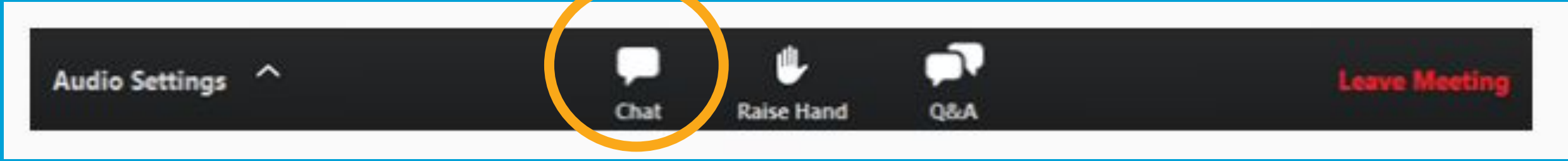
Welcome! While we're waiting for everyone to join, please introduce yourself in the chat :

name, school, district/program, role(s):



Folio
COLLABORATIVE

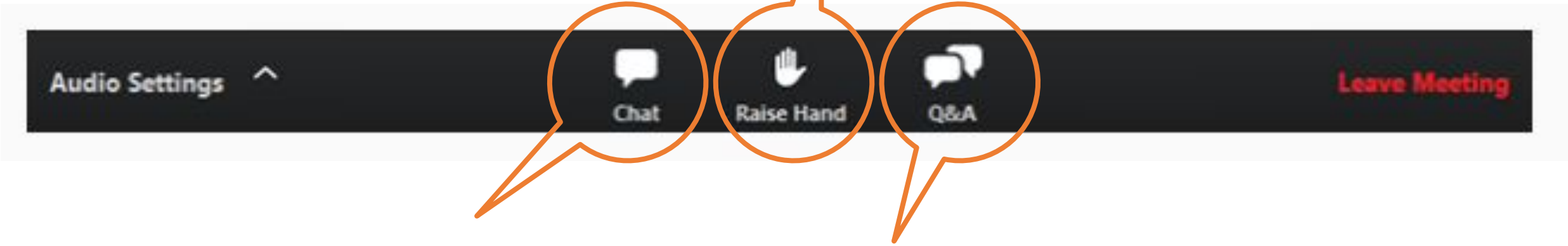
THE CENTER *for* TRANSFORMATIVE TEACHING & LEARNING
AT ST. ANDREW'S EPISCOPAL SCHOOL

Town Hall #2

Using Educational Neuroscience to Support Remote Leadership and Learning 1.0

Participation and Interaction

The raise hand feature if we ask a question and need a quick response or if you need us to pause for a minute.



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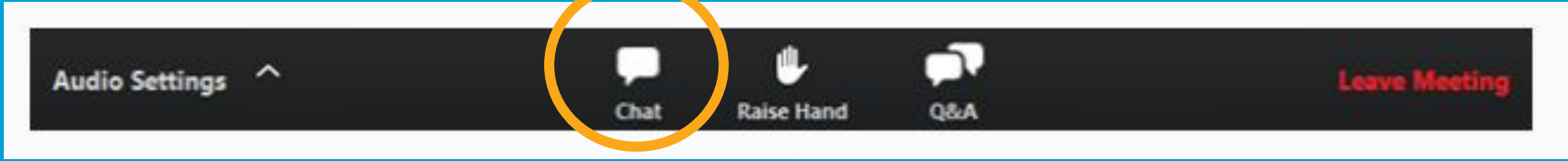


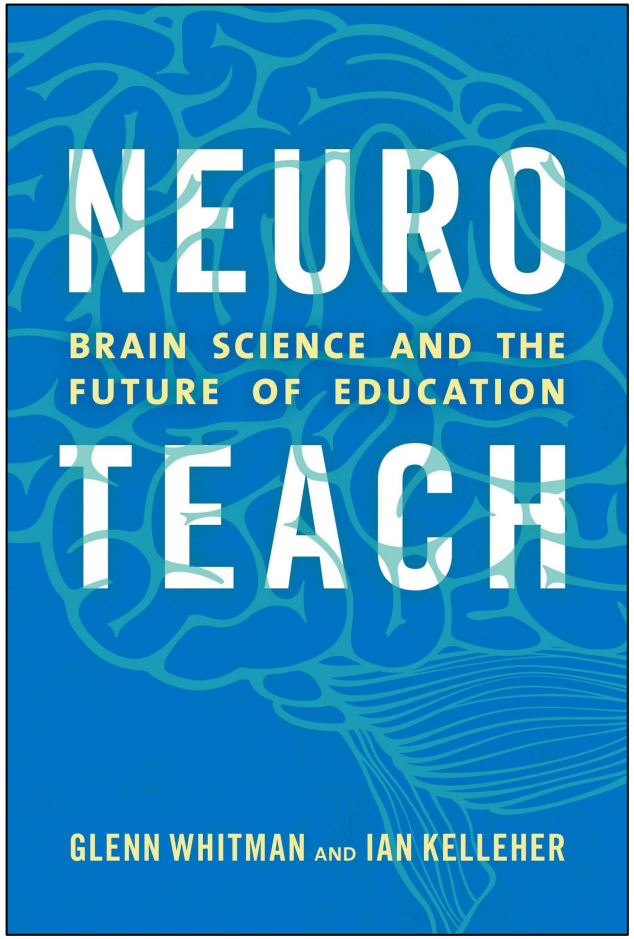
Folio
COLLABORATIVE

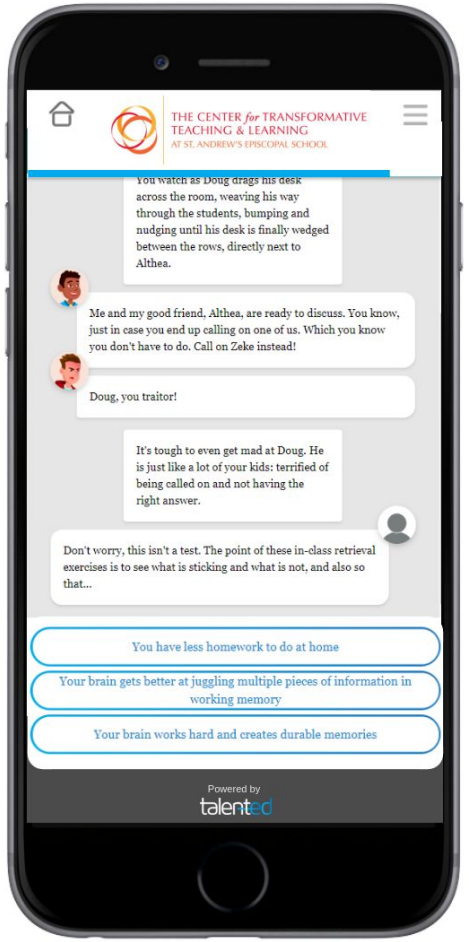
The Folio Community:

- We exist to facilitate professional learning conversations
- We draw from the collective wisdom of the our community of leaders to strengthen school culture around professional learning and conversation

Glenn Whitman
History Teacher, Advisor
Soccer Coach

Director
The Center for Transformative Teaching and Learning at St. Andrew's
gwhitman@saes.org
@gwhitmancttl





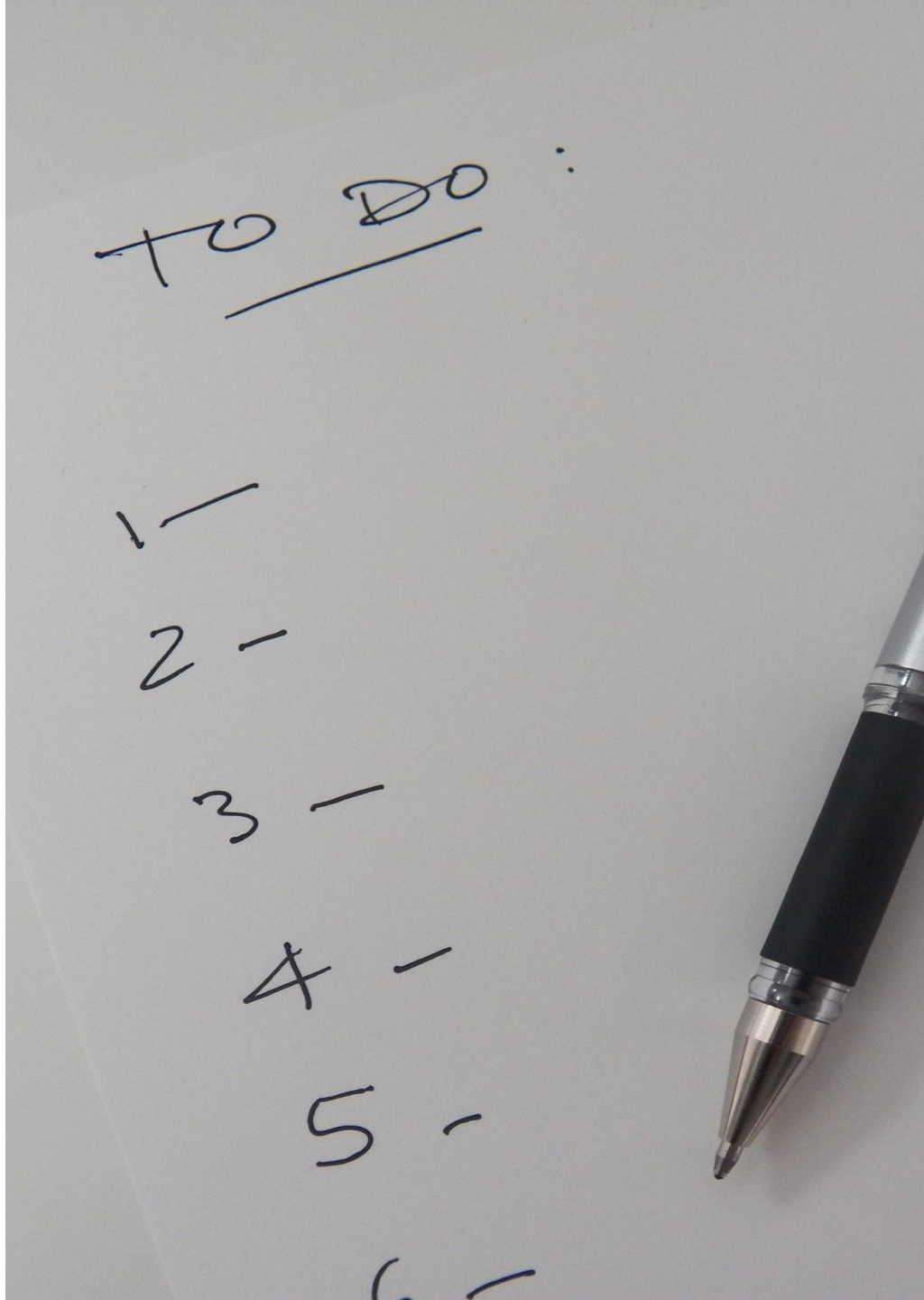
www.neuroteach.us

Learning Objectives: After participating in this Town Hall I will . . .

- ***leverage*** the most promising Mind, Brain, and Education (MBE) research to inform and transform synchronous and asynchronous teaching and learning.
- ***understand*** the 3 mindsets that can inform distant learning for teachers, schools, districts, parents, and care givers
- ***pass*** my learning on to least ONE other person
- ***make*** some new friends

Today's Agenda:

1. Introductions
2. Start to answer some BIG questions
   a. How can research in how the adult and student brain learns elevate the sense of belonging and the whole child's remote learning experience?
   b. What MBE research informed strategies can I use "tomorrow" in my work with teachers, students, and families in the ongoing transition to remote learning?
3. Ongoing participant idea exchange



What question are you hoping to have answered this morning?

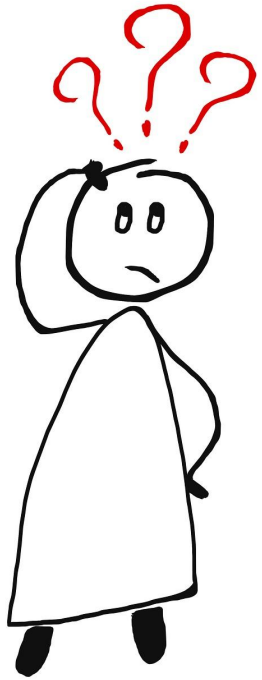
(Please type your answer in the chat and send to panelists and attendees)

Roles

- Participants
  - Share experience & expertise (We each come with a lot!)
  - Ask questions
  - Challenge assumptions
  - Transfer ideas to your own context
  - See this Town Hall as a “first step”

- Glenn Whitman and Meredith Ford
  - Provide promising research to inform and transform your current thinking about distant learning
  - Present options/solutions
  - Facilitate idea sharing

After this Town Hall what will you



Keep - Stop - Tweak - Start

Dual-Coded Note Taking

Keep	**Image**	**Stop**	Image
Tweak	**Image**	**Start**	Image

What will be available online after?

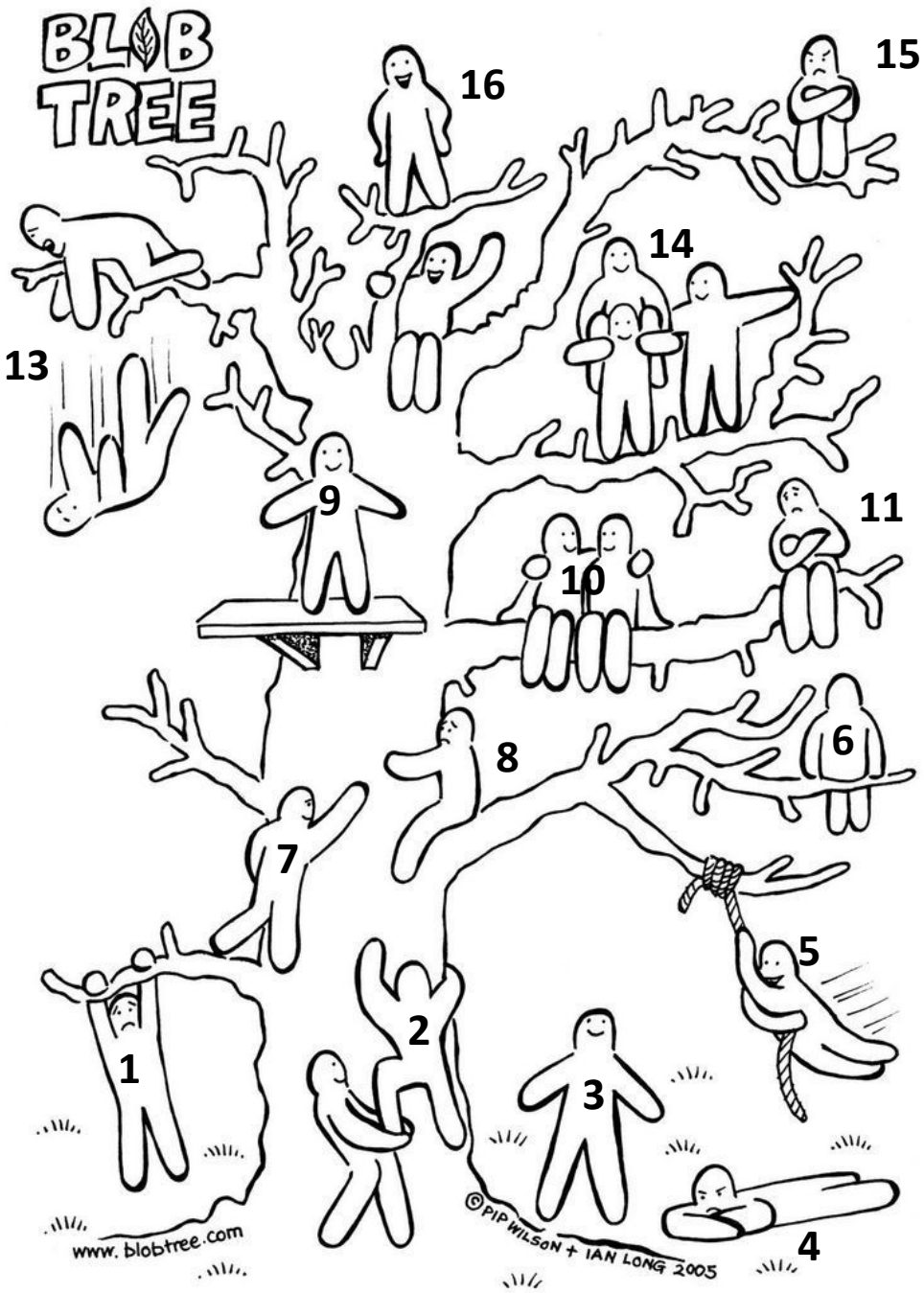
- Cheat sheet
- Slide deck
- Recording

Before we start, let's take a minute to check-in

Where are you currently (emotionally and socially)on the Blob Tree?

Go to menti.com and use the code

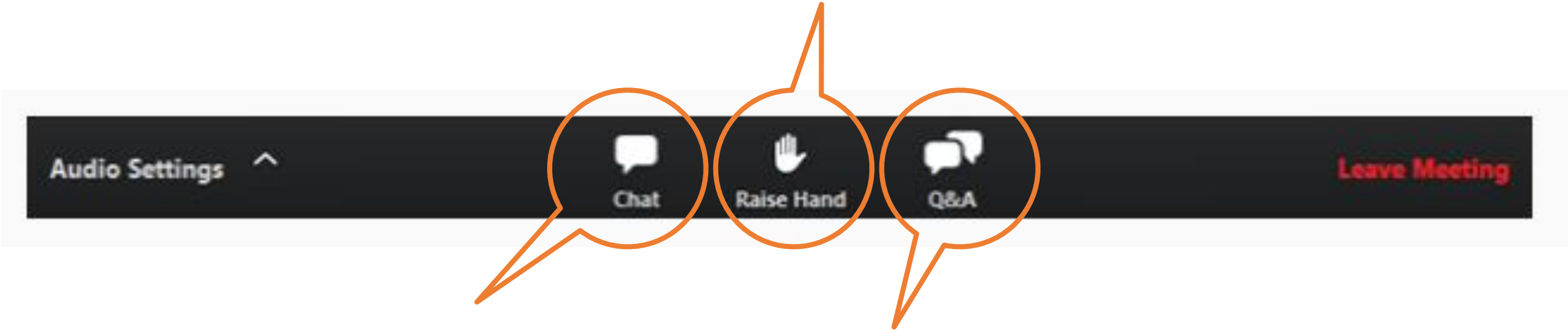
94 81 74



Turn and Talk!

about your current position on the Blob Tree

Use the raise hand feature if you want us to select you to speak in response to a question.



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The Q&A feature for webinars allows attendees to ask questions during the webinar and for the Folio team to answer their questions.


March 1, 2020
Garage Band
Seesaw
Quicktime
Zoom
Flip Grid
Google Meet/Hangouts
Pear Deck
Mentimeter
Learning Management Systems (LMS)
Personalized Learning
TedED
Screencastify
Edpuzzle

March 1, 2020

Crossing the Chasm

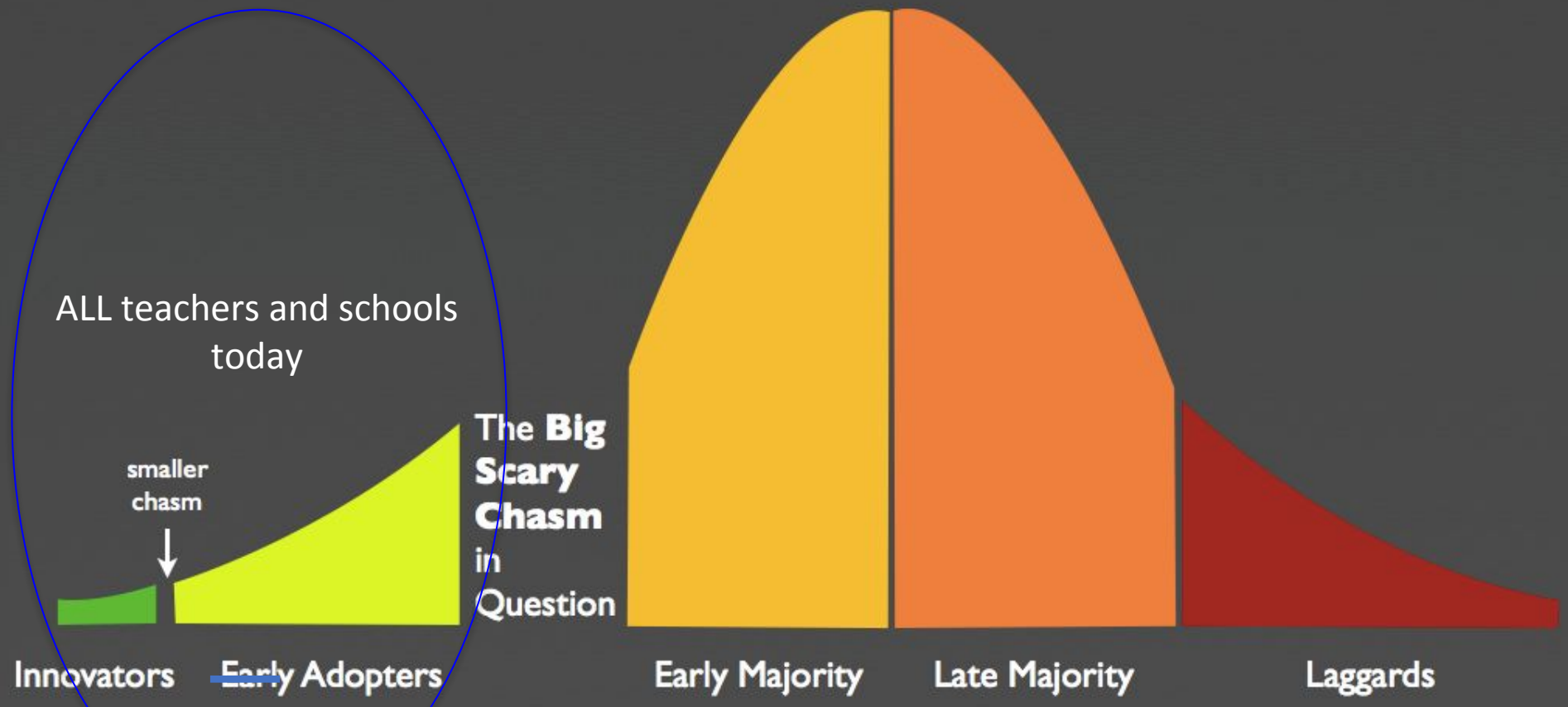
Geoffrey Moore - 1991


March 27, 2020
im
POSSIBLE

March 27, 2020

Crossing the Chasm

Geoffrey Moore - 1991



ALL teachers and schools today

What does each group need . . . now?


MACDONALD HALL
ST. ANDREW'S EPISCOPAL SCH
inspired
LEADERSHIP

Virtual Learning at St. Andrew's 1.0

100% synchronous experience (daily schedule)

Hard and Software

iPads (elementary) and MacBook Air (1:1 laptop program 5-12)

- Seesaw, Google Hangouts, Schoology (LMS), Google Drive

Goals

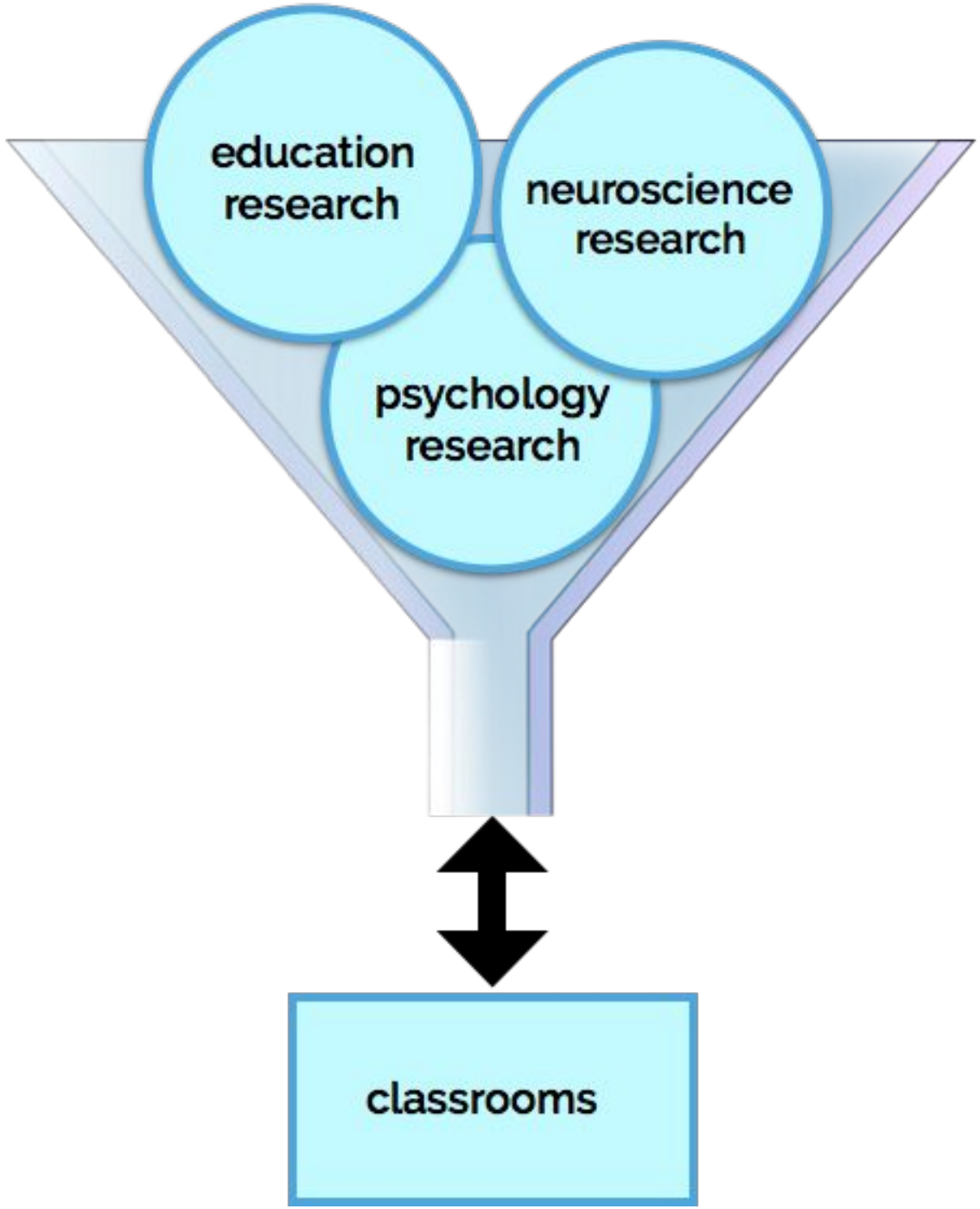
- Relationships
- Community
- Connectedness

Individual and collective meta-cognition moments

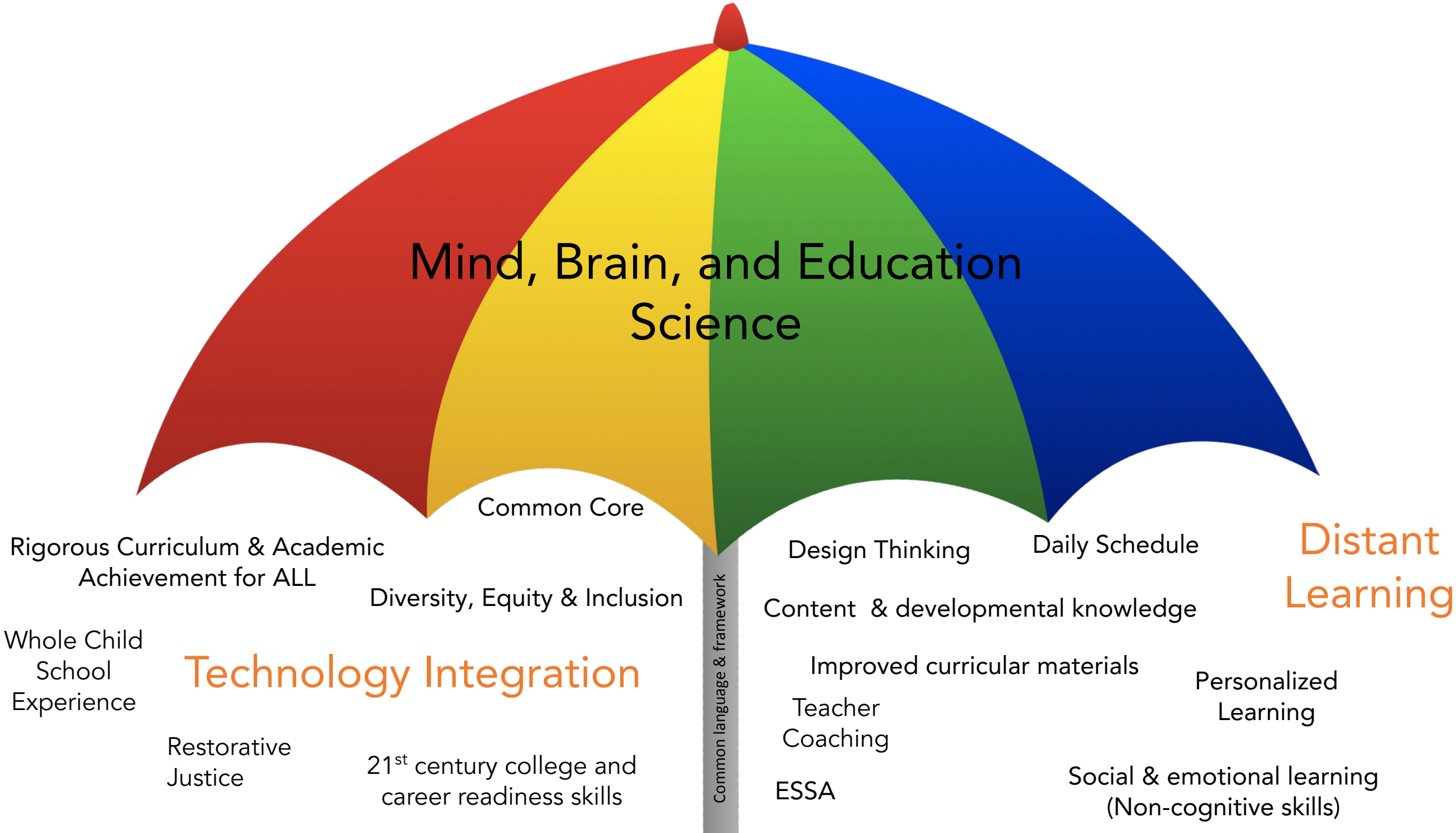
- End of day faculty meetings (by division)

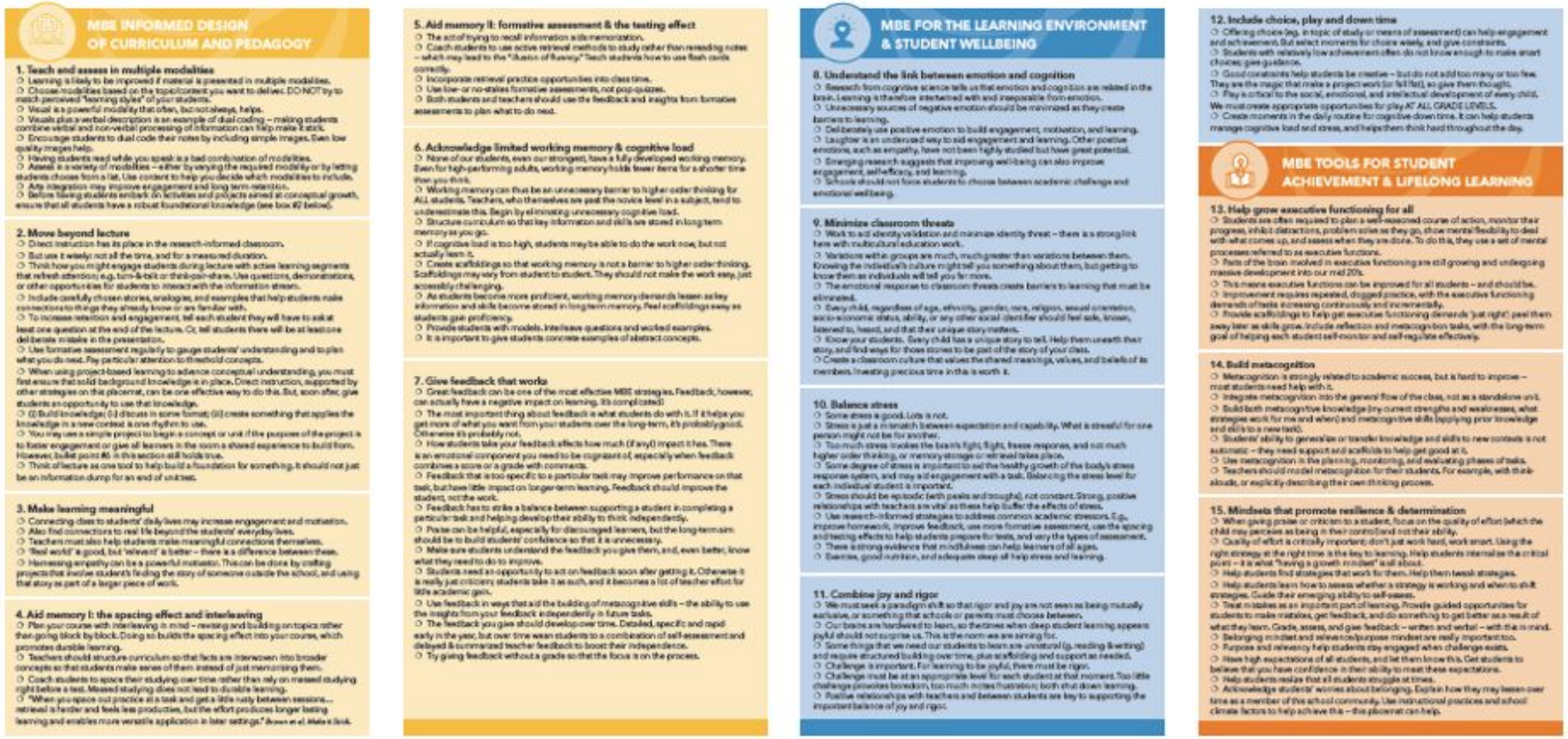
THE CENTER *for* TRANSFORMATIVE TEACHING & LEARNING AT ST. ANDREW'S EPISCOPAL SCHOOL

The CTTL's mission is to create and innovate in the field of Mind, Brain and Education Science research to allow teachers to maximize their effectiveness and students to achieve their highest potential.



Mind, Brain & Education Science (MBE)


Mind, Brain, and Education Science
Common Core
Rigorous Curriculum & Academic Achievement for ALL
Diversity, Equity & Inclusion
Whole Child School Experience
Technology Integration
Restorative Justice
21st century college and career readiness skills
Common language & framework
Design Thinking
Daily Schedule
Distant Learning
Content & developmental knowledge
Improved curricular materials
Personalized Learning
Teacher Coaching
ESSA
Social & emotional learning (Non-cognitive skills)



MBE INFORMED DESIGN OF CURRICULUM AND PEDAGOGY

1. Teach and assess in multiple modalities
- Learning is likely to be improved if material is presented in multiple modalities.
- Choose modalities based on the topic/content you want to deliver. DO NOT try to match perceived "learning styles" of your students.
- Visual is a powerful modality that often, but not always, helps.
- Visuals plus a verbal description is an example of dual coding – making students combine verbal and non-verbal processing of information can help make it stick.
- Encourage students to dual code their notes by including simple images. Even low quality images help.
- Having students read while you speak is a bad combination of modalities.
- Assess in a variety of modalities – either by varying the required modality or by letting students choose from a list. Use content to help you decide which modalities to include.
- Arts integration may improve engagement and long term retention.
- Before having students embark on activities and projects aimed at conceptual growth, ensure that all students have a robust foundational knowledge (see box #2 below).

2. Move beyond lecture
- Direct instruction has its place in the research-informed classroom.
- But use it wisely: not all the time, and for a measured duration.
- Think how you might engage students during lecture with active learning segments that refresh attention; e.g. turn-&-talk or think-pair-share. Use questions, demonstrations, or other opportunities for students to interact with the information stream.
- Include carefully chosen stories, analogies, and examples that help students make connections to things they already know or are familiar with.
- To increase retention and engagement, tell each student they will have to ask at least one question at the end of the lecture. Or, tell students there will be at least one deliberate mistake in the presentation.
- Use formative assessment regularly to gauge students' understanding and to plan what you do next. Pay particular attention to threshold concepts.
- When using project-based learning to advance conceptual understanding, you must first ensure that solid background knowledge is in place. Direct instruction, supported by other strategies on this placemat, can be one effective way to do this. But, soon after, give students an opportunity to use that knowledge.
- (i) Build knowledge; (ii) discuss in some format; (iii) create something that applies the knowledge in a new context is one rhythm to use.
- You may use a simple project to begin a concept or unit if the purpose of the project is to foster engagement or give all learners in the room a shared experience to build from. However, bullet point #6 in this section still holds true.
- Think of lecture as one tool to help build a foundation for something. It should not just be an information dump for an end of unit test.

3. Make learning meaningful
- Connecting class to students' daily lives may increase engagement and motivation.
- Also find connections to real life beyond the students' everyday lives.
- Teachers must also help students make meaningful connections themselves.
- "Real world" is good, but "relevant" is better – there is a difference between these.
- Harnessing empathy can be a powerful motivator. This can be done by crafting projects that involve student's finding the story of someone outside the school, and using that story as part of a larger piece of work.

4. Aid memory I: the spacing effect and interleaving
- Plan your course with interleaving in mind – revisiting and building on topics rather than going block by block. Doing so builds the spacing effect into your course, which promotes durable learning.
- Teachers should structure curriculum so that facts are interwoven into broader concepts so that students make sense of them instead of just memorizing them.
- Coach students to space their studying over time rather than rely on massed studying right before a test. Massed studying does not lead to durable learning.
- "When you space out practice at a task and get a little rusty between sessions... retrieval is harder and feels less productive, but the effort produces longer lasting learning and enables more versatile application in later settings." (Brown et al. Make it Stick.

5. Aid memory II: formative assessment & the testing effect
- The act of trying to recall information aids memorization.
- Coach students to use active retrieval methods to study rather than rereading notes – which may lead to the "illusion of fluency." Teach students how to use flash cards correctly.
- Incorporate retrieval practice opportunities into class time.
- Use low- or no-stakes formative assessments, not pop quizzes.
- Both students and teachers should use the feedback and insights from formative assessments to plan what to do next.

6. Acknowledge limited working memory & cognitive load
- None of our students, even our strongest, have a fully developed working memory. Even for high-performing adults, working memory holds fewer items for a shorter time than you think.
- Working memory can thus be an unnecessary barrier to higher order thinking for ALL students. Teachers, who themselves are past the novice level in a subject, tend to underestimate this. Begin by eliminating unnecessary cognitive load.
- Structure curriculum so that key information and skills are stored in long term memory as you go.
- If cognitive load is too high, students may be able to do the work now, but not actually learn it.
- Create scaffoldings so that working memory is not a barrier to higher order thinking. Scaffoldings may vary from student to student. They should not make the work easy, just accessibly challenging.
- As students become more proficient, working memory demands lessen as key information and skills become stored in long term memory. Peel scaffoldings away as students gain proficiency.
- Provide students with models. Interleave questions and worked examples.
- It is important to give students concrete examples of abstract concepts.

7. Give feedback that works
- Great feedback can be one of the most effective MBE strategies. Feedback, however, can actually have a negative impact on learning. It's complicated!
- The most important thing about feedback is what students do with it. If it helps you get more of what you want from your students over the long-term, it's probably good. Otherwise it's probably not.
- How students take your feedback affects how much (if any) impact it has. There is an emotional component you need to be cognisant of, especially when feedback combines a score or a grade with comments.
- Feedback that is too specific to a particular task may improve performance on that task, but have little impact on longer-term learning. Feedback should improve the student, not the work.
- Feedback has to strike a balance between supporting a student in completing a particular task and helping develop their ability to think independently.
- Praise can be helpful, especially for discouraged learners, but the long-term aim should be to build students' confidence so that it is unnecessary.
- Make sure students understand the feedback you give them, and, even better, know what they need to do to improve.
- Students need an opportunity to act on feedback soon after getting it. Otherwise it is really just criticism; students take it as such, and it becomes a lot of teacher effort for little academic gain.
- Use feedback in ways that aid the building of metacognitive skills – the ability to use the insights from your feedback independently in future tasks.
- The feedback you give should develop over time. Detailed, specific and rapid early in the year, but over time wean students to a combination of self-assessment and delayed & summarized teacher feedback to boost their independence.
- Try giving feedback without a grade so that the focus is on the process.

MBE FOR THE LEARNING ENVIRONMENT & STUDENT WELLBEING

8. Understand the link between emotion and cognition
- Research from cognitive science tells us that emotion and cognition are related in the brain. Learning is therefore intertwined with and inseparable from emotion.
- Unnecessary sources of negative emotion should be minimized as they create barriers to learning.
- Deliberately use positive emotion to build engagement, motivation, and learning.
- Laughter is an underused way to aid engagement and learning. Other positive emotions, such as empathy, have not been highly studied but have great potential.
- Emerging research suggests that improving well-being can also improve engagement, self-efficacy, and learning.
- Schools should not force students to choose between academic challenge and emotional well-being.

9. Minimize classroom threats
- Work to aid identity validation and minimize identity threat – there is a strong link here with multicultural education work.
- Variations within groups are much, much greater than variations between them. Knowing the individual's culture might tell you something about them, but getting to know them as individuals will tell you far more.
- The emotional response to classroom threats create barriers to learning that must be eliminated.
- Every child, regardless of age, ethnicity, gender, race, religion, sexual orientation, socio-economic status, ability, or any other social identifier should feel safe, known, listened to, heard, and that their unique story matters.
- Know your students. Every child has a unique story to tell. Help them unearth their story, and find ways for those stories to be part of the story of your class.
- Create a classroom culture that values the shared meanings, values, and beliefs of its members. Investing precious time in this is worth it.

10. Balance stress
- Some stress is good. Lots is not.
- Stress is just a mismatch between expectation and capability. What is stressful for one person might not be for another.
- Too much stress involves the brain's fight, flight, freeze response, and not much higher order thinking, or memory storage or retrieval takes place.
- Some degree of stress is important to aid the healthy growth of the body's stress response system, and may aid engagement with a task. Balancing the stress level for each individual student is important.
- Stress should be episodic (with peaks and troughs), not constant. Strong, positive relationships with teachers are vital as these help buffer the effects of stress.
- Use research-informed strategies to address common academic stressors. E.g., improve homework, improve feedback, use more formative assessment, use the spacing and testing effects to help students prepare for tests, and vary the types of assessment.
- There is strong evidence that mindfulness can help learners of all ages.
- Exercise, good nutrition, and adequate sleep all help stress and learning.

11. Combine joy and rigor
- We must seek a paradigm shift so that rigor and joy are not seen as being mutually exclusive, or something that schools or parents must choose between.
- Our brains are hardwired to learn, so the times when deep student learning appears joyful should not surprise us. This is the norm we are aiming for.
- Some things that we need our students to learn are unnatural (e.g. reading & writing) and require structured building over time, plus scaffolding and support as needed.
- Challenge is important. For learning to be joyful, there must be rigor.
- Challenge must be at an appropriate level for each student at that moment. Too little challenge provokes boredom, too much incites frustration; both shut down learning.
- Positive relationships with teachers and between students are key to supporting the important balance of joy and rigor.

12. Include choice, play and down time
- Offering choice (e.g. in topic of study or means of assessment) can help engagement and achievement. But select moments for choice wisely, and give constraints.
- Students with relatively low achievement often do not know enough to make smart choices; give guidance.
- Good constraints help students be creative – but do not add too many or too few. They are the magic that make a project work (or fall flat), so give them thought.
- Play is critical to the social, emotional, and intellectual development of every child. We must create appropriate opportunities for play AT ALL GRADE LEVELS.
- Create moments in the daily routine for cognitive down time. It can help students manage cognitive load and stress, and helps them think hard throughout the day.

MBE TOOLS FOR STUDENT ACHIEVEMENT & LIFELONG LEARNING

13. Help grow executive functioning for all
- Students are often required to plan a well-reasoned course of action, monitor their progress, inhibit distractions, problem solve as they go, show mental flexibility to deal with what comes up, and assess when they are done. To do this, they use a set of mental processes referred to as executive functions.
- Parts of the brain involved in executive functioning are still growing and undergoing massive development into our mid 20's.
- This means executive functions can be improved for all students – and should be.
- Improvement requires repeated, dogged practice, with the executive functioning demands of tasks increasing continuously and incrementally.
- Provide scaffoldings to help get executive functioning demands "just right"; peel them away later as skills grow. Include reflection and metacognition tasks, with the long-term goal of helping each student self-monitor and self-regulate effectively.

14. Build metacognition
- Metacognition is strongly related to academic success, but is hard to improve – most students need help with it.
- Integrate metacognition into the general flow of the class, not as a standalone unit.
- Build both metacognitive knowledge (my current strengths and weaknesses, what strategies work for me and when) and metacognitive skills (applying prior knowledge and skills to a new task).
- Students' ability to generalize or transfer knowledge and skills to new contexts is not automatic – they need support and scaffolds to help get good at it.
- Use metacognition in the planning, monitoring, and evaluating phases of tasks.
- Teachers should model metacognition for their students. For example, with think-alouds, or explicitly describing their own thinking process.

15. Mindsets that promote resilience & determination
- When giving praise or criticism to a student, focus on the quality of effort (which the child may perceive as being in their control) and not their ability.
- Quality of effort is critically important; don't just work hard, work smart. Using the right strategy at the right time is the key to learning. Help students internalize the critical point – it is what "having a growth mindset" is all about.
- Help students find strategies that work for them. Help them tweak strategies.
- Help students learn how to assess whether a strategy is working and when to shift strategies. Guide their emerging ability to self-assess.
- Treat mistakes as an important part of learning. Provide guided opportunities for students to make mistakes, get feedback, and do something to get better as a result of what they learn. Grade, assess, and give feedback – written and verbal – with this in mind.
- Belonging mindset and relevance/purpose mindset are really important too.
- Purpose and relevancy help students stay engaged when challenge exists.
- Have high expectations of all students, and let them know this. Get students to believe that you have confidence in their ability to meet these expectations.
- Help students realize that all students struggle at times.
- Acknowledge students' worries about belonging. Explain how they may lessen over time as a member of this school community. Use instructional practices and school climate factors to help achieve this – this placemat can help.

The CTTL's Mind, Brain, and Education Research and Strategies Placemat

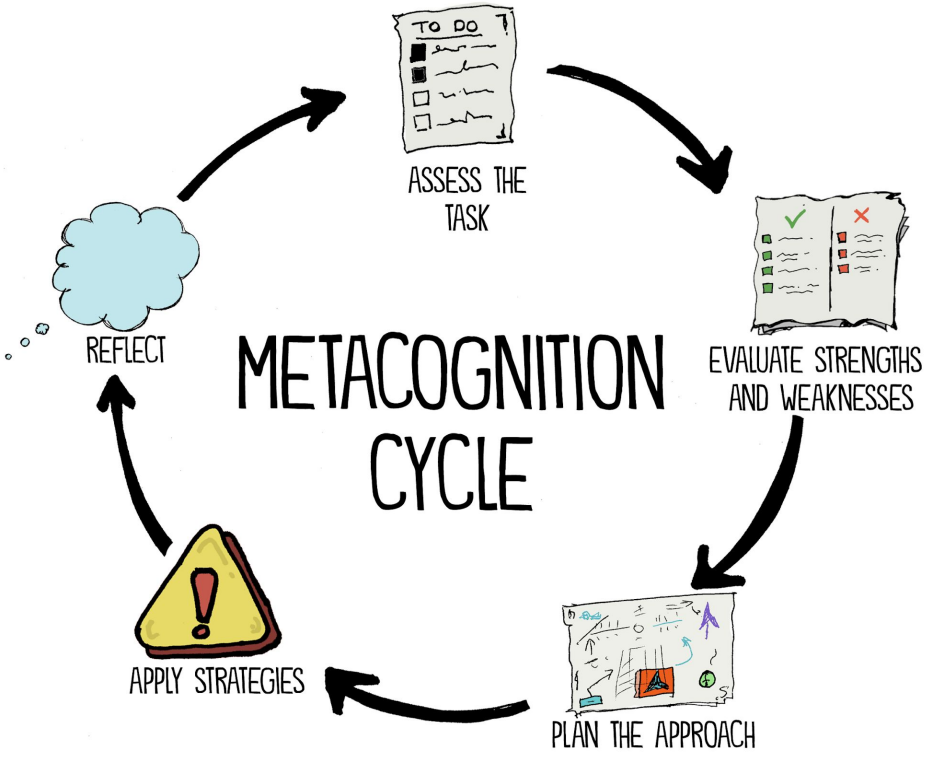
Promising MBE Research and Strategies

Cognitive Load
Diversity, Equity, and Inclusion
Dual Coding
Emotion and Cognition
Executive Function
Feedback
Homework
Memory
Meta-cognition
Mindsets
Multiple modalities
Neuroplasticity
Play
Sleep
Spaces (Teaching and Learning)
Stress (Episodic vs. Toxic)
Wellbeing and Joy

WHAT, THERE IS MORE THAN ONE MINDSET?

- Growth Mindset
- Purpose & Relevance Mindset
- Belonging Mindset

MINDSET SCHOLARS NETWORK



Growth Mindset

What are **3** new or elevated words that have emerged in your school, district, or program in the transition to virtual teaching and learning?

Go to menti.com and use the code

19 69 0

Doug Lemov
@Doug_Lemov

Following

Shared vocabulary to describe technical aspects of an endeavor is one of the most underrated tools for making conversations, teaching or information-sharing more efficient and productive.

9:05 AM - 3 Feb 2019

53 Retweets **168** Likes

8 53 168

List of factors affecting student achievement, Hattie 2018

Folio Team Norms

*general agreements on normal behavior

- Challenge the idea not the person
- Fail up
- Know where you started, and end somewhere more informed
- Speak to what is essential and park everything else
- Respect other stripes
- Pause for reflection
- Respect others’ time
- Be here prepared to be nowhere else
- Be flexible

Belonging Mindset > Growth Mindset

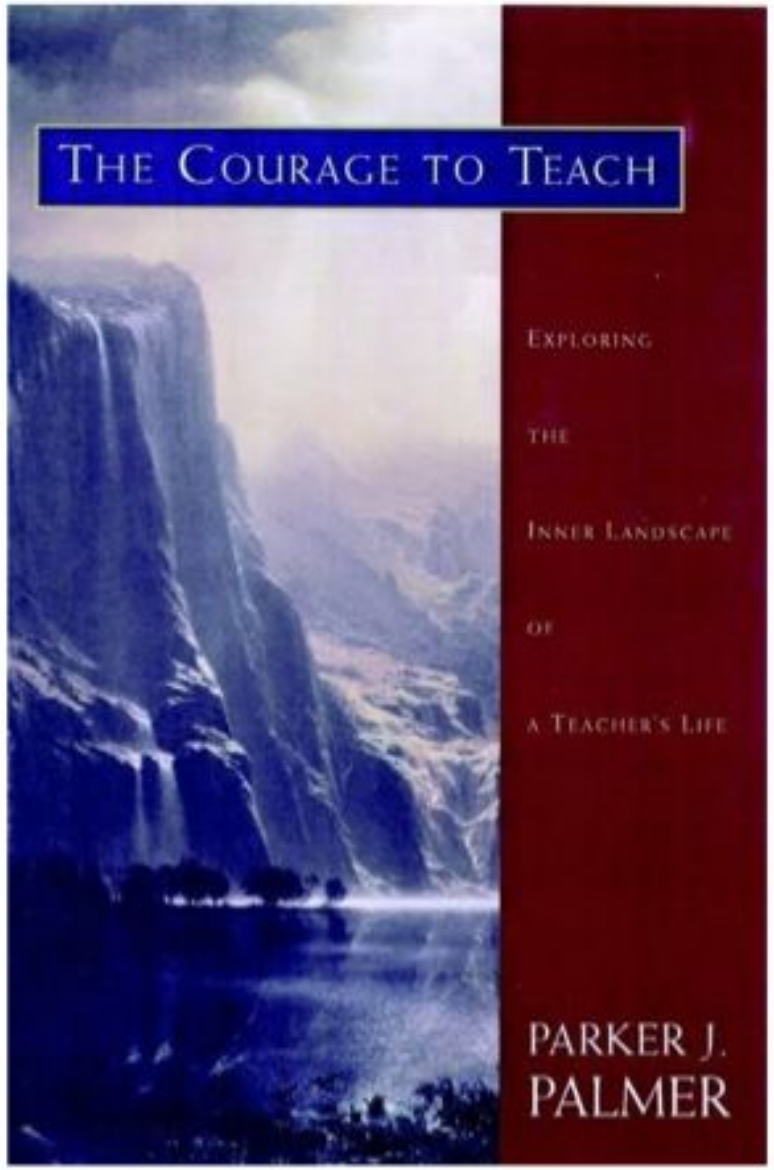
Belonging Mindset

The belief that one is respected and valued by teachers and peers, and fits in culturally in one's learning environment

Do your students and faculty feel this way?

"The connections made by good teachers [and leaders] are held not in their methods but in their hearts -- meaning heart in its ancient sense, the place where intellect and emotion and spirit and will converge in the human self."

-Parker Palmer, *The Courage to Teach*



1997

Belonging Mindset and Distant Learning:
(How can the following elements of a Belonging Mindset be supported through virtual learning experiences?)

- Students feel socially connected, supported, and respected.
- They trust their teachers and their peers.
- They feel like they fit in at school.
- They are not worried about being treated as a stereotype (stereotype threat).
- They are confident that they are seen as a person of value (identity validation).

Purpose & Relevance Mindset

Students value school when they understand how it is related to things they care about and how it can help them reach their long-term goals.

Students value their schoolwork when they believe it is relevant to their lives and experiences and/or will help them connect to a purpose that is bigger than themselves—whether it is a contribution to their family, their community, society at large, or something else.

-Mindset Scholars Network


MACDONALD HALL
ST. ANDREW'S EPISCOPAL SCH
inspired
LEADERSHIP

Virtual Learning at St. Andrew's 1.0

100% Synchronous experience (daily schedule)

Hard and Software

iPads (elementary) and MacBook Air (1:1 laptop program 5-12)

- Seesaw, Google Hangouts, Schoology (LMS), Google Drive

Goals

- Relationships
- Community
- Connectedness

Individual and collective meta-cognition moments

- End of Day faculty meetings (by division)

Virtual Learning at St. Andrew's 2.0

More balanced synchronous/asynchronous experience

Hard and Software

- iPads (elementary) and MacBook Air (1:1 laptop program 5-12)
- Seesaw, **Zoom**, Schoology (LMS), Google Drive

Goals

- Relationships
- Community
- Connectedness
- **Elevation of content**
- **Rethinking assessment (especially final exams)**

Individual and collective meta-cognition moments

- End of Day faculty meetings (by division)
- **Teacher, student, parent surveys (after DL Day 6)**
- **Distance Learning at www.thecttl.org**

High quality professional development does this:[1]

- Has a greater effect on student achievement than other school interventions
- Closes the effectiveness gap between novice & experienced teachers
- Improves retention problems
- Is a cost-effective intervention for improving student outcomes.

But needs this:[2]

- Focus on helping real students
- Based on robust evidence
- Includes collaboration & expert challenge
- Is sustained & iterative
- Is mindful of teachers' limited time

And only 1% of pd meets this bar

DOES YOURS?

[1] Wellcome Trust (2020)

[2] Teacher Development Trust (2015)

Try this next:
Chart your personal or your school’s collective mindsets:

Provide evidence of how each of the 3 Mindsets have informed your work with teachers, students, and families in this transition to remote learning.		
Growth Mindset (in the face of a challenge, opportunity, or barrier)	Belonging Mindset	Purpose & Relevance Mindset

@theCTTL

www.thecttl.org/distance-learning-resources

Dual-Coded Note taking

Keep	**Image**	**Stop**	Image
Tweak	**Image**	**Start**	**Image**

Community Support

What lingering questions do you still have that we could work on together?

Folio's Upcoming Events

- **Town Hall #3 featuring Tim Fish**, CIO for the National Association of Independent School
  - Tuesday, March 31 at 10:30
- **Folio Co-Labs:** Sustaining personal connections with faculty and staff remotely
  - Tuesday, March 31 - 8:00 AM (EDT)
  - Tuesday, March 31 - 12 noon (EDT)
- **Folio Leadership Coaching calls with Abigail Wiebenson**
  - Wednesday, April 1- 7:30 AM (EDT)
  - Thursday, April 2 - 12 Noon (EDT)

We need your feedback

Please take 3 minutes to complete the survey at the end of this call. It will help us to develop additional resources to support you.

Thank you!


Thank
You

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(800) 452-5078

ADDITIONAL RESOURCES

https://foliocollaborative.org/resources/