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Foundations for School Readiness:

Executive Functioning in the Classroom (Day 3)

By: Cara Koscinski, MOT, OTR/L
The Pocket Occupational Therapist

www.PocketOT.com



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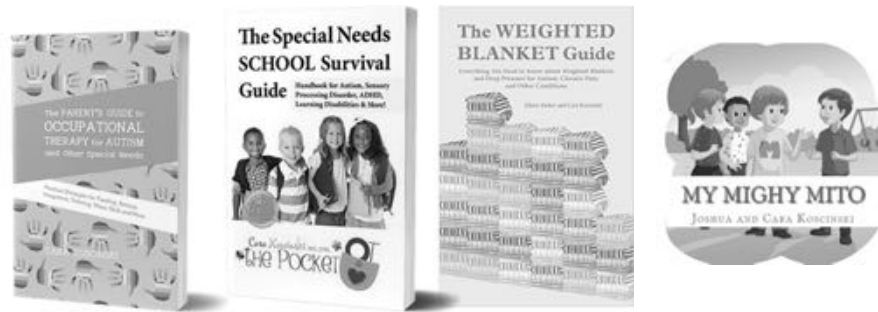
Learning Objectives:

- 1) Describe executive function and its importance in school success.
- 2) Identify the differences between thinking and doing skills.
- 3) Name treatment strategies and set goals for improving executive function in the classroom.

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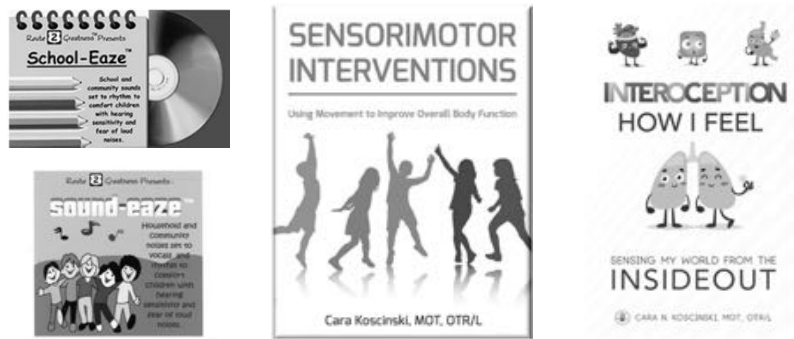
Cara Koscinski, The Pocket OT



Author of 6 Published Books, Two are FAMILY CHOICE AWARD Winners

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Cara Koscinski, The Pocket OT



Author of 6 Published Books, Two are FAMILY CHOICE AWARD Winners

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Cara Koscinski, The Pocket OT



- Speaker and CEU trainer for multiple companies.
- OT Advisor for Autism Asperger's Digest
- Multiple published articles for ADDitude, Future Horizons, Autism File
- Mother to two children with autism
- Attending school for post-professional doctorate in OT

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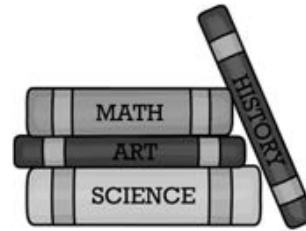
What IS Executive Function:

- Set of skills to manage tasks we complete every day.
- What we will pay attention to and what we choose to do.
- Manage emotions and thoughts so we can be efficient.
- Regulate behavior when difficulties arise.
- Assist in ability to function with independence.

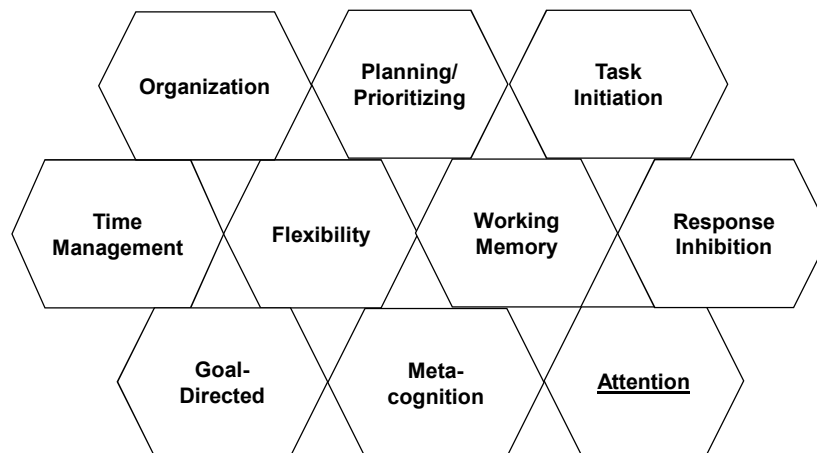
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What Makes up executive function

- Self-awareness
- Inhibition
- Attention management
- Visual imagery
- Problem solving
- Self motivation



Matrix of Skills:



continued

Complicating factors

- Difficulty in inhibiting emotions, anger, excitement, sadness, etc.
- Depression
- Difficulty understanding others' points of view, leading to anger & frustration
- Expressive language difficulty



continued

Breaking down executive Function

- Important to know both order in which skills emerge AND what each skill 'does.'
- Begin after birth and continue to adulthood (25+ years of age)
- Frontal and Pre-frontal cortex
- Two 'types' of skills
 - Thinking (cognition)
 - Doing (behavior)

continued

Two Types of Skills

Thinking	Doing
<ul style="list-style-type: none"> ▪ Planning ▪ Organization ▪ Time Management ▪ Working Memory ▪ Metacognition (Self-observation and assessment) Looking at self and evaluating how you're doing. 	<ul style="list-style-type: none"> ▪ Response Inhibition ▪ Emotional Control ▪ Sustained Attention ▪ Task Initiation ▪ Flexibility ▪ Goal-directed activity (not be distracted by competing activities/interests)

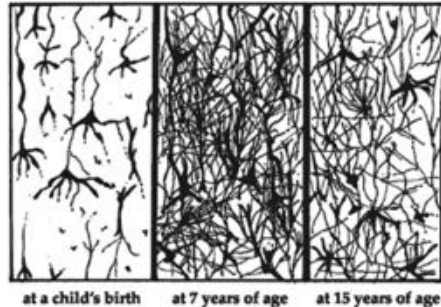
Neuroscience's Star Patient



Phineas Gage:

- Injured by explosion
- Changed personality
- Impulsive
- Poor decision making

How Brain Connections Form



- Continued synaptic pruning, neural connection and integration.
- Increased capacity to process information
- Myelination driven by experience and practice.

**Structural changes underlie the functional integration of frontal lobe (Luna & Sweeny, 2004)

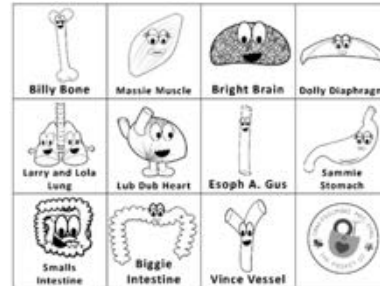
Frontal Lobes Jobs:

- Direct attention/behavior
- Link behaviors to past experience
- Control our emotions and behavior
- Regulate
- Observe, assess, fine-tune so we 'won't do THAT again'

continued

Frontal lobe *Higher Level Processing

- Rational thinking
- Future considerations
- Flexibility
- Mindfulness: Manage internal environment
- **Interoception**
 - Manage mood (to reduce intrusive thoughts)
 - Manage fatigue (pacing, regular breaks)
 - Manage physical comfort (pain, hunger, thirst)



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What comes first?

- Behavioral inhibition
 - ✓ Delay response vs. immediate gratification
 - ✓ Stop behaviors when they are not working
 - ✓ Manage distractions that could interfere



continued

Regulation

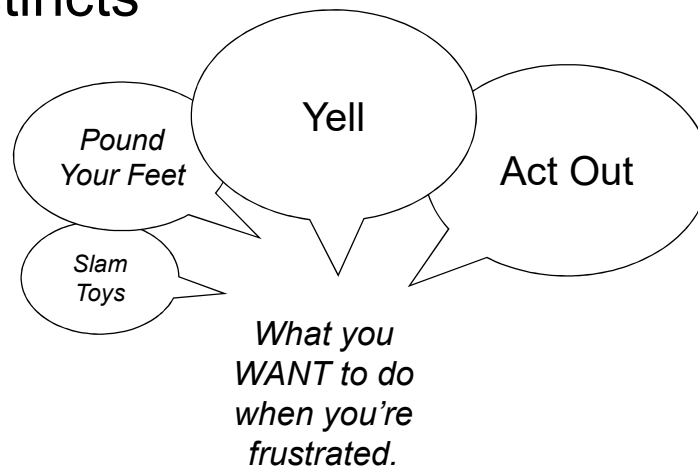
- Our 'optimal' state of learning.
- We are engaged in our environment.
- Not 'too' energetic and not 'too' tired.
- Just right state of BEING



PROCESS:

- Internal awareness
 - How am I progressing
 - Am I on track to meet the deadline
 - Self-reflection
- External awareness
 - Am I on track with others
 - See how they are doing it

Limit influence of lower-level instincts



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Disorganized = overwhelmed

*Important
Directions*

Lets read aloud

Begin on page 101

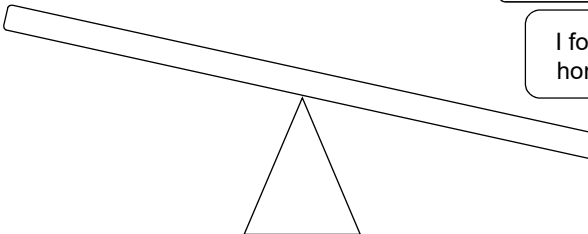
*Child is
Thinking*

I'm hungry

What's that noise?

My tag is scratchy


I forgot my homework



continued

Sub-Cortical Level *inhibits or STOPS*

- Intense emotions
- Impulse reactions
- Rigidity
- Lack of self-reflection



Theory of mind (ToM)—the specific ability to attribute mental states to oneself and to others (Baron-Cohen, Leslie, & Frith, 1985). It is the ability to consider others point of view.

- Manage the external environment
- Reduce distractions (auditory, visual)
- Allocate sufficient time for tasks so less time pressure to distract
- Structure and routine

continued

Child's Brain

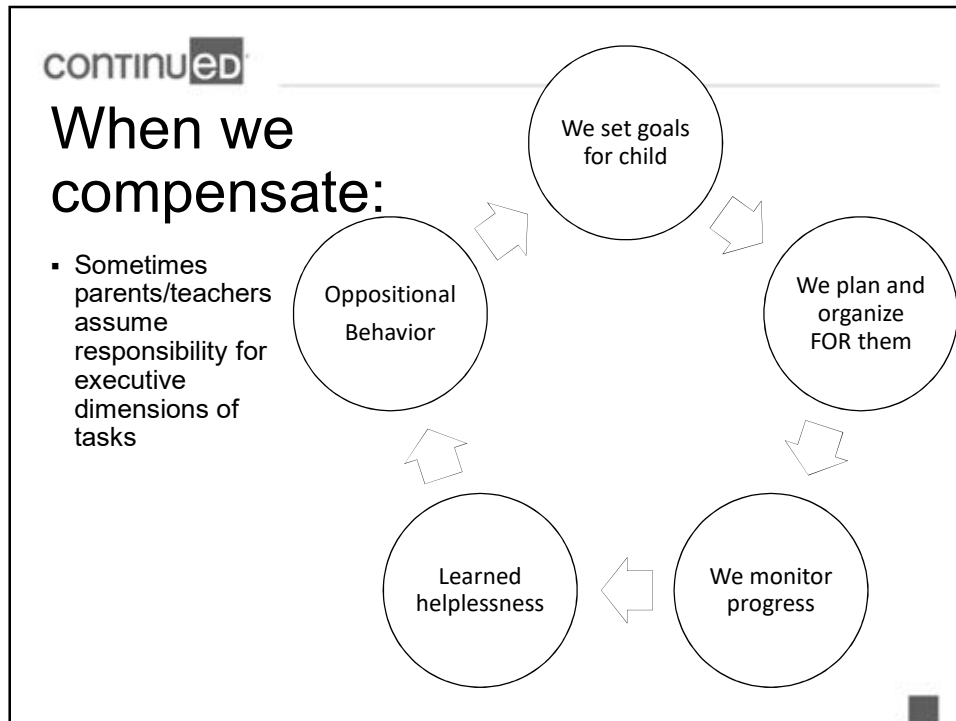
- Frontal lobes grow prior to and during teenage years.
- Executive Functioning occurs primarily in the frontal lobe & pre-frontal cortex
- fMRI = teens rely on prefrontal cortex solely vs. distribution of tasks to other specialized regions.
- Amygdala and insula activated for safety and survival (fight or flight response)
- Risks are much less 'obvious' to children with many special needs

continued

After High school-age 25

- Incidents of impulse retaliation are rare.
- Able to focus on holding a job, multi-step commands.
- Revise and reflect on plans based on circumstances
- Complex problem-solving
- Insight about own behavior

continued



continued

Natural Games for Ex. Fxn:

- Peek-a-boo
- Block copying
- Finger plays
- Hokey Pokey
- Simon Says
- Use inhibition such as:
FREEZE....Ring around the Rosie
- Talking about mutually shared experiences
- Imaginary play

Play!

Be Creative.
Find new ways to use old things!

General Considerations

- Concentrate on one task at a time before moving on
- Keep instructions simple and short
- Reduce distraction and keep environment free from clutter and turn off TV and radio during the activity
- Allow plenty of time for the task
- There is NO such thing as multi-tasking!



Interventions for Young Children

Competence begins with a feeling of satisfaction. Begin with simple, one-step tasks which show immediate results:

- Folding clothes/towels
- Sorting objects
- Watering plants
- Dusting
- One specific cooking task
- Relaxing music



continued

What can OT Do?



- ✓ Self-regulation teaching
- ✓ Identifying goals, planning, monitoring progress, and adjusting behavior are important skills (metacognition)
- ✓ To focus the planning process, encourage teens to identify something specific that they want to accomplish.
- ✓ Meaningful to teen *rebellion* if not important to individual
- ✓ Help teens develop plans for steps to reach these goals. They should identify short- and long-term goals and think about what has to be done to achieve

continued

Teach Forethought – Predict outcome

FINISH

What will
finished work
look like?



Teach self-talk



How will I
feel?



Look back and
reflect

continued

continued

Teaching Strategies:

- Identify a specific plan WITH a written timeline.
- Be sure that all steps have been explicitly identified and ensure that the completion of each step is recognized and celebrated.
- Set 'baby-step' rewards
- Self-monitor while working
- Set a timer to go off periodically as a reminder to check on whether one is paying attention and understanding.

continued

Self-Monitoring

- Identify key times to self-monitor
 - Before an exam
 - Prior to leaving home
 - Every 15 minutes when completing a difficult task to monitor frustration
 - When breathing becomes shallow

continued

'Out of the Pocket ideas'

- Mindfulness and awareness training
- Body scanning
- Brain breaks
- YOGA for classrooms
- Sensory processing and sensory diet



Teaching strategies:

Make the learning process as concrete and visual as possible.

- Use graphic organizers
- Visual or auditory prompts help a student to organize their thoughts
- Use post-it notes for everything as life is NOT static!
- Use accommodations for learning disorders
- Social stories
- Peer buddy
- Mnemonics (memory tricks)
- Visual Posting of key information on strips (PECS in sequence)
- *Use a scoring rubrics to define what is to be included in class assignments and what a quality end product includes.*



Apps

ORGANIZATION

- Checklists
- Real-Simple
- Paperless
- My Homework
- The Homework App
- Remember the Milk
- Hi Future Self
- Organize: Me Personal Task Manager
- GTD Manager
- Be Focused: Focus Timer/Goal Tracker

NOTE TAKING

- Dragon Dictation
- Audio Note
- Quick Voice
- Note Pro!
- Penultimate
- Evernote

Classroom Accommodations

- Use closed-ended testing and questions (word banks, true/false)
- Ask students to self-evaluate by GIVING themselves a score/grade
- Color-coded self-monitoring (checklists at a certain point in task or assignment)
- Extra set of books at home
- Student has input into transitions, order in which tasks are completed, etc.
- Contracts **Work well with behavior plans**

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IEP Goals

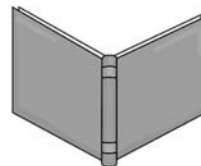
- ALL goals should teach students to independently use routines, build habits
- Setting inner voice, scripts, and self-talk is key to consistent monitoring
- Problem-solving in all areas
- Require a great deal of scaffolding and structure



continued

Iep Goals

- Life Vest example
- SLOW fading of all prompts and reinforcement
- Teacher/therapist/student constant monitoring and double-check system in place for extended periods of time.
- Schedule books for all tasks

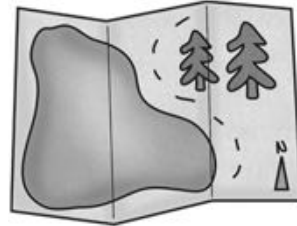


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IEP Goals

1. Flexible Problem Solving
2. Goal Setting
3. Planning
4. Organizing
5. Self-monitoring/Self-evaluation
6. Self-awareness
7. Advocacy



continued



Website: www.PocketOT.com

Facebook:
www.facebook.com/PocketOT

Twitter: @PocketOT

Pinterest:
<https://www.pinterest.com/pocketot/>



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Websites with great information

- <http://www.heysigmund.com/how-to-boost-executive-function-in-children/>
- <http://www.greatschools.org/gk/articles/executive-function-lens-to-view-your-child/>
- <http://www.additudemag.com/adhd/article/7051.html>
- <https://www.understood.org/en>



It's elementary: Foundations for school readiness Virtual Conference

Mon 8/6	Sensory Regulation and Yoga Britt Collins, MS, OTR/L
Tues 8/7	Visual and Fine Motor Skills Emily Dassow, OTR/L
Wed 8/8	Executive Functioning in the Classroom Cara Koscinski, MOT, OTR/L
Thurs 8/9	Early OT Exposure (EOTE), A Mindful OT Screening & Intervention Angela Hissong DEd, OTR/L, CMCP, CMMF, CIR
Fri 8/10	Embedding School Based OT into Elementary Melanie Wheeler, OTD

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