Unorganized, Unfocused, and Unprepared: The Impact of Executive Functioning Skills in the Classroom

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Welcome
Understanding Executive Functioning
Take a minute to write down the steps you went through to get here today.
Defining Executive Functioning Skills

Executive functioning skills are the basic tools for organizing, retrieving, and coordinating the information in our own heads, all while dealing with new material and prioritizing it in the light of the learning goals.
Defining Executive Functioning Skills

- Non-academic in nature

- Cognitive processes involved in regulation of thoughts and actions

- Enables individual to proceed steadily through life and confront any problem
EF is Like Riding a Bike
Monitoring: Long-term Goals, Output and Timing
John’s Homework Folder
EF Skills Do not operate in isolation of one another
IQ is what you know EF is how you show it
“It’s like having an orchestra where each musician plays their own instrument very well. But there’s no conductor to signal the flutes to start playing or the violins to fade out.

~Thomas E. Brown
Core Executive Functioning Skills is an Umbrella Term for:

- Planning and Organizing
- Working Memory
- Initiation
- Task Monitoring
- Self-Monitoring
- Inhibition
- Emotional Control
- Social and Mental Flexibility and Shifting
- Focus
- Sustained Effort and Attention
- Analysis
How do EF Skills Develop?
From Big Wheel to the Tour de France: The Developmental Arc of EF
Practice and Repetition
Set Pathways in the Brain

- Big Wheel - Push with Feet
- Big Wheel - Pedal
- Bike - With Training Wheels
- Bike - Without Training Wheels
- Bike - High Seat and Hand Brakes
- Bike - With Gears

Also must focus on environment and be ready to react to change.
Attention-Deficit Hyperactivity Disorder

Three Hallmark Characteristics of Attention Disorder:

1. Inattention
2. Hyperactivity
3. Impulsiveness

• However, these stereotypical behaviors do not necessarily occur all together in students with attention disorders. Attention disorders are not always so obvious.
• Some individuals with attention problems do not have the fidgety, overactive version of ADHD; instead their primary challenges may be with focusing, transitions from one activity or mind-set to another, and sustaining attention.
Attention-Deficit Hyperactivity Disorder

• Students with ADHD have an inherent weakness in their ability to manage their attention and stick with goal-directed behaviors.
• These students work hard just to manage the demands for directed attention on a moment-to-moment basis in the classroom, and they seem to deplete their pool of energy available for effortful attention more rapidly than other students.
• Students with ADHD may also be easily distracted by things going on around them or by their internal states.
Autism Spectrum Disorder

• Difficulties with Social Communication and Social Interaction

• Restricted repetitive Behaviors or Interests

• Inflexible in their Routines

They are more likely than their peers to have difficulty with inhibiting impulses, planning and organization, and self-monitoring, all executive function skills.
Specific Learning Disabilities

• Unexpected inability to learn a particular academic skill or set of skills despite having the intelligence and the instruction to do so.

• Students with SLD often have problems with EF. However, accurate assessment is critical here, because EF problems can sometimes affect learning and performance in ways that look like other disabilities.
Acute and Chronic Stress

- Emotional and Physical Stress can make us feel like we are...
Acute and Chronic Stress

When we deplete our resources (Run on Empty) we are:

- Subject to Poor Decision Making
- Weak Emotional Control
- Inefficient Working Memory
- Disorganized Thinking
Acute and Chronic Stress

Cognitive Control and Behavioral Control both Draw on the same Energy Resources

So when someone is working hard to keep his attention on a task and to actively screen out other stimuli that threaten to draw him off course, he may wind up in a state of depletion that leaves him more likely to make bad decisions or blow up over small irritations. When a person is working hard to manage an unfavorable mood state or control his behavior, he has little energy available of focus, effortful cognitive work.
Other Stressors

Hungry, Tired, Bullying, Trouble at Home, Sick etc.,,
Is All Stress Bad?

It is clear from research that mild stress ("I have a test on Thursday") generally activates students and is helpful.

However, chronic stress can alter the structure and chemistry of a student's brain.
Reflection

• In what ways do you already manage stress in your household?

• Does your child still show signs of stress despite your efforts?

• How does this stress affect their learning and performance?
Executive Functioning: Behavior and Emotional Control
Executive Functioning and Emotional Control

- Overly dramatic?
- Overreact?
- Can’t take criticism?
- Can’t recoup from a setback?
Won’t? Or Can’t

Depends on whether cues are internal or external.
A child may have the SKILLS to complete a task, but not have sufficient EFSs (working memory, control, initiation) to be able to compete without constant external cues.
Executive Functioning and Emotional Control

skills provide critical supports for learning and development, and while we aren’t born with these skills, we are born with the potential to develop them through interactions and practice.

I can’t!
I think I can!
I think I can!
I think I can!
I know I can!
I did it!
Do Your Students:

Simply not understand what you’re asking them to do? You can check for comprehension by having them repeat instructions back to you.
Do Your Students:

Know what to do, but not how to do it - as in, what to do first or second, and how these steps fit together? See what happens when you give a prompt such as, “First, you need to do this.”
Do Your Students:

Get frustrated and lose motivation easily? This happens because the same part of the brain that serves emotional regulation also influences motivation and other executive function skills.
Do Your Students:

Lack motivation? They understand how to do it but don’t care or think there’s nothing in for them. If you’ve ruled out problems of understanding or skill, then poor motivation is more like culprit.
Executive Functioning: Planning and Organizing
Planning and Organizing

This is the ability to keep track of information and things; to create and maintain orderliness in thoughts, activities, materials, and the physical environment.
# Planning and Organizing

## Build an Organized Environment

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:20</td>
<td>Morning Work</td>
</tr>
<tr>
<td>8:20-9:20</td>
<td>Math</td>
</tr>
<tr>
<td>9:20-9:30</td>
<td>Bathroom/Stretch</td>
</tr>
<tr>
<td>9:30-10:30</td>
<td>Groups</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Music</td>
</tr>
<tr>
<td>11:00-11:40</td>
<td>Social Studies</td>
</tr>
<tr>
<td>11:40-12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30-1:30</td>
<td>Language Arts</td>
</tr>
<tr>
<td>1:30-2:00</td>
<td>Centers</td>
</tr>
<tr>
<td>2:00-2:30</td>
<td>Science</td>
</tr>
<tr>
<td>2:30-2:45</td>
<td>Reflect/Pack up</td>
</tr>
<tr>
<td></td>
<td>Dismissal</td>
</tr>
</tbody>
</table>
Planning and Organizing

- Written & Picture Schedule
- Picture Schedule
- Photo Schedule
- Object Schedule
Planning and Organizing
Purposeful Structures/Routines

The 7 Learning Zones system establishes routines, saves you time, and keeps you sane from the first through the last day of school.

1. Discovery Zone
   - Display examples, provide a central focus, record observations, and use the data.
   - Arts & crafts, games, artists, readers & magazines, games, puzzles, instruments.

2. News Zone
   - Display learning targets, read work, prompts, and homework.
   - Assignments, calendars, community news,housetops, events, weather, world news.

3. Supplies Zone
   - Share reference materials, create a hub for student work, and provide a place for lost and found.
   - Paints, pens, pencils, scissors, sharpeners, staplers, tape, glue, etc.

4. Community Zone
   - Evaluate progress, clarify, correct misconceptions, take notes, and plan ahead.
   - Ask questions, connect, discuss, listen, prepare, reflect, share, collaborate.

5. Quiet Zone
   - Define the zone with a spare table and chairs, make the zone as "library-quiet" as possible.
   - Independent time, make-up work, reading, reflecting, studying, testing, writing.

6. Teacher Zone
   - Define the professional space to work with learners and adult visitors.
   - Certificates, degrees, confidential, calendars, manuals, memos, photos, references.

7. Subject Zone
   - Provide examples and resources for connecting subjects. Add visuals and provide context for vocabulary terms.
   - Anchor charts, flashcards, games, notes, manipulatives, resources, tools, arts.

Discussion and Thinking Zone
- Learners participate in whole-class discussions and talk about their learning.

Discovery Zone
- Learners investigate and solve problems and collaborate on projects.

Show-Off Zone
- Learners write, present, and share their work.

Repeat Level
- Learners come here when they need help, review, and explanations.

Creation Zone
- Learners write, edit, draw, and define their content presentation.
Executive Functioning: Initiation, Focus, Sustained Effort and Attention
Do you ever think of your students as being...

Lazy

Apathetic

Stubborn
Initiation VS Focus and Sustained Effort and Attention

- Initiation getting started on the task
- Focus and sustained effort and attention is to stick with a task and complete it.
Task Initiation

The ability to recognize when it is time to get started on something and being without procrastinating.

Often students who are weak in EF don’t know how to start.
Enhance Individual Student SKills

- Planners (Homework and Long Term Projects)
- Personal schedules
- Organizing binders, desk, lockers
- Student choice
- Color-coded folder
- Grade Checks
Planner

- Use grades 2nd - Adult
- Write student’s name in **BOLD** on front and back
- Bring Planners to every class
- Give 3-5 minutes at the end of class to complete
- Work with parents - if parents pick up students - ask them to have students to show them their planner before they get in the car
- Entries for every class - including writing NONE (Teacher Sign)
- Include checkboxes on planners for some students (Long-term Projects entry Sideways)
Guiding Questions for Planners: Long-Term Projects

1. Do I need a brainstorming day?
2. Do I need to assign myself “final draft work” the day before it’s due?
3. Will some of the work be done in class?
4. Will I have to find dates when I can work with others?
5. How many work days will I need for this particular project?
6. Will I need to work on a weekend?
7. Have I built in an extra day for the unexpected?
1-10 Confidence Scale for Tests

- Recommended levels: 5th grade - adult
- One represents “I don’t understand the material at all,” and 10 means “I can ace this test!”
- Include their rating on their planner
- After test go back to planner and add grade. This will help students access if they were overconfident or underconfident.
- Teaches self-monitoring.
Thursday Grade Checks

• Completed by teacher or student
• Helps students see realistically how they are doing
• Gives them the weekend to catch up
• Start Monday on track and not behind in any assignments.
Thursday Notes to Teacher

- Recommended Levels: Grade 5 through High School
- Purpose of this strategy is for students to self-reflect, self-advocate, and ultimately, take responsibility for the work.
- “My work is all caught up, and I have received all passing grades this week. If I am missing something, please let me know so I can make it up over the weekend.

Dear Teacher,

Without you, I do not know where I would be. You make a major difference in my life. All of those times that you have gone the extra mile for me, I really did notice. The notes and kind words helped give me a sense of hope. Your belief in me makes me believe in myself. I give you a hard time, but you put up with me. That matters. It tells me I matter. Thank you, Teacher!!! Really, thank you! You are awesome!

Love, Student
Weekly Checks: Binder, Locker, Desk

- Teachers may need to change their systems to accommodate “binders or trapper keepers.”
- Teacher assist but does gradual release to student.
- It’s not the organization that is as important as the decision making process the students use to keep, turn in, or discard papers.
Google Docs or Email

Accommodation, Back up Plan and Saves Trees!
Focus Student’s Attention

- Using questions
- Multi-modal techniques
- Learning ready
- Self-monitoring
- Student placement strategies
- Reduce visual distraction
Increase Student Participation

• All student response techniques
  – Whiteboards
  – Sticky Notes
  – Stand up, hand up, pair up
Attention and Concentration

- Secret Word, Phrase or Action
- Use a student’s Name when praising not punishing
- Cue Cards (Teacher)

- Cue Cards (Individual)

- Red and Green Cups

Please Get Started

Do you need help?

Focus

I need help.

I need help but I can keep working.
Attention and Concentration

- **Self-Monitor Forms**
  - Am I on-task or off task?
  - ON
  - OFF

- **Music for transitions, directions and learning.**

- **Incorporate Movement - academics or brain-break**
  - [www.gonoddle.com](http://www.gonoddle.com)
  - [www.schoolmoves.com](http://www.schoolmoves.com)
Using Questions to Refocus Students Attention

Use thinking words not fighting words.
Executive Functioning: Working Memory
Working Memory
Working Memory

This is short-term memory which holds information and uses it to complete a task.
Changes in working memory capacity with age

The changes in working memory capacity with age for an average child are shown by the solid line. Scores of a child with a low working memory capacity are represented by the broken line.

Gathercole and Alloway c. 2007 Understanding Working Memory
Working Memory Might Look Like This

➔ Have difficulty remembering facts and procedures
➔ Slow retrieval of information.
➔ Fail to follow instructions despite repeated instructions.
➔ Demonstrate poor attention to detail, such as beginning to write a sentence and then struggling to remember all of the words in the sentence, skipping words within sentences, and writing shorter sentences (to reduce demands on working memory).
Working Memory Might Look Like This

➔ Make place-keeping errors such as losing track of steps completed or steps yet to be completed and either repeats steps needlessly or constantly has to start over.

➔ Have difficulty starting work.

➔ Demonstrate difficulty staying on task.

➔ Task abandonment is a common consequence.

➔ Lose track of belongings.
Working Memory in the Classroom

Gathercole and Alloway c. 2007 Understanding Working Memory
Reading Warm-Ups
Reading Warm-Ups
Automaticity and Comprehension

- Do 3 one minute reading each day
  - 1 minute of phonic reading
  - 1 minute of sight word or sight word phrases reading
  - 1 minute of reading paragraphs
Highlighting $10 Words: Engaging with Text

- Key words
- Teach how to highlight
- Textbooks (Give Copy of Book or Highlighter Tape)
  - Titles
  - Subtitles
  - Italicized Words
  - Pictures
  - Captions
- Novels and Short Stories
  - Page at back of each chapter - make 3-5 bullet points about chapter rather than writing summary
  - Teaches students to layer chapters
Writing Most Complex EF Task

• Writing requires coming up with a thought, writing or typing those words while holding the thoughts in mind over time, and tracking the whole process and all its parts.

• 7 Minute writing Samples
  – Once per week write for 7 minutes (Younger students 3-5 minutes) - Even if they need to make up a new topic
  – Double Space Work - Reminder of Draft
  – Focus on Talking on Paper - Encouraged to use their Writing Voice
  – Count number of Words and write that number at the top of the page - with little or no prompting students will attempt to beat their own score each week.
Checking Work

- COPS
- Grammar Rule

COPS

C = Capitalization
Capitalize the first word in each sentence. The word "I". All proper nouns.

O = Organization
Make Writing Easy to Read
neat handwriting, letter spacing, complete sentences, indent paragraphs

P = Punctuation
Use Correct Punctuation

S = Spelling
Spell Words Correctly

Patrol your writing!
Math

- EF skills needed: managing material, space on page, sequence of math routines, automaticity.
- Math Warm-Ups: math facts addition, subtraction, multiplication or addition.
- Blank Times Table
- Triangular Flash Cards
- Show All Your Work
- Guided Practice
Executive Functioning: Social and Mental Flexibility
Flexibility

Flexibility has been described as the mental ability to switch between thinking about two different concepts, and to think about multiple concepts simultaneously.
Flexibility in Thinking

Flexibility has been described as the mental ability to switch between thinking about two different concepts, and to think about multiple concepts simultaneously.
Flexibility in Thinking

In the classroom, students have to unlearn certain habits or steps, and relearn another way.
Flexibility in Reading
Flexibility in Reading
What to do?

- Be Explicit
- Be Predictable
- Check In Often
- Provide Supports
Executive Functioning: Conclusion
Go back to your list. What executive functioning skills did you use?
Questions