Understanding and Promoting Executive Functioning in Children

Krystal Draughn, MSW, LCSW
Hattiesburg Clinic Connections
What are executive functioning skills?

- Planning
- Organization
- Time management
- Working memory
- Metacognition
- Response inhibition
- Emotional Control
- Sustained attention
- Task Initiation
- Flexibility
- Goal directed persistence
Air Traffic Control System =
Executive Function in the brain

- Make plans
- Keep track of time and finish work on time
- Keep track of more than one thing at once
- Include past knowledge in discussions
- Evaluate ideas and reflect on our work
- Know when to ask for help
- Engage in group activities
- Wait to speak until called upon
- Make corrections while thinking, reading and writing
How do executive function deficits affect academics?

- Motivation levels
- Persistence
- Academic self-concept
- Personal effectiveness

Leads to:

ACADEMIC SUCCESS
Developmental tasks requiring executive skills

- Preschool age
- Kindergarten – grade 2
- Grades 3-5
- Grades 6-8
- High school
Assessment of Executive functioning skills

- **Informal assessments**
  Behavior Rating Inventory of Executive Function, Brown Attention Deficit Disorder scales, Child Behavior Checklist and Teacher Report form, Behavior Assessment System for children, Student self-perceptions, Teacher perceptions

- **Formal assessments**
  (NEPSY-II, Porteus Mazes, Trailmaking tests, Wisconsin Card sorting test, Mesulam tests of directed attention, Conners continuous performance test-II, Test for everyday children, Delis-Kaplan executive function scale, Cognitive assessment system)
Intervention Strategies to promote executive skills

- **Intervene in the environment**
  - Change physical or social environment
  - Change the task
  - Change ways cues are provided
  - Change interactions between adults and students

- **Intervene with the person**
  - Teach and Model skills through classroom routines
  - Motivating students to use skills
  - Home to school collaboration
  - Self management/ self regulation
How can strategies be taught across tasks, content areas and grades?

- Creating a classroomwide executive function culture
- Goal setting, planning and prioritizing skills
- Organizing skills
- Remembering skills
- Shifting and flexible problem solving
- Self-monitoring and self-checking
- Emotional self-regulation
Creating classroomwide executive function culture

- Strategy Notebooks
- Charts and graphs of student performance
- Personalized error checklists
- Strategy-of-the-week display boards
- Strategy wall
- Strategy-Sharing discussions
- Strategy modeling
- Strategy rewards
Goal setting

- Accomodations
  - rubrics, samples of completed work, visual representations, use of calenders and time lines
- Direct and systematic instruction
  - self understanding, understanding the “big picture”, valuing the task
Planning and prioritizing

- Knowledge of **time**
- Knowledge of **task**
- Prioritizing tasks
  - Obligation, aspiration and negotiation
- Monitoring progress
  - Rearranging schedules, identifying overcommitments, reflecting on current time management strategies
Teaching strategies

- Elementary school
- Middle school
- High school

  Time management, Prioritizing and monitoring strategies for time management
Foundational skills in Organizational strategies

- Understanding existing structures and tasks expectations
- Sorting and classifying information
- Selecting a strategy to use
- Engaging in self-reflection
Organizing skills

- Elementary school
  bottom-up tasks, top-down tasks (K-3)
- Upper elementary school, Middle school and High school
  For organizing ideas:
  STAR Strategy, sorting for meaning: vocabulary and text
  For reading and comprehension:
  Identifying main idea, content for writing, studying, Space and materials, ideas, expository information, narrative information
Remembering skills

- Basic memory types and functions
  Short-term, Working, automatic, long-term

- Teaching strategies that improve memory
  1. Attending to details
  2. Repetition, rehearsal, and review
  3. Attach meaning
  4. Chunking information
Memory strategies for reading comprehension

- **STAR strategy for main ideas**
  - Who, What, When, Where, Why
Organizing skills

- Studying
  - Learning to take notes
  - Skim, RAP, Map (2 column notes)
  - Learning to write a thesis statement
  - PROVE strategy
  - Narrative information
  - Story Grammar Marker, Triple note Tote
Memory strategies for reading comprehension

- Chapter summary organizers
- Title and Why
- Book Notes
Memory strategies for written language

- **Formulating essays**
  - BOTEC from essay express
  - Pieces of a thesis
  - PROVE
  - Lists or charts of transition words/phrases
  - Sentence starters
  - The ISA strategy

- **Editing strategy**
  - SPORTS

- **Strategies for note taking**
  - Partial outlines or templates
  - Color highlighting
  - Different size letters or fonts
Memory strategies for math computation and reasoning

- **Math fact fluency**
  Rhymes, Visual representations, Visual-kinesthetic strategies, Crazy phrases
- **Math formulae and procedures**
  Songs, Stories, Acronyms, FOIL and Face
- **Word problems**
  CUPS, KNOW, RAPS
- **Strategies for checking**
  POUNCE
Memory strategies for studying and test taking

- Chunking together related information
- Strategy cards
- Memory joggers
- Stories
- Rhymes and songs
- Triple Note Tote
- Brain Dump
- Quest strategy
Shifting and Flexible problem solving

- **Reading**
  - Multiple Meaning Strategy (M&M)
  - Multiple-meaning words, multiple-meaning phrases, multiple-meaning sentences,
- **Written language**
  - Venn Diagram, 4 step process for teaching paraphrasing
- **Math**
  - Expose students to many different math concepts and procedures
  - Use numbers, words, visual tools
  - Converting numbers to graphs, tables, and charts
  - Shifting between smaller details and larger patterns and trends
- **Studying and Test taking**
  - Math
    - Flash cards for each different type of problem including these details: name of problem, how to recognize it, steps to solve it, example, strategy for remembering information
  - English
    - 1-2 sentence summary of each chapter of a book with important quotes included
    - Review classroom notes
    - Try to predict essay questions and create outline for response
Self-monitoring and self-checking

- Reading
  - Individual word reading
  - Self-monitoring word reading
  - Click and Clunk
  - Fiction
  - Margin notes, summary post-it notes
  - Informational text
  - Changing section headings into questions
Self-monitoring/Self-checking strategies

- **Math**
  - Error analysis
  - Analysis of test performance
  - Word problem analysis

- **Test taking**
  - Checking cards
  - Crazy phrases
Emotional self-regulation

Situation \(\rightarrow\) Attention \(\rightarrow\) Emotional response

Cognitive Appraisal \(\rightarrow\) Emotional response

Development of emotional regulation

Preschool (3-5) years
Early elementary (6-9) years
Late elementary (10-12) years

Gross and Thompson (2007)
Developing emotional self-regulation skills

- Formal emotion-based curriculum
- Explicit instruction for specific skills
  - Impulse control-Turtle technique
  - Transitions
  - Waiting in line, waiting at your desk, waiting in lunch line
- Decreasing emotional triggers
  - Accommodations
  - Rubrics
- Self-talk and self-reflection strategies
Proactive approaches to helping students with emotions

- Know the students
- Understand each student’s triggers
- Planning ahead
  - Prevention
  - Intervention
Emotionally Distraught Students

Situation: Eliminate or Modify

Cognitive Appraisal: Reframe or shift perspective

Attention: Distract or Refocus

Emotional response: Apply calming Strategies

Gross and Thompson (2007)
Calming Strategies

- Labeling and normalizing anxiety
- Remind students of past successes
- Teaching effective self-talk strategies
- Calming the emotional brain
  - De-stressing
  - Use real or imagined safe place
  - Surfing the “worry wave”
  - Mindfulness meditation
- Focusing: Clearing a space
Firing Up the frontal lobes

- Grounding students in the moment
- Widening the focus/perspective
- Asking a question with curiosity
- Changing the viewpoint
- Expanding the time frame
Bibliography


“Executive Function...What Is This Anyway”, 2002, Chris A. Zeigler Dendy M.S., ChrisDendy.com


