, it is equally as important for parents to know research-informed principles and strategies as they support their children each evening.

- Neuroplasticity means that a student's brain is constantly rewiring itself in reaction to his or her environment. This means that every student, through deliberate effort, that includes the right amount of challenge, can change his or her brain. What might be a current weakness can actually become a current strength.
- While a student might have a current learning preference, he or she does not have a learning style, a theory that has yet to be proven by research.
- The brain cannot multi-task (despite what students think).
- There is a transaction cost to students when they switch between focused attention on an assignment and checking an incoming text or chat. Students need to realize that by switching between their school work and social media, they are actually increasing the amount of time to complete an assignment.

- Deliberate and specific praise of a child's effort contribute to each student developing his or her own growth mindset. Saying "good job" is not enough. Feedback is best when it is specific. For instance, more effective praise can look like the following: "Good job correcting each of your wrong answers on that math assessment so that you now know how to do those problems."
- Lack of sleep and heightened stress impact a student's ability to learn and to use the higher order thinking parts of his or her brain.

St. Andrew's and its Center for Transformative Teaching and Learning has presented to, worked and collaborated with teachers and school leaders from over 250 schools from five countries. The school welcomes visitors to see first-hand how St. Andrew's teachers apply Mind, Brain, and Education Science research to their instructional design and work with each individual student. The CTTL is also honored to work with teachers and school leaders who want to deepen their understanding of Mind, Brain, and Education Science research and strategies.

ST. STEPHEN'S & ST. AGNES SCHOOL

Coeducational, grades JK-12, Episcopal, college preparatory, day school in Alexandria, VA, 1120 students.

How does your school track and evaluate education research? Who is responsible for such efforts?

St. Stephen's & St. Agnes School created the position of Director of Teaching and Learning as a means to ensure our classrooms best meet the needs of 21st century thinkers and learners. The Director of Teaching and Learning is responsible for tracking and evaluating educational research with a specific focus on brain research, educational technology, and faculty growth models. The Director of Teaching and Learning is a member of numerous professional and research organizations and reviews literature regularly. In addition, the Director of Teaching and Learning works collaboratively with school leadership and faculty to share meaningful and impactful educational research as a means to inform teaching and learning in our school. School administrators and faculty also play a key role in sharing compelling research for dissemination to the Saints teaching community.

How is education research shared with appropriate faculty and staff? with parents? with students?

Educational research is shared with administration, faculty, and staff in a variety of ways. We have a summer learning program that includes an educational reading component. Summer titles have included such titles as Angela Duckworth's *Grit*, Carol Dweck's *Mindset*, John Medina's *Brain Rules* and Claude Steele's *Whistling Vivaldi*. In addition, we offer a Professional Book Group each year to all interested administrators, faculty and staff. The Professional Book Group has explored titles such as *Making Thinking Visible*, *Cultures of Thinking*, and *Visible Learners: Promoting Reggio-Inspired Approaches in All Schools*. Our divisions also offer summer learning options that support incorporating best practices in the classroom. For example, last summer our Lower School faculty read the book *A Mindset for Learning, Teaching the Traits of Joyful Independent Growth*. Time has been dedicated to exploring this book in depth during each Lower School faculty meeting throughout the year.

Furthermore, each summer we support faculty learning through our Summer Study Fellowship Program. Teachers are encouraged to attend workshops and institutes that focus on best practices in educations. For example, faculty members have attended Learning and the Brain conferences, Project Zero Classroom summer institute, Design Thinking institutes, etc. The expectation for Summer Study Fellowship recipients is that they share their learning and new expertise with the community through faculty meetings, professional learning communities, in-house Unconferences, or through other venues. Specifically, our Unconferences have proven a wonderfully collaborative model of sharing educational research and pedagogical approaches with colleagues. Sessions have included topics such as neuroscience in the classroom, visible thinking routines, creating cultures of thinking, best practices in technology integration, teaching for all learners, mindfulness, yoga, and teaching in the 21st century. We are in the process of revising the Teach and Learn of our internal website to better showcase current and impactful educational research. In addition, we are in collaboration with our Library Department to ensure that

faculty members have access to key educational texts, articles, videos, etc. that support the school's vision of education 21st century thinkers and learners.

We view parents as partners in the educational process and strive to keep them informed of influential learning science that is informing our work with their children. New pedagogical approaches and methods are shared with parents during events such as Back to School Nights, curriculum coffees, and What's New in the Lower School. These events provide parents with opportunities to learn of our focus on enhancing educational practices that promote innovation, inquiry, and creative problem solving. We also share information with parents through our weekly divisional newsletters that are available in our Thursday Dispatch. Parents are also encouraged to attend special events that showcase classroom innovations and new teaching and learning approaches such as our Middle School Green Cities Challenge.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

We are in the process of implementing our new Strategic Plan with a clear and specific focus on best practices in teaching and learning as informed by educational research. Toward that end, we have established an Academic Leadership Committee that serves as an advisory body reviewing research and initiating pedagogical approaches and methodologies that best support our school's culture of thinking, exploration, innovation and academic risk-taking. Our new Strategic Plan continues to place importance on ensuring our learners are engaged in developmentally appropriate, challenging learning experiences.

Please provide examples of education research your school has found valuable.

We have found the research of the individuals and organizations featured below to be particularly useful and relevant to our work. This is not a comprehensive list, but it gives a sense of some of the work we have found influential and impactful.

- Dr. Judy Willis
- Dr. Mariale Hardiman
- Dr. Mary Helen Immordin-Yang
- Dr. Carol Dweck
- Dr. Angela Duckworth
- Dr. John Hattie
- Dr. John Medina
- Dr. Eric Jensen
- Project Zero - This research group from the Harvard Graduate School of Education researches the nature of intelligence, understanding, thinking, creativity, cross-disciplinary and cross-cultural thinking, and ethics.

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

Our educational practices and learning environments have been substantially transformed as a result of current educational research. Our teachers are employing a variety of pedagogical approaches and learning-focused practices in support of student growth and development. Here are just some of the practices we are implementing or piloting:

- Dr. Medina’s work with the faculty guided our teachers to incorporate more reflective pauses and brain breaks during their lessons.
- Our teachers understand and address the importance recognizing the natural limit of the brain’s capacity to focus attention. As a result, faculty members seek to provide a variety of learning experiences and activities.
- We are currently piloting new learning environment configurations and furniture options to support many students in their need to move as a part of their learning style.
- Educational research also proved an inspiration in the creation of our Lower School natural outdoor play space. This playground provides a natural environment designed to foster exploration and curiosity.
- Current and exciting research clearly supports what teachers have long understood, the social-emotional nature of learning is key. These findings support our school’s focus on creating safe learning environments and strong relationships and interactions between all members of the learning community.
- Many of our faculty members have been deeply influenced by the work of Project Zero researchers such as Ron Ritchhart. As a result, they are incorporating many Project Zero approaches such as thinking routines into their learning environments.
- Our Strategic Plan highlights the importance of a wellness program at St. Stephen’s & St. Agnes School. We are currently researching and piloting mindfulness in our learning environments.
- Teachers are incorporating yoga and movement into break times.
- Students engage in a variety of learning experiences including project-based learning, inquiry-based learning, and collaborative learning,

Are there new programs or techniques that your school would recommend to parents? to students?

Below are some recommendations for parents to consider. They are based on the work of such researchers as Eric Jensen.

- Research is clear that there is real value in providing time for physical activity and natural world exploration with our children. The brain develops better with activity.
- Provide free time for unstructured free play. Dr. Jensen reminds parents, “Children need time to go at their own pace, taking pauses, breaks, and doing nothing at times.”
- Provide enriching activities and allow time for learning to occur.
- Seek out learning opportunities for your child that are novel, meaningful, and challenging.
- Remember that experiencing high stress negatively impacts the brain’s ability to learn.
- Healthy brains need healthy nutrition.

- Recognize the importance of adequate sleep on brain development and learning.

STONE RIDGE SCHOOL OF THE SACRED HEART

*Single-sex girls, grades 1-12, Catholic, college preparatory, day school in Bethesda, MD, 706 students.
Coeducational through Kindergarten.*

How does your school track and evaluate education research? Who is responsible for such efforts?

Stone Ridge holds a robust Professional Development Program, supporting the ongoing development of both faculty and staff. A major component of this program is to remain current with educational research, especially that which is related to the social-emotional growth of girls. Over the course of the last two years, the School created a position to support this effort, the Director of Curriculum and Professional Development. In concert with the Administration, the Learning Strategist and Student Support team, the Counselors, and the Head of School, the Director of Curriculum and Professional Development seeks to identify current educational research that particularly informs best practices for girls' education, leadership development, formation of spiritual conscience, and cognitively-guided instruction.

How is education research shared with appropriate faculty and staff? with parents? with students?

Educational research has informed our Professional Development Program in a variety of capacities over the past two years. Elements of research include, but are not limited to:

- Summer reading and follow-up Speaker Series on Lisa Damour's *Untangled*, Julie Lythcott-Haims' *How to Raise an Adult*, Susan Cain's *Quiet*, Beverley Tatum's *Why Are All the Black Kids Sitting Together in the Cafeteria*, and Jay McTighe's *Understanding by Design*.
- The School remains committed to four professional development days per year, strictly reserved for faculty and staff development and collaboration. This year, Glenn Whitman presented his research on Neuroeducation and brain-based teaching, and workshops were conducted/led by the Director of Curriculum and Professional Development, Division Heads, and faculty leaders on a variety of topics (e.g. teaching skills & knowledge vs. enduring understandings, summative and formative authentic assessments, Design Thinking, etc.).
- The School remains committed to a week of New Employee Orientation (including Formation to Mission, pedagogical coaching, inculturation, etc.) and three-five days of All Employee Orientation for the whole school.
- Parent coffees and educational evening events are regularly scheduled at each divisional level; these address current trends, texts worth consideration (such as those listed above), and new curricular initiatives; these are all rooted in the Mission of the School.
- Students are informally apprised of new curricular initiatives, as developmentally appropriate. For example, when the School introduced *Understanding by Design*, Upper School girls engaged in early-year discussions of using essential questions and enduring understandings as part of their programmatic presentations, much like the faculty do.

- One of the Upper School Learning Strategists also provides faculty with ongoing coaching on metacognition and mind/brain education.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

As the School has fully embraced the *Understanding by Design* model, all classes, as appropriate by grade level, are to be rooted in lasting understandings, essential questions, and Stone Ridge generated Learning Expectations (student outcomes for mastery). This is integrated by the Director of Curriculum and Professional Development over-time via one-on-one meetings and summer workshops with faculty members, regular observations with particular focus on *Understanding by Design* by Division Heads, professional development days, Curriculum Review Process meetings (one in three per month), and consistent faculty independent work.

Please provide examples of education research your school has found valuable.

As connected to our unique mission as an all-girls, Sacred Heart, Catholic school, this year, Stone Ridge has used the following research to inform our pedagogical and curricular work:

- Lisa Damour's research on girls' education
- *Untangled* by Lisa Damour
- *How to Raise an Adult* by Julie Lythcott-Haims
- *Understanding by Design* a framework for teaching from Wiggins & McTighe
- *Neuroteach* by Glenn Whitman
- Harvard University's Project Zero and the research of Ron Ritchhart
- Creative Curriculum for early childhood only
- The Project Approach and the research of Lillian Katz and Sylvia Chard
- Columbia University's Readers and Writers Workshop
- Lucy Calkin's research on the teaching of both writing and reading
- *Singletasking* and the research of Devora Zack
- Stanford University's Design Thinking
- Janet Stuart's *The Education of Catholic Girls*
- JoAnn Deak's *How Girls Thrive*
- Responsive Classroom and Developmental Designs
- Presentations by local psychologists on topics of anxiety and depression in high school aged-girls
- Various Professional Learning Communities (PLCs), guided by faculty interest
- Other [articles for October PD](#), [Division discussions](#), and [PLC conferring](#)
- The Goals and Criteria of Sacred Heart Education

N.B. Please see the included [video of our collaboration with Devora Zack and Glenn Whitman](#), as well as our [time-lapse video of graphic recording of our October Professional Development Days from Lucina Levine](#).

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

While there is no aspect of the School that will remain unaffected by the full implementation of *Understanding by Design*, specific initiatives at this time include, but are not limited to:

Lower School: Using Essential Questions to guide our work on Creative Curriculum in PS and PK; Project Approach in PK and K; and in general instruction across grades 1-4. Using cognitively-guided instruction and instructional research to inform all selection of mathematics and literacy programs and their execution within the PK-4 classrooms. Continuing to embed our social-emotional curriculum in Responsive Classroom techniques and in the formation of our girls and boys as children of the Sacred Heart.

Middle School: Using Essential Questions to guide our work on both curriculum and instruction. Centering assessment on the concept of authenticity and differentiated opportunities for learning. Continuing to embed our social-emotional curriculum and advisory program in Developmental Designs and in the formation of girls as children of the Sacred Heart.

Upper School: Using Essential Questions to guide our Social Action (Community Service) program. Our theme this year is *seeking the common good* through the United Nation's Sustainability Goals. This hallmark Social Action program, in which the Upper School suspends traditional academic classes on twelve days of the year, is guided by an overarching essential question: *As I grow in awareness and knowledge, how am I impelled to act responsibly for the common good?* Each assembly for these service days then revolves organically around uniting the Gospel message of service, new information to inform the students and impel them to action, and connection with a speaker who is an expert in the field to help students answer the overarching essential question and to provide context and meaning for the specific goal of that day. Students lead all aspects of this programming with essential questions and the mission of the School as guiding principles. Each student in the Upper School is also enrolled in a seminar, facilitated by Upper School Counselors, that focuses on the various developmental, social, and emotional issues/topics that they will have to navigate in life.

Are there new programs or techniques that your school would recommend to parents? to students?

Stone Ridge is currently offering parent evenings to share changes in our curriculum directly with our parent constituents. Parents are welcome to familiarize themselves further with *Understanding by Design* and the work of Jay McTighe and Grant Wiggins to learn about this approach to instruction and curricular design. Parents are also welcome to reach out to Division Heads or the Director of Curriculum and Professional Development to discuss Stone Ridge's Expectations for Learning, now set at every level (PK-12) and within every discipline. Parents were, and continue to be, encouraged to read *How to Raise an Adult* and *Untangled*, for faculty and staff read these texts, and conversations around these readings foster greater collaboration and conversation between the home and the School.

THE HARBOR SCHOOL

Coeducational, preschool-2nd grade, day school in Bethesda, MD, 75 students.

How is education research shared with appropriate faculty and staff? With parents? With students?

- The Head of School and the Assistant Head of School for Curriculum are responsible for disseminating useful research to the faculty.
- We invite specialists to present to the faculty and staff at faculty meetings for professional development. We have had presentations and trainings on occupational therapy, sensory integration, mindfulness, and school inclusion.
- Faculty who attend workshops and conferences share what they have learned to the entire faculty.
- Research can also be shared with parents via our weekly school-wide newsletter, the Head's Corner Bulletin Board, and weekly classroom newsletters.
- We invite speakers to present or hold workshops with our parent body. For example, we have had Parent Education Program (PEP) speakers, psychologists and educational consultants, and other practitioners hold workshops.

How is education research integrated and incorporated into your school's policies and curriculum? Does this answer vary depending on the grade-level of the students?

See below.

Please provide examples of education research your school has found valuable.

Mindfulness -

Research has shown that consistent mindfulness practice can create changes in the brain that decrease stress and anxiety, increase alertness, attention and emotional regulation, and promote compassion and positive social interaction.

Physical Exercise-

Physical exercise makes positive physiological and developmental impacts on the brain, and has been shown to improve attention, memory and mood.

Sensory Integration-

Children respond to sensory input in different ways, and may seek or avoid sensory input. Incorporating a variety of sensory experiences makes learning more memorable.

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

Mindfulness

- We have had in-service training on mindfulness
- Our teachers implement mindfulness practices in their classrooms
- We begin our weekly assemblies with a mindfulness exercise

- We have provided parent trainings on mindfulness

Physical Exercise

- We have extended our PE program so Kindergarten, first and second grade students attend PE twice a week for 45 minutes. Preschoolers attend twice a week for 30 minutes.
- Teachers incorporate several movement breaks throughout the day, in addition to 1-2 periods of recess.

Sensory Integration

- Teachers integrate sensory experiences in their instruction and also provide materials that children can access when sensory input is needed.

Are there new programs or techniques that your school would recommend to parents? To students?

- Mindful Schools curriculum
- GoNoodle.com for guided brain breaks and movement breaks

THE SIENA SCHOOL

Coeducational, grades 4-12, day school serving language-based learning disabilities in Silver Spring, MD, 115 students.

How does your school track and evaluate education research?

- Annual school-wide organizational goals drive evaluation of education research

Who is responsible for such efforts?

- Heads of School
- Department Chairs
- Dean of Students
- Counselor

How is education research shared with appropriate ...

- **faculty and staff?**
 - Two weeks of professional development in August
 - Whole school readings
 - Department meetings
 - Division meetings
 - Weekly faculty meetings
 - Sharing of relevant articles
 - Spreadsheet of website and article links
- **with parents?**
 - Weekly newsletter
 - Siena Parents' Association speakers
 - Siena Educational Workshop Series
 - Specific emails from counselor
- **with students?**
 - Guest speakers
 - Workshops
 - Field Trips
 - Integrated into curriculum
 - Grade specific monthly meetings with counselor
 - Mindfulness
 - Communication Skills
 - Healthy Coping Strategies
 - Stress Management
 - Healthy Relationships and Boundaries
 - Problem Solving/Conflict Resolution Strategies
 - Mental Health and Wellness

- High school students examine specific topics with Dean of Students
 - Diversity, growing up LGBTQ, “The Out List”
 - Diversity, socioeconomic, “Living on One Dollar”
 - Diversity, racial, “Hidden Figures”
 - Health, substance use, National Capital Poison Center
 - Social Perception/Social Media, workshop on perception, communication and social media use. Ian Solomon

How is education research integrated and incorporated into your school’s policies and curriculum?

- With specific mission, research based best practices for working with students with language based learning differences integrated into:
 - all school wide policies e.g. structure of the school day, delivery of information, integration of accommodations, enhancing students’ executive functioning, standardized tools, technology (and so forth)
 - Curriculum - everyone is considered a teacher of reading and required to incorporate reading strategies into their subject areas. Cross curricular approaches to reading, writing and executive functioning are consistently implemented across the school.
 - Multisensory instruction
 - Authentic Assessment
 - Social/emotional development
 - Strengths based curriculum
- Annual school-wide organizational goals.

Does this answer vary depending on the grade-level of the students?

No--all students receive this kind of instruction.

Please provide examples of education research your school has found valuable.

- English department using mentor text/sentence composition grammar instruction (*Mechanically Inclined: Building Grammar, Usage, and Style Into Writer’s Workshop* by Jeff Anderson)
- Multisensory instruction
- Brain research e.g. Dr. Guinevere Eden’s work at the Center for the Study of Learning

Please provide examples of academic, social, curricular and/or other practices and policies your school has implemented, or changes your school has made, based on such research.

- Integration of mindfulness techniques
- Self-reflection on negative mindset and grit
- Student centered learning based on choice and collaboration - Science Fair, Science Expo
- Authentic assessments - final and midterm projects, peer teaching
- Place-based learning - field trips to test stream water or IKEA to design a room using measurement
- Project based learning
- Homework - making sure it supports classroom teaching vs. filling time
- Differentiation of curriculum
- Font size and type that are easiest for students with language-based learning differences to read
- Giving students processing time
- Formatting/layout of materials (white space, room to work)
- Integrating digital resources which support individualization

Are there new programs or techniques that your school would recommend to parents? to students?

- Multisensory Math (ASDEC, in Rockville, MD)
- Authentic Assessments

WASHINGTON EPISCOPAL SCHOOL

Coeducational, nursery-8th grade day school in Bethesda, MD, 285 students.

WES is constantly reviewing and sharing education research. Our faculty and administration bring new ideas to the table for the school to evaluate and make decisions on implementation. Over time, this practice results in a range of research-based practices being employed throughout various aspects of the school.

Throughout our academic program we use practices such as brain breaks, frequent movement, academic reflection, wait time, etc. We agree with the benefits of experiential learning opportunities. Our flagship study trips to Utah in sixth grade, Italy in seventh grade, and France and Spain in eighth grade provide students with the connections and opportunities to experience first-hand what they have been studying in the classrooms.

In the areas of environmental influences and societal dangers, we provide both our students and families with a wide range of programs and opportunities. For instance, to help our students and families better navigate the appropriate use of social media and technology, our middle school students completed a Digital Awareness Project where they conducted research on various apps and the benefits and potential dangers of each. The students then showcased their research for their peers and the parent community. The parents then participated in a parent-only meeting with middle school faculty to dive deeper into the social media trends in which our adolescents are engaging. Also, this fall, WES sponsored a viewing of the film *Screenagers* which was followed by a panel discussion with various experts in the field. Another program in this area is our Freedom from Chemical Dependence Program in which both students and parents have opportunities to work with professionals in this field to better understand drug and alcohol abuse and learn preventative strategies. These conversations are also followed up in our health classes.

In the area of social/emotional learning (SEL), WES uses research-based programs such as Responsive Classroom and Developmental Designs as well as in our health and counseling programs. Through Responsive Classroom, teachers facilitate morning meetings to build community and discuss SEL topics. Our counselor routinely joins these meetings to talk about subjects like kindness and conflict resolution. Through Developmental Designs, our middle school faculty facilitates a weekly advisory program centered on SEL topics. Past topics have included empathy building, appropriate use of social media, diversity and acceptance of others, anti-bullying, goal-setting and planning (creating S.M.A.R.T goals for themselves), etc.

In our health curriculum, students learn about physical, mental, and emotional health. Our health curriculum guides students through such topics as yoga and meditation practices, goal-setting and planning, conflict resolution, self-esteem, healthy relationships, character education, making good decisions, proper use of social media, personal safety, responding to peer pressure, coping skills and managing stress, etc.

Our counseling program is also research-based. We use a curriculum, *Superflex*, as a basis for teaching social thinking skills to students in the primary grades. For older students we source lessons through other research-based counseling curriculum guides such as, "Friendship and Other Weapons" and "Girls In Real Life Situations."

2017

Best Practices Forum

'A Child's Brain'



Summary of Resources

Mentioned in School Submissions

RESOURCES MENTIONED IN SCHOOL SUBMISSIONS

BOOKS

All Kinds of Minds: A Young Student's Book about Learning Abilities and Learning Disorders
by Melvin Levine

A Mindset for Learning: Teaching the Traits of Joyful, Independent Growth
by Kristine Mraz & Christine Hertz

Blindspot: Hidden Biases of Good People
by Mahzarin Banaji & Anthony G. Greenwald

Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School
by John Medina

Creating Cultures of Thinking: The 8 Forces We Must Master to Truly Transform Our Schools
by Ron Ritchhart

Culturally Responsive Teaching and The Brain: Promoting Authentic Engagement and Rigor Among Culturally and Linguistically Diverse Students
by Zaretta Hammond

Empathy and its Development
by Nancy Eisenberg & Janet Strayer

Friendship & Other Weapons: Group Activities to Help Young Girls Aged 5-11 Cope with Bullying
by Signe Whitson

Girls in Real Life Situations, Grades 6-12: Group Counseling Activities for Enhancing Social and Emotional Development
by Julia V. Taylor & Shannon Trice-Black

Grit: The Power of Passion and Perseverance
by Angela Duckworth

How girls THRIVE
by JoAnn Deak

How to Raise an Adult: Break Free of the Overparenting Trap and Prepare Your Kid for Success
by Julie Lythcott-Haims

How to Teach Boys
Manual

Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners

by Ron Ritchhart & Mark Church
Mindset: The New Psychology of Success
by Carol Dweck

Neuroteach: Brain Science and the Future of Education
by Glenn Whitman & Ian Kelleher

Quiet: The Power of Introverts in a World That Can't Stop Talking
by Susan Cain

Singletasking: Get More Done-One Thing at a Time
by Devora Zack

Social: Why Our Brains Are Wired to Connect
by Matthew Lieberman

The Education of Catholic Girls
by Janet Erskine Stuart & Susie Lloyd

Understanding By Design
by Grant Wiggins & Jay McTighe

Untangled: Guiding Teenage Girls Through the Seven Transitions into Adulthood
by Lisa Damour

Visible Learners: Promoting Reggio-Inspired Approaches in All Schools
by Mara Krechevsky & Ben Mardell

Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do
by Claude M. Steele

***Why Are All the Black Kids Sitting Together in the Cafeteria:
And Other Conversations About Race***
by Beverly Daniel Tatum

PEOPLE

- Blakemore, Sarah-Jayne (Adolescent Social Brain)
- Calkin, Lucy (Teaching Reading)
- Chard, Sylvia (The Project Approach)
- Coe, Rob (Evidence-Based Educations)
- Didau, David (Learning Literacy)
- Eden, Guinevere (Visual Language and Visual Learning)
- Eliot, Lise (Brain Development and Gender)
- Fischer, Kurt (Mind, Brain Behavior)
- Galinsky, Ellen (Families and Work Institute)

- Hardiman, Mariale (Learning and the Brain)
- Hattie, John (Visible Learning)
- Heacox, Diane & Tomlinson, Carol Ann (The Differentiated Classroom)
- Hecker, Linda (Universal Design for Learning)
- Immordino-Yang, Mary Helen (Social Emotion/Self-Awareness/Culture)
- Jensen, Eric (Brain-Based Learning and Teaching)
- Kandel, Eric (Kavli Institute for Brain Science)
- Katz, Lililan (Toddler Understanding and Learning)
- McDaniel, Mark (Human Learning and Memory)
- Posner, Michael (Field of Attention)
- Ritchhart, Ron (Project Zero)
- Robinson, Sir Kenneth (Creativity/Education and the Arts)
- Rose, Todd (Mind, Brain and Education Program)
- Shonkoff, John (Brain Development)
- Sleeper-Tripplett, Jodi (ADHD)
- Willingham, Daniel (Cognitive Psychology/Neuroscience/Education)
- Willis, Judy (Brain-Based Learning Strategies)

OTHER RESOURCES

- ❖ Apple Education (Technology Integration Best Practices)
- ❖ Common Sense Media (Guidelines for Social Media Use)
- ❖ Design Thinking (Stanford University)
- ❖ Family Online Safety Institute Research (Technology and Online Resources)
- ❖ GoNoodle.com (Guided Brain/Movement Breaks to Keep Kids Moving at School/Home)
- ❖ Mathematical Mindsets (Boaler)
- ❖ Minds Incorporated (Mindfulness Training for Faculty, Staff, and Students)
- ❖ *Our Whole Lives* text series (Life Skills Curriculum)
- ❖ Project Zero /Making Thinking Visible (Harvard University)
- ❖ Readers and Writers Workshop (Columbia University)
- ❖ R.U.L.E.R. Program (Teaching Emotional Intelligence)
- ❖ *Screenagers: Growing Up in the Digital Age* (Documentary on Use of Technology)
- ❖ Stay Strong: Reframing Failure (Workshops for Parents)
- ❖ Superflex (Social Thinking Curriculum)
- ❖ The Buck Institute (Project Based Learning)
- ❖ The Origins Program (Responsive Classroom/Education for Equity)
- ❖ *WIS Summer Institute for Teachers (WISSIT)/Project Zero Conference*

❖ www.thectl.org/neuroteach to sign up for *The Bridge* newsletter of the CTTL