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For Further  
Conversation

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## Enticement Elements

- Curiosity
- Narrative
- Suspense
- Anticipation
- Vividness
- Foreshadow
- Props
- Personal voice
- Relevancy
- Situational Interest
- Gentle Competition
- Creating something

4



Whoever responds to students or classmates is doing the learning. Make sure the majority of the time it's students responding, not the teacher. [Consider Triads!]

Students learn more when they ask the questions. Teachers ask most of the questions in typical classrooms, however. Let's find ways to make question-asking so compelling they can't escape it.

In our lessons, where do we find curiosity, foreshadow, puzzles, debate, problems to be generated, mystery, dilemma, creativity, and wonder?

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## Use Effective Attention Signals



- Movement
- Sound
- Rain stick
- Power location
- Speak quietly, requesting an action
- Minimize light blinking in secondary classrooms

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## Use Effective Attention Signals

*(Additional ideas)*



- Using students' names
- Proximity
- Redirecting
- Startling
- Pre-alerting
- Prompts
- Humor
- Drama & Suspense
- Students as assistants
- Vocal inflection
- Unison task
- Props
- Argue (Devil's Advocate)
- Connect to student's imagination or life
- Foreshadow

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## Co-Presenting/Facilitating



- Tag Team
- Duet
- Speak and Interject
- Speak and Chart
- Perform and Comment
- Human Video with Remote Control
- Possibilities: Teacher/Teacher, Teacher/Student, Student/Student, Student/Parent, Teacher/Parent, Administrator/Teacher, Administrator/Student, Professional in the field and any of these



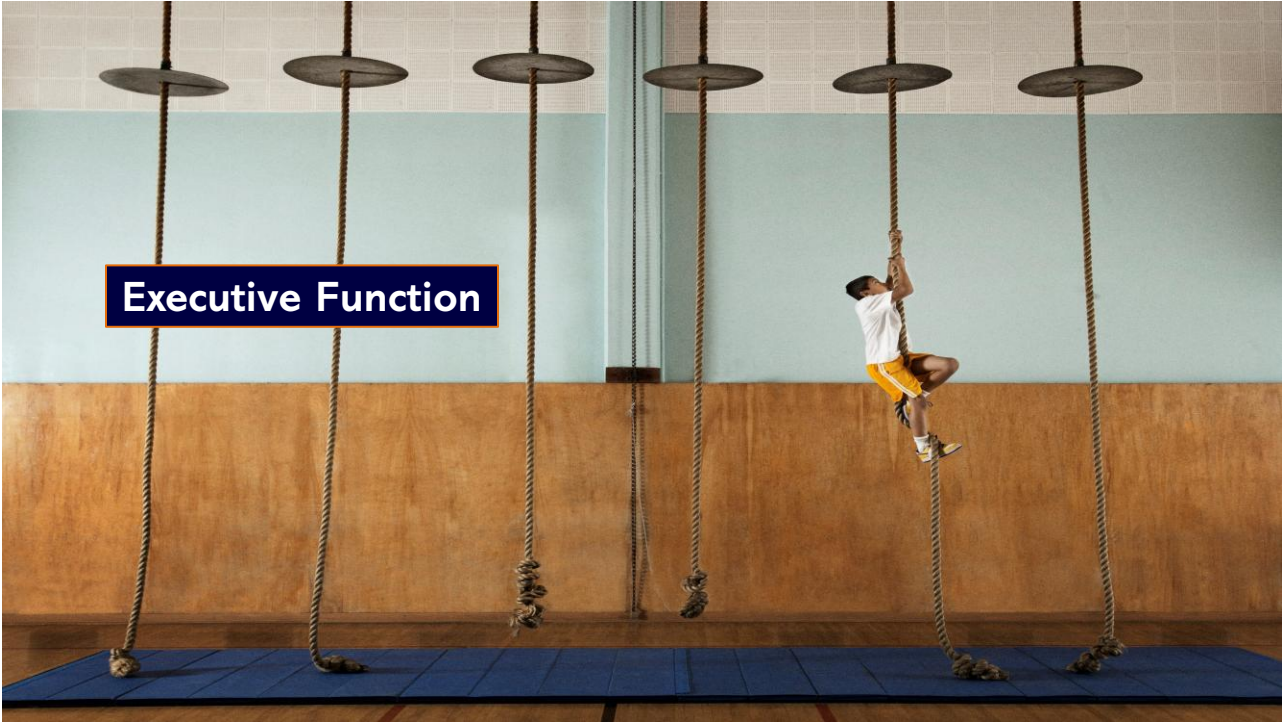
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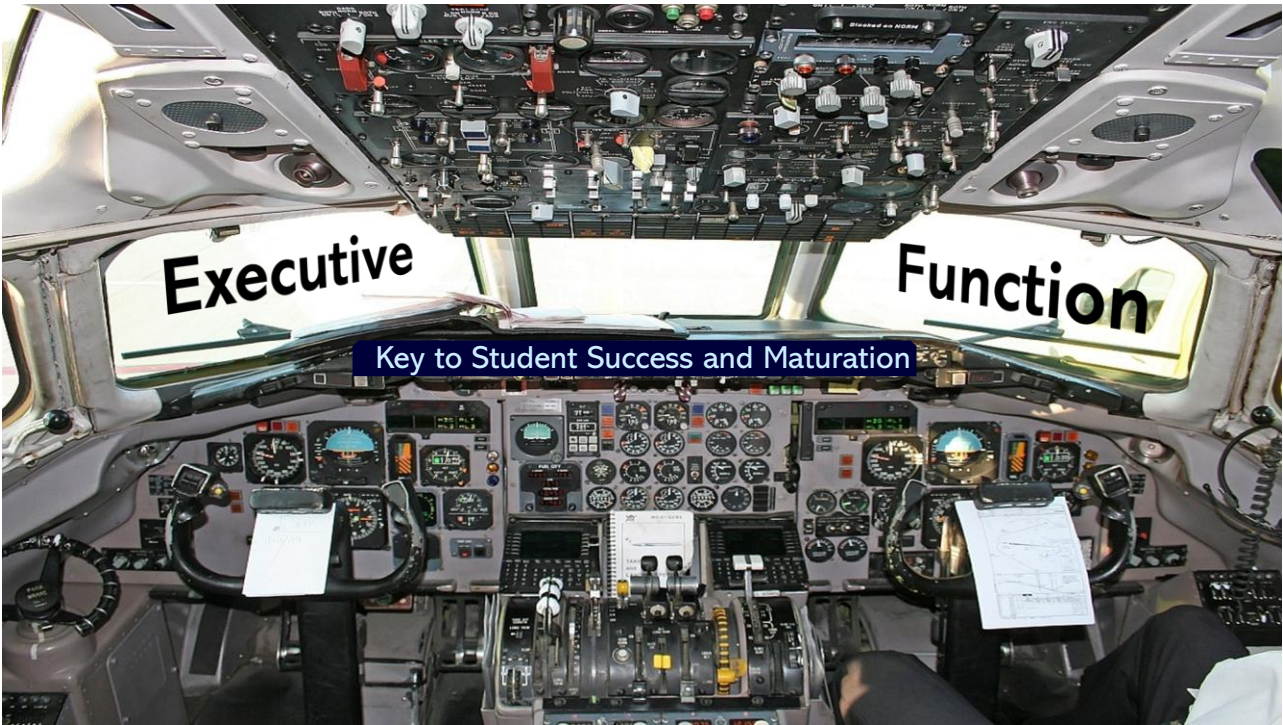
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**Seriously, if we don't do this, than almost all other techniques and design elements to engage students are a bust. This means we keep up with the latest research on the age groups and the individual nature of the children we teach.**

10



11



12

Consider that student maturity in these skills is often more predictive of future success than other commonly used measures.

**Executive Function skills:**

(Guare, Dawson, Guare, 2013, p. 15-17)

- **response inhibition**
- **working memory**
- **emotional control**
- **flexibility**
- **sustained attention**
- **task initiation**
- **planning/prioritizing**
- **organization**
- **time management**
- **goal-directed persistence**
- **metacognition**

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Great website for Executive Function research and recommendations for classroom practices for primary, elementary, and secondary teachers as well as for adults challenged by Executive Function skills:

<https://developingchild.harvard.edu/resource-guides/guide-executive-function/>

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## Highly Recommended articles for Faculty and Parents:

- <https://www.additudemag.com/executive-functioning-adhd-teacher-guide/>
- <https://ditchthattextbook.com/executive-functioning/>  
(Among other suggestions, this author recommends using the app, <https://www.forestapp.cc/>)

15

Anne Ginnett  
“Who Doesn’t Have  
Trouble with Executive Function?”

TedX Talk October 2015

<https://www.youtube.com/watch?v=zq0oNVb0k58>

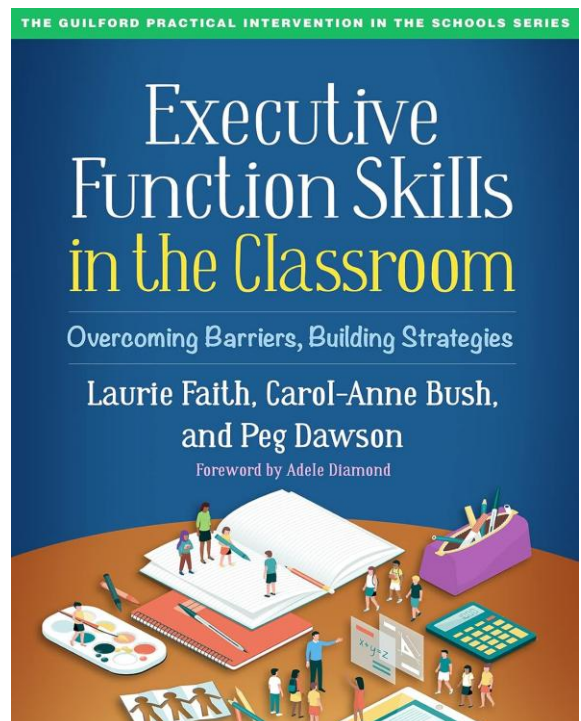
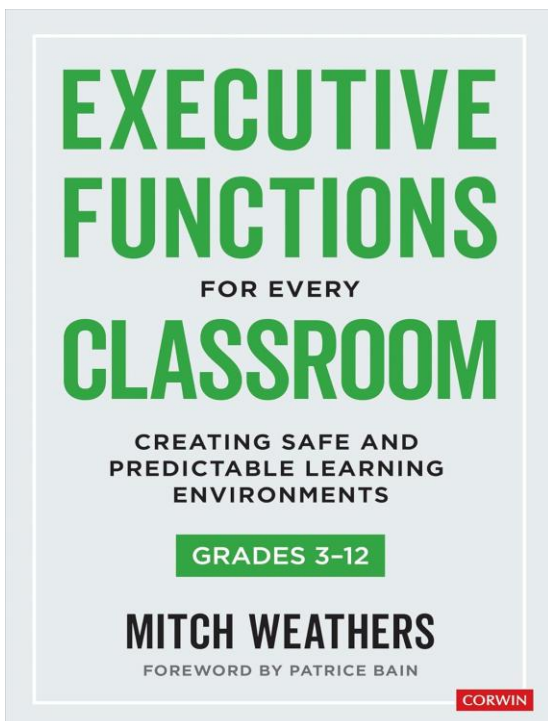
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*Highly Recommended Video Presentation on Youtube:*

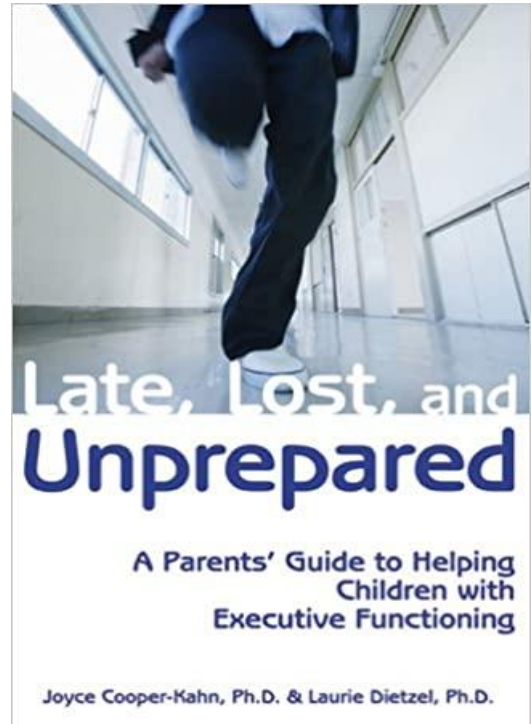
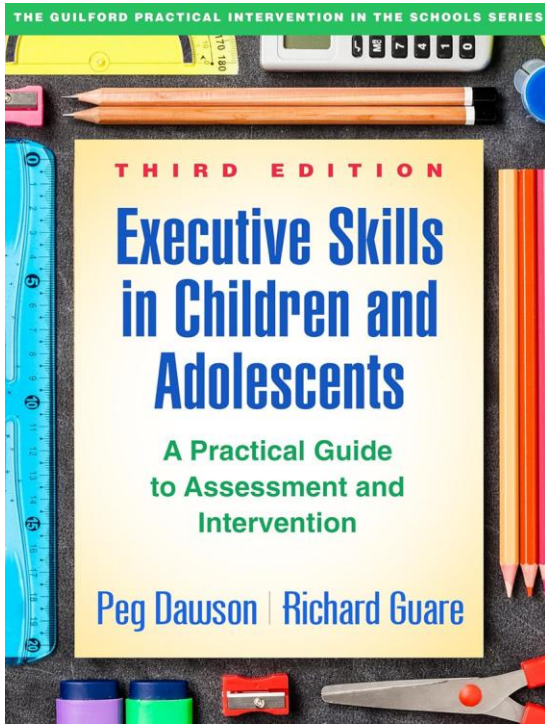
**Adele Diamond: Executive Functions  
@ the Simms/Mann Institute Think Tank**

(<https://www.youtube.com/watch?v=39BYyfr3SeY>)

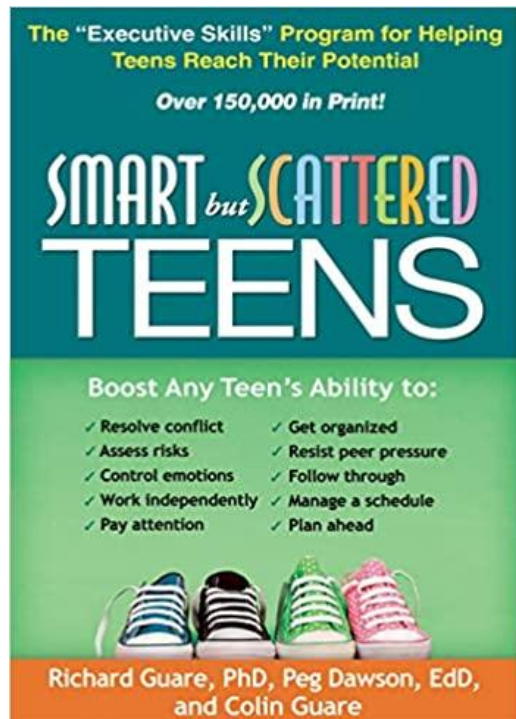
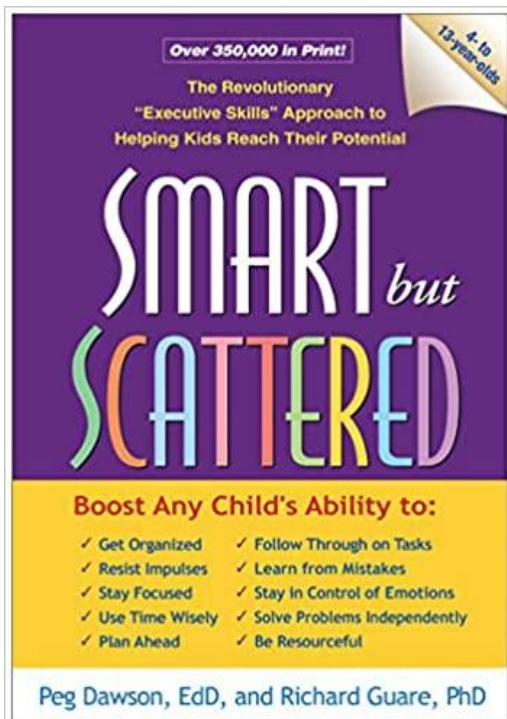
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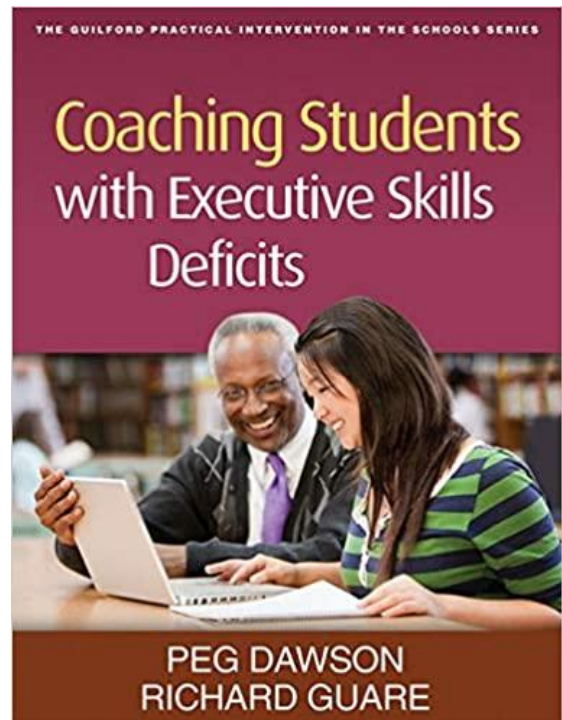
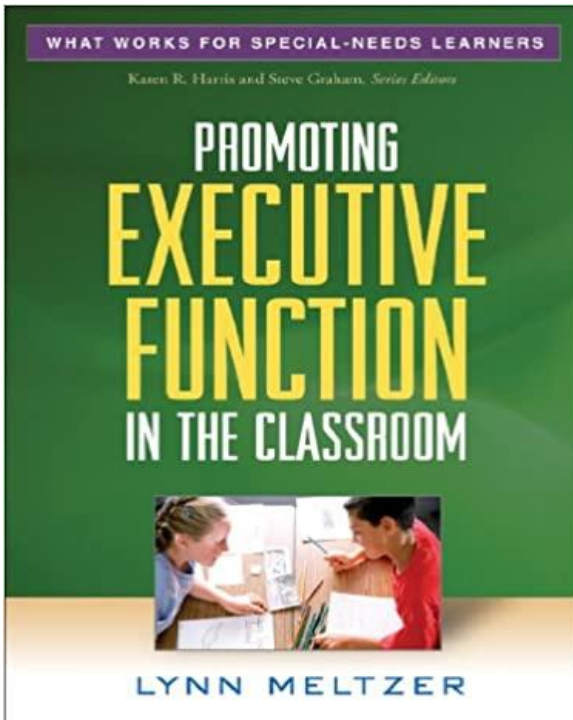
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### Highly Recommended Resources for Faculty and Parents:

- Any resources related to ADHD
- Any resources on the developmental nature of young adolescents and to teach them best
- <https://www.additudemag.com/> [and] <https://www.additudemag.com/executive-functioning-adhd-teacher-guide/>
- <https://ditchthattextbook.com/executive-functioning/>  
(Among other suggestions, this author recommends using the app, <https://www.forestapp.cc/>)

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**Insights into Motivation,  
Engagement, and Self-Discipline**

23

No research indicates using low, unrecoverable grades as the way to instill self-discipline, respect for deadlines, and caring about one's work. Teachers who rely on grades for class management and student motivation are uninformed, exacerbating the problems they are trying solve.

Let's get up to speed on what we know about motivating students and use those ideas instead of grades and grading.

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## Tiles in the Mosaic

For motivation, tenacity, taking responsibility, and more, consider:

- Responsive Teaching
- Child and Adolescent Motivation
- Relationships, Belonging
- Constructive Response to Anxiety, Panic, and Depression
- Agency (Voice and Choice)
- Learning Tools
- Self-Efficacy applications of A.I.

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## Tiles in the Mosaic

For motivation, tenacity, taking responsibility, and more, consider:

- Executive Function Skills
- Descriptive Feedback, Student Self-Monitoring
- Re-Learning-Re-Assessing
- Engaging Cognitive psychology Strategies (How the brain learns)
- Meaning-Making
- Sharing Clear, Achievable Goals
- Engaging Presentations

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Discrete mathematics is the study of mathematical structures that are fundamentally discrete rather than continuous. In contrast to real numbers that have the property of varying "smoothly," the objects studied in discrete mathematics – such as integers, graphs, and statements in logic – do not vary smoothly in this way, but have distinct, separated values. Discrete mathematics therefore excludes topics in, "continuous mathematics," such as calculus and analysis. Discrete objects can often be enumerated by integers. More formally, discrete mathematics has been characterized as the branch of mathematics dealing with countable sets (sets that have the same cardinality as subsets of the natural numbers, including rational numbers but not real numbers). However, there is no exact, universally agreed, definition of the term "discrete mathematics." Indeed, discrete mathematics is described less by what is included than by what is excluded: continuously varying quantities and related notions.

27

The set of objects studied in discrete mathematics can be finite or infinite. The term finite mathematics is sometimes applied to parts of the field of discrete mathematics that deals with finite sets, particularly those areas relevant to business. Research in discrete mathematics increased in the latter half of the twentieth century partly due to the development of digital computers which operate in discrete steps and store data in discrete bits. Concepts and notations from discrete mathematics are useful in studying and describing objects and problems in branches of computer science, such as computer algorithms, programming languages, cryptography, automated theorem proving, and software development. Conversely, computer implementations are significant in applying ideas from discrete mathematics to real-world problems, such as in operations research. Although the main objects of study in discrete mathematics are discrete objects, analytic methods from continuous mathematics are often employed as well.

28

The history of discrete mathematics has involved a number of challenging problems which have focused attention within areas of the field. In graph theory, much research was motivated by attempts to prove the four color theorem, first stated in 1852, but not proved until 1976 (by Kenneth Appel and Wolfgang Haken, using substantial computer assistance).

In logic, the second problem on David Hilbert's list of open problems presented in 1900 was to prove that the axioms of arithmetic are consistent. Gödel's second incompleteness theorem, proved in 1931, showed that this was not possible – at least not within arithmetic itself. Hilbert's tenth problem was to determine whether a given polynomial Diophantine equation with integer coefficients has an integer solution. In 1970, Yuri Matiyasevich proved that this could not be done.

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The need to break German codes in World War II led to advances in cryptography and theoretical computer science, with the first programmable digital electronic computer being developed at England's Bletchley Park. At the same time, military requirements motivated advances in operations research. The Cold War meant that cryptography remained important, with fundamental advances such as public-key cryptography being developed in the following decades. Operations research remained important as a tool in business and project management, with the critical path method being developed in the 1950s. The telecommunication industry has also motivated advances in discrete mathematics, particularly in graph theory and information theory. Formal verification of statements in logic has been necessary for software development of safety-critical systems, and advances in automated theorem proving have been driven by this need.

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When it comes to cognitive perseverance, carrot and stick approaches don't work. Avoid them.

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### Three Premises

- We can control and coerce someone to do something, but we can't motivate anyone to do anything they don't already want to do.
- Motivation is only doing to the best of our ability what we are already capable of doing. (*Rick Lavoie, F.A.T. City Workshop: How Difficult Can This Be?* PBS Video)
- Motivation is not something we do to students, it is something we create with them.

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Many educators have this backwards: Motivation is most often the result of achievement, not its prerequisite. Get students achieving and see the positive change in motivation.  
*- What does this mean for student instructional design?*

Students avoid experiences in which they feel incompetent. To help them get motivated, then, make sure they have, and that they perceive they have, the skill and content set needed for the task.

33

If performance on homework indicates students are out of their depth, and maybe don't belong in the class, students will avoid doing it, choosing instead to self-preserve and save face. They'd rather you thought them irresponsible than find out they can't read on grade level.

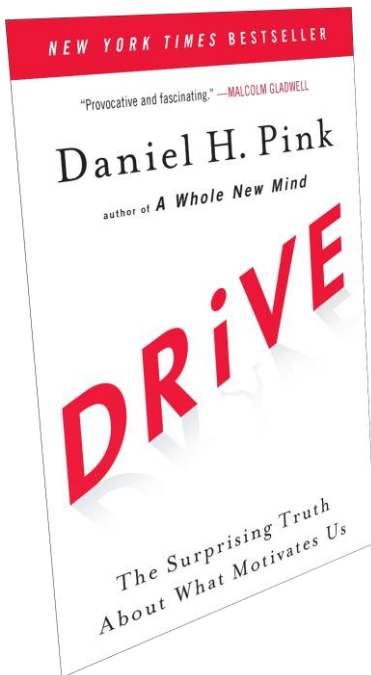
Laziness is not a natural resting state of humans. Our natural state is one of curiosity, a need to belong, to participate, contribute, build, learn complex things, and be successful.

34

Memorization still matters,  
even in a world in which we  
can look it up.

[www.ame.org/memorization-still-matters/](http://www.ame.org/memorization-still-matters/)

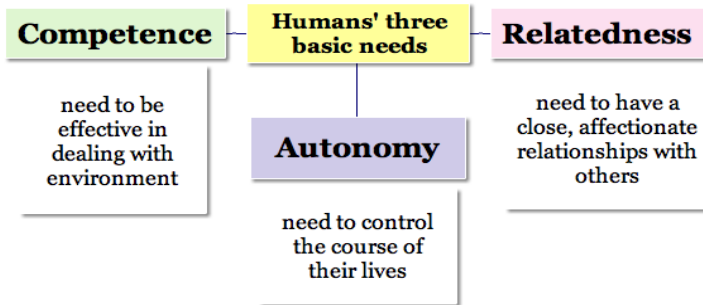
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Autonomy -- the ability to choose what and how tasks are completed  
Mastery -- the process of becoming adept at an activity  
Purpose -- the desire to belong, matter, or improve the world.

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## Self-Determination Theory



Self-Determination Theory  
(Deci and Ryan, 1985)

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### Characteristics of Motivational Classrooms (Rick Lavoie, *The Motivation Breakthrough*, 2007)

- 1.Relevance
- 2.Control
- 3.Balance of Support and Challenge
- 4.Social Interaction
- 5.Safety and Security

#### Motivational Forces (Needs):

To Belong	To be Acknowledged
To be Independent	To Control
To be Important	To Assert
To Know	

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- Dopamine increases our general level of inquisitiveness and goal-directed behavior as we seek to fill those needs.
- We feel good while we are doing the task (not just upon completion).
- It's released in great amounts when goals are accomplished.

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*Note the interesting dynamic:*

If we take away a ready source of Dopamine from students' daily lives, academic engagement will be challenging. We must replace that source with activities that release natural amounts of Dopamine in students' bodies.

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## Triggers of Dopamine - We Can Alter Dopamine Release

1. The brain can be trained to feed off bursts of dopamine sparked by accomplishment (rewarding experiences):
  - Little incremental goals (focused on one thing at a time)
  - Accomplishing tasks is a reward
  - Positive, constructive feedback (from self and others)
  - Progress through series of goals to accomplish the BIG one!
2. Other POSSIBLE Dopamine-Releasing Triggers:
  - Successful problem solving
  - Positive, deeper-learning, group experiences (communicating the good and bad results with a team)
  - Laughter, fun, anticipation
  - Switching from analyzing to being creative
  - Challenge
  - Questions of interest posed
  - Did it! (Checklist)
  - When protein is eaten
  - Movement!!!! Exercise!!!!
  - Enhancing Working Memory Strategies
  - Brain Breaks (Syn-NAPS) – to avoid depletion of neurotransmitters in the synapse. CHUNK-CHEW

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Rick Lavoie  
From F.A.T. City Workshop: How  
Difficult Can This Be?

Visual Perception

42



43

When it comes to student motivation, nothing matters more than feeling safe, invited, and that you belong.

All other strategies are of limited effect until these three are assured.

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**We can help  
school personnel  
to be that one  
adult.**

Why do some children adapt and overcome childhood trauma and others bear lifelong scars that hurt their potential? “Every child who winds up doing well has had at least one stable and committed relationship with a supportive adult.”

- Bari Walsh, “The Science of Resilience: Why Some Children Can Thrive Despite Adversity.”



45

Students need to feel their life and culture are honored, that they have something to bring to the conversation, task, and learning. Motivation suffocates with teacher dismissiveness or inattention to earned insights and internal narrative.

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*Is this a safe for me to be my genuine self?  
Can I make mistakes and not have them held against me?*

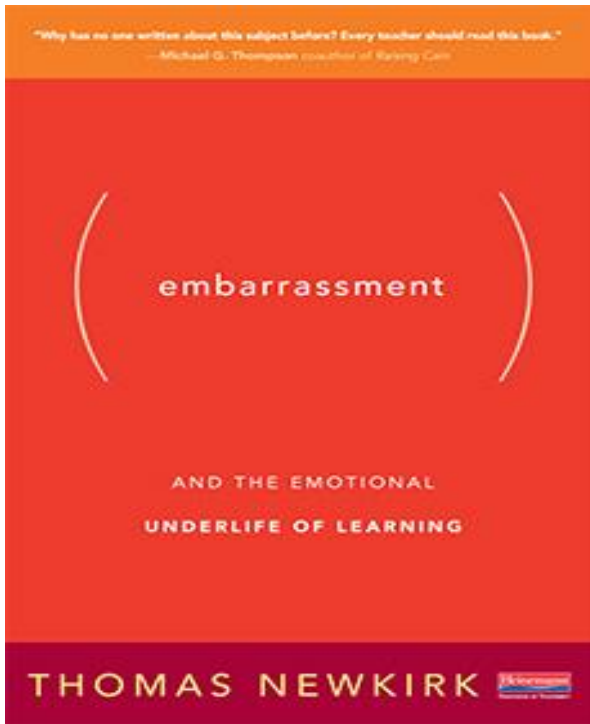
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“If I had been a  
kid in my class  
today, would I  
want to come  
back tomorrow?”

-- Elsbeth Murphy,  
*Chalkdust*, 1979

Highly recommended book: Vitto, John M.;  
*Relationship-Driven Classroom Management:  
Strategies That Promote Student Motivation*,  
Corwin Press, 2003

48



**‘Highly recommended, one of the most impactful books on teaching I’ve read in years.**

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## Where are my –’actives?

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If one of these is a little weaker for you, let it be the primary focus in the months ahead.

- Proactive – How am I developmentally responsive and effective with instructional design and my knowledge of the individuals in my room?
- Interactive – How am I connecting to students in such a way as to continue the relationship and help them with their own agency?
- Reactive – How am I responding to discipline issues in the moment?

50

Interact with students based on  
*mutual ethos.*

- Do we look out for students' interests as learners as they look out for our success as teachers?
- Do we provide a space for students' lives at learning's table?
- Are we worthy of students' respect?

51

Model reliability. Goodwin and Miller: 2013 study demonstrating that adult experimenters who followed through on promises positively affected children's resilience. Children whose experimenters did not keep their promises were less resilient than the other group. Actions speak louder than words. - *Education Leadership*, ASCD, September 2013, p. 75

52

Relationships are everything. How would I know if I have the kind of relationship with students that allows learning and feedback to flourish?

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How do we build credibility with students?

“Do you have credibility? Do your students believe they can learn from you? ...[T]eacher credibility has the potential to more than double the rate of learning in the classroom.” – *How Feedback Works*, p. 78-79,

53

Hope is very demanding as it makes things possible and compelling. When there is hope, there is no choice but to forge ahead and commit to the effort.

When we remove hope, there's nothing left to lose, and we find ways to avoid the demands and rationalize our way out of accountability.

54

- You're having a tough time. How can I help?
- This seems out of character for you. Is there something you can tell me that would help me understand things better?
- You seemed to have lost your way. What can we do together to get you back to a positive place?
- I believe in you and your future unconditionally. Let's take a look how we can re-gain trust.

That Different Lens:  
**Compassion**

55

*Stop & Consider:*

**Recovering from failure in full teaches  
more than being labeled for failure ever could teach.**

56

Rick's new article on Practical Tips  
for Re-Learning and Re-Assessing:

[https://www.amle.org/re-learning-  
and-re-assessing-practical-tips/](https://www.amle.org/re-learning-and-re-assessing-practical-tips/)

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## **Inviting, Not Disinviting**

Affirm; create rites of  
passage.

Model enthusiasm for the  
subject

Plants, lots of them

Positive Postcard home

Greeting at the door

Student work up in the room  
and referenced

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## **Inviting, Not Disinviting**

Directing students to one another

Negating incorrect responses diplomatically

Location of the teacher's desk

Honoring students' passions & interests

Body language and time indicating time in their company is valued

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Negating Students' Incorrect Responses  
While Keeping Them in the Conversation

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- Act interested, “Tell me more about that...”
- Empathy and Sympathy: “I used to think that, too,” or “I understand how you could conclude that...”
- Alter the reality:
  - Change the question so that the answer is correct
  - That’s the answer for the question I’m about to ask
  - When student claims he doesn’t know, ask, “If you DID know, what would you say?”

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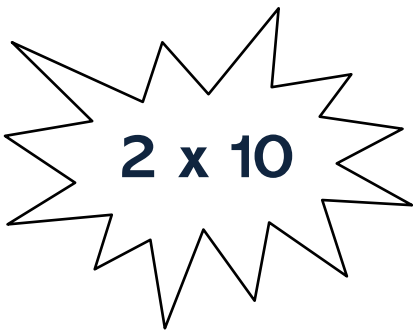
- Affirm risk-taking
- Allow the student more time or to ask for assistance
- Focus on the portions that are correct
- Remember: Whoever is responding to students is processing the information and learning. Who, then, should be responding to students in the classroom? Students.

62

“Emotion drives attention,  
attention drives learning.”  
-- Robert Sylwester, 1995, p.  
119, Wolfe

63

## Positive Connections Research



Research by: Raymond Wlodkowski,  
Motivational Opportunities for Successful  
Teaching. Phoenix, AZ: Universal  
Dimensions

Have a personal conversation with the student that is about anything in which they are interested. The idea is to re-establish normal connections and to prove to the student that they belong and that you value time in their company.

### Time Commitment:

- 2 minutes a day
- 10 days in a row

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And the result?

**85%**  
improvement in that one  
student's behavior AND  
'found behavior of all other  
students in that class  
improved as well.

65




66

When properly done, **validation** for hard work and solid learning comes primarily from sources *other* than teachers or parents:

- The student finds connection, meaning, or joy in it for its own sake.
- Classmates find the student's work and competence helpful to them in their own efforts.
- The student uses the learning in meaningful pursuits in other classes.
- The student uses the learning to do things after school hours that are valuable to him.
- Professionals in the field provide constructive feedback.

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Voice and Choice help students shed learned-helplessness and overdependence on the need for external validation.

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# Quaglia Student Voice Survey

2015-2016 ([www.quagliainstitute.org](http://www.quagliainstitute.org))

- 48,185 students in Grades 6-12
- 12,157 students in Grades 3-5
- 249 schools across 14 states

## Research Found:

- ❖ 52% of students said their teachers make an effort to get to know them.
- ❖ 43% believe their teachers care about their problems and feelings.

And clearly, the best news...

When students have a voice, they become 7X more academically motivated.

Agency (voice and choice) is not one event or factor, but rather a continuous cycle of growing and learning based on one's interests, background, knowledge and experiences, and what students perceive is meaningful to them. There is a passion, flow, and initiative to keep learning until goals are met or new ones are formed, even when confronted with serious hurdles along the way, and students are empowered to act upon what is learned and valued.

With voice and choice, students self-initiate and persevere in their own learning through partnership with others and empowerment by co-designing goals, tasks, methods, and criteria for success, monitoring progress, and for resolving challenges.

“Once a direction is set, students don’t just gaze out the window of the bus. They drive.”

- Jennifer Davis Poon, 2018

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What's In It for Me?

Tune your Radio  
Station to

**WII.FM**

**WII.FM**

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**Position  
students as  
agents of  
their own  
learning.**

- Based on an idea  
by Susan Brookhart

73

**For example, when  
providing  
descriptive  
feedback that  
builds  
perseverance and  
cultivates  
engagement and  
perseverance,  
comment on  
decisions made  
and their impact,  
*NOT* quality of  
work.**

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In which teacher statement is the student considered thoughtful and an agent of their own learning?

- “That topic is going to take you down too many rabbit holes. It won’t work for this project.”
- “Tell me more about your reasoning for this topic – Where do you think it will lead?”

75

In which teacher statement is the student considered thoughtful and an agent of their own learning?

- “If you had more time, what would like to change in your work so that it matched the example given?”
- “I’ve marked three places for you to go back and fix. Get busy.”

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Goldilocks Principle:  
Give feedback so that,  
“...students get enough  
feedback so they the  
understand what to do,  
but not so much that  
they work has been  
done for them.”

- Brookhart, 2008, p. 13

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- “Using words and phrases that ‘lecture’ or ‘boss’”
- Telling the student what to do, leaving nothing up to the student’s choice
- Assuming that your feedback is the last word, the final expert opinion”
- Finding fault

VS

**Avoid**

**Do Instead:**

- “Using words and phrases that assume the student is an active learner
- Asking questions
- Sharing what you are wondering about”
- Seeking to understand, compare to exemplars, re-direct, not blame

**Tone matters.**

- Brookhart, 2028, p. 26,  
34

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In schools, whoever is doing the editing is doing most of the learning. Do not edit student work. Instead, teach them how to find and correct their own mistakes. They will internalize the correction much more solidly; it's active, not passive.



Suggestion: Place a dot or cartoonish eyeballs near the problem in the student's work without identifying specifically the issue or its correction.

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## **Student-Led Conferences**

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**Agency, yes!**

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## Let me tell you...

- What worked for me, and what did not
- What I will change in my learning or study practices next time
- Where I started, where I ended up, and what decisions I made in order to learn (or be successful)
- What I learned about myself as a student
- Where I'm going next with this

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## Recommended Articles on the Best Digital Apps Used to Create Portfolios

- <https://www.educatorstechnology.com/2012/06/free-apps-to-create-digital-portfolios.html>
- <https://www.techlearning.com/resources/top-10-sites-for-creating-a-digital-portfolio>
- <https://www.edutopia.org/article/tools-creating-digital-student-portfolios/>
- <https://www.edtechreview.in/trends-insights/insights/top-resources-for-students-to-create-a-digital-portfolio/>

82

## Recommended Websites on Practices and Getting Started with Student-Led Conferencing

- <https://www.edutopia.org/blog/student-led-conferences-resources-ashley-cronin>
- <https://www.wps.k12.va.us/Page/10975> Winchester Public Schools, VA
- [//efaidnbmnnnibpcajpcglclefindmkaj/https://images.template.net/wp-content/uploads/2015/11/13204219/student-council-agenda-template.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://images.template.net/wp-content/uploads/2015/11/13204219/student-council-agenda-template.pdf) (Washington Heights Expeditionary Learning School Minds in Motion)
- [//efaidnbmnnnibpcajpcglclefindmkaj/http://mlei.pbworks.com/f/SLCP P.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/http://mlei.pbworks.com/f/SLCP%20P.pdf) (From Patti Kinney, training principals presentation)
- (Podcast) <https://www.bamradionetwork.com/track/student-led-parent-teacher-conferences/>

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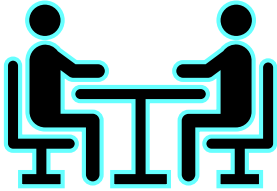


'Teacher & Parent as Coach, helping students orchestrate their own learning...

Coaching/Mentoring Questions [Based on the work of Costa, Garmston, Toll, Aguilar, Knight, and Wormeli]

84

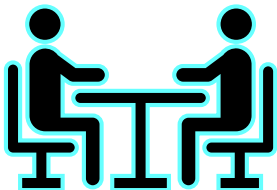
## Paraphrasing



- I hear you saying...
- What I hearing you saying is...
- Let me make sure I have this correct...
- In sum, then, you are worried that...
- Do I have that right?
- Did I hear that correctly?
- It sounds like you're saying that...

85

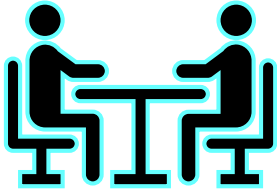
## Helpful Coaching Questions



- How do you feel it went?
- When you think about your successful learning, what gets in the way?
- Why did you choose....?
- Why did you *not* choose to...?
- How does this move you from dependence to independence?
- When you do this again, what will you change?
- Let's compare your attempt to the example given – where is it different?

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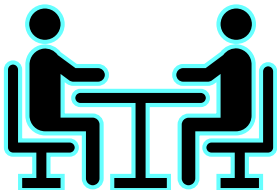
## Helpful Coaching Questions



- How's [X] going? You were concerned/happy with X last time.
- What was your goal there?
- What do you mean by....?
- Tell me more about...
- How will you be different as a result?
- What would a respected classmate or friend do this situation?
- What have you done in the past, and what was the result?

87

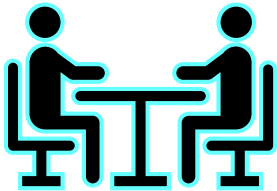
## Helpful Coaching Questions



- Is there another way to do this?
- I noticed you...., and as a result... Was that your goal?
- How does that help you achieve your goal?
- Describe a time when this was successful for you.
- Tell me what excites you about this unit.
- Let's consider the situation from his/her point of view....

88

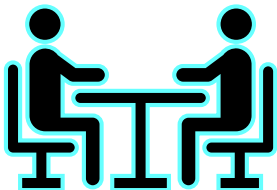
## Helpful Coaching Questions



- How will you begin?
- What will you need for that?
- Can you give an example of...?
- Imagine yourself at that point in the learning – What will be going through your mind?
- Can you describe that further?
- Let's rehearse that moment together.
- Let's watch another demonstration via video clip – What do you notice?

89

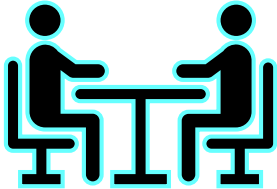
## Helpful Coaching Questions



- How will you know you are successful?
- What did you see the teacher or classmates doing (or hear them saying) that made you feel that way?
- What do you recall about your own behavior during the experience?
- How did what you planned compare with what you did?
- What are some anticipated challenges or problems, and how can we address them?

90

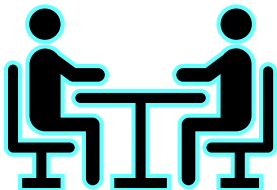
## Helpful Coaching Questions



- Is there any part of this that you can do yourself?
- What could we do to help you get this done on time?
- “If this problem were solved, what would it look like?” (Toll, p. 32)
- And then? ....And then?
- If you weren’t worried about rushing, how would you do this differently?
- What do you notice?

91

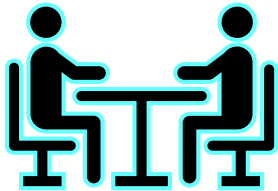
## Helpful Coaching Questions



- What have you tried?
- How would you like this to be different?
- Have you talked to....? They may have some advice on this.
- Where did the learning break down?
- I hear you saying..... Is that what you intended to say?
- What else are you considering?
- What does that tell you?

92

## Helpful Coaching Questions



- Could you tell me how you...?
- And what else?
- And what was your response?
- How could we re-phrase that to better communicate what you want to say?
- What have you tried so far?
- What would you like to try?
- Did it work – How do you know?
- Let's brainstorm some possibilities together.

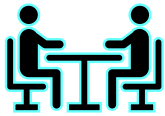
93



## Helpful Resources for Coaching

- Educational Coaching: A Partnership for Problem Solving by Cathy A. Toll
- Turning to One Another: Simple Conversations to Restore Hope to the Future by Margaret Wheatley
- Embarrassment – And the Emotional Underlife of Learning by Thomas Newkirk
- Onward: Cultivating Emotional Resilience in Educators by Elena Aguilar
- The Art of Coaching: Effective Strategies for School Transformation by Elena Aguilar

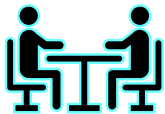
94



## Helpful Resources for Coaching

- **The Human Side of School Change: Reform, Resistance, and the Real-Life Problems of Innovation** by Robert Evans
- **Instructional Coaching: A Partnership Approach to Improving Instruction** by Jim Knight
- **Better Conversations: Coaching Ourselves and Each Other to Be More Credible, Caring, and Connected** by Jim Knight
- **Coaching Conversations: Transforming Your School One Conversation at a Time** by Linda M. Gross Cheliotos, Marceta F. Reilly
- **Unstuck: How Curiosity, Peer Coaching, and Teaming Can Change Your School** by Bryan Goodwin, Tonia Gibson, Dale Lewis, and Kris Rouleau

95



## Helpful Resources for Coaching (Ideas here are for coaching adults only)

Articles by Rick Wormeli that may help, available at [www.rickwormeli.com](http://www.rickwormeli.com):

- **The Grief of Accepting New Ideas**
- **Cultivating the Intellectual Life of Teachers**
- **Reflective Coaching: Training for All Teachers**
- **Just Did Some Professional Development – Now What?**
- **Specific, Candid, and Helpful Responses to Expressions of Racism and Bias**
- **Where Do We Find Time to Do all this Stuff?**

96



<https://iite.unesco.org/highlights/open-badges-new-opportunities-to-recognize-and-validate-achievements-digitally/>

97



<https://shanmon-wilson.medium.com/digital-badges-what-it-is-and-why-is-it-important-3509ffb3fc57>

98



Jason Tomaszewski, *Education World*,  
[https://www.educationworld.com/a\\_tech/schools-students-digital-badges.shtml](https://www.educationworld.com/a_tech/schools-students-digital-badges.shtml)

99



<https://liquidliteracy.com/2013/10/12/motivating-literacy-digital-badges-in-the-school-library/>

100



<https://www.the74million.org/article/how-indianapolis-high-schools-are-using-badges-to-help-students-demonstrate-skills-and-land-jobs/>

101

## Micro-Credentialing, Digital Badges, and Modular Learning



Digital Badges tend to have the following elements:

- Name of the badge and image/icon
- Criteria for Certification/Proficiency
- Earner's name
- Course title
- Issue date
- Issuer name and title

*What would this look like in schools as students pursue personalized learning and build their academic and professional portfolios?*

102

## Suggested Places to Get Started with Using Digital Badges with Students:

- <https://www.ascd.org/el/articles/the-power-of-digital-badges>
- <https://www.techlearning.com/how-to/motivating-students-with-digital-badges>
- <https://sertifier.com/blog/digital-badges-for-students-a-comprehensive-guide/>
- <https://practices.learningaccelerator.org/strategies/student-badges>
- <https://shakeuplearning.com/blog/5-awesome-resources-for-badges-in-the-classroom/>

103



104

## Neurogenesis

Birth of new brain cells

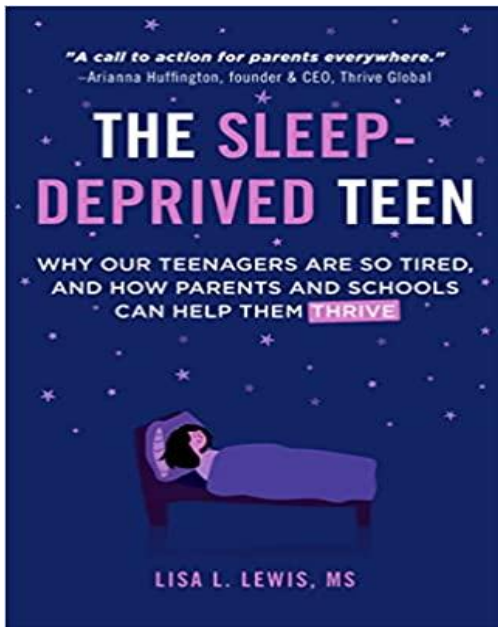
### Enhanced by:

- Exercise
- Complex Environments
- New Learning
- Nutrition
- Low Stress
- Social Situations

### Reduced by:

- Distress
- Inactivity
- Boredom
- Depression
- Poor Nutrition
- Isolation and low social status

105



*Quick Reminders about our Brains in Adolescence:*

- **Sleep is critical**

Sleep dramatically affects the capacity to learn, retain long-term memory elements, personality, willingness to engage/persevere, our perception of time, clarity of thinking, attention/focus, our body's capacity to recover from stress and to process the day, starvation response (with overeating issues), and energy allowances for the next day. What is the school doing to promote sound sleeping practices for adolescents, and not just leave it to chance?

← Released June 2022

106

Daily exercise has dramatic impact on the development of the brain's frontal lobe (Bennett and Kalish, p. 91). This affects decision-making, abstract and moral reasoning, personality, impulsivity control, immediate working memory, insight, and being aware of consequences

107

Very little goes into long-term memory unless it is connected to something already in storage. Create prior knowledge where there is none.

---

“To a person uninstructed in natural history, his country or seaside stroll is a walk through a gallery filled with wonderful works of art, nine-tenths of which have their faces turned to the wall.”

-- Thomas Huxley, 1854

108



- What do you see?
- What number do you see?
- What letter do you see?

Perception is when we bring meaning to the information we receive, and it depends on prior knowledge and what we expect to see. (Wolfe, 2001) Are we teaching so that students perceive, or just to present curriculum and leave it up to the student to perceive it?

109

Prime the mind for the experience: Read the stories of the museum exhibits, opera, ballet, Shakespeare play, home of the scientist, and the history of the country before visiting them.

110



- **Making connections.**
- **Re-coding something we're learning in terms of something we already understand.**
- **Using the content or skills in the pursuit of something we value.**
- **Using our efforts/talents in the service of others**

111

**d-a-o-o-u-i-d-y-v-l-e**

112



*Chance favors  
the prepared mind.*

-- Louis Pasteur

113

**“The breathing of Benbow’s pit is deafening, like up-close jet engines mixed with a cosmic belch. Each new breath from the volcano heaves the air so violently my ears pop in the changing pressure – then the temperature momentarily soars. Somewhere not too far below, red-hot, pumpkin size globs of ejected lava are flying through the air.”**

**-- *National Geographic*, November 2000, p. 54**

114

**“A volcano is a vent in the Earth from which molten rock (magma) and gas erupt. The molten rock that erupts from the volcano (lava) forms a hill or mountain around the vent. Lava may flow out as viscous liquid, or it may explode from the vent as solid or liquid particles...”**

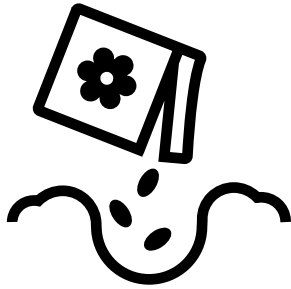
**-- *Global Encyclopedia*, Vol. 19 T-U-V, p. 627**

115

Read complex text aloud with proper vocal inflection and pacing. Students can understand text in readabilities above their own independent, silent reading proficiency when the complex text is read aloud by someone who understands the material.

Students who understand text are more inclined to stick with it when reading it silently later.

116



Prime the mind for learning:

- What they will get out of the experience (the objectives)
- What they will encounter as they go through the experience (itinerary, structure)

117

Which one leads to more willingness to stick with a lengthy article and learn how microscopes work?

- Kellen plays with the [manipulatives, algorithms, sample problems, graphic design, math tools, case scenarios, video demonstrations, software, etc], experimenting, wrestling and more – then reads the textbook explaining the math concepts and how to determine solutions, then finally is asked to practice the new knowledge on eight practice problems.
- It's reversed: Kellen reads the textbook, solves the practice problems, then is allowed to play with the algorithms, tools, manipulatives, videos, case scenarios, etc

118

### **Vividness:**

- **Comparing Constitutions – Former Soviet Union and the U.S. with identifying names removed**
- **Real skeletons, not diagrams**
- **Simulations/Role-play/Scenarios/Hypotheticals**
- **Writing Process described while sculpting with clay**
- **Use/Construct working models**
- **Video and live demonstrations**
- **Field study**
- **“Physicalizing” the abstract**

*Let's make a practice of experiencing the abstract vividly.*

119

There is not any curriculum so symbolic or abstract that we cannot “physicalize” it for better student learning.

120

## Why Should We Physicalize Content and Skills in the Curriculum?

- Gets oxygen/nutrients to cognitive centers of the brain
- It's fun and intrinsically motivating
- Relieves bone growth plate stress
- Relaxes students and improves their perspective/attitude, creates mild euphoria
- Supports cognitive theory regarding how students best learn
- The human body is built to move, not sit
- Makes abstract content vivid and thereby illuminates it
- Often involves face-to-face interactions which has more urgency and connectivity in a world in which students spend so much time passively looking at screens

121

- Identify essential components, pieces, or definition of whatever we're teaching
- Physicalize those pieces and present them to the class.
- Class critiques the physicalization in terms of accuracy, comprehensiveness, appropriateness, and clarity. 'Makes suggestions for improvement.

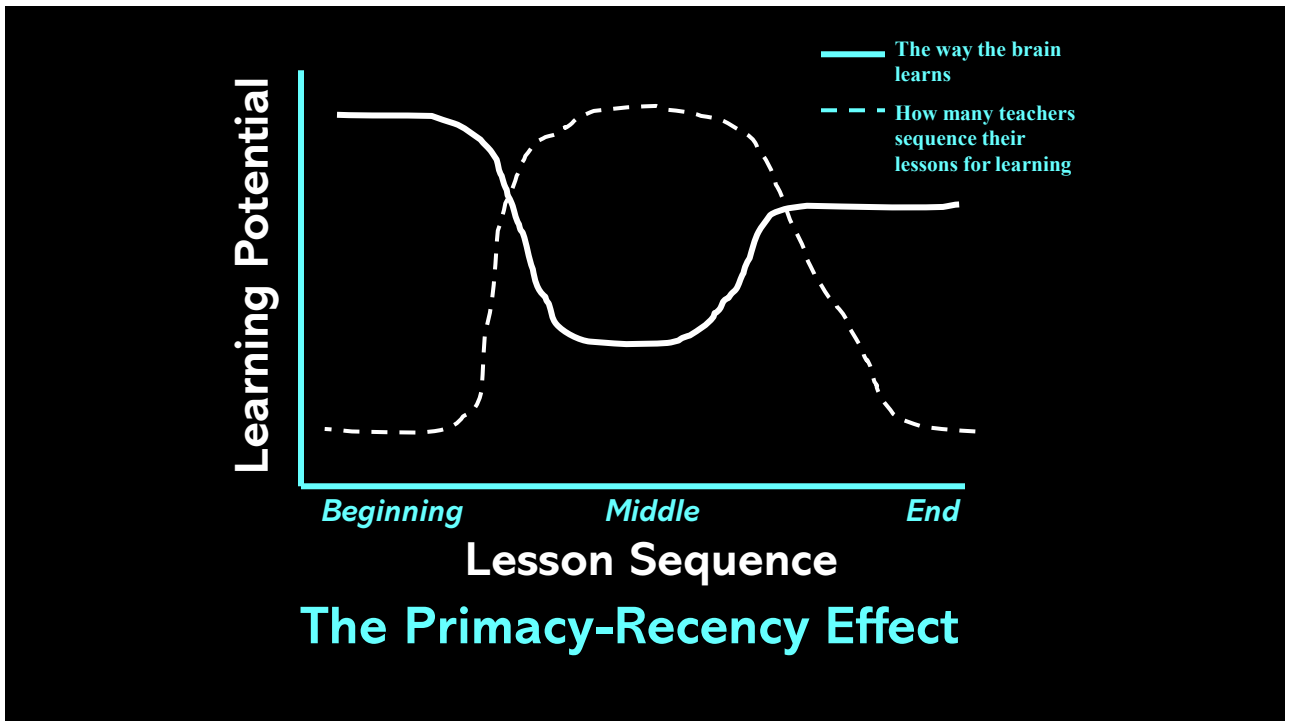
## Physicalizing P r o c e s s

122

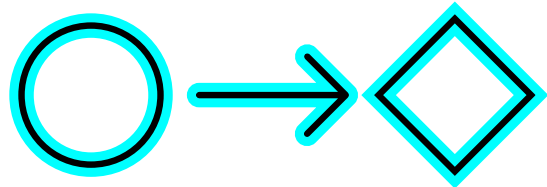
- 10 min. Lecture/Learning Experience
- 2 min. Processing/Discussing w/partner
- 2 min. Individual Processing & Connecting



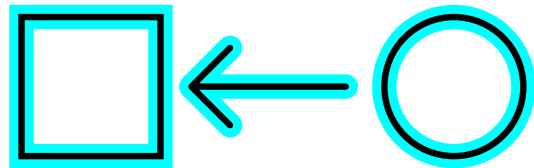
123



124



Our ability to retrieve information has more to do with how it first enters our minds. Help students discover the structure of information and experience the first time they engage with content.



125

## Components of Blood Content Matrix

	Red Cells	White Cells	Plasma	Platelets
Purpose				
Amount				
Size & Shape				
Nucleus ?				
Where formed				

126

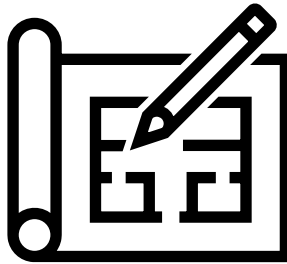
## The student's rough draft:

Red blood cells carry oxygen and nutrients around the body. They are small and indented in the middle, like little Cheerios. There are 5 million per cc of blood. There is no nucleus in mature red blood cells. They are formed in the bone marrow and spleen.

127

### Somebody Wanted But So [Fiction]

- Somebody (characters)...
- wanted (plot-motivation)...
- but (conflict)...
- so (resolution)...



### Something Happened And Then [Non-fiction]

- Something (independent variable)...
- happened (change in that independent variable)...
- and (effect on the dependent variable)...
- then (conclusion)...

128

# Cornell Note-Taking Format

## Reduce

*[Summarize in short phrases or essential questions next to each block of notes.]*

## Record

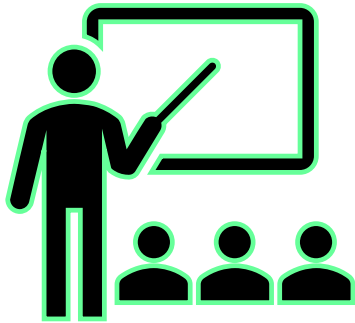
*[Write your notes on this side.]*

**Review** -- *Summarize (paragraph-style) your points or responses to the questions. Reflect and comment on what you learned.*

129

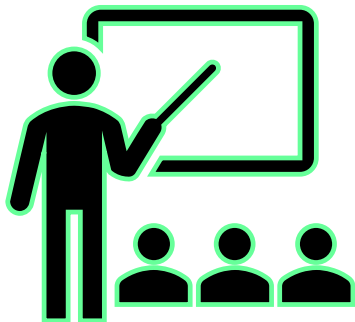


130



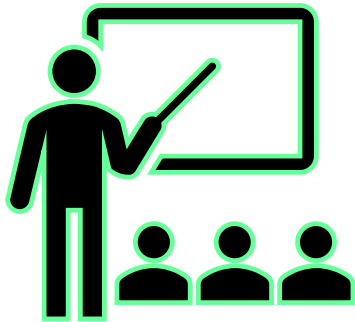
Lecturing is one of the most popular teaching techniques found in high school classrooms, but straight lecture for the whole class period results in some of the **lowest** amount of information going into long-term memory (Sousa, 2005).

131



Less than 10% of the message we receive from lectures comes from the words themselves. Over 90% of the message comes from perceiving the speaker's physical movements, vocal inflections, cadence, visuals, facial expressions, give-and-take, and monitoring one's own learning as the lecture progresses. Students need these attributes to "tune" into the lecturer and understand his message.

132



If we're not careful, lecture gives the false sense that we're teaching, and as students, that we're learning.

Summarized from, "Twilight of the Lecture: The trend toward 'active learning' may overthrow the style of teaching that has ruled universities for 600 years," Harvard Magazine, March/April 2012 by Craig Lambert (<https://www.harvardmagazine.com/2012/03/twilight-of-the-lecture>)

133

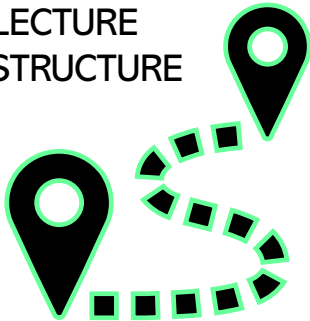


The best lecturers are **story-tellers** at heart, and just as stories have plots, lectures have road maps with points of interest/enticements to keep us listening. We can plot our lectures accordingly, including these six elements at least:

- **"Hooks"/Wonder/Challenge** to create curiosity at the beginning as well as throughout the lecture

134

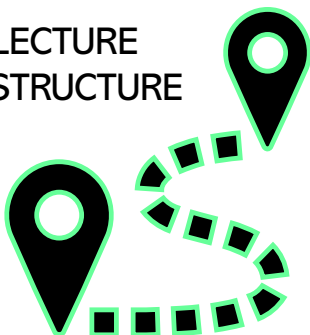
## LECTURE STRUCTURE



- **Goals/outcomes** of the lecture (Start with the stem, “As a result of this lecture experience, students will know and be able to do the following...”)
- **Major concepts** (5 or less for most good lectures)
- **Supporting details/explanations** for the major concepts

135

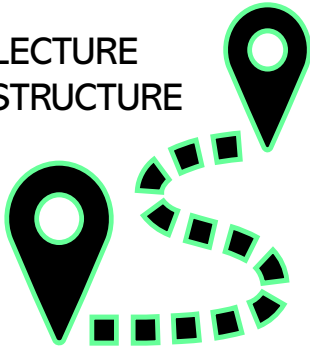
## LECTURE STRUCTURE



- Students **accessing information** -- How will students enter the information into their minds and make sense of it? Consider word choice, sequence, graphics, clarifications, emphasis, student-teacher interactions to clarify thinking, materials to be in students' hands during the lecture, choice between student self-discovery or direct instruction, and formative assessments to get monitor comprehension.

136

## LECTURE STRUCTURE



- Students **processing** information – How will students recode information for themselves in a meaningful way? Consider analogies/metaphors, anecdotes & asides that personalize the story for students, interdisciplinary connections, summarization techniques, creating personal relevance – how this knowledge transform students' lives, creating enough background knowledge prior to the lecture so students have something on which to hook the new learning.

137

## ➤ LECTURE AND PRESENTATION TIPS

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138

## Prime students for the lecture's content and experience.

Priming includes two aspects: First, explain what students will learn as a result of the lecture, and second, provide students with a road map of what they will experience: "As a result of today's lecture, you will 1) understand how Pythagoras arrived at his theorem, 2) how the theorem works, and 3) how to identify Pythagorean Triples. On the road to this success, we will first work with tangrams and graph paper, then we'll analyze three successfully determined Hypotenuses and sides in right triangles, followed by sample practice problems. After critiquing each other's practice, we'll chase down those Triples."

139

From: *Summarization in any Subject, Second Edition*, ASCD, 2019, Wormeli and Stafford

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Today I will...create a 3-D model illustrating the phases of mitosis.</li><li>• So that I can...understand the role of cellular division (mitosis) in producing complex organisms.</li><li>• I am successful when...I can describe and explain the phases of mitosis to someone and explain their importance.</li></ul> | <ul style="list-style-type: none"><li>• Today I will...analyze the characters of <i>Brave New World</i> by creating character maps.</li><li>• So that I can...connect key attributes of the novel's characters to the plot and theme of the book.</li><li>• I am successful when...I can accurately describe character traits and how each character relates to others by using evidence from the text.</li></ul> |
|---|---|

140

## Memorize the first 5-10 minutes

The first five minutes are critical. Memorize this portion of the presentation solidly. Don't read from a script or PowerPoint here. Doing so kills our credibility with students. And hey, fight the urge to read PowerPoint slides word for word at any time: This is insulting, time consuming, and results in students wondering how to unstick Milk Duds from their teeth. Design your slides as launching points, clarifying graphics, information to be applied, and provocateurs.

141

## Eye Contact

Maintain eye contact with the class as much as possible. Lectures are more engaging for students when they can see your face. Every time we break eye contact, we take our foot off learning's accelerator. We hope there's enough intensity built to keep students coasting along until we resume the drive, but that's not always the case. Set up your props and media so that you don't have to turn away from the group to use them.

142

## Monitor your Pauses and Monotone Voice

Limit the um's, uh's, and monotone voice. Know your stuff so well, you speak with confidence. In our society, a monotone voice and pauses like this are signs of weakness in the argument we make every day that the information we're presenting is worth students' time and energy. The pauses and lackluster voice not only ruin momentum, they distract students as well. When we're competing with so many other aspects of students' lives for attention, we can't afford to do diminish the lecture experience.

143

### Don't say it.

During a lecture, if you're about to say, "It goes without saying..." then don't say whatever it was you were going to say. Really, if it goes without saying, then why are we saying it? If it's important to declare but some students may know it already, say instead, "Just a reminder..." "As some of you know..." "To clarify..." and, "To reinforce the point..."

144

## Invite Contrarianism

As demonstrated in one of the opening descriptions, invite students to identify incorrect and arguable ideas in your lecture. Arguments and looking for and correcting mistakes made by adults is very compelling to students: “Mr. Berckemeyer, you said that the rule of law is always the preferred way to govern, but what if the laws are wrong? I mean, it used to be okay to discriminate against others, but now we know this is wrong. How can you say laws are always preferred?”

145

## Enthusiasm

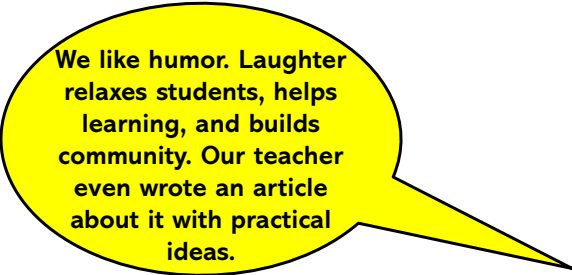
Be enthusiastic for the topic and recognize its contagious nature. If we're not interested in the topic, we can't expect students to be interested, nor even pretend to be so. The brain remembers what it finds interesting, and we're all about students remembering information. Most of us remember a teacher who was passionate about a particular sports team, locale, book, hobby, or aspect of the curriculum, and we found ourselves interested in it, too, if only because our teacher was interested in it, and we respected our teacher.

146

## Humor helps.

Stress limits learning, but humor counteracts that stress, making it a lecture ally. We all enjoy humor when learning – we relax and it makes us more attentive, and as a result, our brains process incoming information better. Collect and insert into your lectures humorous comics, photos, quotes, anecdotes, on-line (and appropriate) videos, and clever turns of a phrase. Students will remember the lecture's information better, not just the funny aside or visual.

147



**We like humor. Laughter relaxes students, helps learning, and builds community. Our teacher even wrote an article about it with practical ideas.**

“Humor? Yes, Please!  
Embracing humor in the classroom invites creativity, reduces stress, and enhances retention,” February 2019, *AMLE Magazine*. Email Rick to ask for a copy!

148

Stress limits learning, but humor counteracts that stress, making it a teaching and leadership ally. We all enjoy humor when learning and working – we relax and it makes us more attentive. As a result, our brains process incoming information better and we accept the input.

149

“The idea is not for teachers to take on the additional burden of being stand-up comics...It is for educators to appreciate that unmitigated solemnity isn't a prescription for success, and to find some ways to bring humor into their students' educational experiences.”

- Steven Mazie, Professor of Political Studies at Bard High School Early College-Manhattan and Supreme Court Correspondent for *The Economist*, “Humor is a Test of Character: Why Our Classrooms Need More Joy and Laughter,” June 2012

150

Stop mid-sentence in your explanation of something and declare in a newscaster's voice, "We now interrupt today's lesson with this breaking news report: [Insert something about which students need reminding] We now return you to your normal class programming already in progress. [Pick up with the rest of the sentence you interrupted earlier as if nothing happened.]

151

Teach while holding an umbrella over your head, as if it were raining only on you. Don't say anything about it. If a student comments on why you're holding it indoors and it's not raining, tell him that in your reality it is raining and that you'd kindly like him to be careful where he walks as he is splashing through puddles right and left. As you walk in the classroom yourself (and be sure to do so), step over and around imaginary rain puddles, and occasionally stick out a hand, palm up, to see if it's still raining. There's a child-like playfulness here that catches students unaware and invites imagination.

152

At the end of homework or an assessment, throw in a question about something completely unrelated, but interesting to answer. For example, after several math problems or social studies reading comprehension questions ask, “If you had a superhero power, which one would it be and why?” “For what do you have more use in your life: parallel or perpendicular lines?” “What advice would you give someone just starting fourth grade?” “Describe a time when you laughed so hard, whatever you were drinking at the time came out of your nose.”

153

When writing sentences or equations on the front screen or whiteboard, insert something bizarrely unrelated to the content, such a picture of an apple saying, “Howdy!,” a student’s name, or a favorite movie line, in the middle of what you’re writing and smile when someone notices. Later, work whatever you inserted randomly into the lesson into the later content meaningfully.

154

In the middle of a lesson, start dancing in a recognizable dance move to a tune only you can hear in your head. A student whom you recruited prior to the lesson to join you comes up, joins you in the dance for 30 seconds, then he returns to his seat and you continue your lesson as if nothing were awry.

155

## Novelty works.

Novelty, props, and the unexpected keep students engaged, especially when they frequently occur.

To create curiosity, ask someone to burst into your room with information or objects related to the lecture's content, incorporate optical illusions or a simple magic trick in the presentation, use a student in the presentation who has secretly been prepared in advance but acts hesitant and ill-prepared at first, then soars with amazing knowledge.

156

On other occasions, punctuate lectures with the names of students' favorite locations, music groups, Websites, and movies in purposeful ways: "It takes more than a spinning top to determine what's real and not real when it comes to imaginary numbers," (referring to the 2010 movie, *Inception*), "Consider the shape of the parking spaces at the mall. Are they slanted or straight, and does one of these create more available spaces on finite pavement than the other?"

Hold an unusual prop in your hand or Velcro it to your shoulder for the first portion of the lecture, eventually incorporating it into the presentation. Portray yourself as an historical figure, well-known celebrity, inanimate object, or general concept as you present the information: "As a semi-colon, I'm lonely. Nobody understands me, and I'm never used. I can be a lot of help, however, especially when a period at the end of the sentence is too strong a commitment to cutting off the thought."

157

## Present in Fives or Less

- "Two of the most frequent mistakes students make with this App are..."
- "The five main steps in this problem are..."
- "Four ways to cite your sources properly are..."
- "There four reasons we signed the Treaty with those Allied Nations..."

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## Limit the Note-Taking

Stop the note-taking during lectures. We diminish both meaningful note-taking and personal engagement in lectures when we require students to take notes during our lecture. It's physically impossible to get the full message of a lecture via its combination of words, face and body movements, nuance, and vocal inflections while also transcribing personal interpretations in an organized manner for future recall. The best students can do is switch back and forth, sacrificing one when focused on the other. Instead, stop every 10 to 15 minutes and lead students in a 2 to 6-minute processing of what they just experienced via note-taking, summarization, or some other technique useful to them.

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## Audience Interaction

Increase audience interaction to maintain engagement. Create suspense when using a narrative model, incorporate individuals and small groups in demonstrations or role-playing at the front of the room, and ask students to respond to statements/questions with a show of hands, clicking buttons in audience response systems, leaning left or right according to levels of agreement, unison reading or tasks, or holding wipe boards above their heads with personal responses written on them.

160

## Strategic Use of Metaphors and Analogies

“A picture is worth a thousand words, but one metaphor is worth a thousand pictures.” – Dan Pink, 2009

Metaphors and analogies have the power to change the world and good lectures employ them strategically. Each comparison is an opportunity for a-ha and mini-epiphany. During lectures, invite them, construct them, share them, dismantle them, and build them anew. This is the world of cognitive linguistics. [Great resource: *Metaphors & Analogies: Power Tools for Teaching any Subject* by Rick Wormeli]

161



162

In her 1994 book of poetry, *Something Permanent*, writer/poet Cynthia Rylant gets inspiration from the photographs of Walker Evans, a photojournalist who documented rural America during the Great Depression in the 1930's for the Farm Security Administration. In one photo, a young boy sits barefoot on a chair in a small room of a struggling family. The last line of Rylant's companion poem for this photograph reads:

*It gave him, briefly,  
some sort of feeling  
of just being  
enough.*

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Do our students today feel like they are enough for those around them?

Almost hourly, middle schoolers wonder, "Am I,"

- smart enough?
- pretty or good looking enough?
- popular enough?
- connected on-line enough?
- Hispanic, Black, Choctaw, Filipino, Korean, American, male, female, Catholic enough?
- creative, funny, religious, normal, technological, or athletic enough?

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Am I worthy of friendship, trust, respect, responsibility, love, and eventual parenthood?

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And what do we do as teachers to assure students that they, as they are right now and without conditions, are enough, that they are ceaselessly valued, legitimate individuals in their own right?

165

Calabrese, et al. (2007) Biological stress response terminology: Integrating the concepts of adaptive response and preconditioning stress within a hormetic dose-response framework. *Toxicol Appl Pharmacol.* 222, 122-8

Stress is the physiological response to a perception of a lack of control over an adverse situation or person

166

**stress** (on/off)  
is healthy for us.

**distress** (chronic)  
is toxic to our brain and body

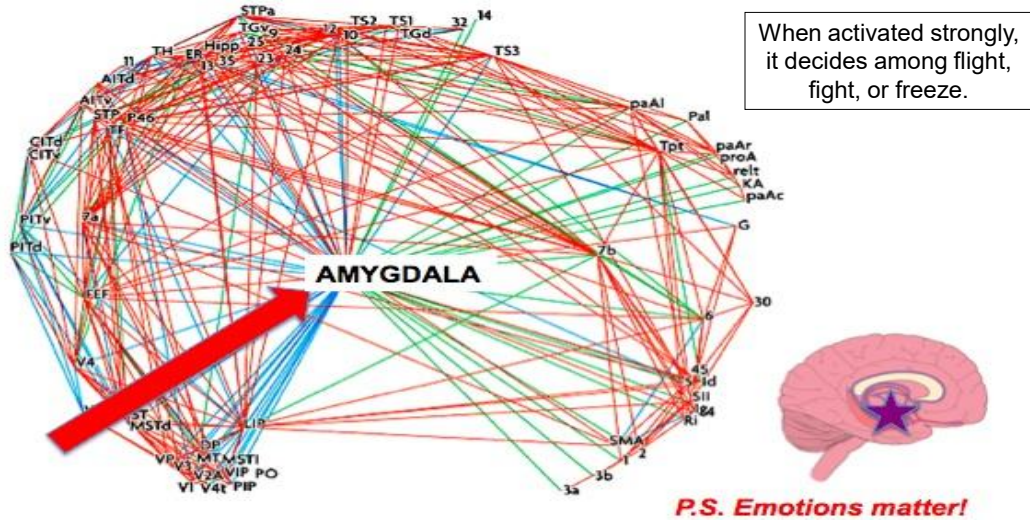
167

## Chronic Stress Effects. Did you know...

1. Chronic stress affects motivation. (Morgado P and Cerqueira JJ (2018) Editorial: The Impact of Stress on Cognition and Motivation. *Front. Behav. Neurosci.* 12:326. doi: 10.3389/fnbeh.2018.00326)
2. Being in close contact with stressed people increases your stress levels. (Bains, 2018)
3. Stress impairs self control. (Maier, et al, 2015)
4. Stress impairs memory. (Yuen et al, 2012)
5. The hippocampus (the part of the brain that processes memory) is smaller in those with chronic stress. (Kim, et al, 2015)
6. Dwelling on stressful events increases inflammation in the body. (Zoccola, et al, 2013)
7. The amygdala part of the brain that modulates the fear response, is highly activated during times of stress. (Ressler KJ. Amygdala activity, fear, and anxiety: modulation by stress. *Biol Psychiatry.* 2010;67(12):1117–1119. doi:10.1016/j.biopsych.2010.04.027)

168

# How Much Input Does the **Amygdala** Have to the Rest of the Brain?



169

**20%**  
increase in  
**stress**

**75%**  
decrease in  
**empathy**

...in the last 25-30 years.  
Source: [www.6seconds.org](http://www.6seconds.org)

As stress increases, we become more task focused and reactive. This increases our isolation... which increases our stress.  
Can we learn new ways of responding to exit from this vicious cycle?

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**Bottom Line:**  
Chronic stress can greatly affect  
motivation, the capacity to form  
long-term memory, and one's  
ethical decisions.

171



**What Educators Can Do**

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172

To greatest extent we can, assist students and their families as they try to increase five important elements in students' lives:



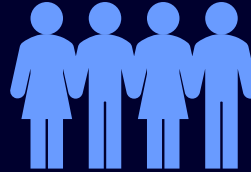
Sleep



Movement



Nature



In Person  
Connection



Hydration

173



Avoid the urge to comfort the student with the phrases, "It's not a big deal," "It's just part of being in high school," or worse, "Everything is going to be fine."

Create a hotline texting app that connects the student directly to a school counselor, social worker, or psychologist as available, and promote it to students regularly. If they ever feel out of control, depressed, overly anxious, dysfunctional, suicidal, and need a listening ear and genuine support, they text a simple code to a particular number and a qualified advocate will respond within a few minutes.

174

*As we can, we help students learn techniques to mitigate and control rising anxiety and/or panic attacks. We can provide a quiet, private space to do this, if needed, or help them use some of these techniques at their classroom desk or at home as episodes rise. Some of those helpful techniques include:*

- ✓ Breathing deeply
- ✓ Recognizing the panic attack and calling it what it is  
(*This helps the person realize that it's temporary and will pass*)
- ✓ Closing eyes to minimize external stimulation
- ✓ Practiced mindfulness, focusing on specific sensations in and around the body
- ✓ Relaxing muscles, focusing on one muscle or small group of muscles at a time
- ✓ Focusing on an object in the room
- ✓ Thinking of a comfortable, soothing place in the student's memory
- ✓ Some forms of light exercise (Endorphins & Neurotransmitters release into the bloodstream and calm the mind)
- ✓ Repeating a mantra
- ✓ Smelling lavender ('has a calming effect in some  
- Paraphrased from [www.healthline.com/health/how-to-stop-a-panic-attack](http://www.healthline.com/health/how-to-stop-a-panic-attack)

175

In her article, "Anxiety in the Classroom – Another Learning Disability?," ([www.amle.org](http://www.amle.org)), Paula Prentis, a licensed social worker specializing in child and adolescent health, wellness, and development, suggests:

"Instead of offering security, offer skills. For instance, if a student avoids school, create a context for him that values him being there. In one example, a student became known as the school pet expert. He never missed another day because he was valued for his knowledge of pets, something for which the teachers and many classmates counted on him. He felt "good enough."

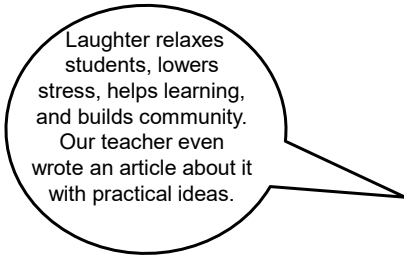
176

For students who need structure and regular procedures, provide them, but also sit with them ahead of time and talk through those moments in the day or days ahead that will not be as structured and normal. Identify specifically what irregular, unstructured thing is going to happen and the specific steps the student can take to navigate the irregularity constructively.

177

Do not, do not, do not ask students to drop fine and performing arts classes, technology classes, or any other class or extracurricular activity in which they are passionately interested and feel safe in experiencing. Quite often, these are a collective “oasis” that gets them through the day feeling normal, capable, and invested in life. And yeah, that means we don’t take students out of these experiences in order to double-up on math or reading classes in preparation for state or provincial exams.

178



"Humor? Yes, Please!  
Embracing humor in the classroom invites creativity, reduces stress, and enhances retention," February 2019, *AMLE Magazine*. Email Rick to ask for a copy! See slides in the lecture section for ideas, too!

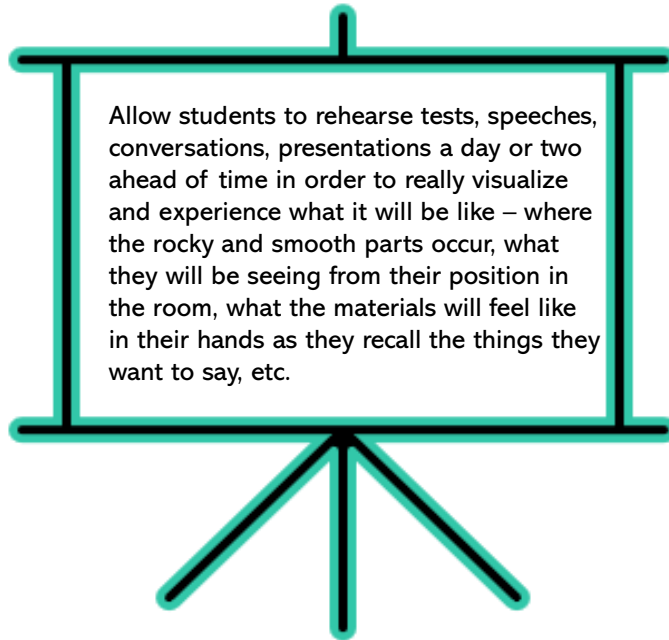
Overtly teach students executive function skills (time management, impulsivity & distractibility control, decision making, moral and abstract reasoning, responding constructively in social situations, and more). Students can't use skills and tools they don't have.

Develop a dozen or more constructive descriptive feedback techniques and use them frequently instead of judgement or evaluation. Good descriptive feedback does not invoke ego or self-preservation; no one is threatened. It invites students into their own learning and builds self-efficacy.

181

Pull back from the autocratic, didactic approaches as much as possible and facilitate more student choice. Choice feeds autonomy and the sense that what students want matters to the teacher.

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Make recovering from mistakes and failures compelling and doable. Yes, allow re-do's and re-takes for full credit after re-learning the material properly. Consider the reasoning for why students cheat as well as our instructive responses to that when it occurs.

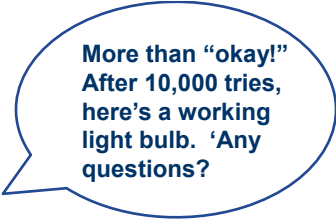
184

**F.A.I.L.**

**First Atttempt in Learning**

185

**Re-Do's &  
Re-Takes with students  
and their teachers:  
Are They Okay?**



**More than “okay!”  
After 10,000 tries,  
here’s a working  
light bulb. ‘Any  
questions?’**

**Thomas Edison**

186

Invest time and energy in positive school climate programs and elements, making sure it happens in all areas: hallways, classes, buses, bus stops, playgrounds/fields, locker rooms, cafeteria, and on-line. Make sure teachers see the value of expertise in the emotional development of their students as well. To remain indifferent and incompetent in this element is educational malpractice.

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*For some students, it may be time to seek professional help:*

- First Option: School counselors and psychologists, if you have them (Call 9-1-1, if a student is in danger of harming himself or others)
- Second Option: Medical professionals

If diagnosed with an anxiety or panic disorder, medical responses can include:



- Psychotherapy called, “cognitive behavioral therapy” which teaches students healthy ways to adjust thinking, behavior, and reactions as episodes begin or to keep them from happening in the first place
- Exposure therapy in which students spend short periods of time in the anxiety-inducing situations, but with support, then the time periods slowly increase over time until the anxieties in those situations subside
- Medications, including Benzodiazepines (like Xanax and similar) to calm students
- Residential Treatment

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**New National Suicide Prevention Lifeline: 988**  
**National Suicide Prevention Lifeline: 1-800-273-8255**  
**(For Spanish speakers, use 1-888-628-9454.)**  
**Crisis Text Line: Text, "HELLO," or, "HOME," to 741741**

Let's all memorize these numbers for ourselves  
and to pass these along to others who may need it.

189

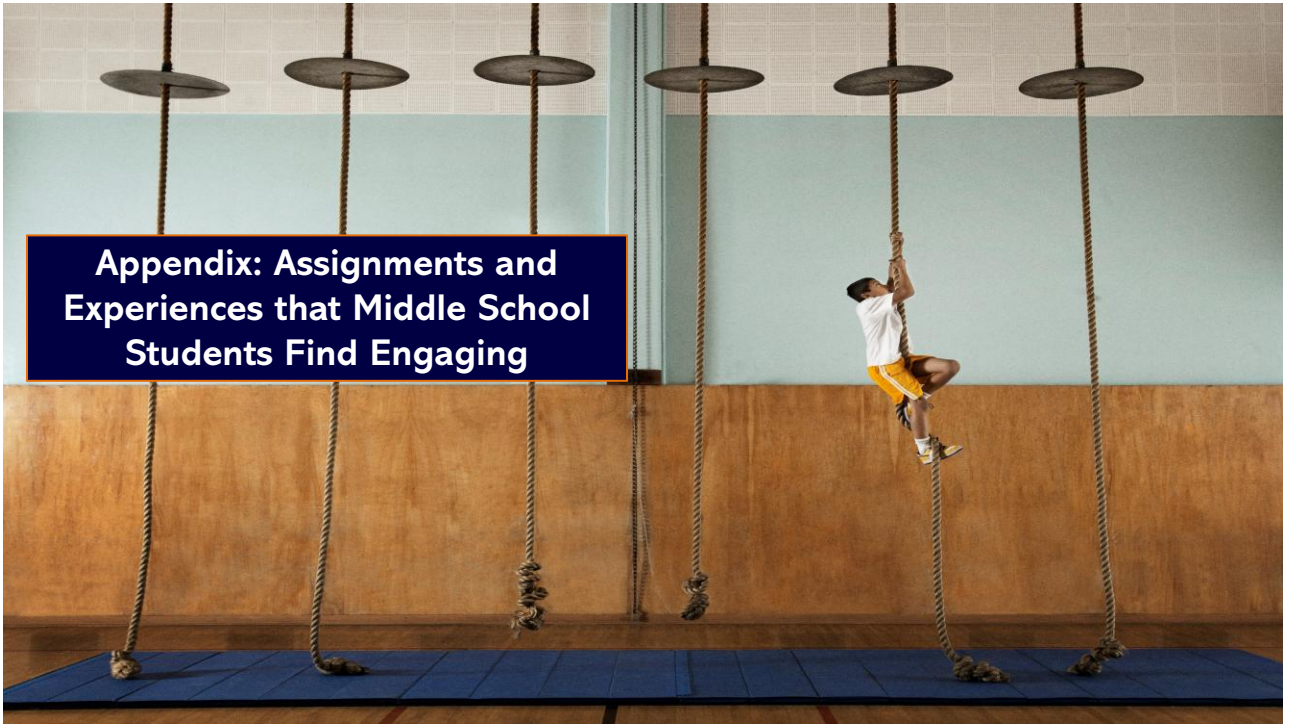
*Recommended Video:*

**"What Causes Panic Attacks, and How You Can  
Prevent Them – Cindy J. Aaronson"**  
Posted on Youtube.com on October 8, 2020

*Rick's article on a school's constructive response:*

<https://www.amle.org/panic-anxiety-disorders-in-middle-school-students/>

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**Appendix: Assignments and Experiences that Middle School Students Find Engaging**

191

- **Descriptive Paragraph with no adjectives and using one syllable words only**
- **Week-long, mini-internships in which students spend time each day with professionals observing them in action.**
- **Paint a wall inside or outside the school that expresses elements in the curriculum.**
- **Create and give speeches on important topics within the curriculum and invite parents and the local press.**

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- Draft a proposal to the city council for a bridge structure over a river or street, explaining why it is the sturdiest and most cost-efficient option.
- Create a political cartoon informed by subject content
- Create a comic strip or page from a graphic novel that retells a famous incident
- Design a lunar colony made only of three-dimensional solids, schematic designs included.
- Create the autobiography of a right angle.

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- Create a physical demonstration or expression of an abstract concept.
- Take students outside the school building to engage with nature and a sense of place. To get ideas and facilitate these experiences, look here:
  - *Place-Based Learning: Connecting Inquiry, Community, and Culture* by Micki Evans, Charity Marcella Moran, Erin Sanchez
  - *Place-Based Education: Connecting Classrooms and Communities* by David Sobel
  - *Moving the Classroom Outdoors: Schoolyard-Enhanced Learning in Action* by Herbert W. Broda
  - *Last Child in the Woods: Saving Our Children From Nature-Deficit Disorder* by Richard Louv
  - *The Essential Guide to a Nature Rich Life: Vitamin N - 500 Ways to Enrich the Health and Happiness of your Family and Community* by Richard Louv

194

- Ask students to write, produce, and star in a Shakespeare play, opera, or one act thereof that has been revised for a particular era or context, such as “A Midsummer Night’s Dream” as a tropical beach excursion, an 80’s punk band experience, spy movie, or ancient Egypt.
- Conduct a Poetry Festival or Poetry Slam – Check out Taylor Mali’s Website ([www.TaylorMali.com](http://www.TaylorMali.com) ) for more details. Invite some adults in the building to participate.
- Create an escape room solved only through clues about your subject. Even better, ask groups of students to design the room themselves, then have a half-day-long, “Escape-apoloosa.”

195

- Play, “Would you rather...?” (*From Edutopia’s article, [www.edutopia.org/article/17-brain-breaks-tailored-for-high-schoolers/](http://www.edutopia.org/article/17-brain-breaks-tailored-for-high-schoolers/)*) Pair students up and have them discuss fun “would you rather” questions: “Would you rather live in a world with no technology or a world with no nature? Would you rather have the ability to speak with animals or the ability to speak all human languages fluently? Additional recommended resource: *Would You Rather? Family Challenge! Edition: Hilarious Scenarios & Crazy Competition for Kids, Teens, and Adults (2021)* by Lindsey Daly.

196

- **Connect with a local or national museum and conduct an electronic or in person interview with an expert in the field.**
- **Conduct Education Simulations – Here are some examples of simulations you can find and use with your classes –**
  - [https://www.centerforlearning.org/?s=interact&fwp\\_search\\_facet=interact](https://www.centerforlearning.org/?s=interact&fwp_search_facet=interact)
  - <https://www.centerforlearning.org/product/greeks/>
  - <https://www.centerforlearning.org/product/skateboard-science/>
  - <https://www.centerforlearning.org/product/s-o-s/> (S.O.S. A Simulation Solving a Scientific Mystery by Understanding the Formation and Motion of Ocean Currents)

197

- **Shape spellings**
- **Restaurant Menu**
- **Wanted Dead or Alive Posters**
- **Vocabulary Rummy Cards**
- **Examine a common science, math, or history/government misconception and how it is perpetuated.**
- **Conduct a subject-themed scavenger hunt through the textbook or some other medium in order to familiarize students with the medium’s content and layout.**

198

- **Teach and use theater games, similar to “Who’s Line Is It Anyway?” - There are multiple websites and books dedicated to improvisational activities, such as Bob Bedore’s 101 Improv Games for Children and Adults (2004). When searching, use, “Theater games,” and, “Improv activities for middle school.”**
- **Ask students to write letters to themselves that you will send to them one year from now. Be sure to provide prompts to describe their thinking today as well as to make predictions about what they will be thinking and doing when the letter arrives. These can lean toward personal reflections or toward the subject being taught.**

199

- **Write autobiographies to go with portraits**
- **Explain how four different art concepts are expressed in a gymnasium**
- **Write the autobiography of a [Insert inanimate concept or tool of your discipline], such as the autobiography of a cubed root, past perfect (pluperfect) tense, nuclear fusion, website, asymptote, or table/graph.**
- **“Turning Point in History”- Write or create fantasy/science fiction in which students explore how our lives would be different if certain historical events or scientific processes did not occur.**

200

- Ask students to record books, newspapers, and magazines for younger students, homeless shelter residents, or elderly nursing home residents.
- Ask students to plan and build benches for the school's courtyard or grounds.
- Ask students to write letters of hope, encouragement, and healing for hospital patients that will be placed on their food trays when delivered at meal times.
- Plan, make, and bury/install a time capsule of today's culture and students' predictions for the future.

201

Practical article on what to do when class finishes early and engaging activities for the end of the school year:  
<https://www.amle.org/when-the-lesson-ends-early-or-testing-is-finished-for-the-year-making-the-best-use-of-that-after-time-and-learning/>

202