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**Executive functioning:** Doing something with purpose. When we have purpose, we have a goal.

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## Goal-oriented behaviors are things like:

- Getting ready in the morning for school or work
- Making plans to meet up with friends
- Doing laundry
- Doing homework
- Writing a paper
- Staying quiet while the teacher is speaking
- Planning your vacation



Think about what **you do** to get yourself ready in the morning for the next thing in your day.

Conference attendees are asked to write a list detailing their morning routines. The lists commonly state:

- Wake up
- Go to bathroom
- Get dressed
- Make coffee
- Make breakfast, etc.

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Can you make coffee if you **only have a goal** to make coffee?

# Making coffee is the goal, but to make and drink coffee requires you to:

- Develop and follow a set of sequenced action plans. You may start with pouring water into the coffee machine and then you do many more steps before the coffee is made
- But, you're tired! How do you push yourself to manage your emotions and your behavior to accomplish your plans to actually enjoy coffee?
- ...and then you get interrupted now you have to use flexible thinking. You have to stop making coffee to deal with something else. How do you get back to your goal?

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### Our children have morning routines too -we usually tell them:

- Brush your teeth
- Wash your face
- Get dressed
- Eat breakfast
- Get ready for school

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Notice that we direct each other by stating the goal/concept (e.g., do your math worksheet, work in a group, brush your teeth).

However, we expect students to accomplish these concepts/goals by working through an organized set of details that are often not explicitly taught.

### Each item on this morning list is a goal. How do they learn to develop and carry out the plans for each goal-oriented task?

If your brain makes executive functioning easy, you take this ability for granted.

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# How many of our students struggle to:

- get out of the house on time in the morning?
- transition easily from one class to the other?
- do homework?
- write an essay?
- show their math?

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For individuals who struggle with developing executive functioning, there is **nothing simple about this**!

### **Example:**

A teenager regularly says he will do his homework and then can't get his homework started. But, he says he was doing his homework because he was sitting at the homework table.

Teen is **frustrated that people say he isn't trying**; he feels like he is trying but nothing gets on the paper.

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Example:

A highly educated woman struggles to feel accomplished outside of the structure of the university.

**She is frustrated by her lack of ability** to clean her apartment. She says, "I just keep thinking I have to clean my apartment. Over and over again I tell myself, but it doesn't get done!"

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Executive functioning is an "**everything**" skill set. We can't work on everything, so how do we help people work on something?

Move away from focusing on a student's executive functioning and **start focusing on a student's executive functions**.

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"The executive functions are a set of processes that all have to do with managing oneself and one's resources in order to achieve a goal. It is an umbrella term for the neurologically-based skills involving mental control and self-regulation."

Drs. Gerard A. Gioia, Peter K. Isquith, Steven C. Guy, and Lauren Kenworthy (2000)

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The executive functions all serve a "command and control" function; they can be viewed as the "conductor" of all cognitive skills.

Joyce Cooper-Kahn and Laurie Dietzel (2008) http://www.ldonline.org/article/29122/

Executive functions help you manage life-tasks of all types, including making and maintaining a friendship!

The social mind requires the **same executive functions** as those required to do assignments, and these keep evolving across our lives.

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### An incomplete list of executive functions

- 1. Impulse control
- 2. Emotional control
- 3. Flexible thinking
- 4. Working memory
- 5. Self-monitoring for self-regulation and co-regulation
- 6. Planning and prioritizing
- 7. Task initiation
- 8. Organization
- 9. Perspective taking...

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# Dilemma: We can't work on improving in all of these at once!

- What is reasonable to help individuals engage in this learning process?
- When teaching executive functions we have to break things down to build up competencies in meeting our goals!

# Moving from executive functions into executive functioning-4 Steps:

- 1. Have a goal: something you think about
- 2. Have a series of sequenced or parallel action plans, which we then need to do
- 3. Self-regulate your behavior and emotions in order to carry out the action plans to accomplish your goal.
- 4. Be flexible throughout all steps!

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# Getting things done also requires time management.

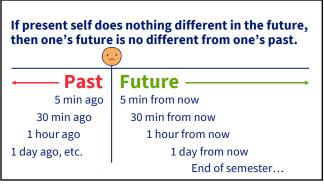
Predicting time, doing things to alter the future while learning from our past.

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# When you have a goal, you have to do things to accomplish the goal.

Each thing you do takes time and may not be fun; it may be hard. But, accomplishing the goal alters our emotions from negative to positive.

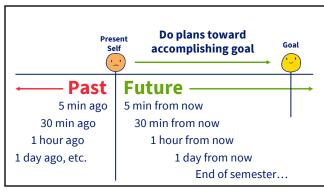
We must imagine our working through our action plans and positive emotions about getting closer to our goal to fuel motivation to get things done.



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# What about the child who cries a lot?

Have you ever met a child who you think can do the 15 minutes of homework, but he or she cries every day for 45 minutes before getting started?

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# Use visuals to create logic and systems thinking

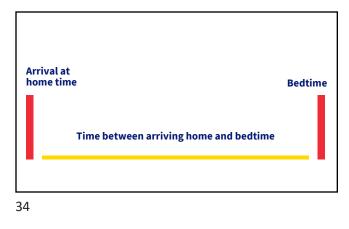
Discussion with student:

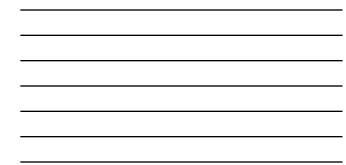
- When you come home there is only so much time between the end of the school day and sleep time.
- It's important that we look at the schedule of events after school to figure out when we can use time to get homework completed.

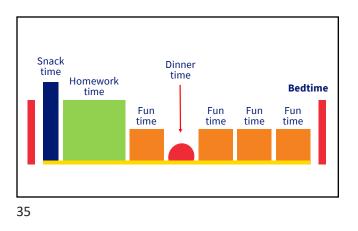
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# Continued discussion...

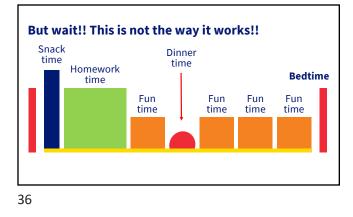
Let's explore the things you do after school and before you go to bed.

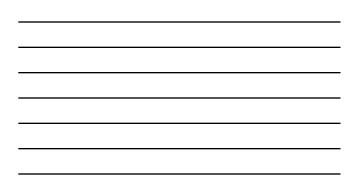


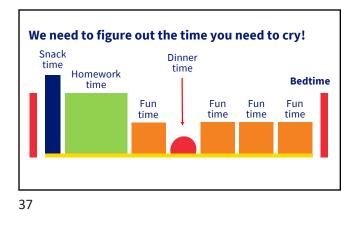




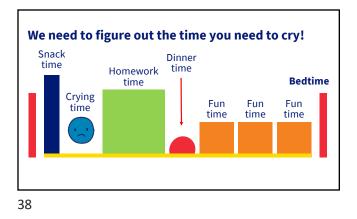




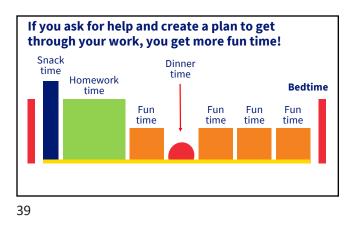


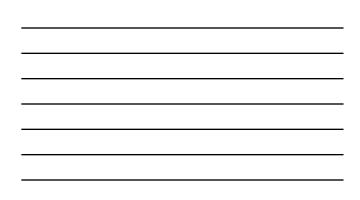


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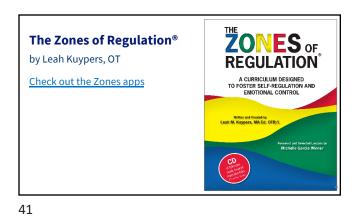




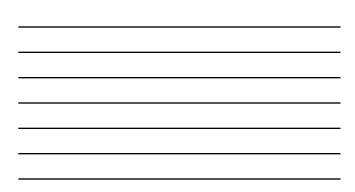




**Emotional regulation** is an important executive function to keep evolving and improving across our lives!







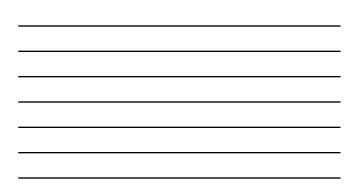


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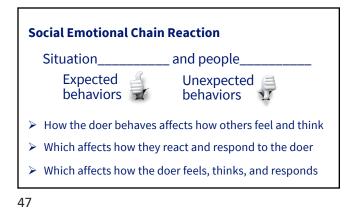
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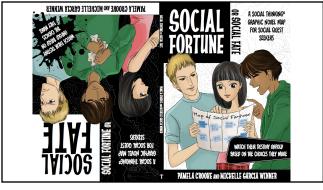












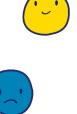
No matter work or play, we have to keep our **thoughts on the goal**, then **manage our time** in order to **get things done**, while learning to self-regulate our emotions.

All of these can be difficult to learn. This requires us to break concepts down for our students to build up their competencies.

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## Let's Play

- Three 8-year-old children All cognitively "gifted"
- Dilemmas: choices, time, and tears
- The kids cried for 8 of the 10 minutes of play because they didn't like the color of their mat.



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What to do?? The kids would not stop crying!!

At last week's session: Let's think about how you played last time. We had 10 minutes to do an activity. 8 minutes were spent crying about the color of the mat you were to stand on to play the game.



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We then had two minutes left. **1 minute** was available to play.



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- 1. Set up-cried for **8 min**
- 2. Played for **1 min**
- 3. Cleaned up for **1 min**



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Let's do it again! I will hand you the same color mat, let's go ahead and cry—you have 8 minutes.

A student says, "Michelle, that isn't logical!"

I wonder out loud, "Then, what should we do...?"

Students respond, "Let's do it without crying"

## Activities are broken down into parts and defined by time

#### Play (10 min)

- 1. Set up (1 min)
- 2. Play (8 min)
- 3. Clean up (1 min)
- Group project (25 min)
- 1. Set up (5 min)
- 3. Wrap up and plan for
  - next time (5 min)

2. Work time (15 min)

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#### Students are least likely to require executive functioning during standardized testing.

For example, many standardized tests assessing written expression do not require the student to write.

Instead, the student answers multiple choice questions about vocabulary and punctuation.

If the student scores well, it is **assumed** he or she can actively engage in written expression.

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# IQ testing does not adequately assess executive functions

Ardila, A., Pineda, D., Rosselli, M. (2000) Correlation Between Intelligence Test Scores and Executive Function Measures in Archives of Clinical Neuropsychology 15(1):31-36

## New article:

The misnomer of "high functioning autism": Intelligence is an imprecise predictor of functional abilities at diagnosis

Alvares, G., Bebbington, K., Clearly, D., Evans, K., Glasson, E., Maybery, M., Pillar, S., Uljarevic, M., Varcin, K., Wray, J. & Whitehouse, A. Autism, 2020, Vol24(1) 221-232.

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Adaptive functioning refers to practical life skills, including the ability to relate to others and learn how to meet one's own practical needs, as well as selfadvocate when needing help.

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Adaptive behaviors and executive functions go hand in hand. Some adults with ASD or ADHD may earn one or more master's degrees but not be able to live independently.

### Independence = ability to manage

- Going to university does not mean you are living independently.
- Some of our students are crashing out:
  - No sleep schedule
  - No homework completed
  - No hygiene plan
  - No nutrition plan
  - No friends

Levels to Living Independently

• Or just so depressed they can't function...

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# Redefining independence before students move out of the house!

- 1. Mostly consistent sleep patterns Be awake during expected time within your community.
- 2. Take medication routinely
- **3. Maintain nutritional intake** Plan for, prepare food, and eat to establish and maintain basic nutrition.

# 4. Exercise

- Keep body active to keep brain at its best. **5. Hygiene**
- Keep body, face, and hair relatively clean.
- 6. Establish face-to-face social connections Ward off depression and increased anxiety. Be friendly, take a risk, etc.
- 7. Plan how to get organized Take time to organize your thinking to make plans.

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8. Make yourself do things you don't want to do. Get things done in order to meet your own goals.

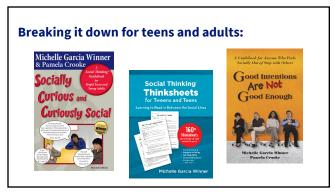
9. Learn new information by attending classes, etc. Here's where attending college classes comes in!
10. Balance

Learn to have time for passions, people, work, and relaxation.

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Look to tests such as the **Vineland Adaptive Behavior Scales** and **The BRIEF**, for better insight into a student's ability to function.

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### **Other excellent resources:**

Dr. Daniel Siegel <u>https://www.drdansiegel.com</u>

Sarah Ward and Kristen Jacobson for EF strategies <u>www.efpractice.com</u>

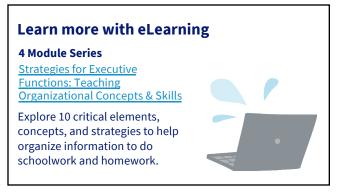
Lynn Meltzer and the SMARTS Team <u>www.smarts-ef.org</u>

Dr. Damon Korb <u>www.devminds.com</u>

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