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Executive Functioning 101

Parent Ed Series February 2025

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Our goal today:

- Define executive functioning
- Explain the domains of executive functioning per The Howard School's model
- Discuss the effects of executive dysfunction on students' academic and social learning
- Discuss strategies that are being used in the classroom as well as strategies that can be used at home to increase consistency



A fancy EF definition

EF concerns “those neuropsychological processes needed to sustain problem-solving toward a goal”

— Russell Barkley

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Put otherwise...

EF is what your brain is doing when you're getting stuff done

Executive
Dysfunction, then, is
“Disuse through
non-conscious
choice”

— George McCloskey

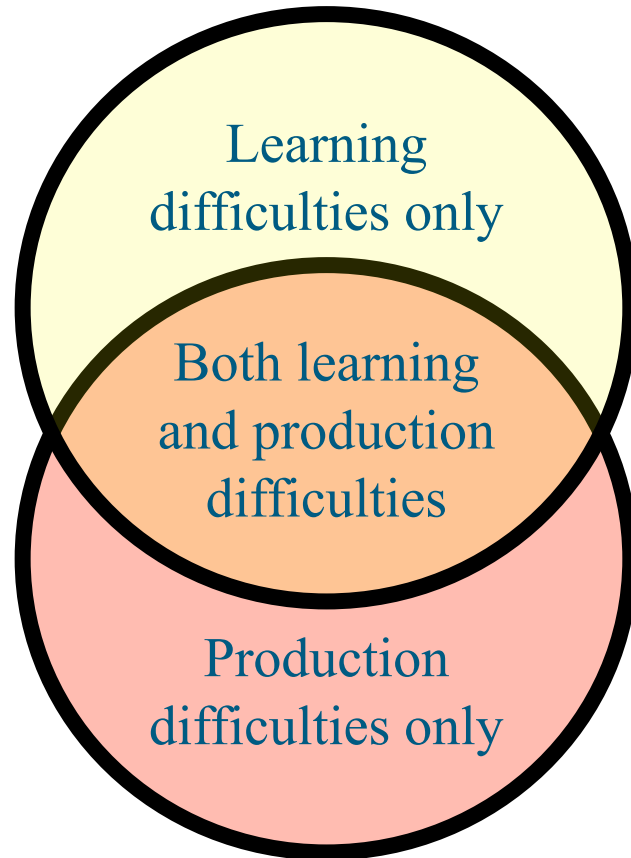
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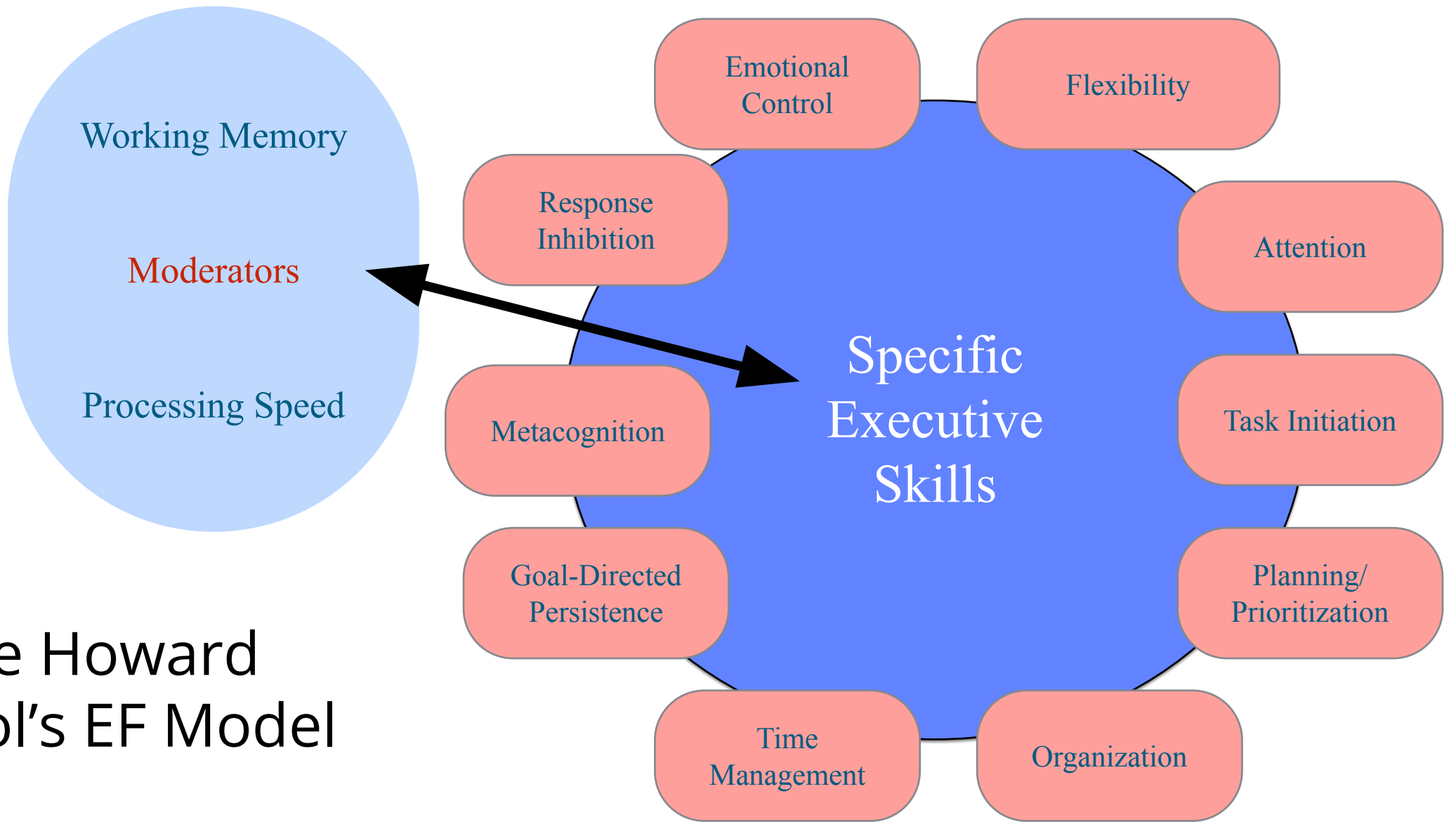
Learning vs Producing



- ← Often not recognized as a learning disability
- ← More easily recognized as a learning disability (with possible EF component)
- ← **EF: Often attributed to lack of motivation, character, etc.**

McCloskey, 2013

EF breakdowns are disorders of *performance*, not lack of knowledge or skills



The Howard School's EF Model

(Adapted from Dawson, 2015; Miller, 2013)

Two Groups of EF Domains

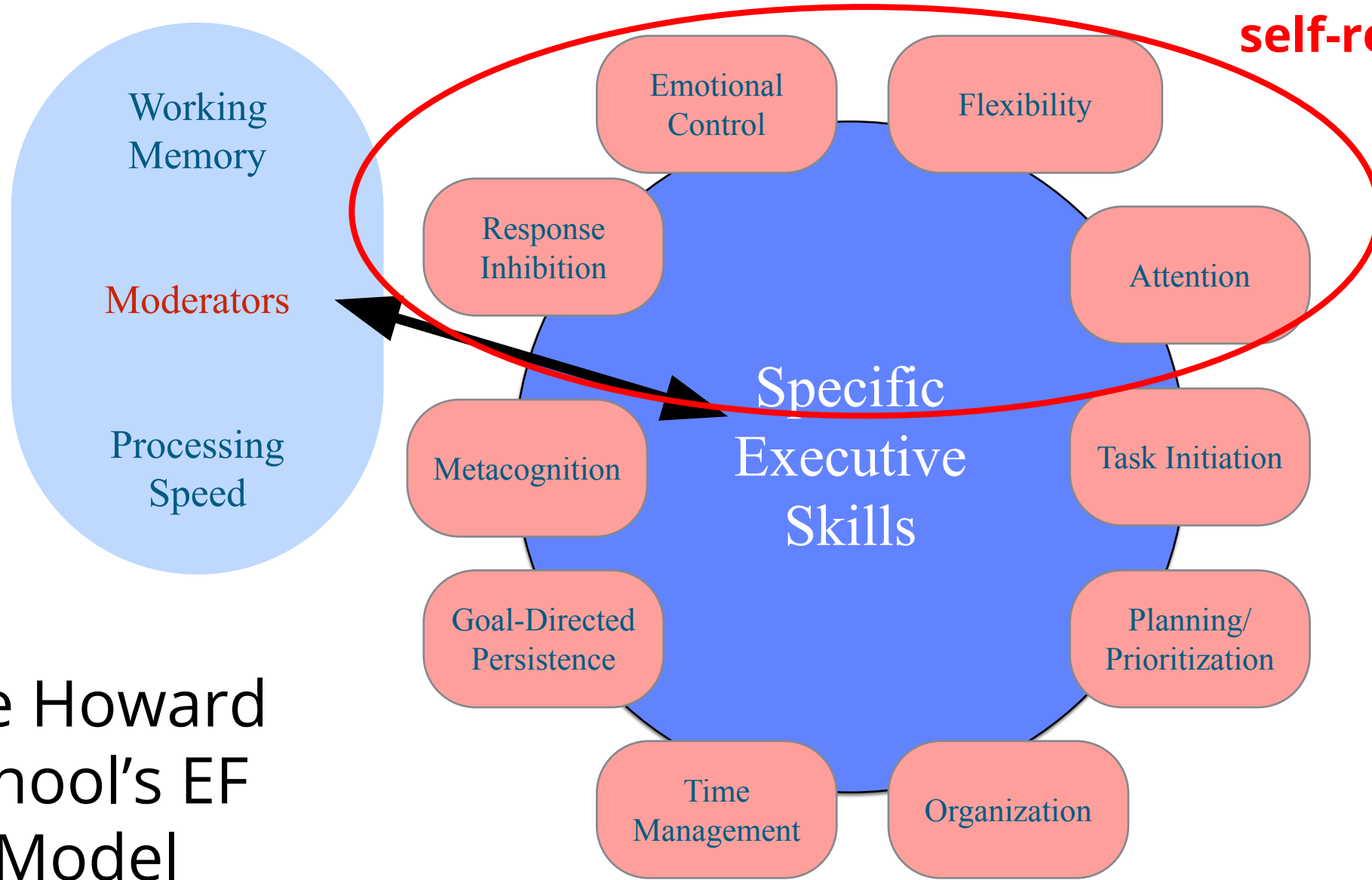
Self-Regulation

- Stopping, thinking, and then making a **choice**
- Affects or controls **behavior**
- Helps us to accord with social norms (what is **expected** of us)
- Breakdowns can stand in the way of beginning the execution of tasks

Execution

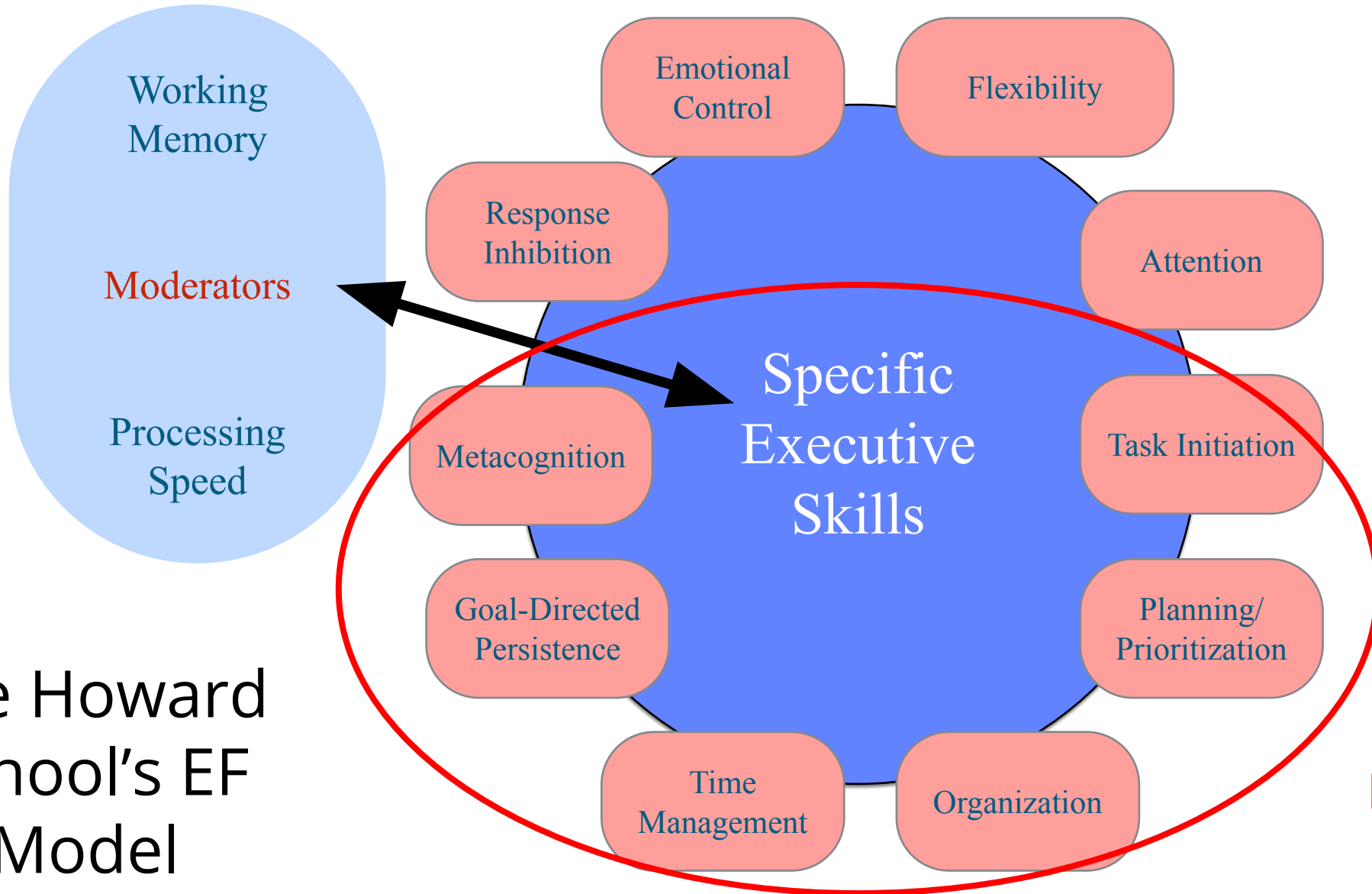
- Planning, completing, and reflecting on a **task**
- Affects or controls the **completion of tasks**
- Helps us to do what is **required** of us to complete a task
- Can break down at any point of completing a task

Domains of self-regulation



The Howard School's EF Model

(Adapted from Dawson, 2015; Miller, 2013)

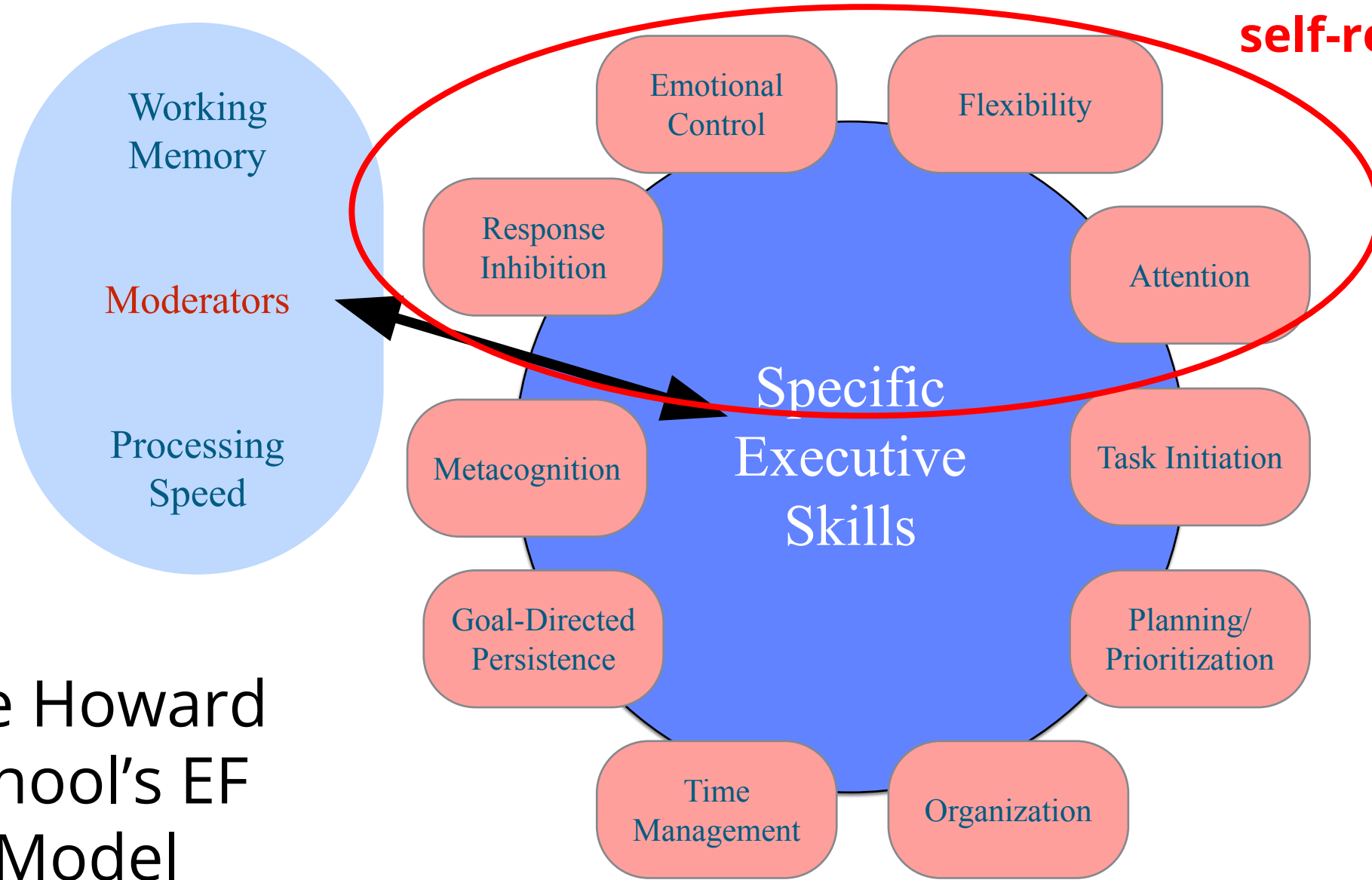


The Howard School's EF Model

Domains of execution

(Adapted from Dawson, 2015; Miller, 2013)

Domains of self-regulation



The Howard School's EF Model

(Adapted from Dawson, 2015; Miller, 2013)

Response Inhibition

Inhibiting, stopping or controlling automatic or impulsive actions or behaviors that interfere with desired activity; Controlling the expression of behavior and thoughts, especially as related to inattention

Problems may look like:

- Blurting out answers
- Distractions on technology (laptop, phone, iPad)
- Unwanted behaviors (touching others or their possessions, taking things, constantly moving, etc.)
- Constantly responding and talking (related to topic or not)
- Overreaction to adverse circumstances

Emotional Control

Managing or controlling your emotions and emotional responses so they do not get in the way of a desired task or activity

Problems may look like:

- Outbursts or tantrums
- Crying or otherwise showing upset and not responding to redirection
- Not letting go of a setback, not moving on
- Fixating on something that is upsetting
- Letting moods or emotions consistently drive behavior
- As we get older we're expected to *under-react* to stressors

Flexibility and Shifting

Switching between tasks and responding to changing demands in a generally positive and productive manner

Problems may look like:

- Behaviors and outbursts, often related to anxiety when routines or schedules change
- Anxiety and possibly rigidity around unexpected feedback
- Outbursts or anxiety when unexpected events occur (e.g., fire drill)
- Difficulty changing between centers, small groups, classes, etc.
- Difficulty coming back to school at the beginning of the year or after long weekends or breaks
- Difficulty starting the school day until routine sets in

Attention

Focusing, sustaining focus, inhibiting outside stimuli, and shifting your focus to the expected task or stimulus at hand

Problems may look like:

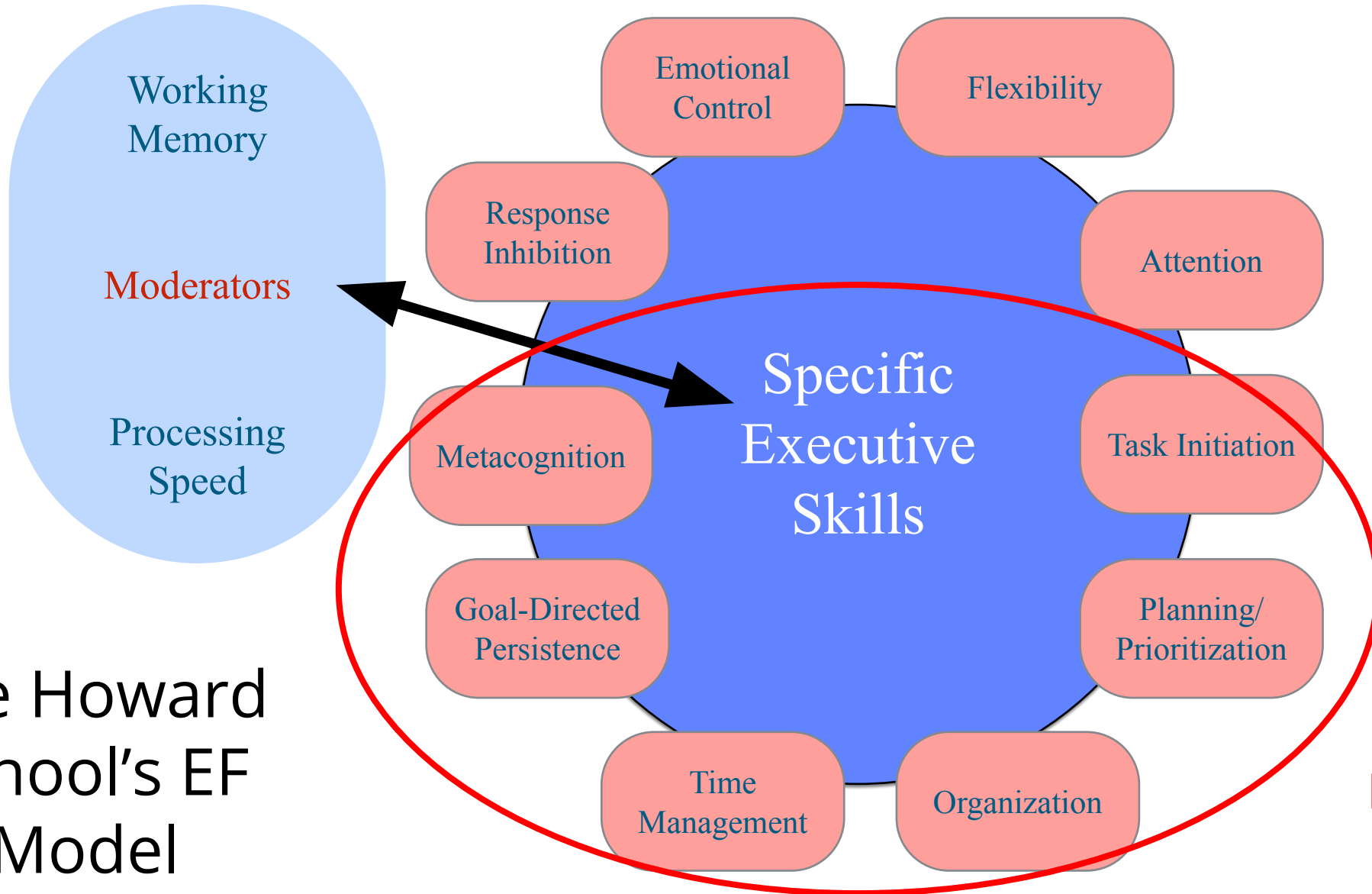
- “Zoning out” to internal distractions
- “Not paying attention” (common complaint that underspecifies the problem)
- Distraction by other things, students, technology
- Appearing to not listen
- Not completing a task in the assigned time

A caution about “Attention”

- Many types of EF deficit look like an attention deficit
- When Attention deficit (diagnosed or not) is suspected, teachers are meant to ***take the time to be skeptical and dig deeper***
 - For instance, not starting on work right away may be indicative of an **Initiation** deficit, though it may look like inattention
 - Similarly, when **Flexibility** is weak, a child may appear to be disengaged from the current task relative to the previous one
 - **Time Management** deficits may create the appearance of falling behind through inattention

Also ...

- ... calling a behavior “attention-related” is too general to be helpful in the classroom, *or* at home
- Effective attention calls for:
 - **Initiating** focus on the target task
 - **Inhibiting** competing stimuli from becoming distractions
 - **Sustaining** attention once it is established
 - **Shifting** attention as needed for subsequent tasks
- Specifying where the breakdown occurs helps identify strategies for remediation
- *Everyone* can attend to *something* of high interest!



The Howard School's EF Model

Domains of execution

(Adapted from Dawson, 2015; Miller, 2013)

Task Initiation

Finding a starting place for a task and knowing the required steps and pieces to begin something and to overcome initial obstacles

Problems may look like:

- Task avoidance
- Getting upset and saying “I don’t know what to do”
- Not beginning the task correctly
- Staring at a blank sheet of paper

Planning and Prioritizing

Knowing and executing the “hidden steps” of a task and paying special attention to the ones that are a higher priority; organizing a series of tasks in order to complete them on time

Problems may look like:

- Not completing a homework assignment
- Only doing part of a homework assignment
- Completing parts of assignments that are less important rather than those of greater urgency
- Delaying starting an assignment or task
- Avoidance behaviors (always!)

Organization

Efficient and orderly approach to organizing steps for a task, or keeping materials in order

Problems may look like:

- Messy binders, desks, computers, bedrooms
- Losing homework assignments
- Difficulty locating materials posted online (e.g., knowing which assignment to be working on in Google Classroom or SeeSaw)
- Telling stories out of order (goes hand in hand with sequencing and possible language deficits)

Time Management

Awareness of time and pace; knowing how long a task will take and self-monitoring & pivoting as necessary

Problems may look like:

- Taking way too long on tasks or parts of tasks
- Inability to estimate how long a task will take to complete
- Protesting that “It’s going to take too long!” or “all night!”
- Not completing tasks and claiming not enough time was allowed
- Unawareness of how much time has passed

Goal-Directed Persistence

Having a goal in the future and understanding what it takes to accomplish it; connecting what is being asked of you today with its relation to future goals

Problems may look like:

- “This is stupid, why are we doing this anyway?”
- Apathy towards tasks and assignments
- Not having a plan or idea of how to accomplish a future goal
- Having unrealistic goals without plans (big dreams!)

Metacognition

Thinking about our own thinking, actions, or choices and self-reflecting on how to replicate success or make changes to find success

Problems may look like:

- Making the same choices over and over despite unfavorable outcomes
- Not using strategies or resources
- Focusing on external locus of control rather than internal (“there wasn’t anything I could have done! It’s not my fault!”)
- Failing to internalize and act upon supportive feedback
- Unawareness of what made one successful at a task

Self-Regulation and Execution Interact

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- Students with EF challenges:
 - “may have difficulty self-modulating emotions and display outbursts or tantrums or react in ways that do not match the triggering factor” (Sumpter).
 - may overreact to situations that other students may take in stride (Dornbush & Pruitt).
 - will not have access to abstract reasoning and problem-solving when they are not able to self-regulate (Dornbush & Pruitt).



EF Cheat Sheet

- **Response Inhibition:** Knowing when to stop
- **Emotional Control:** Keeping your feelings in check
- **Flexibility and Shifting:** Responding to the unexpected
- **Attention:** Keeping focus on the expected task
- **Task Initiation:** Knowing how to get started
- **Planning and Prioritizing:** Knowing all the steps to complete a task
- **Time Management:** Using time well and with awareness
- **Organization:** Having a routine, keeping things in order
- **Goal-Directed Persistence:** Knowing how to meet a goal
- **Metacognition:** Reflection on your thinking and learning

WM & PS –how do they affect EF?

Working memory - How much information your brain can retain and use at any one time (decaying rapidly)

Processing speed - How quickly (or slowly) your brain takes in, responds to, and makes meaning of information (such as the info in WM)

Bottom line – deficits in WM or PS can affect one's success with executive functioning skills

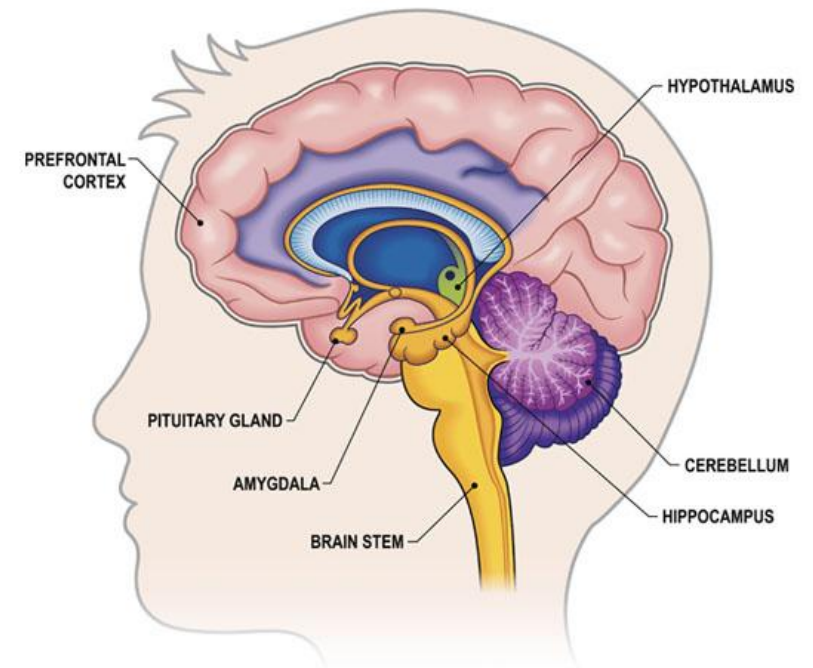
“World War II or the Second World War, often abbreviated as WWII or WW2, was a global conflict that lasted from 1939 to 1945. The vast majority of the world's countries, including all of the great powers, fought as part of two opposing military alliances: the Allies and the Axis.”

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*“World War II or the Second World War, often abbreviated as WWII or WW2, was a global conflict that lasted from 1939 to 1945. The vast majority of the world's countries, including all of the great powers, fought as part of **two opposing military alliances: the Allies and the Axis.**”*

A Note on Anxiety

- A growing body of research examines the connection between anxiety and executive function deficits
- Comorbidity is known between learning differences and psychological concerns, specifically anxiety and depression
- When the brain signals a threat (real or imagined), the amygdala releases hormones that trigger a “4F” response
 - “4 F’s” : Fight, Flight, Freeze, Fib
 - Complete take-over of cognitive and EF processes
 - “Black out”



A bottom-line way to think about EF

“What your brain is doing when you’re getting stuff done”

Effective EF → increased likelihood of academic and social **success**:

- Adequate production, competency with multiple demands
- Management of social situations adequate to initiating and sustaining friendships

EF deficits → increased likelihood of academic and social **struggles**

- May *appear* to be behavioral, emotional, motivational, attentional
- Part of the Howard job is to help identify, problem-solve, and address

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How does Executive Dysfunction affect us?



What do students with EF challenges have in common?

These students tend to show:

- difficulty with automaticity of tasks (decoding, math facts, classroom routines)
- difficulty with following multi-step instructions
- difficulty orienting to and initiating classroom tasks
- difficulty valuing, prioritizing, and executing production tasks

They may appear to present with:

- lack of motivation and energy for schoolwork
- oppositional (or at least indifferent) attitude
- inattention to school and school-related tasks
- a sense of disconnect between schooling and success

You at home may be bearing the brunt of this, especially when students have held it together all day.

Academic & Social Consequences

Academic:

- missing assignments
- trepidation about starting work
- rushing through work
- not checking over work
- not using strategies and tools proven to help
- inattention during work time and lectures)
- seeming to shut down during tasks

Social:

- struggling to make or keep friends
- struggling to “read the room”
- not getting the joke
- acting impulsively in ways that are off-putting to peers
- responding inappropriately to peers
- struggling with group work
- difficulty attending to conversations
- deficits in turn-taking & keeping to a topic



“1. EF is necessary for speech & language development.

2. Generalization or carryover of skills requires EF (academic).

3. Pragmatic development is more dependent on EF than linguistic structures (social).”

**-Tera Sumpter, Seeds of Learning
LLC
@terasumpter_slp**



“1. EF is necessary for speech & language development”

This cuts across the social AND academic worlds.

SOCIAL:

- Examples for the **social** world and development of social pragmatics:
 - You underreact, and don't take everything personally [Emotional Control]
 - You don't say *everything* you are thinking [Response Inhibition]
 - Sometimes with friends, you just go with the flow [Flexibility]
- Note that it is Self-Regulation that is the most necessary constellation of EF skills for **social** development

ACADEMIC:

- Examples for the **academic** world and success in schools:
 - You balance multiple school demands with extracurriculars [Planning and Prioritizing]
 - You set goals and learn how to meet them [Goal-Directed Persistence]
 - You change your approach to fit the assignment or situation [Metacognition]
- Note that **academic** development depends on mastery of Execution EFs

“2. *Generalization or carryover of skills requires EF*”

- Generalization from the classroom to the world outside is a major concern of ours
- This is particularly true in the **academic** realm, but also the **social**
 - How do I know when to apply a skill I have worked on?
 - How do I know which skill to apply in a particular situation?
 - How do I know what behavior is expected of me among a group of peers, and what will make me stand out negatively?
 - How do I initiate a new friendship?
 - How do I join conversations and not dominate them with my preferred topic?
- Self-regulation EFs are especially called for

“3. *Pragmatic development depends more on EF than on linguistic structures*”

- This is particularly true in the **social** realm, but also the **academic**
- Pragmatics is part of language, and includes more than what we say
 - Students are more successful when they can apply and interpret non-literal language [Metacognition]
 - Students are more successful when they can understand what is implied but unsaid [Flexibility]
 - Students are more successful when they express and make sense of *how* someone is communicating, not just what they are saying [Metacognition]
 - Students are more successful when they have world knowledge and contexts that bear on current discussions [Metacognition]

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Remember:
Behavior is a form of
communication.



Behavioral Challenges

- It feels good to be regulated, BUT many kids need support with noticing and reinforcing that fact for themselves.
- Issues?
 - emergent self-awareness and metacognition
 - belief in lack of agency
 - external locus of control
 - absence of self-reflection
 - e.g., what did it feel like to be better regulated, and how do I achieve that more consistently?

EF Connection

- Self-regulation EFs
 - Response Inhibition
 - Emotional Control
 - Flexibility
 - Attention
- When there are breakdowns in these areas, this leads to “over-arousal” and unwanted behaviors.
 - The challenge is to figure out ways to help students regulate themselves more often to minimize these behaviors

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Indicators of Over-Arousal & Accompanying Behaviors

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- Overly nervous / anxious (accompanying behaviors)
- Crying over minor issues
- Increase in activity or impulsivity
- Struggling to think clearly
- Angry, even aggressive outbursts
- Too overwhelmed to complete tasks or assignments
- Shut-downs, refusing support or even dialogue



We've covered a lot about understanding EF...so how do we help?

An important note:

- We should be constantly reframing our vision of behavior
 - When we focus on the things our students “cannot” do, we are continuing a negative narrative about them
 - We know what students *have done*, not so much what they *cannot* do
- Children are more than their behavior
 - Like us, they have areas of growth and opportunity
 - We need to name these challenges **constructively**
 - Constantly touching others’ stuff suggests impulse control difficulties
 - Not playing with others points to challenges with emergent socialization
 - Getting carried away with talking about narrow scopes of interest like video games indicates a growing edge in conversational skills

Strategies for School

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EF Strategy List

Some of our favorite tried and true....

- Common language
- Consistent classroom and school routines
- Reflections
- Self-talk routines for self-regulation
- Social autopsy
- Backwards planning & prospective visualization
- Agendas and homework checks
- Planners and organizers for projects
- Breaking down & identifying hidden steps

Strategies for At Home

EF At Home Strategy List

- Routines for repeated tasks (getting ready for bed, getting out the door in the morning, etc.)
- Reflective questioning
- Week ahead preview
- Give small multi step tasks and chores
- Calming strategies
- Self-talk routines (“What can you say to yourself here?”)

More Strategies for At Home

- Break down steps prior to activity (First, Then, Last)
- Prospective visualization (“What will finishing look and feel like?”)
- Homework routine – make it as much the same (time, place, method) as you can
- Visuals around the house for schedules, checklists for packing backpack → make these tasks routine!
- Backpack and binder clean out at home (again–routine!)

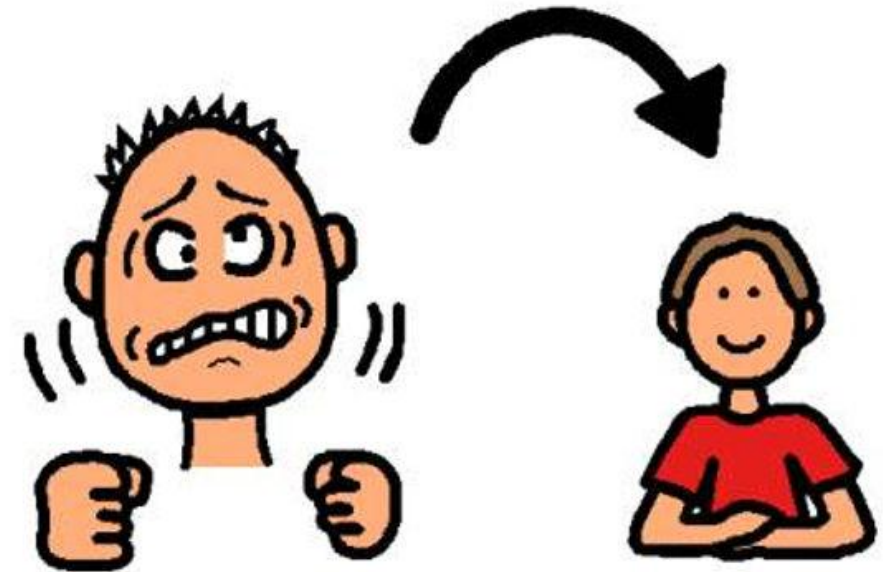
Calming Strategies: How to Facilitate Re-regulation

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- Take a “Reset” or “Break”
 - NOT punitive! Time to restart, time to become available again
 - It’s important to recognize *when there’s no point trying to redirect the child yet*
- Allow a walk to get water or find a cool-down space
- Prompt student with their script
- Use fidgets or stuffed animals
- Counting (especially skip counts)
- Deep breaths (3x3 rule)
- Calming music
- “How is my motor running?”
 - Green Zone, Yellow Zone, Red Zone





Remember that
dysregulated adults
cannot regulate
dysregulated children.

Use trusted and true strategies for yourself before
engaging with a dysregulated child.

Once a child is regulated, THEN (and only then) can you begin to do the work to make changes to behavior going forward.

Resources for At Home



Tera Sumpter
@terasumpter_slp

Over 425,000 in Print!

The Revolutionary
"Executive Skills" Approach to
Helping Kids Reach Their Potential

4- to 13-year-olds

SMART *but* SCATTERED

Boost Any Child's Ability to:

- ✓ Get Organized
- ✓ Resist Impulses
- ✓ Stay Focused
- ✓ Use Time Wisely
- ✓ Plan Ahead
- ✓ Follow Through on Tasks
- ✓ Learn from Mistakes
- ✓ Stay in Control of Emotions
- ✓ Solve Problems Independently
- ✓ Be Resourceful

Peg Dawson, EdD, and Richard Guare, PhD

ADDITUDE

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10:19 5G

learningwithdr.k

Dr. Nelly Kaakaty | Learning Tips + Resources

144 posts 5,672 followers 473 following

PhD Learning Specialist | Empowering kids with ADHD, dyslexia, & more | Tips for parents & educators | Supporting every learner's unique journey

linktr.ee/learningwithdrk

Followed by terasumpter_slp and 5 others

Following Message +

Research Time Management Organization Study Skills

Research Time Mana... Organization Study Skills

What kids with ADHD need from their parents

Blame the brain (not the child). When they struggle to manage their time, it's not laziness—it's



THINGS TO REMEMBER:

Repeat, repeat, repeat

- There is no telling in advance how long a child will take to internalize a skill
- A common mistake → *Giving up too soon on reinforcing the routine.*



Some Major Takeaways

- Behavior is communication *and therefore decodable*
 - Undesired behaviors often represent self-regulation difficulties
 - Not all children readily express what's going on
- Tend to yourself first:
 - Dysregulated adults cannot regulate dysregulated children
 - Help students self-regulate before attempting to address modification of the behavior

Some Major Takeaways

- All students have strengths as well as challenges
 - Intervene supportively when your child gets stuck
 - Some EFs emerge later than others
 - Whenever possible, use constructive rather than ableist language
- EF development takes time
 - There are many strategies we can use in the interim to help our students make different choices going forward as they grow.



Some Major Takeaways

- There is no telling in advance how long it might take for an EF to more fully develop
 - Repeat, Repeat, Repeat and don't resign yourself too soon
- Many EFs require direct instruction to emerge and strengthen
 - For instance, Metacognition takes many years (some of them long after High School) to fully emerge
 - Partner with your child's teacher to reinforce approaches going on in school



EF often must be directly instructed and cannot be imposed!

- *It's not effective to say, "You're in __nth grade now and should know how to do this"*
 - EF will need to be directly instructed to students who don't just luckily absorb it from surrounding contexts
- Release control gradually to the student as mastery of strategies and skills increases
 - This will depend on the age and profile of a particular student
- Don't give up — this is often the work of years!



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Thank you!!

Any questions?

Feel free to reach out to us! We'd love hearing from you.

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