



Strategies to Address Weak Executive Functioning Skills

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• Agenda

- What is Executive Functioning (EF)
- Definition of EF Skills
- Strategies

•What is Executive Functioning?

- Term that describes a variety of cognitive skills
- A general term, not a diagnostic label – it's a symptom of many diagnostic conditions
- “Those capacities that enable a person to engage successfully in independent, purposeful, self-serving behavior...”

(Neuropsychological Assessment 3rd Ed. Muriel Deutsch Lezak, Pg. 42-43)

•What is Executive Functioning?

- Executive functions of the brain are cognitive functions that activate, integrate, and control other functions of the mind.
- When these executive functions are not working effectively, the individual, despite strong abilities, can experience significant problems in many aspects of learning, getting work done, social functioning, and self-esteem.

- EF skills involve...”high-level cognitive functions...that help us to decide what activities or task we will pay attention to and which ones we will choose to do...they allow us to organize behavior over time and override immediate demands in favor of longer-term goals...allow us to plan and organize activities, sustain attention, and persist to complete a task...allow us to manage our emotions and monitor our thoughts in order to work more efficiently and effectively.”

Dawson & Guare, 2010

- Good Analogy...



Things to remember...

- EF skills are consistent with inconsistencies
- EF skills work together – no skill works in isolation
- EF is not about “Do I have the skill” but...
“Do I have the ability to access the skill at that moment?”



- EF skills are impaired by stress, anxiety, depression, self-deprivation
- EF deficiencies often interfere with one's ability to demonstrate intelligence

EXECUTIVE FUNCTIONING SKILLS

Thinking Skills

- Planning
- Organization
- Time Management
- Working Memory
- Metacognition

Behavior Regulation Skills

- Response Inhibition
- Self-regulation of Affect
- Task Initiation
- Flexibility
- Goal-directed Persistence

What is the difference?

- EF thinking skills “allow us to create a picture of a goal, a path to that goal, and the resources we need along with way. They also help us to remember the picture even through the goal may be far away and other events that come along to occupy our attention and take up space in our memory.”
- EF behavior skills “help guide our behavior as we move along the path.”

(Executive Skills in Children and Adolescents, Dawson & Guare, 2010, pg. 2)

THINKING SKILLS

Planning

- Ability to create a roadmap to reach a goal
- Prioritizing order of tasks
- Continues to increase in importance as students get older

Good planners know...

1. What's on the list of things that needs to get done first
2. Have to be able to prioritize 1st to last
3. Manage time – what can wait until tomorrow
4. Tolerate making it happen and actually doing it

Organization

- Arrange things according to a system
- Design and maintain systems for keeping track of information or materials
- Increase in importance as students get older
- One of the most frustrating skills for teachers and students

Time Management

- Ability to ...
 - Estimate how much time left
 - How to allocate it
 - How to stay within time limits and deadlines
- Involves a sense that time is important

Working Memory

- Ability to hold information in mind while performing complex tasks
- Accessing the ability to draw on past learning or experience to apply to the current situation or to project problem-solving strategies into the future
- Keeping several ideas/tasks and ability to do something with it
- Writing – essays, note taking, math, multi-step directions

Short-Term/Long-Term Memory

- Taking info in, remembering it, then doing something with it
- Rehearsal is the key! The only thing you don't have to rehearse is things with emotions attached to them
- Anxiety plays a factor



Metacognition

- Ability to observe yourself (bird's eye view" and observe how you problem-solve, self-monitor and self-evaluate

BEHAVIOR REGULATION SKILLS

Response Inhibition

- Ability to think before you act
- Ability to resist the urge to do something that may have a negative impact
- Goes along with emotional regulation – higher affect – more impulsive

If I can't think before I act...how can I think before about how to act?

Self-Regulation of Affect

- Ability to manage emotions in order to achieve goals, complete task, or control and direct behavior
- Ability to regulate voice, emotion, body

Task Initiation

- Ability to begin a task in a timely manner
- Includes procrastination – forgets about it, or still remembers but doesn't worry until the day before a project is due
- Homework!
- Research Papers!



Sustained Attention

- Capacity to attend to a situation or task in spite of distractibility, fatigue or boredom
- Concentration – can't attend to save their life
 - Hyper focus
 - About modulation, processing thoughts through the brain
 - Skill missing – what to do to help focus on topics that aren't interesting

Flexibility

- Ability to revise plans in the face of obstacles, setbacks, new information and mistakes
- Involves adaptability to changing conditions
- Includes cognitive flexibility – flexible solutions to problems
 - Changing cognitive set – switch from + to -, entering different door to get to their locker

Goal-Directed Persistence

- Has the drive or capacity to follow through to the completion of a goal and not become distracted by other demands or competing interests
- Volition – tenacity – the ability to stick with it until it's finished
 - Requires emotional regulation to finish something we don't like, internal satisfaction

Goal-Directed Persistence

- Pacing – ability to pace how fast you are doing something
 - Academic – reading hard material, writing
 - Social Settings – when to share personal information, sharing opinions, turn taking

STRATEGIES

Using Routines to Promote EF Skills

- Present straightforward set of steps to manage problems caused by weak EF skills
- Engage their own EF skills metacognition, flexibility, planning and organization

General Guidelines for Older Students

- Make them full partners in the design of the routine, selection of rewards, and troubleshooting
- Be willing to negotiate rather than dictate
- Whenever possible, use visual cues rather than verbal cues

Example – End of Day Instructional Sequence

Step 1 - Hand checklist to student

Step 2 - Instruct student to open assignment book and compare what's been written on the board

Step 3 – Prompt student to fill in missing assignments

Step 4 – Prompt student to write down anything else that needs to go home

Step 5 – Prompt student to highlight any materials needed for their assignments

Step 6 – Prompt student to place each item in backpack and check off item on list

Step 7 – Prompt student to ask teacher to sign and date homework checklist

Example – End of Day Routine Fading Sequence

Step 1 – Prompt student to begin and cue each step in process

Step 2 – Prompt student to begin and ask “What do you do next?” after each step

Step 3 – Prompt to begin, tell student to go through steps; check in periodically and check at end to make sure process is complete

Step 4 – Prompt student to begin and check when done

Step 5 – Prompt student to begin; no check in when done

Step 6 – Student follows entire procedure independently

COACHING STUDENTS WITH EF DEFICITS

To Be Successful as a Coach...

- Process requires student's willing and active participation.
- Continuously collaborative process managed by student and coach.
- If students have been talked into or coerced into participation, it's not likely to succeed.
- Middle/High School: Choice of participation and who will be their coach rests largely with them

Step 1: Conduct a goal-setting session

- Set the goal.
- Identify potential obstacles to achieving the goal and ways to overcome the obstacles
- Write a plan for achieving the goal.

Step 2: Hold Daily Coaching Sessions

- First part of the session spent reviewing the previous day's plan.
- Second part is spent designing the plan for the current day.
- Possible questions to ask:
 - Did you complete the tasks you said you were going to do?
 - Were you satisfied with the amount of time and effort you put into the task?
 - When are you going to do the tasks you've listed?
 - Are there obstacles today (activities, etc) that you have to work around?
 - Any long-term planning that needs to happen?
 - Are you on target to achieve the goal you set in Step 1?

STRATEGIES FOR SPECIFIC EF SKILL DOMAINS

• Time Management and Project Planning

- Limit or carefully structure topic choices
- Structure assignment with discrete, manageable steps
- Be specific about project steps and deadlines
- Provide individualized project coaching
- Complete a project planning form



Time Tools

Timex Vibrating Easy Set Alarm



Timex i-control Twist and Pull



www.timetimer.com



- Look Ahead
- Know/Plan your Time
- Look Back: Hindsight
- Gather Materials

- Do
- Set a Half Way Point
- Half Time Check in Pace

- Know your Stop Spot: - What will it look like?
- Clean Up
- Review

Get Ready.....Do.....Done

Sarah Ward, 2012



Get Ready for School

- Shoes
- Backpack
- Coat
- Library books

Sarah Ward, 2012

• Create Time Zones

1. Draw How Much Time the student has
2. Identify/sketch the “future planning image”: if everything goes your way what will it look like?
3. Make sure to state over and over: “Factor in time for _____”
4. Mark the start time and stop time.
5. Mark a time check at the $\frac{1}{2}$ way point.

Sarah Ward, 2012

• Organization

- Workspace and Materials
 - Dedicate a homework space
 - Encourage parent supervision
 - Use checklists and check-ups
- Homework
 - Promote quality over quantity
 - Establish consistent schedules and routines
 - Use highly structured and signed assignment books

• iPad/iPod Touch Apps

- Checklists Lite
- my Homework
- Remember the Milk
- Hi Future Self
- Scrumboard
- Focus Me Do
- Work Tracer
- Dragon Dictation
- Audio Note
- Quick Voice
- Note Pro HD
- Penultimate

Organization

Note Taking

Working Memory

Teach students to:

- Make lists
- Use self-talk
- Use consistent systems for cues
 - Planner
 - Alarms/timers
 - Cell phones

Nonverbal/Verbal Memory



Metacognition

- Embed self assessment questions
 - “How did you solve that problem?” “What can you do to help remember that information?”
- Build error monitoring into task assignments
 - Proofreading checklist, check math solution with calculator or using the reverse process
- Make self assessment a part of the task
 - Ask them to give themselves a grade and explain why they deserve that grade.
- Use scoring rubrics to define what a quality product will include

Task Initiation

- Embed initiation cues into assignments
- Provide visual cues in work spaces
 - Mini schedules
 - To do lists

Flexibility

- Teach calming/stress relieving strategies
- Teach how to reframe the situation
 - Label the problem
 - Brainstorm solutions
- Incorporate small changes into the schedule
- Incredible 5 Point Scale
- Social Thinking by Michelle Garcia Winner
- SOCCSS form

Sustaining Attention

- Write start/stop times on assigned tasks
- Break tasks into smaller parts
- Use
 - Timers – Time Timer
 - Incentive systems
- Encourage self-monitoring
 - Reinforcement Reminder Tone
 - MotivAider
- Balance the schedule – intermittent non-reinforcing and reinforcing tasks
- Offer sensory or motor breaks

Self-Regulation/Response Inhibition

- Prevention – Positive Behavior Supports
- Keep nonacademic times structured and adult-directed
- Establish rules
- Manage energy and frustration levels
- Watch for red flags or rumbling behaviors
- Stay nearby, but say little
- Low and slow
- Change the body-change the mind

Behavior Regulation Strategies

- Yoga
- MeMoves – Thinking Moves
(www.thinkingmoves.com)
- Relaxation techniques

Goal Directed Persistence

- Schedules & looking ahead
- Clear goals
- Self-monitoring progress
- Reflection & reinforcement

Explain your math thinking...

- The answer is _____ . I used the _____ strategy. I knew that _____ . For example, _____ . Therefore, I _____ . That is how I _____ .
- I knew (what the problem says), and I needed to know (what you are looking for), so I (operation/strategy) and found (answer).

Resources

www.socialthinking.com

<http://jillkuzma.wordpress.com>

www.timetimer.com

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