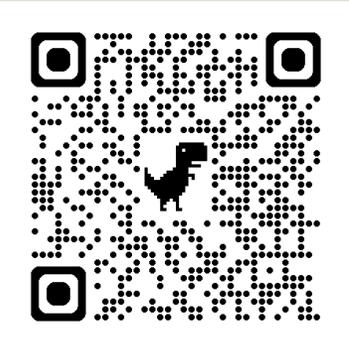Del Siegle, John Burrell, Talbot Hook, & Luis Orione

Assessing and Developing Executive Functioning Skills

s.uconn.edu/execfunction

We all know kids who are brilliant but for one reason or another just don't seem to be able to get anything done.

What are Executive Functioning (EF) Skills?

They are the things that enable us to get things done.

Schools have traditionally given precedence to aptitude and intelligence, but much modern research has found that **mere academic skills are not sufficient** in enabling students to reach their goals and potential.

Therefore, these "non-cognitive" EF skills are also necessary.

Why Do EF Skills Matter in Life?

- One EF skill – inhibition control – is positively related with better physical and mental health, salary, and happiness (Moffitt et al, 2011).

- EF skills are also important for job success (in terms of productivity and retaining one's job; Bailey, 2007) and marital stability (Eakin et al., 2004).

- Finally, people with better EF skills seem to enjoy a higher quality of life (e.g., Brown & Landgraf, 2010) and even live longer (Hall et al., 2010).

Why Do EF Skills Matter in school?

- Although there seems to be some relationship between intelligence and executive functioning, it is clear that some very intelligence people lack EF skills. In fact, some researchers have found that EF skills predict school success better even than IQ (e.g., Duckworth & Seligman, 2005).

- EF skills are important for school readiness; working memory and being able to control one's impulses predict both math and reading competence (Alloway & Alloway, 2010).

- Poor EF skills can interfere with building relationships with both teachers and peers (Raver & Knitzer, 2002).

Current EF Scales

Current executive function scales consist of some combination of

Task Orientation
- Task Initiation
- Goal directedness
- Time management

Self Regulation
- Impulse control
- Emotional regulation

Metacognition
- Self-awareness/ Self-monitoring of learning and thinking
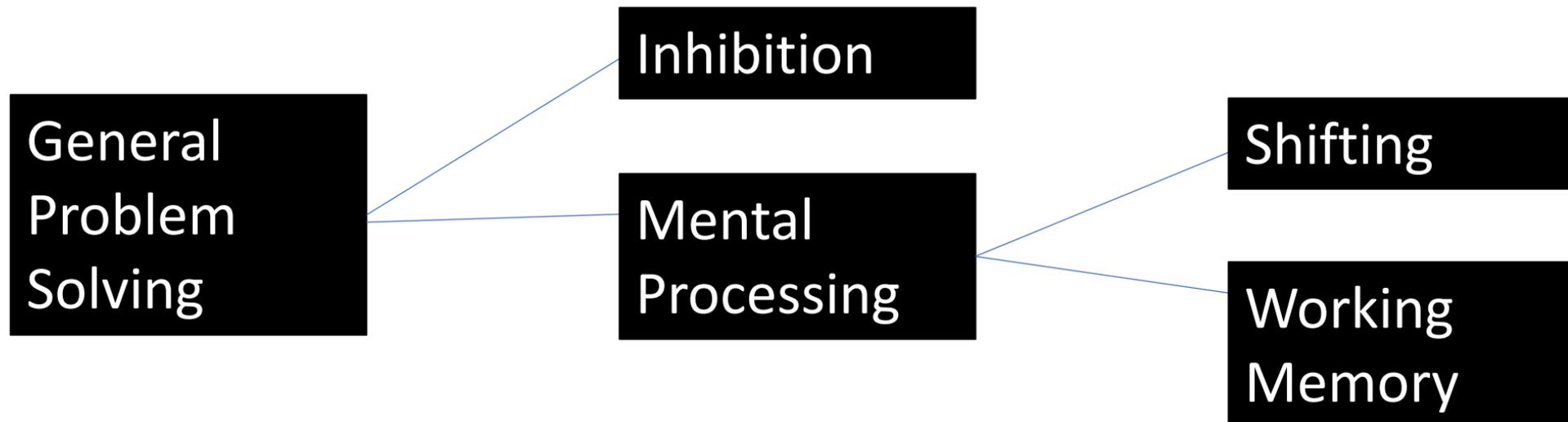
Mental Processing
- Focus
- Attention
- Working memory
- Shifting

- *The Behavior Rating Inventory of Executive Skills (BRIEF) : Eight-factor model consisting of task shifting, emotional control, task initiation, working memory, planning, organizing materials, and self-monitoring (Gioia et al., 2000).*

- *The Childhood Executive Functioning Inventory (CHEXI) is a two-factor model consisting of working memory and inhibition (Thorell & Nyberg, 2008).*

- *The Behavior Assessment of Executive Functions in Children (BASC) uses a four-factor model consisting of problem-solving, attentional control, behavioral control, and emotional control (Garcia-Barrera et al., 2011).*

Current EF Scales

Why are there differences between what different scales measure?

- **Different definitions of Executive Functions**
  - Some are neurocognitive (brain) based, others are behavioral based
- **Different ways of assessing Executive Function**
- **There is evidence that Executive Functions get more differentiated with development**

```
                          Inhibition
                                                Shifting
General
Problem
Solving          Mental
                 Processing
                                                Working
                                                Memory
```

Messer et al., 2018

Renzulli Executive Functioning Scale (REFS)

- Executive Functions are a key part of the Renzulli Framework in addition to:
  - Three Ring Conception of Giftedness
  - Enrichment Triad Model
  - Operation Houndstooth

- Renzulli classified Executive functions as leadership skills for a changing world.

Renzulli, 2012
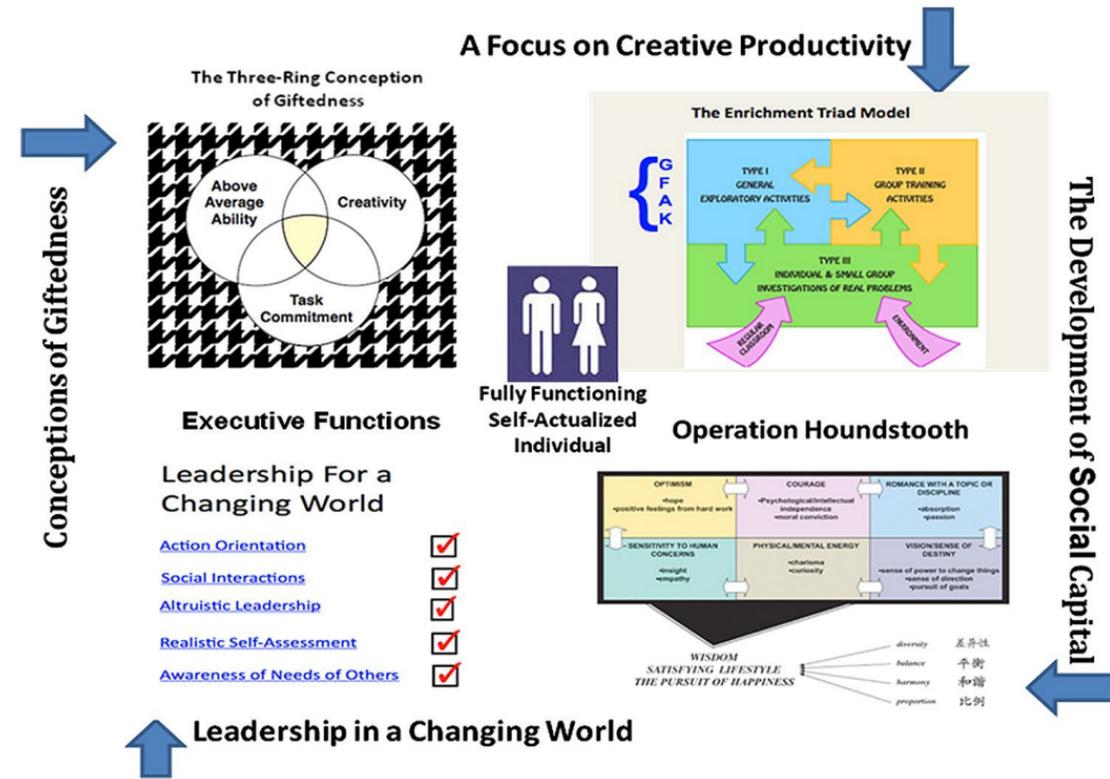
Renzulli's Conception of Executive Functions is Bigger than the Traditional Domain

Mental Processes such as
- Working memory
- Self-Inhibition
- Cognitive flexibility

Have traditionally been associated with

Are also associated with

Skills such as
- Reasoning
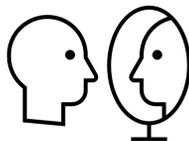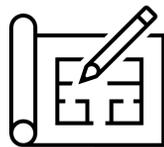- Problem Solving
- Planning

Skills such as
- Emotional Intelligence
- Social Intelligence

Renzulli suggested that head and heart are part of the same processes

(Diamond, 2013; Renzulli, 2022)

Renzulli Executive Functioning Scale (REFS)

7 DOMAINS

- **Task Initiation**
- **Task Persistence**
- **Organization**
- **Self-reflection/ Awareness**
- **Emotional Regulation**
- **Collaboration**
- **Self-advocacy**

Task Initiation

Brief Definition: The ability to get started, or to begin a task without procrastination

- I like starting new things.
- It's easy for me to get started on things.
- I hate having to start things.
- Beginning a task is hard for me.
- Starting something is hard for me.
- Finishing a task isn't hard, but starting is.
- It's hard to get started on tasks.

Suggestions for helping students initiate tasks:

- Let them choose
- Write tasks down and break the task into smaller pieces. Start small.
- Work on anxiety (What is the worst that can happen?)
- Focus on values, not on feelings. (Don't wait until you feel like it). Know that momentum comes AFTER you get started.
- Timer
- Set a designated time and place
- Set goals
- Create a checklist
- Develop visual models
- Checking in; reminding them they can revise later
- Start anywhere
- Create a plan (plan steps)
- Get a buddy

Task Persistence

Definition: The ability to put continual effort towards a task-oriented goal. Stick-with-it-ness.

- I am able to stick with something even if I don't want to do it.
- I can only work on something for a short time.
- I finish what I start.
- I find it hard to stay on task.
- It's hard for me to finish something that I've started.

Suggestions for helping students persist in tasks:

- Set a timer and work in focused bursts with breaks (Pomodoro Technique)
- Create barriers to distraction (physical and digital).
- Give yourself a deadline (Parkinson's Law)
- Set small goals to get excited about competition
- Offer reward tokens
- Provide praise and encouragement
- Give feedback for interim steps
- Use goal charts
- Work with student's interests
- Beware of multi-tasking
- Recognize progress
- Organize sectioned binder
- Use music

Organization

Definition: The ability to put things in order, plan, manage time, and monitor one's progress.

- My desk is clean and organized.
- I have designated places for things.
- I keep a list of things I need to do.
- I can find things when I need them.
- I put things back when I am done with them.
- I lose stuff all the time.
- I never lose anything.
- I don't have a set place for my things.
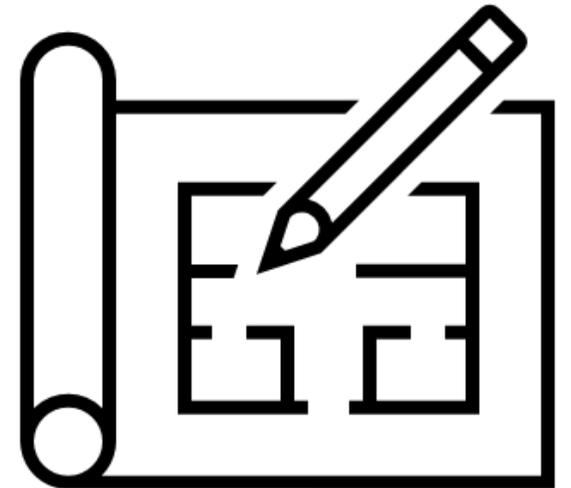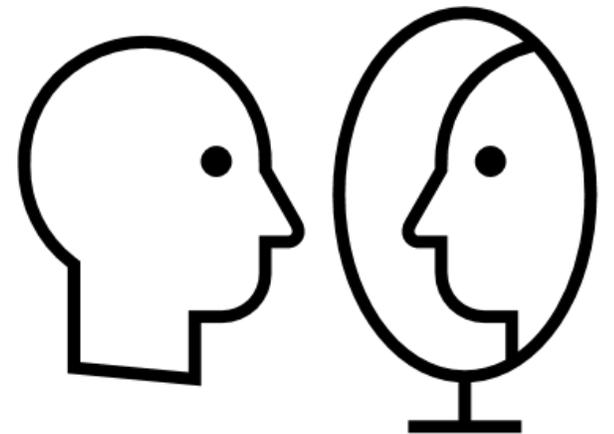
Suggestions for helping students stay organized:
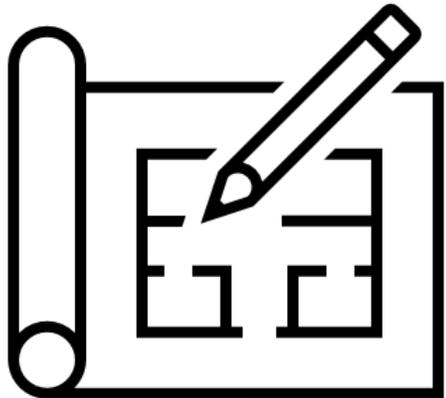
- Color code tasks
- Create task lists
- Labeled portfolios
- Model it: Show what a desk free of clutter look like

- Develop daily checklists
- Have students make planners and binders with ordered tasks

- Build the school-home connection

Self-Reflection/Awareness

Definition: The ability to recognize and understand one's strengths and weaknesses.

- I am aware of my weaknesses.
- I know what I can do well.
- I know what I need to improve about myself.
- I know what I can do to improve.
- I reflect on what goes well.
- I understand my strengths.

Suggestions for helping students become more self-aware:

- Encourage self-talk
- Quick polls - rate your understanding or how you are feeling on scale of 1-4
- Tune into feelings
- Grade their own work with a rubric
- Reflection on strengths/area want to improve before a task/project
- Reflect on what went well/biggest strength/something would like to improve after a task
- Set goals for the day
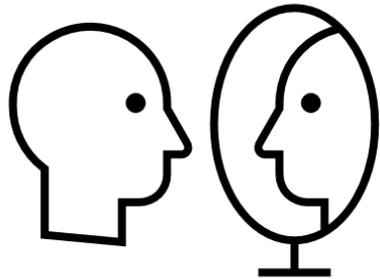
Emotional Regulation

Definition: The ability to sense and manage emotions.

- I know how to lower my stress level.
- When I am angry, it talks a long time for me to calm down.
- I can calm myself down when I am upset.
- When things don't go well, I can remain calm.
- I get stressed for a long time, which gets in the way of my goals.
- I know when I'm getting anxious and can control it.
- When I'm upset, I can't stop thinking about what upset me.
- I can feel calm when I need to.
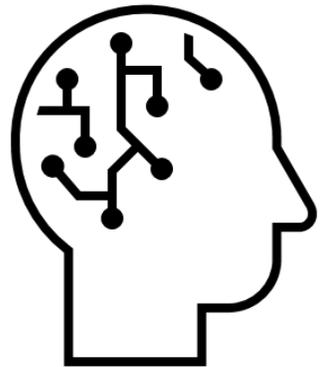
Suggestions for helping students regulate their emotions:
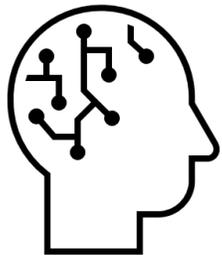
- Take breaks
- Encourage movement
- Listen to quiet music
- Conduct mindfulness exercises
- Reserve time and place to calm down
- Practice breathing (in for 3 seconds and out for 6 seconds)
- Tense muscles and then relax them
- Close eyes and send a mental command to each part of the body to relax (feet, legs, torso, arms, neck and head)
- Control stressful thoughts by identifying them, stopping them, breathing 3 x 6, and thinking about something relaxing

Collaboration

Definition: The ability to work well with others in groups, especially on common projects or tasks.

- I am willing to compromise with others.
- I don't like working with my classmates.
- I listen to other people's ideas.
- I work well with others.
- I am patient with others.

Collaboration

- **Key Components**

  - **Perspective-taking:**

  - **Situational awareness; Responding appropriately to others' emotions**

  - **Initiation**

  - **Using humor appropriately**

- **Strategies to improve Collaboration:**

  - **Model perspective-taking by sharing internal dialogue**

  - **Teach child that sometimes they have to "fake" interest.**

  - **Help raise awareness of context**

  - **Encourage involvement in extracurriculars/social activities**

  - **Praise effort**

MAKING FRIENDS

The Social Executive Function Skills That Elude Kids with ADHD

Children and teens with ADHD may lose friends because of deficits in social executive function skills – the underlying processes that are involved in social skills ranging from perspective-taking to reciprocity and cognitive flexibility. Here, learn strategies that help them bolster these skills and strengthen their friendships.

| By Ryan Wexelblatt, LCSW | ✔ Verified | Updated on October 11, 2023

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https://www.additudemag.com/social-skills-for-kids-friendships-adhd/

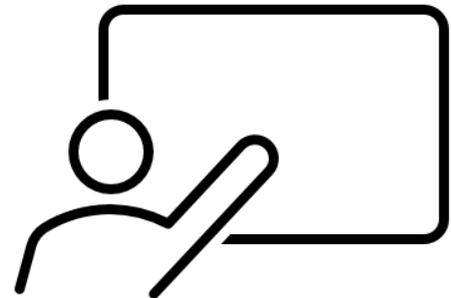# Suggestions for helping students become more collaborative:

- Share thoughts
- Listen
- Turn and talk
- Teach how to divide up tasks
- Use sentence frames
- Develop leadership roles
- Implement Kagan strategies that encourage cooperation and communication
- Use flexible grouping
- Conduct team builders
- Jigsaw classroom learning
- Teach how to actively listen to other's ideas
- Encourage involvement in extracurriculars/social activities
- Help raise awareness of context
- Teach need to sometimes "fake" interest

Self-Advocacy

Definition: The ability to communicate one's needs and wants and to make decisions about the support need.

- If something feels unfair, I let someone know.
- I am not afraid to stand up for myself.
- If I don't understand something, I raise my hand and ask the teacher.
- I let people know what I want.
- I ask my parents or teacher for what I need.
- When people do things that bother me, I let them know.
- It is hard for me to ask a teacher for help.
- I'm uncomfortable asking for help.

Suggestions for helping students self-advocate:

- Develop knowledge of self and how to communicate
- Review how to properly approach/contact a teacher
- Discuss rights
- Locate a trusted adult
- Learn to recognize and appreciate accomplishments
- Use sentence starters
- Role play skills in assertiveness
- Participation in IEP meeting (if applicable)
- Help accept making mistakes and using them as learning tools
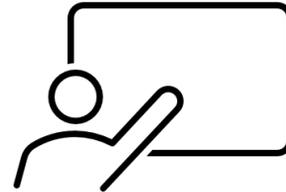
Too Passive
"Maybe if I sit here and do nothing, the teacher will notice and give me a pencil"

Effective Self-Advocacy
" Excuse me, Mr. Burrell. May I borrow a pencil?"

Too Aggressive:
"Give me a pencil right now!"

How knowing students' executive functioning strengths and weaknesses can benefit teachers, students, parents, and administrators

- **Use to understand and address underperformance issues**
- **Help put students' behaviors in perspective**
- **Use to improve communication**
- **Use to design and assess effectiveness of EF programs (e.g., SEL, Study Skills)**

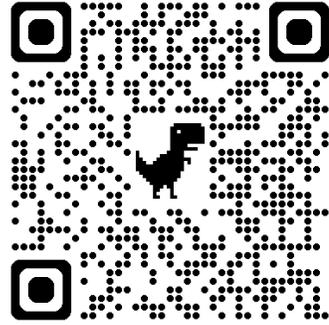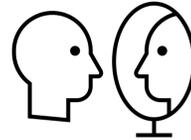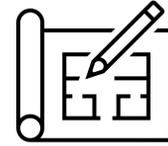If you would like to be on an email list to receive further information about the REFS, email del@uconn.edu
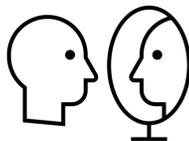
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