

Executive Functions: What are they and how do they impact learning?

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What do Independent Learners Look Like?

What behaviors do you notice in your independent learners?

What behaviors do you notice in your struggling learners?

Independent Learner Characteristics

- 1) Curious
- 2) Self-motivated
- 3) Self-examine / Self-monitor
- 4) Accountable / Responsible
- 5) Critical Thinkers / Problem solvers
- 6) Comprehension / Understanding without guidance
- 7) Persistent
- 8) Manage their time

Executive Function Areas



Executive Function Skills:

- **Goal-directed persistence**
 - Prioritizing
 - Time management
- **Sustained attention**
- **Organization**
 - Planning
 - Teach a process for the student to be organized
- **Working Memory**
 - Allows for active ideas to be manipulated (Dog)
- **Inhibition**
 - Reflection on action/result
- **Shifting**
 - Flexibility

Executive Function Development

- Infancy; when a child can keep an object in mind while playing hide-and-seek. Beginnings of working memory.
- Preschoolers; learning to inhibit behavior such as not touching a hot stove and developing basic social skills
- School Age through adolescence; learning to develop planning, emotional regulation, and organizational skills
- Executive functions develop slowly in many disorders including Autism, ADHD, ODD
- Teens, Tweens need executive function “support” or scaffolding

Developing Inhibition

- 1) Earn the things they want (e.g., save money to buy a cell phone)
- 2) Delaying gratification
- 3) Reinforce efforts (e.g., STOPPING, waiting)



Cognitive Control: Attention is the Bedrock of all Cognition

Initiate: Begin tasks independently without reminders

Working Memory: Sustain attention to task
Following Directions

Plan/Organize: Plan ahead, develop strategies

Organize Materials: Backpack, Folders, Desk

Monitor: Paying attention to what you're doing!
Error Monitoring

Emotional Control:

- We are born with "reactivity" to stimulation (i.e., temperament)
- Development leads to regulation of reactions

Teaching the skills?

- Don't assume your child has EF skills and is not using them (i.e., "lazy")
- Slowly decrease your role as the "frontal lobes"
- Teach the skills
- Keep supports in place until there is mastery



Steps To Create A Plan!

1. Identify the weakness
2. Set a goal
3. Teach your child the skill
4. Look for opportunities / situations that allow your child to pursue independence
5. Discuss the skill – verbally mediate and model the skill
6. Practice the skills
7. Set up opportunities, "catch them" and reinforce **their effort**
8. Provide just enough support to be successful
9. Review and Revise



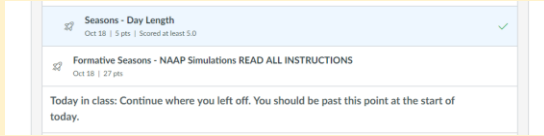
Executive Function Strategies

- Organizing
 - Color coding
 - Color dots, tape, folders, notebooks
 - Visuals
 - Change symbol
 - First...then
 - Filing system (accordion folders)
 - Planners
 - Check in/check out with teacher

What are your strategies?

Strategies: Example

Using visual reminders in Canvas



Strategies: Example

Creating To-Do Lists with clearly marked expectations

1) Practice: Area of a Rectangle (Khan)	
2) Practice: Understanding Area of a Triangle	
3) Practice: Summary, Examples, and 5 Practice Problems	
4) Practice: Using formula to find Areas of a Triangle (Khan)	
* If you need more practice see the Leath Resources in the playlist *	
Optional: Learn: Area of Rectangle + Triangle (Math Antics)	
Optional: Learn: Use area models to find the area of rectangles	

Strategies Continued

- Flexibility What are your strategies?
 - More than one para
 - Pre talking
 - Visuals
 - Social Stories
 - Use a timer/bell/music
 - Provide 5 min. warning
 - Dim lights before new activity

Strategies Continued

• Inhibition

- Zones of regulation
- Stop, think, act
- First...then
- Visuals (rules and reminders)
- Reward Self control
- Games (red light green light, simon says)
- Building in breaks

What are your strategies?

Strategies Continued

• Goal directed persistence

- First... then
- Add timing (hourglass visual)
- Allowing movement or location changes
- Teach positive self talk (If I get stuck, I don't need to quit. I can...)

What are your strategies?

Strategies Continued: Examples

Modifying and accommodating on online personalized learning platforms (Summit)

Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word.

- Website: Common Roots and Affixes
- Presentation: Root Word Vocabulary
- Quizlet: Greek and Latin root words
- Video: Prefixes and Suffixes
- Website: Prefixes and Suffixes and their Meanings
- Pre-Test: Root Words
- Activity: Prefixes Notes
- Presentation: Prefixes
- Quizlet: Prefixes
- Activity: Suffixes Notes
- Presentation: Suffixes
- Quizlet: Suffixes



Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word.

1. Presentation: Root Word Vocabulary (Medium)
1. Presentation: Word Root Vocabulary (IM4)
2. Root Words Chart - Make a copy of this chart and complete this while watching the Root Words Presentation (resource 2) as part of your evidence of learning.
3. Quizlet: Greek and Latin root words
4. Pre-Test: Root Words - make a copy of this chart and complete for your evidence of learning.

Strategies Continued: Examples

Providing scaffolding in writing activities to assist with initiating tasks and accessing academic skills.

PART 1: READ A POEM & ANNOTATE FOR THEME

Choose a poem to analyze from the Poem Selections document.

Title of the poem: _____

Author of the poem: _____

Step 1: 3 reads of the poem

Read #1: What words did you underline? Why did you underline them?

Read #2: What is going on in the poem? What questions do you have about the poem?

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Read #1: What words did you underline? Why did you underline them?

I underlined _____ because _____

Read #2: What is going on in the poem? What questions do you have about the poem?

In the poem, there is _____

I have questions about _____

Strategies Continued: Examples

Scaffolding Instruction to help with task initiation and completion

Link to scaffolded video- [Screencast of Powerpoint presentation](#)

Strategies Continued

- Working Memory Boosters
 - Chunking information
 - Point out important information when teaching to help make connections
 - Ask students to teach you/check for memory
 - Rhythm and/or Rhyme
 - Rehearse
 - Check for memory
 - Visualization skills
 - Reduce distractions and visual clutter
- Games that use visual memory/card
-Make it multisensory
- What are your strategies?

Tips

- **Getting buy in / Motivation**
 - Use something your student values
- **Communication skills**
 - Validate, problem-solving skills, acknowledge feelings
 - 1) Listen and acknowledge
 - 2) Talk about your feelings
 - 3) Ask student for solutions
 - 4) Write them all down (don't judge)
 - 5) Decide which idea they will try
- **Praise**
 - Be descriptive
- **Focusing on the Effort**
- **Breaking tasks down into manageable parts**

Questions?