

So, REALLY... WHY can't Tommy Learn????
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You know the story...maybe you've lived it, maybe you've been the parent in the story...the story of the bright child who just can't seem to learn. The child who gets up every morning, in the same house, with the same people, at the same time...but still can't seem to remember exactly how to get ready to go to school (or forgets to put on his shoes as he runs out of the house). This is the child who, just as the bus approaches, starts raging because you put the peanut butter on the jelly side of the sandwich. We're talking about the kid who has the best of intentions but can't seem to start a task, or if he does—can't finish the task, or if he does—can't find it, or if he does—can't remember to turn it in. And, when you ask him to move on to something else, acts as if his feet are stuck in molasses. These are the kids with report card comments of “Lazy”, “Unmotivated” and “Underachiever”. No matter how bright or how much he wants to please...this is Tommy. There are a number of different disorders that could be contributing to Tommy's difficulties, but one that is being increasingly identified as a major source of learning and self-management problems is....,

Executive Functioning Deficit

Now if you are hoping for a clear-cut definition, I will disappoint. Google “Executive Functioning” and you will find as many explanations as entries. And, the name is very misleading. How many executives do you know who independently and effectively manage and control all the intertwining and demanding facets of their lives? Most don't. They have secretaries and office managers to do that for them. The same holds true for our brain, except our brain's “office manager” is called the “frontal lobe”. Others have equated the frontal lobe with a musical conductor, orchestrating each instrument so the whole can work together. The human brain has not significantly developed since our days of hunting and gathering. Therefore, modern day demands place a great burden on the frontal lobe as moment by moment, we are expected to:

- Organize, prioritize, and get mentally and physically ready to approach tasks
- Get started on tasks, stick with them, and finish them
- Organize our time and materials
- Process information in an efficient and timely manner
- Pay attention, sustain attention, and divide and shift our attention between and within tasks
- Regulate alertness and sustain our effort
- Manage frustration and use “self-talk” to modulate our emotions and direct our actions
- Think before we speak or act
- Use our working memory (“juggling information”) and retrieve what we've been told or learned long ago
- Take apart an issue, analyze the pieces, reconstitute it and organize it
- Remember what we read, memorize information, and complete complex tasks
- Deal with the ever expanding bombardment of information coming from multiple sources-- from our own social network and from events around the world, from the internet, our smart phone, text messaging, email, and the growing expectation that we are all “online” and feel required or at least expected to respond immediately 24/7 to everyone around us

Essentially, executive functioning encompasses many aspects of perception, cognition, emotion,

and motor functioning, and allows us to use our higher-level thinking skills in an efficient manner. Even more simply put we can think about EF as: “What to do”, “When to do it”, “How to do it”, and “How to manage it”.

So, let’s look at Tommy again, and further inspect his executive processes. This is what we know so far: Tommy has at least average intelligence, average to above average academic skills, and no emotional disorders. On the other hand, he is struggling in school, his strengths are not apparent to his teachers, and his parents are scratching their heads because they know he is smart. In order to evaluate EF, clinicians often use a combination of observations, interviews, assessments, and rating scales. One widely used EF rating scale (Behavior Rating Scale of Executive Functioning-BRIEF) defines eight areas of executive functioning as follows:

- **Inhibition** – “The ability to resist impulses and stop one’s behavior at the appropriate time. Those with intact inhibition typically consider consequences before acting.”
- **Shifting** – “The ability to make transitions, tolerate change, be flexible when problem-solving, and switch or alternate attention from one focus or topic to another.”
- **Emotional Control** – “A well-regulated emotional state helps us handle stress and other negative factors, which in turn makes us more available for learning and coping with everyday situations.”
- **Initiation** – “The ability to begin a task or activity without being prompted to do so. People who are good “initiators” can usually generate ideas, responses, and problem-solving strategies.”
- **Working Memory** – “The capacity to mentally hold and manipulate information in order to complete a task, take in and store information, and generate goals. Working memory is essential for carrying out multistep activities, completing mental manipulations such as mental arithmetic, and/or following complex instructions.”
- **Planning/Organizing** – “Planning involves setting a goal and determining the best way to reach that goal, often through a series of steps. Organization involves the ability to bring order to information and to appreciate main ideas or key concepts when learning or communicating information, either orally or in writing.”
- **Organization of Materials** – “Another aspect of organization is the ability to order and organize things in one’s environment (work, play, and storage spaces). This type of organization involves organizing, keeping track of, and cleaning up one’s belongings, as well as making sure beforehand that the materials needed for a task are available.”
- **Monitoring** – “Task monitoring reflects the ability to check one’s own performance during or shortly after finishing a task to ensure accuracy and attainment of the desired goal. Self-monitoring reflects awareness of the effect that one’s behavior has on others.”

Let’s assume Tommy struggles in only three of these areas (Inhibition, Working Memory, Planning/Organizing) and quickly look at the impact it will have on his functioning.

Tommy’s Inhibition skills are weak. He knows the material and should be able to answer questions related to it, but he often shouts out because he can’t control his impulses and he has trouble stopping his behaviors. The teacher often reprimands Tommy for problematic academic behavior, which embarrasses him, causes him to “shut down”, and impacts his social relationships. Likewise, even though he is an excellent reader, Tommy’s impulsivity causes him to misread the directions and impulsively answer multiple-choice answers, resulting in grades that don’t reflect his understanding.

Tommy’s Working Memory is also weak. He has trouble “juggling” information in his mind,

which affects his ability to listen and take notes at the same time. Even though his comprehension is good in isolation (sentence by sentence), he cannot “keep in mind” everything he is reading so as he progresses through a chapter or a book, he is unable to incorporate the earlier information with the newer information, which significantly impacts his comprehension. Likewise, although Tommy has strong math skills, he can’t hold all the information in his head when not allowed to use pencil and paper. His weak working memory also makes it difficult to complete multi-step directions, even though he could easily do each part, separately. Paying attention is so difficult for Tommy because the effort it takes to try to perform working memory tasks drains his mental energy and causes much frustration.

Planning and Organization is the third area of executive functioning that is weak for Tommy. Since Tommy has trouble planning, academic tasks that involve setting goals and knowing what steps to take to reach each goal are particularly difficult for him. Further, his weaker organizational skills impact his ability to bring order to information and to figure out the salient concepts when learning and communicating, both orally and in writing. He tends to approach tasks in a very haphazard way, and gets caught up in the details causing him to miss the bigger picture. Tommy is often overwhelmed with information even though he has good ideas. He has trouble judging the difficulty of the task at hand and the amount of time it will take to complete. Therefore, he waits until the last minute to begin long-term projects.

The bottom line is that we are talking about production versus potential. Although Tommy has the potential to succeed based on his innate intelligence (which we know from his individually administered intelligence tests), when put in “real-life” situations his executive functioning deficits overshadow and mask his abilities, creating a problem of production. So, even though Tommy possesses the higher-level verbal and non-verbal cognitive abilities, because the underlying skills are compromised, he is not able to efficiently and effectively access the curriculum and demonstrate his knowledge.

Many children with Tourette Syndrome struggle with executive functioning tasks. If your child does demonstrate symptoms similar to the ones described above it might be useful to obtain a psycho-educational evaluation in order to assess the exact nature of the problem, the severity, and the impact on the child’s academic, daily living, and social functioning. Although EF is not always recognized by school districts as a disability that is a basis for services, depending on the severity of the symptoms, special education eligibility and services might be warranted, or your child might qualify for a 504 plan.

Executive functioning skills will continue to develop for several years beyond high school, but only if the frontal lobe is stimulated with critical thinking activities. In order to best help our children develop executive functioning skills, whether at home or at school, we need to initially act as their frontal lobes. In a broad sense this means that we have to teach our children how to automatically use self-regulatory routines and habits that increase independent, flexible, and goal-oriented problem solving. Time-management and self-discipline (and all the EF traits for that matter) can and should be taught in classroom environments. Just as we cannot give a child a pair of shoes and expect him to learn how to tie without providing instruction, we cannot expect that all children will be able to figure out how to most effectively use an assignment notebook and do so on a regular basis. Some children intuitively figure out how to manage their days, others need concrete instruction that includes adult modeling, practice, and re-teaching until the child develops constant routines and skills—only then can we begin to fade our presence. Unfortunately, many people don’t know about or understand EF disorder. It is important for parents and educators to learn about it, recognize the signs that signal students may be struggling in this area, and develop strategies for helping the student, rather than punishing them or

assuming they are lazy or incapable of working. Here are some simple strategies for help with some EF problems, as well as some resources for more information on EF:

Strategies

- Help students identify organizational systems that work for them, teach and model how to use them, and work with the child as he develops the skills to use them independently
- Use timers and time-trackers to help students become aware of the time they spend on certain tasks, and to motivate and guide them to begin tasks and stay on task.
- Use visual and verbal reminders to help with transitions, and allow ample time for breaks, if needed
- Model appropriate social and emotional behaviors, and teach children how to use “self-talk” to guide them through difficult situations and to support their functioning.
- Use positive behavioral management techniques when you are confident that the child can perform the task, and judiciously when the deficits are more severe.
- Teach students how to use technology to support working memory, organization, and academic performance. Examples included:
 - “Webspiration” - to help with the pre-writing process and written expression
 - “Nudge” - for quick note-reminders
 - “iAnnotate” and “Noteability” – supports note-taking and organization of notes
 - iPad applications (see below)

Resources

Executive Functions: What They Are, How They Work, and Why They Evolved
by Russell A. Barkley

Executive Skills in Children and Adolescents: A Practical Guide to Assessment and Intervention
by Peg Dawson EdD, Richard Guare Phd

Coaching Students with Executive Skills Deficits
Peg Dawson EdD, Richard Guare Phd

Smart but Scattered Teens: The "Executive Skills" Program for Helping Teens Reach Their Potential
Richard Guare Phd, Peg Dawson EdD, Colin Guare

Late, Lost, and Unprepared: A Parents' Guide to Helping Children with Executive Functioning
(Paperback and Workbook): Joyce Cooper-Kahn Ph.D, Laurie Dietzel Ph.D.

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)
www.chadd.org

<http://www.setconnections.org/ExecutiveFunctionApps.html> (apps and tools)

<http://www.happy-neuron.com/brain-games/executive-function/> (games for children and adults)

*Other examples of Executive Functioning Rating Scales include:

- Barkley Adult ADHD Rating Scale--IV (BAARS-IV)

- By Russell A. Barkley PhD ABPP ABCN
- http://www.mctherapy.com/efrs_school.pdf (online, user-friendly form)

Shari Meserve was diagnosed with Tourette Syndrome in 1976. She is married to Dennis, a police sergeant, and they have three adult children, two of whom have TS. Shari is a school psychologist and worked in the public school system for 13 years. Currently, she is an Executive Functioning Coach for Thinking Outside the Classroom ([www.thinkingoutsidetheclassroom](http://www.thinkingoutsidetheclassroom.com)) and an educational consultant and advocate for the special education law firm of Matt Cohen & Associates (www.mattcohenandassociates.com). Shari also co-leads Tourette Connection, a monthly get-together for those impacted by Tourette Syndrome.