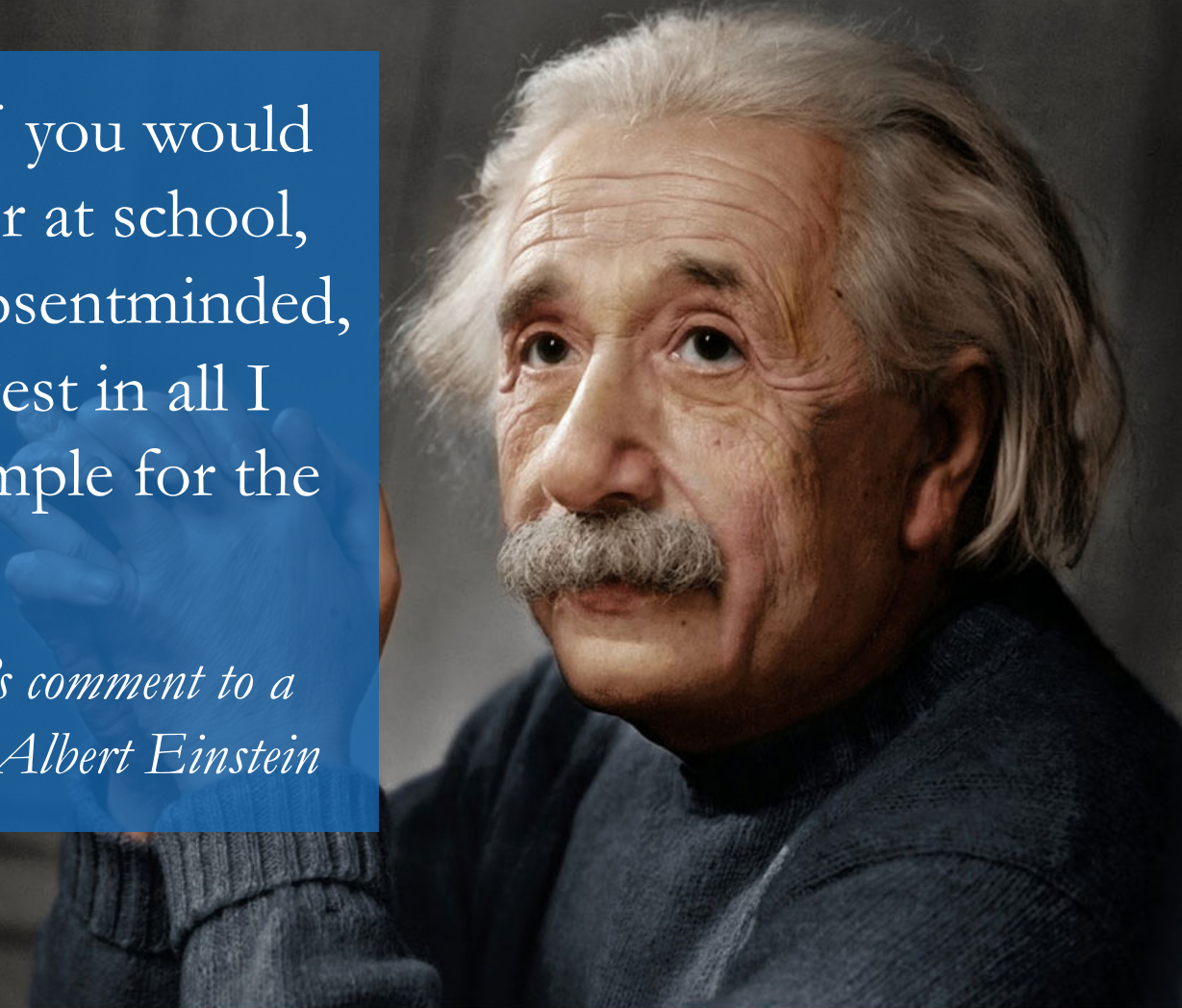# Executive Functions & Internal Skills

Michael McLeod, MA ADHD-CP
GrowNOW ADHD
GrowNOWADHD.com

"It would be nice if you would leave. Your behavior at school, so distracted and absentminded, and your poor interest in all I teach set a bad example for the whole class."

— *teacher's comment to a young Albert Einstein*

"What any person in the world can learn, almost all persons can learn if provided with appropriate prior and current conditions of learning."

-Benjamin Bloom

ADHD - Research & Learning

Research study on the GrowNOW Model took place at Stratford Friends in Newtown Square, PA (stratfordfriends.org)

Today's Sources & References:
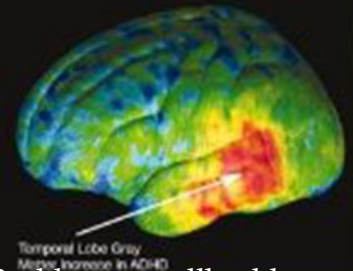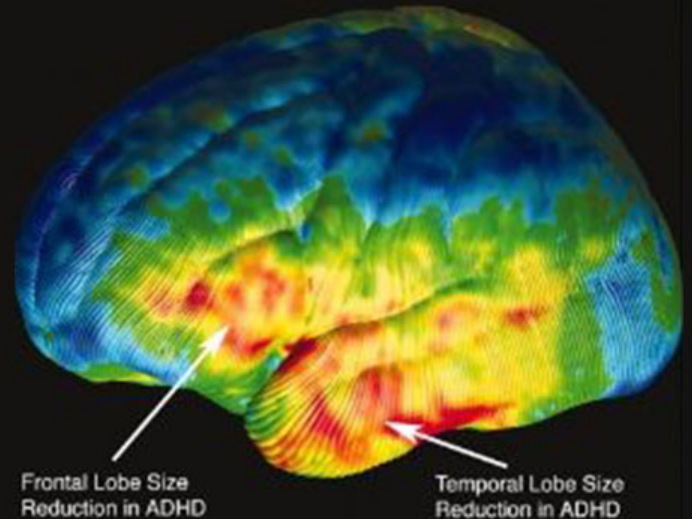- Dr. Russell Barkley: **RussellBarkley.org**
- Sarah Ward, MS, CCC-SLP: *Cognitive Connections:* **efpractice.com**
- Ryan Wexelblatt, LCSW: **ADHDDude.com**
- Harvard Center of the Developing Child: **developingchild.harvard.edu**
- CHADD: *Children & Adults with ADHD*: **chadd.org**

ADHD - Neurodiverse

- Neuro-Developmental Disorder

- Brain Imaging studies confirm that people with ADHD have **differences in their brain structure**

- **ADHD is a disorder of the brain**

- ADHD causes differences in Brain **Structure, Function, & Development**
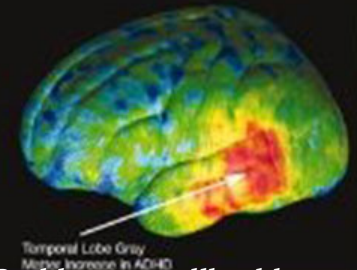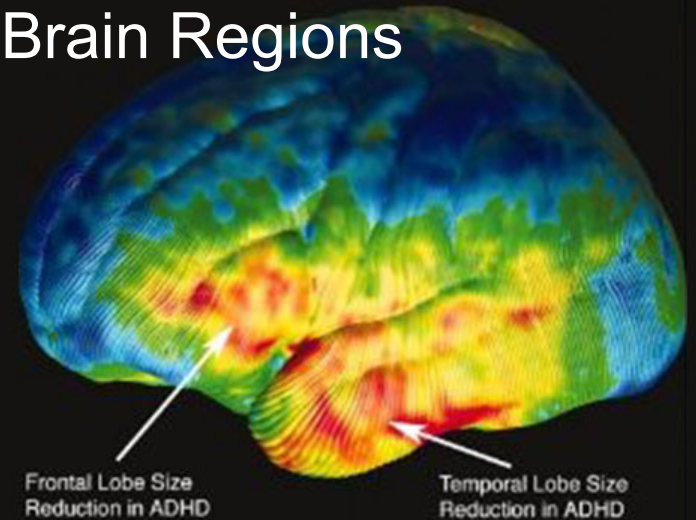
- Overall Delayed Brain Maturation

Frontal Lobe Size Reduction in ADHD

Temporal Lobe Size Reduction in ADHD

Temporal Lobe Gray Matter Increase in ADHD

Source: Dr. Russell Barkley: russellbarkley.org

Pre-Frontal Cortex

Smaller, Less Active, Less Developed Brain Regions

- 3-10% reduced regional volumes in 5 regions

- Same parts of the brain impacted by ADHD are the same areas that deal with **emotions, self awareness, and self-regulation**

- The Limbic System (amygdala) – **The Emotional** Center of the Brain → smaller in ADHD

- Anterior-Cingulate (making **social & emotional decisions**)→ much less activation with ADHD

- Less activation within the Frontal Lobe overall

Frontal Lobe Size Reduction in ADHD

Temporal Lobe Size Reduction in ADHD

Temporal Lobe Gray Matter Increase in ADHD

Source: Dr. Russell Barkley: russellbarkley.org

Pre-Frontal Cortex → A Social Organ

The Source of SELF Regulation & Motivation

- Humans are the ONLY species that can sustain behavior in the **ABSENCE** of a direct consequence

- Because: Humans have the ability to **PAUSE**

- In this **PAUSE** → we can **STOP AND THINK** to aim our behavior toward the FUTURE

→ Creating and Sustaining MOTIVATION
(even with a **DELAY**)

Frontal Lobe Size Reduction in ADHD

Temporal Lobe Size Reduction in ADHD

Temporal Lobe Gray Matter Increase in ADHD

Source: Dr. Russell Barkley: russellbarkley.org
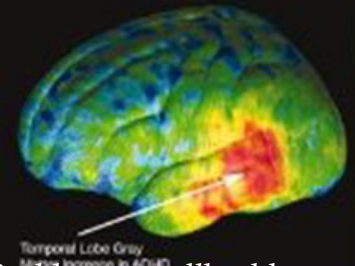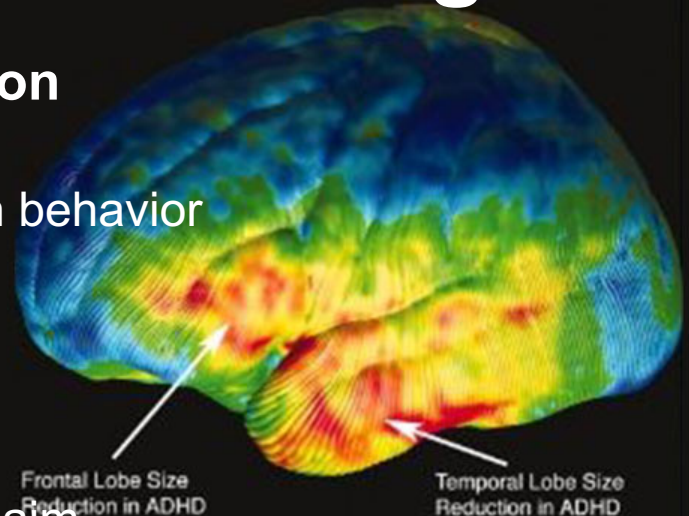
ADHD is SERIOUS

Increased risk of:

- Substance abuse
- Driving accidents
- Risky behaviors
- Violence
- Job loss
- Early death

"Those with ADHD who have become successful, did so *in SPITE* of their ADHD. Nobody with this disorder would choose to keep it." – Dr. Barkley

Frontal Lobe Size Reduction in ADHD

Temporal Lobe Size Reduction in ADHD

Temporal Lobe Gray Matter Increase in ADHD
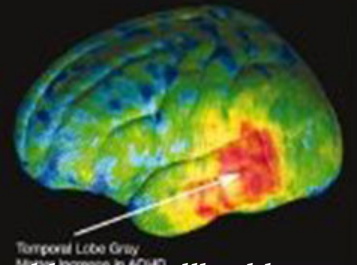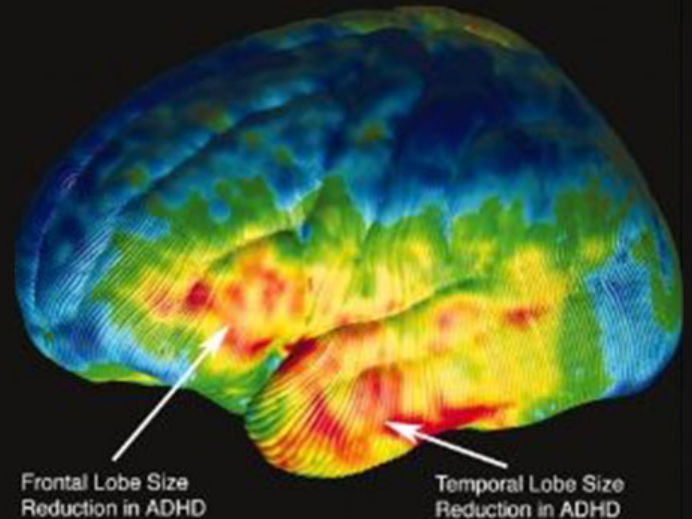
Source: Dr. Russell Barkley: russellbarkley.org

ADHD is SERIOUS

Studies show that having a child with ADHD is just as distressing to the parent as having a child with Autism Spectrum Disorder

Leitch S, Sciberras E, Post B, et al. Experience of stress in parents of children with ADHD: A qualitative study. *Int J Qual Stud Health Well-being*. 2019

Video:

Frontal Lobe Size Reduction in ADHD

Temporal Lobe Size Reduction in ADHD

Temporal Lobe Gray Matter Increase in ADHD
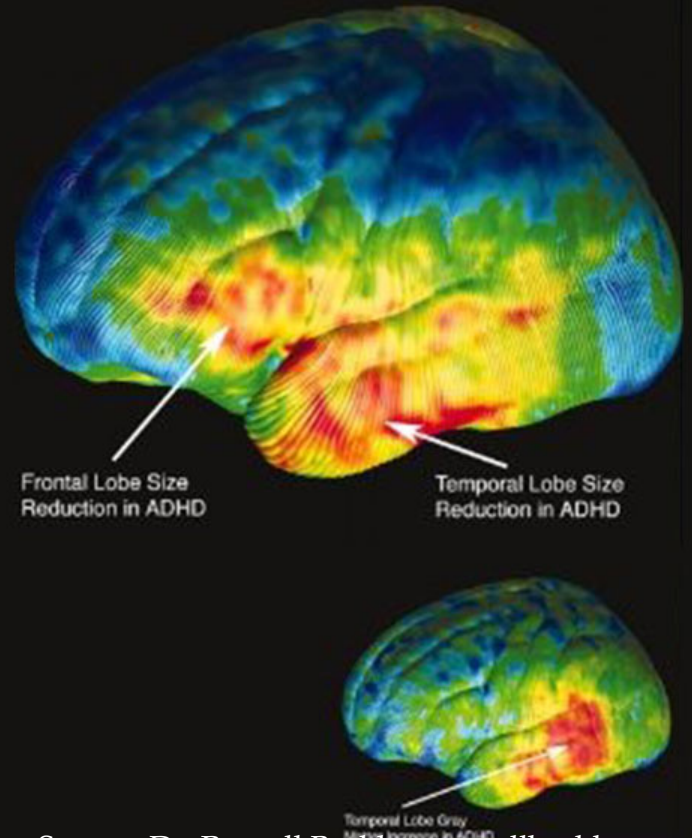
Source: Dr. Russell Barkley: russellbarkley.org

ADHD → Executive Functions

- Executive skills have been identified as the foundation that **all children need** to negotiate the demands of childhood and adolescence

- Become more critical as children venture into the world with **decreasing parental supervision and guidance**

- These skills develop gradually during the first two decades of life – **peaking at around 25-30**

Source: Dr. Russell Barkley: russellbarkley.org

The ADHD Brain

The back is where we Learn - The front is where we DO

PERFORMANCE

NOT an attention disorder
→ Performance Disorder

Executive Functions:
The Past & The Present

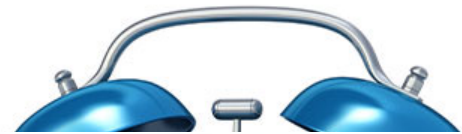- In the past - Executive Functions and ADHD were looked at as an

EXTERNAL Behavioral-Based Disorder

- Intensive focus on external *organization & time management*

- ***A purely academic-based disorder***

Source: AAP & CDC:
https://www.cdc.gov/ncbddd/adhd/guidelines.html

Executive Functions:
The Past & The Present

Executive Functions:
The Past & The Present

- Non-certified Executive Function "Coaches" – cleaning out backpacks, organizing papers into folders, sitting with students while they work

- Educational Therapy, Social Skills Groups, ABA, CBT, EMDR, Brain Balance ➔ Meds, Parent Training, and…

Now, we know to look at the <u>INTERNAL</u> and <u>long-term skill building</u> instead of just accommodations

Source: AAP & CDC: https://www.cdc.gov/ncbddd/adhd/guidelines.html

ADHD is
A TERRIBLE Name for the Disorder

Self-Regulation Deficit Disorder

Delayed Gratification Disorder

Attention to the Future Disorder

VAST: Variable Attention Stimulus Trait

Self-Awareness

The ability to perceive your environment, emotions, and behaviors.

How you monitor the way you present yourself

Self-Regulation

The ability to regulate and manage your emotions, language, body and behavior in various environments & toward various stimuli

Self-Motivation

The ability to internally motivate yourself to initiate, persist and complete non-preferred and challenging tasks.

The Three Zones of Executive Functioning

Academic

Home

Social

Executive Functions

What you are doing to your **SELF**

Actions to the SELF

Designed to change **SELF**

To change **SELF's** future

Stop focusing/responding to the world →
focus on SELF
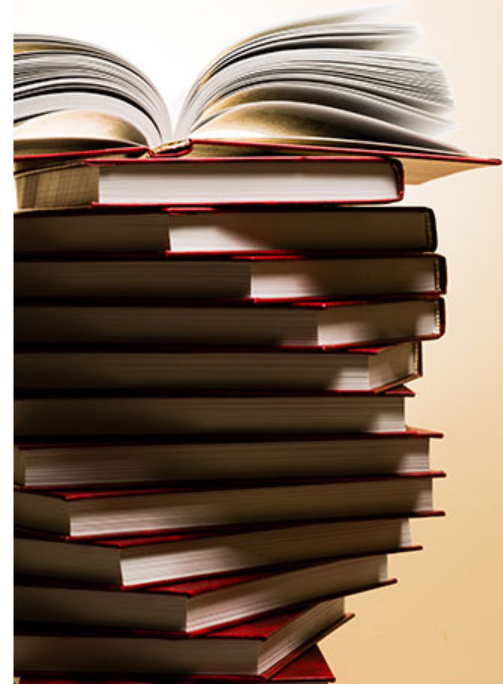
Executive Functions

To STOP SELF

From what you would have done
on impulse, without stopping to *THINK*

Stimulus → Response
OR
STOP → THINK
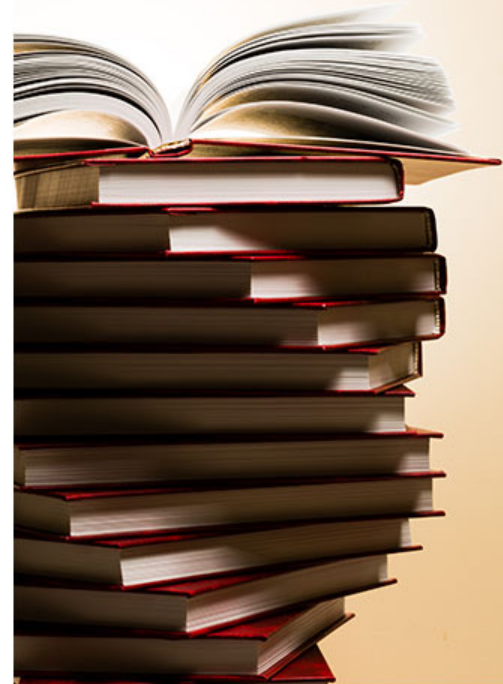
Executive Functions

Use this as an opportunity to TURN AWAY from the seductions of the moment

Subject yourself to adversity and hardships to change a distant future/consequence (college)

All deferred gratification requires Self-Regulation
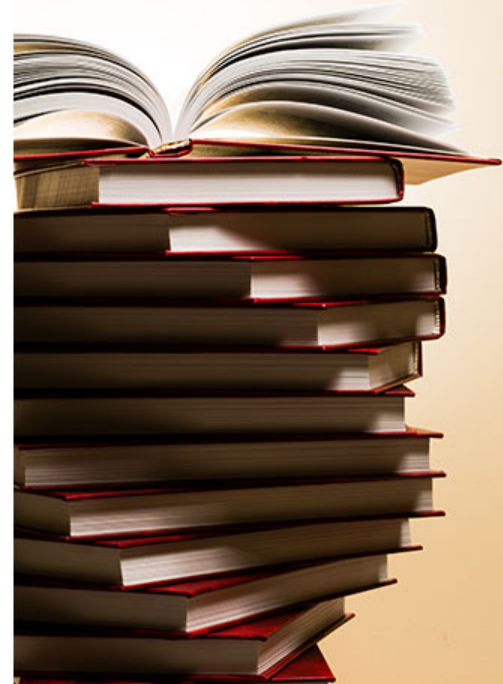
Executive Functions

Executive Functions are the Building Blocks for ALL Independence & Education

Why aren't these skills a core focus of our education?
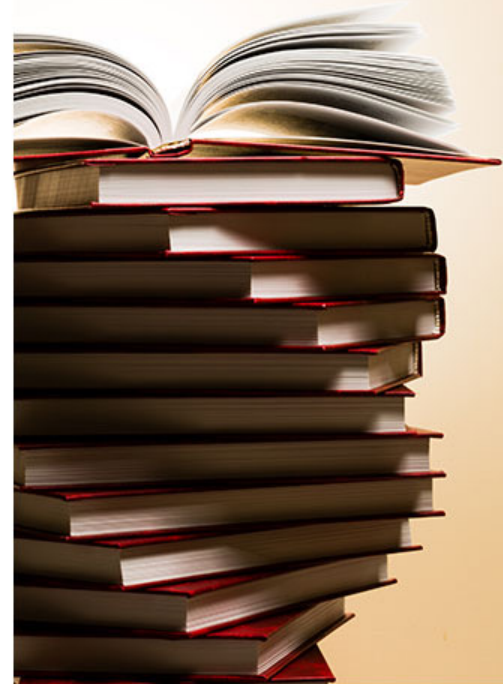
Executive Functions

We can't effectively **measure** Executive Functions the same way we measure other skills

Executive Functions

From **Prompt Dependence** to **Independence (SELF)**
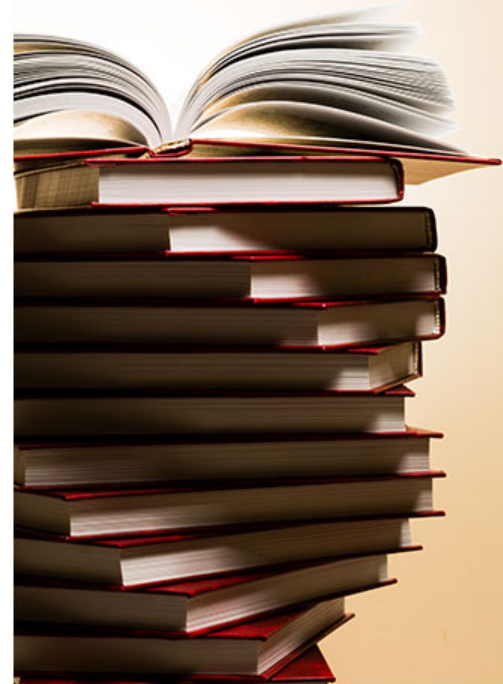
Executive Functions

From **Prompt Dependence** = Adults are acting as the child's Executive Functioning.

The longer this is done, the longer development of these skills will be delayed

What are the TRUE Predictors of Success?

1) Ability to **independently** form and maintain
   social relationships

2) Ability to **independently** manage emotions

3) Ability to manage your life and **independent**
problem solving

VIDEO: https://www.youtube.com/watch?v=BvyTiC_byOo

EF Skill Age-Appropriate Expectations

Ages 3-4

- "Get shoes from your bedroom"
- Clean and put items away with minimal assistance
- Perform simple chores and self-care tasks with reminders and physical assistance – clear dishes, brush teeth, get dressed
- Inhibit unsafe or inappropriate behaviors – don't touch a hot stove, do not run into the street, do not hit or bite

Source: North Shore Pediatric Therapy (NSPT4kids.com)

EF Skill Age-Appropriate Expectations

Ages 5-7

- Complete 2-3 step errands – "put the napkin in the trash and bring me a cup"
- Tidy bedroom and playroom independently
- Initiate and perform chores and self-care with some reminders
- Bring papers to and from school
- Complete 20-mins of homework

Source: North Shore Pediatric Therapy (NSPT4kids.com)

EF Skill Age-Appropriate Expectations

Ages 8-11

- Remember to bring something home from school without reminders
- Keep track of belongings when away from home
- Complete majority of homework without assistance (maximum of 1 hour)
- Remember changes in daily schedule
- Inhibit and self-regulate behaviors
- Inhibit tantrums and bad manner

Source: North Shore Pediatric Therapy (NSPT4kids.com)

EF Skill Age-Appropriate Expectations

Ages 12-15

- Help with chores around the house with minimal assistance and prompting
- Use system for organizing schoolwork with minimal assistance and prompting
- Independently follow a school schedule with multiple transitions
- Plan and complete long-term projects
- Plan time effectively
- Inhibit rule breaking in the absence of adult authority

Source: North Shore Pediatric Therapy (NSPT4kids.com)

EF Skill Age-Appropriate Expectations

High School

- Manage schoolwork independently
- Create and follow long-term goals (college/vocational)
- Independently organize after school activities and weekends
- Gain employment with assistance
- Manage and complete non screen-based activities

Source: North Shore Pediatric Therapy (NSPT4kids.com)

Video: ADHD Interview

https://www.youtube.com/watch?v=_GVSMyAJhD0

https://www.youtube.com/watch?v=-IO6zqIm88s

Executive Functions & Resiliency

Harvard Center of the Developing Child:

Children who develop strong Executive Functions experience lifelong benefits

Allow children to make healthy and positive choices

These skills are developed over time – no better time than NOW!

They are a developed through
varied experiences & interpersonal relationships

Growth Mindset

- Experiences low threat and high challenge

- Is relaxed and emotionally engaged

- Has the foundation to take risks in thinking

- Comfort in making mistakes, trial and error, and learning through failure

- Flexible, motivated, able to follow directions and take feedback

Source: Carol Dweck: Mindset (2016)

"The Comfort Zone"

COMFORT ZONE — Feel safe and in control

FEAR ZONE — Lack of self-confidence, Find excuses, Be affected by others' opinions

LEARNING ZONE — Deal with challenges and problem, Acquire new skills, Extend your comfort zone

GROWTH ZONE — Find purpose, Live dreams, Set new goals, Conquer objectives

Today's Youth - Instant Gratification

"We value natural effortless accomplishment over achievement through effort." - Malcolm Gladwell

Don't care about what is happening behind the scenes…

Want fun & results NOW → High Speed Internet, Google, Touchscreens, YouTube, Amazon next day delivery, video games

*Long-term goals (delay)
*Failing first!
*Boredom
          Instant Gratification deters Future Goals

Source: Carol Dweck: Mindset (2016)

The Fixed Mindset

- **Instant Gratification** → Fear challenge → Devalues effort

- Failure has transformed from an action (I failed) to an identity (I am failure)

- Effort has the power to *reduce you* - Effort takes *time (delay)*

- Effort and Challenge are a THREAT → they threaten to unmask your flaws

- *Do not try* → exert as little effort as possible (establish dominance from adults)

Source: Carol Dweck: Mindset (2016)

Education – EF Goals: Student Responsibility

- "Lecture-Listen" Model of Education does not work for the ADHD Brain

- It is clear that students with Executive Function difficulties/ADHD need to be evaluated so they can attain an Individualized Education Program (IEP, 504) with specific accommodations and up-to-date SDI's.

- **Most IEPs and 504s promote Prompt Dependence!**

- **Schools and educators must take a "research into practice" approach → *fading prompts & internal skills***

→ INDEPENDENT LIFE SKILLS! IEPs need an Exit Plan
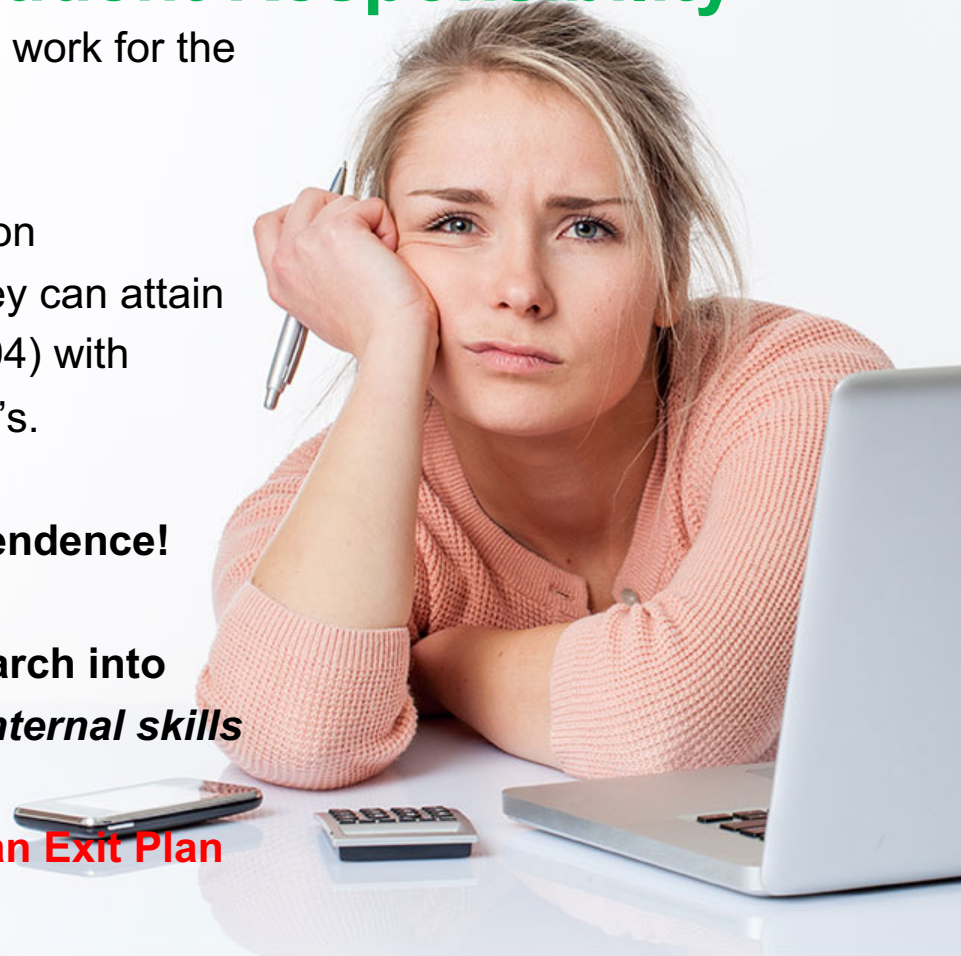
Impact of Untreated ADHD on Academic Performance

More than $3 billion in annual public school expenditures

Percent

Did not complete high school — Retained in grade at least once — Suspended at least once — Expelled

Swensen, A et al. Publication Pending

Education – EF Goals: Student Responsibility

The best accommodations for students with ADHD

Goals that increase accountability

- Cannot allow these students to fly under the radar
- Too much time has passed after they get home
- **Parent accountability for school often does not work**:
- **- Parent-Child Relationship far too dynamic to allow for school accountability**
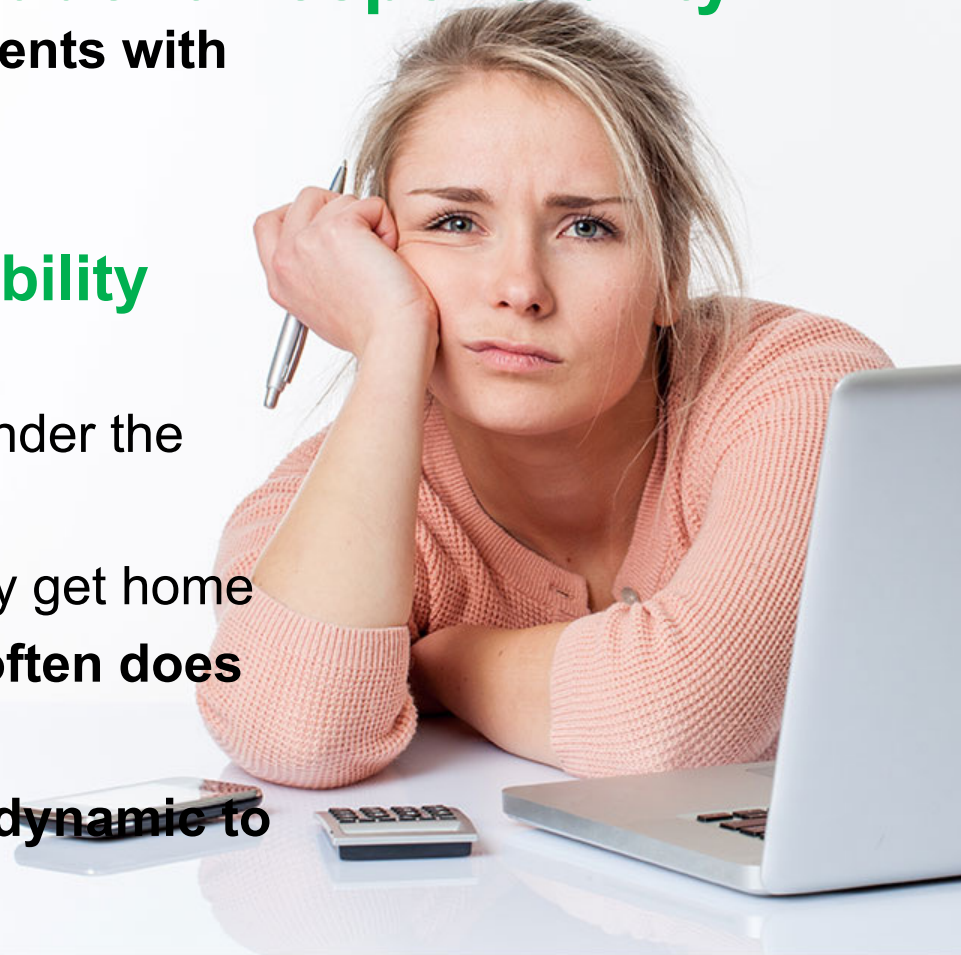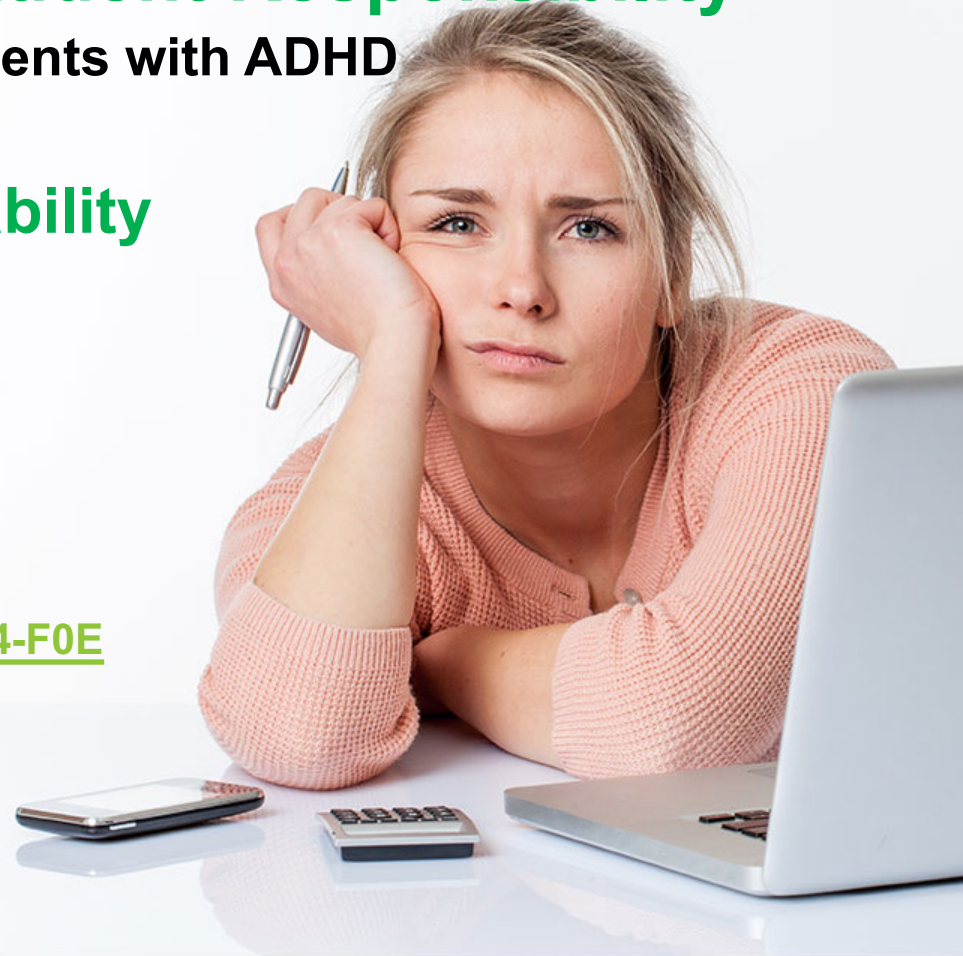
Education – EF Goals: Student Responsibility

The best accommodations for students with ADHD

Goals that increase accountability
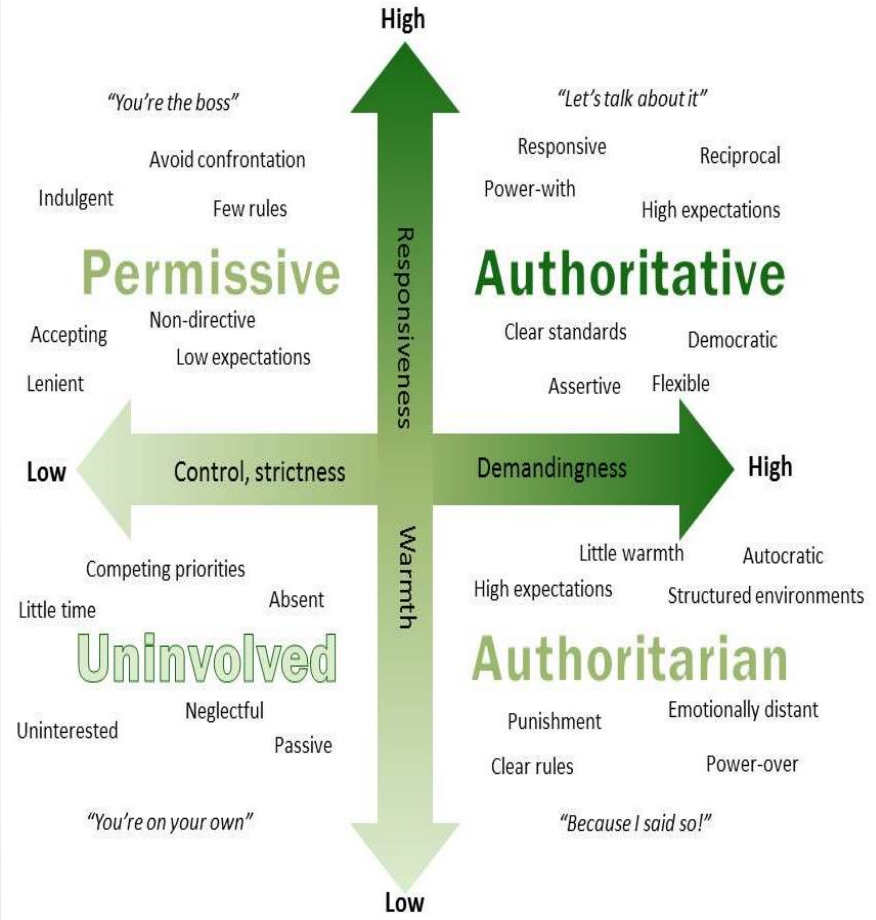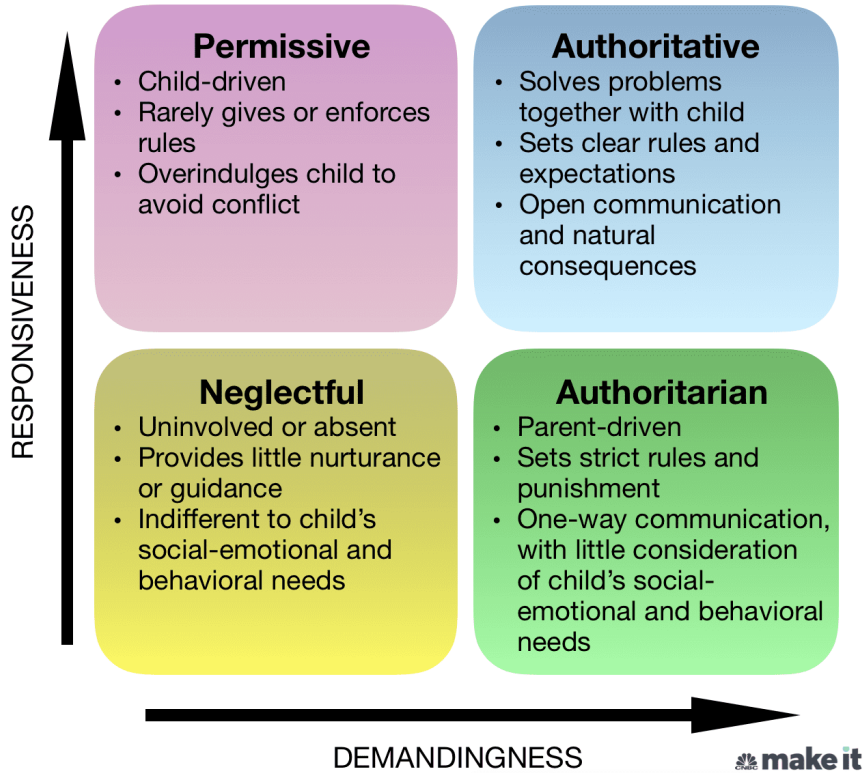
VIDEO:

ADHD Needs More Accountability

https://www.youtube.com/watch?v=r8Dg2u4-F0E

The #1 Clinical Recommendation for ADHD by the American Academy of Pediatrics: Parent Coaching

Source: ADDitude Magazine - @TheADHDDUDE

The 4 Parenting Styles

Permissive
- Child-driven
- Rarely gives or enforces rules
- Overindulges child to avoid conflict

Authoritative
- Solves problems together with child
- Sets clear rules and expectations
- Open communication and natural consequences

Neglectful
- Uninvolved or absent
- Provides little nurturance or guidance
- Indifferent to child's social-emotional and behavioral needs

Authoritarian
- Parent-driven
- Sets strict rules and punishment
- One-way communication, with little consideration of child's social-emotional and behavioral needs

RESPONSIVENESS

DEMANDINGNESS

make it

High

"You're the boss"
Avoid confrontation
Indulgent
Few rules

"Let's talk about it"
Responsive
Reciprocal
Power-with
High expectations

Permissive
Accepting
Non-directive
Low expectations
Lenient

Authoritative
Clear standards
Democratic
Assertive
Flexible

Responsiveness

Low
Control, strictness
Demandingness
High

Warmth

Competing priorities
Little time
Absent

Little warmth
Autocratic
High expectations
Structured environments

Uninvolved
Uninterested
Neglectful
Passive

Authoritarian
Punishment
Emotionally distant
Clear rules
Power-over

"You're on your own"
"Because I said so!"

Low

Source: ADDitude Magazine - @TheADHDDUDE

Parent Coaching - Permissive Parenting

- Leads to insecurity, avoidance of tasks, lack of self-regulation and resiliency, and poor social skills → **The Fixed Mindset**

- Low demands – high responsiveness

- Few guidelines and rules

- Open access to screens & games

- Little to no balance between non-preferred and preferred tasks

- No consequences, low expectations

- Not allowing their child to struggle or take accountability

Source: ADDitude Magazine - @TheADHDDUDE

Parent Coaching – Inhibiting EF Development

- Doing tasks for your child they are capable of doing independently (enabling overdependence)

- Constantly prompting (prompt dependence)

- Lack of free play/unstructured time

- Solving problems for them (inhibiting development of independent problem-solving skills)

- Speaking for them (inhibiting self-advocacy skills)

- Micromanaging academic performance – telling them what they have for homework and reminding them to hand it in

Source: ADDitude Magazine - @TheADHDDUDE

Parent Coaching – Inhibiting EF Development

The Independence Tipping Point

- Typically begins around 14-15 years old

- Inflexibility has been accommodated for so long, the child is now fully resistant to help and assistance

→ with a continued lack of Self-Awareness

→ Still continued to be **dependent** on adults and parents

Decades of research show that **authoritative parenting** is the most effective style for raising productive, well-adjusted, functional children with ADHD and/or Executive Functioning delays

I refer to this style as Reciprocal Parenting

Build The Structure:

- Expectations
- Chores – Competent Roles
- Limits on Screen Time
- Physical activity
- Family Time

Source: Ellis & Nigg (2018)

Flexibility is cultivated,
Inflexibility is accommodated

- ADHD Dude

https://www.youtube.com/watch?v=efCq_vHUMqs

The Connection: Language & ADHD

Dr. Russell Barkley & Dr. Lev Vygotsky

Language goes from PUBLIC ("egocentric")

to <u>PRIVATE</u>

- **0-3: Emit language to others (No Self-Talk)**

- **3-5: Begin to talk to themselves out loud (public)**

- **5-7: Face & Larynx become suppressed →** *Language goes from Public to Private*

- **9-12: Full use of Internal Private Language**

Source: Dr. Russell Barkley: russellbarkley.org

Language & Executive Functions

Language goes from PUBLIC to *PRIVATE*

Language goes from Description → *Self-Instruction*

Below 5 Years → Language has not yet gained control over the motor system of the brain

Between 5-7 Years → Diverse experiences & development allow the brain to strengthen, *and*

language gains control of the motor strip

"What you say, starts to control what you do!"
– Dr. Barkley

Language → Self-Regulation

Source: Dr. Russell Barkley: russellbarkley.org

Language & Executive Functions

Task: Self-Talk & Talk to others at the same time

ALL Verbal Thinking is Speech to the SELF with the face & larynx *suppressed*

The face & larynx *STILL* move when engaged in verbal thought. ONLY difference in you talking to you/me

IT'S THE SAME COGNTIVE SYSTEM

Visual Imagery → Improve Sports Performance

The ADHD/EF – Language Connection!

Language & Executive Functions

Language goes from PUBLIC to <u>PRIVATE</u>

Same with Executive Functions: Others → SELF

Adult Help → Independent

EF: Actions to OTHERS →

Turned back toward the <u>SELF</u>

1) <u>Inhibition</u> – shuts down the motor system (STOP SELF)
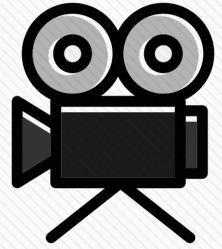
The Internal Skills

STOP SELF and then…

1) **Non-Verbal Working Memory**

- SEE & SENSE to SELF
  - Visual Imagery
- Re-image the Relevant Past
- Forecast into the Future

Mental Movies

Non-Verbal Working Memory
Visual Imagery

All Executive Functioning **starts** with **Visual Imagery** and **Mental Movies** in our mind!

See to yourself-Sense to yourself

Executive Functioning involves our **IMAGINATION!**
By 12 months – **Human's Visual Imagery exceeds all other species**
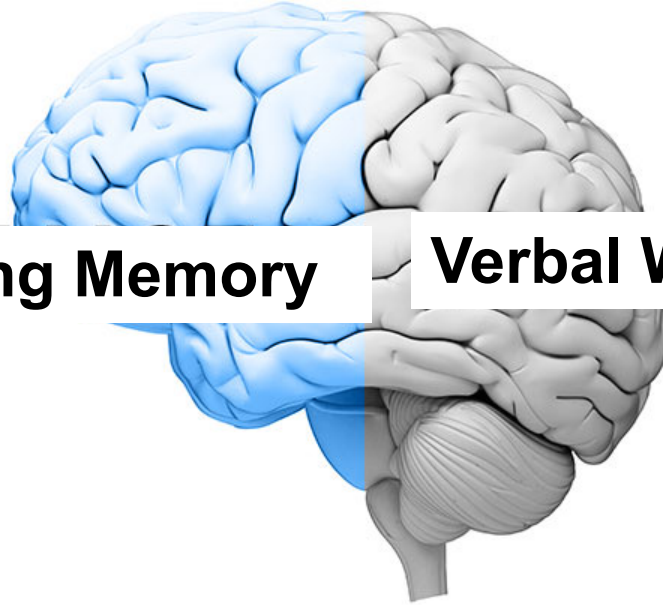
The Internal Skills

2) <u>Verbal Working Memory</u>

- **TALK to SELF**
- **Internal & Private Speech**
- **Self-Talk**

The Brain Coach

Ages 5-7 = Language captures of Motor System

(what you say controls what you do!)

The EFDD Brain

Non-Verbal Working Memory

Verbal Working Memory

WEAKENED & DISCONNECTED

The Internal Skills

3) Internalize Emotions & Motivation

- **Go from External → INTERNAL → to the SELF**

- **We create our own Emotions to respond more appropriately (EMOTE to SELF)**

- **We create our own Internal Motivation (MOTIVATE SELF)**

The Internal Skills

4) <u>Internalize PLAY</u>

- **Foundation for planning, problem solving, creativity**

- **Mental Play**

- **Creating multiple different scenarios to solve a problem**

- **Manual → Symbolic → Mental Play**

Source: Dr. Russell Barkley: russellbarkley.org

True Executive Functions - Hierarchy

1. **Self-Awareness**: self-directed attention

2. **Inhibition**: self-restraint.

3. **Non-Verbal Working Memory**: visual imagery - how well you can picture things mentally.

4. **Verbal Working Memory**: Self-speech, internal speech.

5. **Emotional Self-Regulation**: to manipulate your own emotional state, to use words, images, and your own self-awareness to process and alter how we feel about things.

6. **Self-Motivation**: How well you can motivate yourself to complete a task when there is no immediate external consequence.

7. **Mental Play - Planning and Problem Solving** → https://www.youtube.com/watch?v=qUlrWmwg4Kg
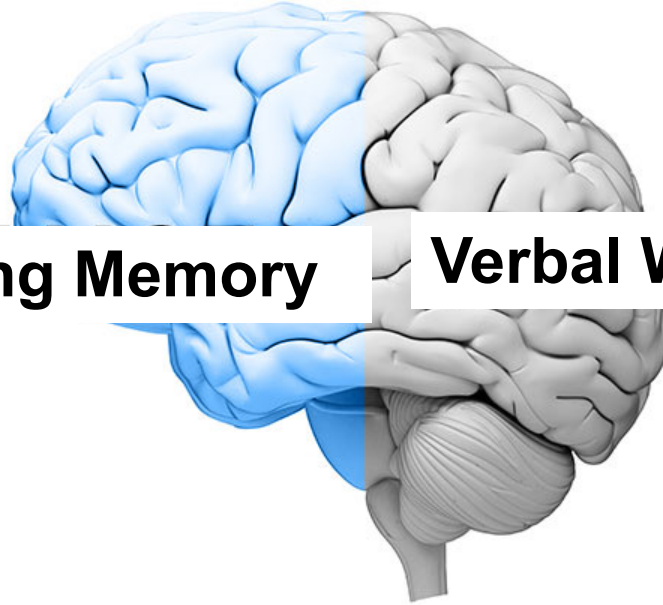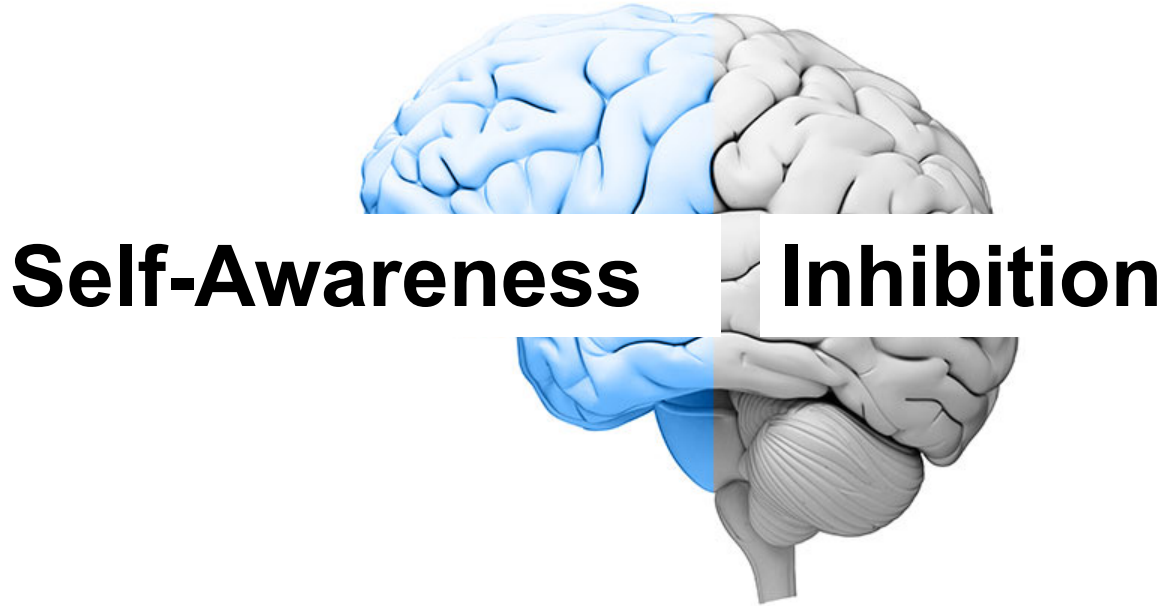
Source: *Russell Barkley: russellbarkley.org*

The ADHD Brain

Self-Awareness   Inhibition

You can't direct an action at yourself if you can't stop responding to the world

The New Era of Child Development

As we have seen an increase in **screens** in our daily lives, we have also seen an increase in external behavior problems/dysregulation, decrease in Executive Function & Social Skills.

Why?

1) **Non-Verbal Working Memory**

2) **Instant Gratification → Dysregulation Later**

3) **Lack of Varied Experiences**

4) **Lack of True Interpersonal Relationships**

The New Era of Child Development

Screens have eliminated TRUE PLAY

- Screens have replaced everyday opportunities to **practice visual imagery**

- Today's Instant Gratification world has **eliminated time of boredom** when we use our imagination

- **Varied Experiences have decreased**

- **Interpersonal Relationships have decreased**

- Opportunities to **plan and problem solve** have decreased – Google and iPhone do it for you!

- VIDEO: https://www.youtube.com/watch?v=A-ILeKHjR7Y

Screens & Gaming – Reward, Stimulus, Response

1) More than 1-hour per day is associated with short-term increased signs of **inattention**

2) Consistent signs of increased **opposition toward parents**

3) Excessive release of Dopamine in the brain → leading to **anger & isolation** when not gaming

Gaming Disorder is now listed in the DSM-5
Source: Mazurek & Englehard (2019)

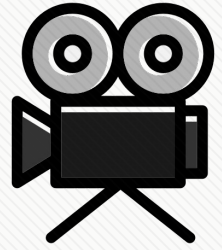https://www.youtube.com/watch?v=aeP6ntRJP78

The EFDD Brain
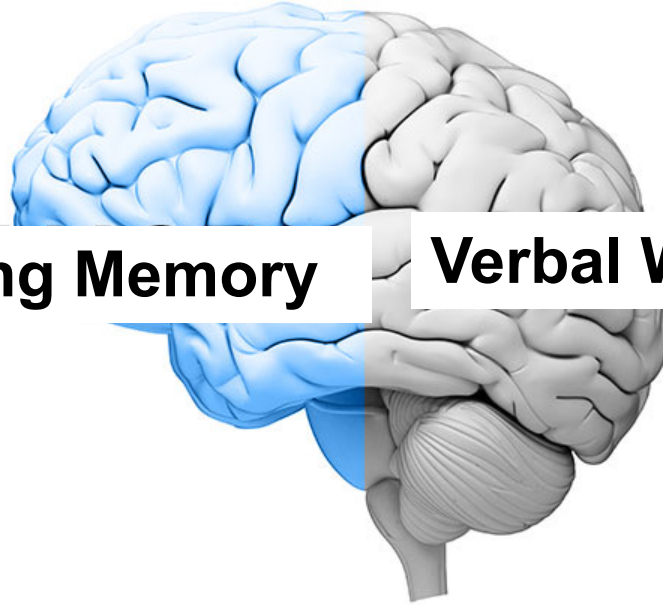
Non-Verbal Working Memory **Verbal Working Memory**

WEAKENED & DISCONNECTED

Non-Verbal Working Memory
Visual Imagery

All Executive Functioning **starts** with **Visual Imagery** and **Mental Movies** in our mind!

See to yourself-Sense to yourself

Executive Functioning involves our **IMAGINATION!**
By 12 months – **Human's Visual Imagery exceeds all other species**

Executive Function & Language Connection

Mental Movies – Non-Verbal Working Memory

Re-Image The Relevant Past

Hindsight

Varied Experiences = Greater Episodic Memory

Executive Function & Language Connection
Mental Movies – Non-Verbal Working Memory

Forecast Into The Future

Foresight

Varied Experiences = Future Thinking Skills

EFDD can be so debilitating – why?

It all starts at the foundation - A core weakness in:

1) Non-Verbal Working Memory (Visual Imagery)
Hindsight and Foresight

2) Verbal Working Memory (Brain Coach)

Planning, Prioritizing, and Problem Solving

Cause & Effect
Conditional Thinking

→**IF-THEN/Cause & Effect THINKING**

1) Non-Verbal Working Memory (Visual Imagery)
→ and **then** stated implementation intentions with

2) Verbal Working Memory (Brain Coach)

Conditional Thinking

IF it's going to **look** like that **–** **THEN** this is what I need to **do** *NOW*

ADHD is

Time Blindness

What is **NOW** vs. *NOT NOW*

https://www.youtube.com/
watch?v=wmV8HQUuPEk

GrowNOW Executive Function Model

Predictions & Review

Visual Imagery - Intervention
Predict & Review

Step 1: Make a Mental Movie of 2 Predictions of what you think the class/activity/event will look and feel like

Step 2: Teachers records and asks questions to elicit further information

Step 3: Using these predictions we make a plan → create Self-Talk

Step 4: Do Activity/Event

Step 5: Review Predictions vs Reality – Build Competence & Confidence!

Visual Imagery - Intervention

Predict & Review

Step 1: Make a Mental Movie of Predictions of what you think this book report project will be like

Step 2: Responses: it will take forever, will be very hard, I will need a lot of help

Step 3: "I will use my clock to track time" – "If I need help, I can ask"

Step 4: Do Activity/Event

Step 5: Review Predictions vs Reality – Build Competence & Confidence!

Bringing EF-Visuals in the Classroom

What specific visuals should we have for our students in the classroom?

1) **Independently quietly working at desk**

2) _____

3) _____

Building Internal Language

THE BRAIN COACH

The voice we have inside of our heads we can talk to anytime!

The Brain Coach helps us made healthy choices. It is always positive and always supports us

Have the students give their brain coach a name, and practice talking to it throughout the day – as much as possible!

EF at School

1) Use Visual Language – _**visualize feeling good about getting the task done**_

2) Remind them of past experiences of when they were successful (with pictures!)
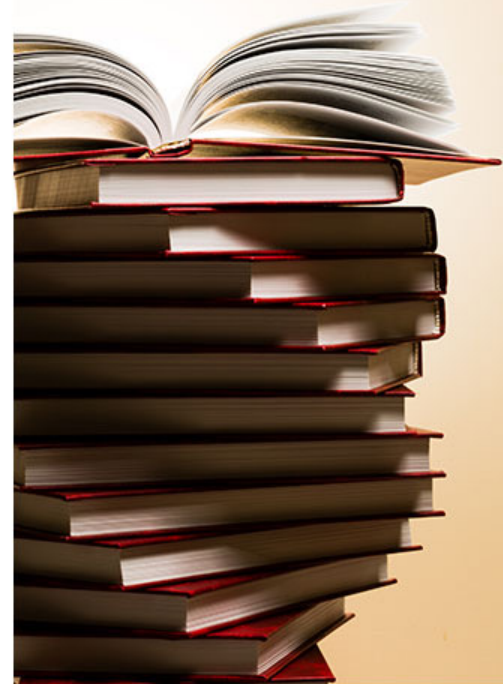
Visual Language in School

WHEN >> THEN

DAILY PRACTICE

WHEN → Then Language

"**WHEN** you are able to complete your work in class today, **THEN** you can earn some free time at the end of the period"

"**WHEN** you are able to be kind to your classmates today, **THEN** you can earn lunch with your favorite teacher"

"**Picture yourself** later today being free of homework because you were able to get everything done at school"

Classroom Strategies

- Consistent movement breaks (yoga video)

- Have students repeat directions **out loud**

- When possible – grade from work *completed*

- Meet with students **1-1 for a review**

- Have students openly share about what they learned **yesterday**

- Play calming music while students work

- Noise-cancelling headphones

Montessori Education

- Evidence based for hyperactive children

- Emphasizes collaboration, communication, self-direction, and risk-taking

- Teachers and other students give feedback

- Kids take the lead in defining their goals

Project-Based Learning

- "A student's brain is in it's most dormant state – during lectures"
- **To really learn** – student needs to be **constantly thinking, articulating points of view, and responding to and asking great questions**
- Students thrive in settings where their opinion matters and they engage in meaningful debate

Project-Based Learning

- Team up with a trusted colleague

- Review tests and quizzes – how memorization-intensive are they? **Could anyone with a computer easily google these answers?**

- Do the assignments you give help your students gain critical thinking skills?

- **In your classroom: what is the lecture time vs. the student-led discussion?**

Project-Based Learning – Evidence Based

- One study found that when teachers received training and support in using project-based learning (PBL) in the classroom, their students performed better on Advanced Placement (AP) exams than students whose teachers did not have this training. The study suggests that using PBL in classrooms can benefit students' learning and preparation for college-level exams and civic engagement and engagement with learning. (Saavedra, Liu, et al., 2021)

- A study in Michigan found that third-grade students who were instructed using Project-based Learning (PBL) and 3-dimensional learning outperformed those who continued with their usual curriculum on a science achievement test. The new curriculum also improved students' scores in self-reflection and collaboration in science classes, suggesting that it can be an effective way to teach science in elementary school and help students develop a deeper understanding of science and SEL skills. (Krajcik et al., 2021).

- A study of middle school students in California found that those who learned science through a project-based curriculum performed 11 percentage points better on a science assessment than their peers. Additionally, students who used the project-based curriculum did better on the end-of-year math and English language arts assessments. (Deutscher et al., 2021).

Project-Based Learning - Examples

1) Internet Safety: research the risks of social media and internet use and create a public service campaign to educate peers on how to stay safe online.

2) Podcast Broadcasting: create a radio show featuring original content and interviews.

3) Human Rights - YouTube: research a specific human rights issue and create a campaign to raise awareness and advocate for change through YouTube Videos

4) Stop-motion Animation: learn the basics of stop-motion animation and create an animated short.

5) Personal Growth with apps: students reflect on their personal growth and create a plan to achieve their goals.

Character Report Card

Three Best SELF Words:

1) Kind

2) Flexible

3) Hard-working

Character Report Card

Three Best SELF Words:

Digital Portfolios for each student

Tracking goals and success

KIPP: CHARACTER
REPORT CARD

Jane Smith Grade: 8	KIPP Imagine Date: 01/28/11	Q2	Q2					
	OVERALL SCORE	**4.30**	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6
Zest		**4.28**						
1	Actively participates	4.50	4	5	5	4	4	5
2	Shows enthusiasm	4.17	5	4	3	4	4	5
3	Invigorates others	4.17	3	4	5	4	5	4
Grit		**4.11**						
4	Finishes whatever he or she begins	4.00	4	5	3	4	4	4
5	Tries very hard even after experiencing failure	4.17	5	4	4	3	4	5
6	Works independently with focus	4.17	4	4	3	4	5	5
Self Control – School Work		**4.33**						
7	Comes to class prepared	4.50	4	5	5	5	4	4
8	Pays attention and resists distractions	4.50	4	5	4	5	4	5
9	Remembers and follows directions	4.17	4	5	5	4	3	4
10	Gets to work right away rather than procrastinating	4.17	5	4	4	4	3	5
Self Control - Interpersonal		**4.54**						
11	Remains calm even when criticized or otherwise provoked	4.50	4	5	4	5	5	4
12	Allows others to speak without interruption	4.83	5	5	5	4	5	5

Social Mentoring

Pairing students with peers

- team projects

- rate each other/hold each other

  accountable

- change up weekly!

Delaying Gratification

Why I Review with Students and how you can too

End of class:

1) Finish with a review of predictions and what actually happened/was learned

2) Self-Rating Scales

3) End up something fun and gratifying

Academic Executive Functions

The most common
ACADEMIC symptoms of the
ADHD/Executive Function-Language Connection

Written Expression & Reading Comprehension

Academic Executive Functions

Written Expression

Writing is Slowwwwwwww

Executive Function → Language

- Mental Representation Internally Organized
- Slow transfer from Brain to finger, pencil, paper
- Perspective-Taking Skills for the Reader
- Connecting details to the Main Idea

Source: Peg Dawson: smartbutscatteredkids.com

Academic Executive Functions
Written Expression

Molitor SJ, Langberg JM, Evans SW. The written expression abilities of adolescents with Attention-Deficit/Hyperactivity Disorder. Res Dev Disabil. 2016 Apr-May;51-52:49-59

Have students tell the story orally first → record it!

- **Give them access to the recording throughout the writing process**
- **Aids the deficits in working memory**

Academic Executive Functions
Written Expression

Molitor SJ, Langberg JM, Evans SW. The written expression abilities of adolescents with Attention-Deficit/Hyperactivity Disorder. Res Dev Disabil. 2016 Apr-May;51-52:49-59

- Have them draw a picture or use the computer to **make visual images**
- **A vision board**
- Graphic Organizers → fade prompts so they can make it their own

Academic Executive Functions
Written Expression

Molitor SJ, Langberg JM, Evans SW. The written expression abilities of adolescents with Attention-Deficit/Hyperactivity Disorder. Res Dev Disabil. 2016 Apr-May;51-52:49-59

- Allow them to use Dictionary, Thesaurus, Grammarly
- **Set up feedback sessions (1-1 and fade support)**
- Create a safe space for them to write with decreased distractions
- Wordless music with headphones

Academic Executive Functions
Reading Comprehension

- Visual Imagery
- Mental Flexibility
- Self-Regulation – delay gratification
- Self-Motivation
- All Internal Play!

- Poor EF makes kids HATE reading

Academic Executive Functions

Reading Comprehension

Miller AC, Keenan JM, Betjemann RS, Willcutt EG, Pennington BF, Olson RK. Reading comprehension in children with ADHD: cognitive underpinnings of the centrality deficit. J Abnorm Child Psychol. 2013 Apr;41(3):473-83.

- Have your student take a break every three to five minutes to **discuss out loud** what happening in the story
- take notes
- Record themselves talking about it!

Academic Executive Functions

Reading Comprehension

Miller AC, Keenan JM, Betjemann RS, Willcutt EG, Pennington BF, Olson RK. Reading comprehension in children with ADHD: cognitive underpinnings of the centrality deficit. J Abnorm Child Psychol. 2013 Apr;41(3):473-83.

Important for them to focus on the FEELINGS & RELATIONSHIPS between characters

- Compare this to things they understand
- Real life experiences
- Movies
- Video games/YouTube

Academic Executive Functions

Reading Comprehension

Miller AC, Keenan JM, Betjemann RS, Willcutt EG, Pennington BF, Olson RK. Reading comprehension in children with ADHD: cognitive underpinnings of the centrality deficit. J Abnorm Child Psychol. 2013 Apr;41(3):473-83.

Besides focusing on accuracy of Reading Comprehension, we have to help them learn how to make reading **a positive experience**

- Read in a comfortable area
- Wordless music to reduce distractions
- Focus on the positive feelings of completing reading
- Get them not to focus so much on reading rate
- Tons of positive feedback
- Reduce the black and white of reading accuracy (either right or wrong)

https://www.youtube.com/watch?v=XjOWkTmiALs

Home EF - Homework

Alter the external environment to aid with structure

- one room & area only
- **Same time and place everyday**
- **No phones, limit distractions, set timers**
- **Homework BEFORE preferred tasks**
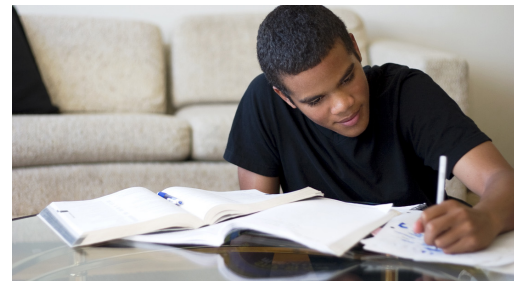
Homework is NEVER worth consistent stress in the home!

- **Future Success in life is not decided by homework**
- Do not email teachers for them → let them develop **Self-Advocacy Skills**

Homework output is NOT a reflection of parenting

Home Executive Functioning
Create a COACH → Positive Self-Talk

- The more complex the behavior demanded by a situation, and the less direct its solution, the greater the importance of **inner speech.**

- Teach kids to Internally TALK BACK to their anxiety and negative self-talk

- Parent's Role: MODEL & Externalize your Self-Talk

Home Executive Functioning
Create a COACH → Positive Self-Talk

MODEL & Externalize your Self-Talk

1) Work through a problem out loud

2) Consider various possibilities out loud

3) Make Predictions

4) IF → Then Language

5) Read The Room

Visual Language

DAILY PRACTICE

- **"Picture in your head** the last time you had to do this, it took you 10-minutes and you did a great job working"

- "**Imagine** how good it will feel when this is finished and you have earned your free time."

Declarative Language

Making Statements, out loud about what we think, notice, remember, feel, wonder about, observe.
*Flexible - allows for more than one possible way to respond and triggers **Visual Imagery!***

I'm wondering where your shoes are.
I'm wondering if you are thirsty?
I'm wondering what we will need to eat this meal?
I notice that you really didn't want recess to end

I notice it is almost time to change classes.
I see the other students are starting to pack up their belongings.

I notice you didn't' seem to understand what I just said
I didn't like when that happened. It made me feel a little nervous.
It made me really happy when you said you like playing with me.

Avoid the fight/flight response of *Directive* Language

Source: Linda Murphy: Declarative Language Handbook

Declarative Language:

Look around the kitchen and figure out what needs to happen

Do you **look like** you are ready to leave for school?

Imagine having YouTube time when you're done with math

I'm wondering if you'll want your snack at school today

Source: ADHD Dude

GrowNOW-EF at Home

Teach habituation: by staying in a situation, you become used to it - getting into colder pool

Child will take each step on ladder gradually and with repetition (we don't just do it once, we do it over and over until it no longer evokes anxiety).

This is **SYSTEMATIC DESENSITIZATION.**

Exposure Therapy – building skills through experience. From Fixed → GROWTH Mindset

GrowNOW-EF at Home

RESILIENCY - We need to encourage children to be **brave, face their fears, and tolerate the discomfort.** We do this gradually and by guiding them to face their anxieties and not give up.

Teach students to **use their internal language to visualize themselves completing the non-preferred task first.**

Use your future thinking to mental time-travel and see yourself in space and time being successful.

STAY STRONG in the Short-Term for <u>Long-Term Success</u>

Failure & Discomfort CREATES <u>Skills, Strength, & Success</u>

Do NOT praise ability!

Praise **EFFORT**

Executive Functions: Quality of Life

Overall Goal: Improve quality of life

 and improve child's self-worth

Language
Social Skills
Executive Functions
Resiliency
Mental Flexibility
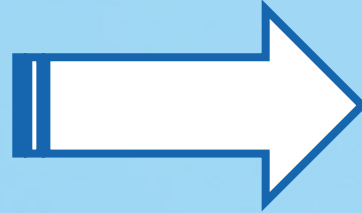
→ Positive Quality of Life & Positive Self-Worth

GROWTH MINDSET

What are the TRUE Predictors of Success?

1) Ability to form and maintain social relationships

2) Ability to manage emotions

3) Ability to manage your life and independent problem solving

The GrowNOW EF-Tech Grow Plan

Parenting ADHD Podcast with The ADHD Dude & Education Chapter Chat

@GrowNOWADHD
@TheADHDDude
@CariEbertSeminars

Spotify & Apple Podcasts

for professionals and parents

CHAPTER CHAT BOOK CLUB

Discussing literary nuggets related to optimal child development and education reform

Hosted by Pediatric SLPs
Michael McLeod and Cari Ebert

IG LIVE
Mondays at 8 pm Eastern Time

Michael McLeod - GrowNOW

Email:

Mike@GrowNOWADHD.com

Website:

GrowNOWADHD.com

YouTube & Instagram:

@GrowNOWADHD.   **(631) 332-3801**

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GrowNOWTherapy.com

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