Executive Function and the Gifted Child

Executive functions are the skills needed to monitor and regulate one’s thinking, attention/organization, behavior/activity, emotions, and social interactions. Executive functions involve metacognition, or thinking about thinking, which leads to better self-control. Limitations in executive functions can directly affect the student’s independence, efficiency of processing, mood, and behavior, which can ultimately impact academic success. Students who have difficulty with executive functions have trouble regulating themselves and need help from parents and teachers to improve their metacognitive skills.

Learning at its foundation involves taking in facts and developing skills. These are both examples of input and many gifted learners excel in these areas. However, executive functioning skills are an opposite set of skills; they include everything that has to do with acting on knowledge, or output. Some gifted students struggle with executive function skills.

Specific executive functions include: inhibition, shifting, emotional control, initiation, self-monitoring, working memory, planning/organizing, and organization of materials.

Inhibition
The ability to stop responses when appropriate.
Possible Problems:
- Impulsive behavior; acts before thinking
- Out of control or ‘stimulus bound’
- Can often articulate appropriate behavior but can’t do it in the moment
Possible Solutions:
- Ask to verbalize a plan before beginning tasks
- Teach “stop and think” for various situations
- Approach task in a step-wise manner
- Have more than one plan of approach

Shifting
The ability to move freely from one situation, activity, or aspect of a problem to another as circumstances warrant.
Possible Problems:
- Rigidity; Inflexibility
- Hard to transition to new activities
Possible Solutions:
- Pictures, schedulers, planners, calendar boards to help with activities of day and sequence of events (eliminates surprises)
- Established routines set with flexible structure
- Help with conceptualizing day into parts
- Give a few minute warning before the end of a task (timer)

Emotional Control
The ability to modulate/control emotional responses.
Possible Problems:
- Sudden outbursts
- Mood changes
- Excessive emotional upset
- Explosiveness
Possible Solutions:
- Pay attention to what provokes them
- Talk through emotional situations and explain how to deal with feelings
- Exercise

Initiation
The ability to “get going” on tasks and activities, and to actively and independently generate ideas, responses, or problem solving strategies.
This is not a lack of conscious motivation
Possible Problems:
- Can’t “get going” on tasks
- Needs extensive encouragement / cueing to begin
- Once distracted, difficulty re-starting
Possible Solutions:
- Provide routines and structure
- Break routines into manageable steps and then supervise until the student can accomplish them independently
- “Chunk” tasks
- Take frequent breaks

Self-Monitoring
The ability to monitor the impact of one’s actions on others.
Possible Problems:
- Unaware of behavior and impact it has on others
- Social skills deficits
Possible Solutions:
- Be patient: these individuals don’t recognize their own errors
- Encourage self-talk during tasks
- Discuss and review the behavior after the fact in a non-punitive way
- Talk through tasks and have the student evaluate “what works” and “what didn’t work”
Working Memory
Capacity to hold information in your mind while completing a task.
Verbal and visual-spatial working memory may differ.
Possible Problems:
- Can’t stick to/finish tasks
- Not enough mental control
- Can’t hold information in mind while performing an activity
Possible Solutions:
- Give attention breaks at school and during homework
- Pay attention to energy levels
- Teach self-talk to get through tasks
- Written checklists
- Ask for paraphrasing

Planning and Organization
Plan: The ability to anticipate events, set goals, and plan steps.
Organize: The ability to bring order to information and distinguish key concepts
Possible Problems:
- Strategizing
- Attending to relevant details
- Completing long-term projects
- Miss ‘the big picture’
- Difficulty retrieving relevant details
Possible Solutions:
- Give examples of alternate ways of achieving goals
- Model planning skills
- Co-create steps for successful task completion
- Verbalize and write plans for everyday routines or chores
- Create more than one plan for a task
- Use a planning notebook
- Break down lengthy assignments
- Give additional organizational time at the start and end of each day

Organization of Materials
Ability to organize, keep track of, and clean up belongings.
Possible Problems:
- Materials disorganized
- Materials not on hand for tasks
- Can’t categorize materials or put them away
Possible Solutions:
- Develop organizational routines
- Co-create a checklist of needed materials to review daily for task completion
- Color-coded organizational systems
- Utilize organizers
- Use same system of organization in each class if switching classes
- Model proper organizational behavior
- Review materials prior to starting task or day
- Schedule “organization time”
- Help categorizing where to put materials

Research indicates that success and happiness in life are mediated not just by raw intelligence, but also by one’s ability to apply oneself to a chosen task and work through the process. Executive function skills tend to transfer across domains; if a child learns how to self-regulate in learning one kind of task, it will generally be easier for him/her to learn to self-regulate in other areas.

RESOURCES
Additional Information on Executive Functioning
