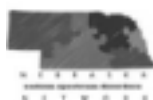


TRI-STATE WEBINAR SERIES

Executive Functioning: A Closer Look

Presented by:
Dawna Sigurdson, Ed. S.
with contribution from
Sharon Krupa-Sirotek, Ph. D.



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Tri-State Autism Spectrum Disorder Webinar Series

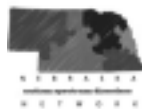
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Presentation Summary

This is the second in a series of Executive Function webinars developed as a part of the Tri-State Collaboration. Executive Function is a complex set of skills that has a profound impact on individuals with autism across the spectrum. The ability to use strategies in the component areas of executive function is integral to student success in academic and social environments.

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Learner Objectives

Learners will:

- **Understand components of Executive Function (EF)**
- **Recognize behaviors that indicate executive function/dysfunction in students with an autism spectrum disorder**
- **Identify interventions for each component to support students with ASD**

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Executive Function (EF)



- **Is an umbrella construct that includes interrelated concepts that are responsible for purposeful, goal-directed problem solving behavior**

Is a collection of processes that are responsible for guiding, directing, and managing cognitive, emotional and behavioral functions, particularly during active, novel problem solving

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A Good Analogy



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Components of Executive Function

- Focus/Attention Skills
- Organization
- Planning/Prioritizing
- Working Memory
- Emotional Control
- Problem Solving

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Focus/Attention

- **Selecting the target of attention or main topic**
- **Ignoring distractions**
 - **External/Environmental**
 - **Internal/Putting your thoughts aside**
- **Activating and initiating work**
- **Task preference**

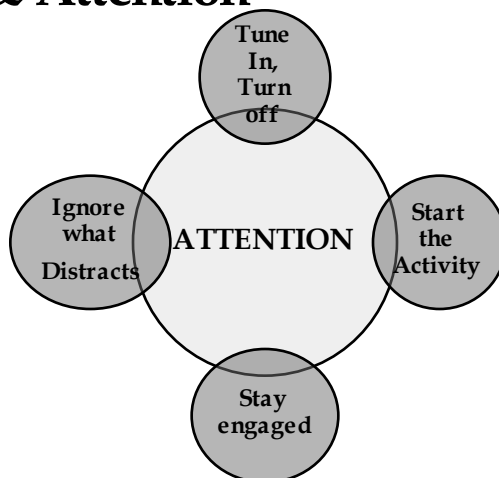
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Focus/Attention Looks Like

- **A toddler to preschooler watching and imitating a simple gesture, actions to a song/rhyme, or matching game**
- **An early elementary student moving attention from speaker to speaker (student to teacher and back)**
- **A middle schooler ignoring noise from the hallway or peers during a lesson**
- **A high school student being able to complete an assignment during the transition time just before the bell rings**

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Focus & Attention



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Dysfunction in Focus/Attention

- A preschool/kindergarten cannot sit through a short book or circle time (plays with a string or preferred toy)
- An early elementary student fails to look at the teacher or information presented in class
- A middle schooler cannot independently take notes on a lesson even with an organizer
- A high school student fails to recognize changes in topic and has difficulty transitioning during class discussion

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Strategies to Support Focus /Attention Skills

- Use or include topics or items of interest
- Share a visual plan for the activity or lesson
- Include what comes next, preferably an enjoyable activity
- Reinforce attending, perhaps initially with tangibles, later with social recognition or tokens

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Being an Engaged Learner

Teachers expect students to do certain things while they are teaching them. Being an engaged learner means:

- My mind is thinking about what the class is discussing.
- I am looking toward the teacher, listening to her words, and thinking about the topic the class is discussing.
- When another student is talking during class discussion, I am looking toward and listening to that student.
- I shift my attention back and forth between looking toward and listening to the teacher and looking toward and listening to other students.
- My body is turned toward the group or the person who is talking.
- I am "following along" by thinking about and doing the task while the teacher is showing how to do something.
- I frequently raise my hand to participate in the class discussion. Sometimes the teacher will call on me and sometimes the teacher will call on other students. Raising my hand lets the teacher know that I am being an engaged learner.

If I need a reminder to get back on track as an engaged learner, an adult might give me a cue. When an adult gives me a cue, I can think, "I need to do what is expected right now." Then, I can think about my checklist and do what is expected.

When I choose to do the things that are expected in class, I am more likely to understand the information, complete my work more quickly, and I might have less homework.

Organization

The ability to establish & maintain a system for arranging or keeping track of important items

- **Physical-Space/Materials-recognizing the purpose of items and where they go to access them easily**
- **Ideas-determining what ideas are important, how to retrieve them**
- **Time Management-deciding what needs to be done and estimating how long tasks will take**

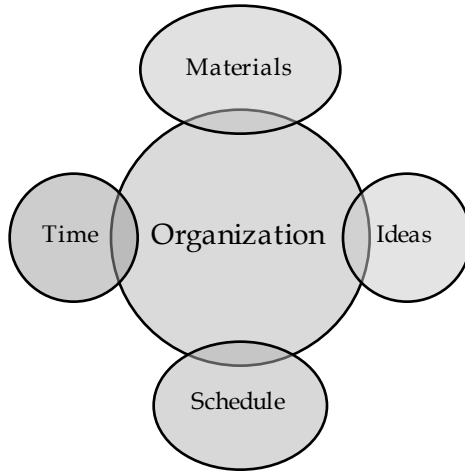
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Organization Looks Like

- **A toddler/preschooler assisting with putting blocks in one container and cars in another**
- **An early elementary student planning and sequencing a project or activity that lasts about 15 minutes**
- **A middle schooler using an organizational system that has been taught**
- **A high school student formulating and following the steps for applying for a job or college admission**

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Organization Skills



Jill Kuzma

ASD Network 2015

April 9-10, 2015 Kearney, NE

Organization

Dysfunctional



Functional



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Dysfunction in Organization

- A preschool/kindergarten student needs repeated reminders to put toys away
- An early elementary student fails to take their *Homework Folder* home, complete work or bring either back to school
- A middle schooler asks repetitively to go to his locker for subject-specific materials (protractor, calculator, etc.)
- A high school student loses track of deadlines to sign up for sports physicals or return forms to compete in school activities

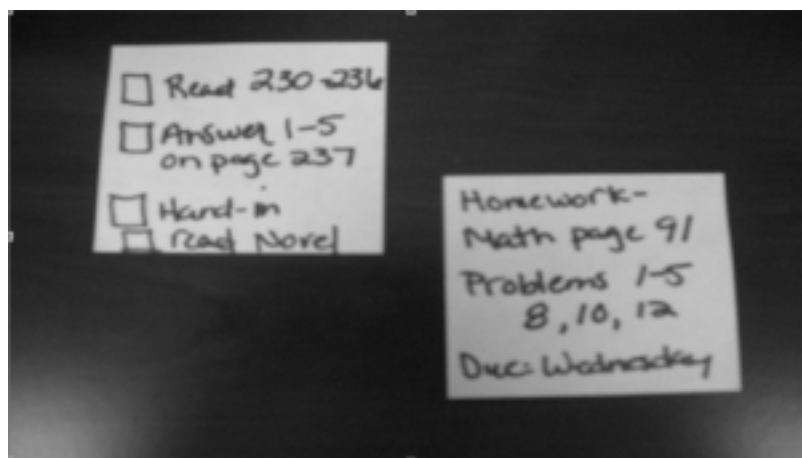
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Strategies to Support Organization

- Establish a daily routine as much as possible
- Teach the student problem solving using a step-by-step guide
- Help students create or prepare picture schedules, plans, checklists, or electronic organizers
- Break down long-term and larger projects into step for students- start with the due date and then work backwards

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Sticky Notes Rule!



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What Is Your Opinion?

Two components of executive functioning have been presented:

- Focus/attention and
- Organization

Given your experiences, which component do you see as more problematic for students with ASD?

The answer is . . .

**My answer is ... it depends on the student.
Each individual with autism is unique.**

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Planning/Prioritizing Skills

- **Creating a map to reach an objective or complete a task**
- **Making decisions about the importance of tasks**
- **Deciding the order of tasks in multi-step projects**
- **Determining the amount of time tasks will require**
- **Self checking and monitoring to evaluate whether the plan is working or needs revision**

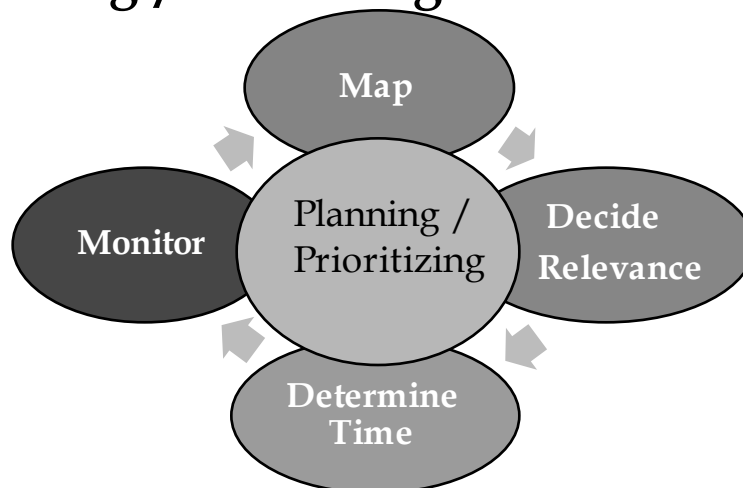
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Planning/Prioritizing Skills Looks Like

- A toddler/preschooler drawing a family picture including all members (with a model)
- An early elementary student saving money for a toy
- A middle schooler planning an after school activity with a friend
- A high school student separating the main task from details and breaking down work with due dates for a semester writing project

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Planning / Prioritizing



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Dysfunction in Planning/Prioritizing

- A preschool/kindergarten student moves from toy to toy without actually playing with items
- An early elementary student fails to complete a familiar assignment, i.e., journal, with verbal reminder
- A middle schooler forgets to fill in their planner and put it and necessary items in their backpack to take home
- A high school student is unable to decide where to start when given an opportunity to design the “perfect” commons area design for a construction project

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Strategies to Support Planning Skills

- Provide models of tasks, both static and kinetic (as you complete steps or make videos of processes)
- Make, post and use lists, routines or plans
- Check off completed activities
- Introduce tasks with a limited number of steps and gradually add more steps or complexity

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Working Memory

Memory is retaining information long enough to use it or processing different sources of information simultaneously

- **Verbal**
 - Sequencing information, processing multiple ideas and relating them to what has been previously learned
 - Information are simultaneously stored and manipulated to support comprehension
- **Nonverbal**
 - Remembering the schema of items or recognizing the relevance of visual patterns

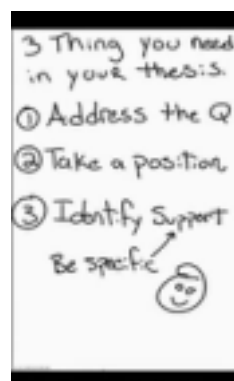


Working Memory Looks Like

- A toddler/preschooler student remembering words and actions to a finger play
- An early elementary student following a two-step instruction for an assignment
- A middle schooler keeping track of the rules for multiple teachers
- A high school student remembering and using the scientific method

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Working Memory



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Dysfunction in Working Memory

- A preschooler/kindergartener needing to be reminded of the sequence of routine tasks, “First socks, then shoes.”
- An early elementary student not being able to “picture” how to head a paper
- A middle schooler forgetting non-routine events like bringing back a permission slip for a field trip
- A high school student failing to remember steps to the quadratic equation after having seen several models during one class session

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Strategies to Support Working Memory

- Teach visualization skills, “What will it look like when the assignment is complete?”
- Make connections, i.e., show that the two’s times table is the same as double’s facts, such as $4 \times 2 = 8$ and $4 + 4 = 8$
- Use visual supports
- Have the student explain an answer or teach a skill

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What Strategies Work for...?

... Focus/Attention, Organization, Planning/Prioritizing,
and Working Memory

- a) Visual supports
- b) Familiarity with a student
- c) Direct teaching of skills
- d) Practice
- e) All of the above

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The answer is . . .

e. All of the above

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Emotional Control

- **Impulse control – thinking/waiting before you act**
- **Inhibition – deciding not respond to a person or an event**
- **Initiation – beginning tasks or activities, generating ideas independently**
- **Adaptability – being flexible and able to revise a plan or a response**

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Emotional Control is

- **A toddler/preschooler recovering when told that because of the rain there will be recess indoors, not on the playground**
- **An early elementary student accepting a teacher correcting an error**
- **A middle schooler understanding that an action taken by a peer is unfair without becoming overly upset**
- **A high school student recognizing that shouting at the referee about a perceived “bad call” is unsportsmanlike**

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Emotional Control



This

VS.



This

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Dysfunction in Emotional Control

- A preschool/kindergartener throwing a tantrum when she cannot have her preferred marker
- An early elementary student continuing to act silly and laugh, long after the joke has "worn off"
- A middle schooler failing to accept the group decision in a cooperative learning activity
- A high school student exhibiting defiance toward a teacher or administrator when questioned about actions

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Strategies to Support Emotional Control

- Teach emotions and their gradients
- Explain “expected” and “unexpected” behaviors and the consequences of each
- Use visual rules and reminders
- Prepare individuals in advance for new situations
- Role play or do video modeling of situations students may encounter

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What is Expected in the Classroom as an Engaged Learner?					
Doing What is Expected	My Positive Self-Talk Statements	How the Teacher & Others Might Feel When I Do What is Expected	How I Might Feel When I Do What is Expected	Doing What is Not Expected	What I Can Do When I Check Myself and I am Doing What is Unexpected
Thinking about the topic being discussed	Ask myself, "What is the topic?"	Respected	Included, Proud	Thinking about something else	Shift my attention back to the topic
Shifting attention to the person she is talking	I look toward, listen to, and think about what the teacher or student is saying and how it relates to the topic	Included, Liked	Respectful, Proud, Like I'm Part of the Group	Body turned away and not looking toward the person who is talking; I miss the information	Turn my body toward the person who is talking and ask myself, "How does this information relate to the topic?"
I know the teacher can't call on everyone and the topic changes a lot.					
Adding to the class discussion by raising my hand and waiting to be called on	I listen to the class discussion, think about what is being said, and participate by raising my hand and waiting to be called on. I can jot down my thought as I won't forget	Respected, Happy, Calm	Respectful, Proud	Stutting out or making comments that are not related to the discussion	Stop and think about what I am going to say before I say it. Ask myself, "Is this related to our topic of discussion? Has the discussion changed? How does my thought fit now?"
Doing the work when the teacher asks me to do it (doing with her or she is teaching with a partner or a group, or independently)	I might have to shift between doing the work when the teacher tells the class to do it and following along and participating with the class.	Respected, Happy, Calm	Confident, Calm	Waiting until the teacher tells you what the answer is to do the work	Get back on track and do the work the teacher is asking you to do at the time that she is asking you to do it
There is a good time to take a sensory break.					
Waiting to take a sensory break until it is independent work time	I take a sensory break when it is independent work time.	Respected, Happy, Calm	Respectful	Interrupting the teacher to ask for a break while she is teaching	Stop and think, "Is this an appropriate time to ask for a sensory break?"

Problem Solving

Using other executive functioning skills to implement plans or remove obstacles to meet goals

- **Identify the problem**
- **Brainstorm solutions**
- **Select an idea**
- **Implement**
- **Take data and evaluate the results**

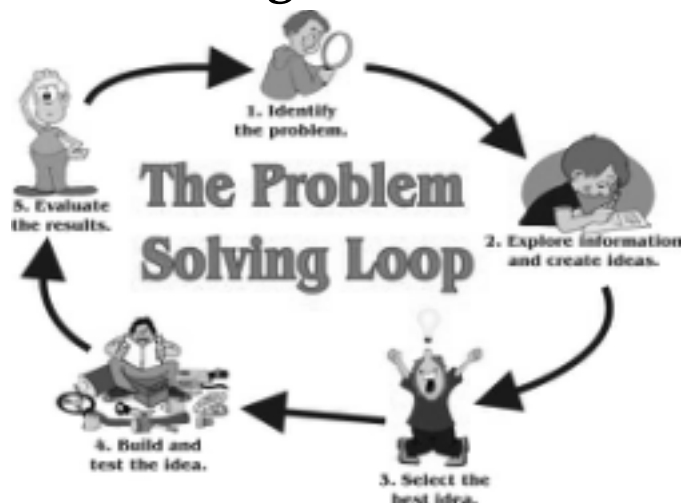
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Problem Solving is

- **A toddler to preschooler making a choice from available snacks when the preferred item is not available**
- **An early elementary student getting the attention of an adult when another child on the playground is hurt**
- **A middle schooler adjusting their schedule to complete homework and participate in extracurricular activities**
- **A high school student negotiating with the counselor or administrator to get a release for work study instead of attending a on-campus class**

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Problem Solving



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Dysfunction in Problem Solving

- A preschool/kindergarten student “tells on” other student rather than using practiced skills
- An early elementary student fails to see more than one solution to a problem
- A middle schooler is unable to determine a behavior is inappropriate when someone else receives a reprimand
- A high school student has difficulty envisioning more than one solutions to a situation

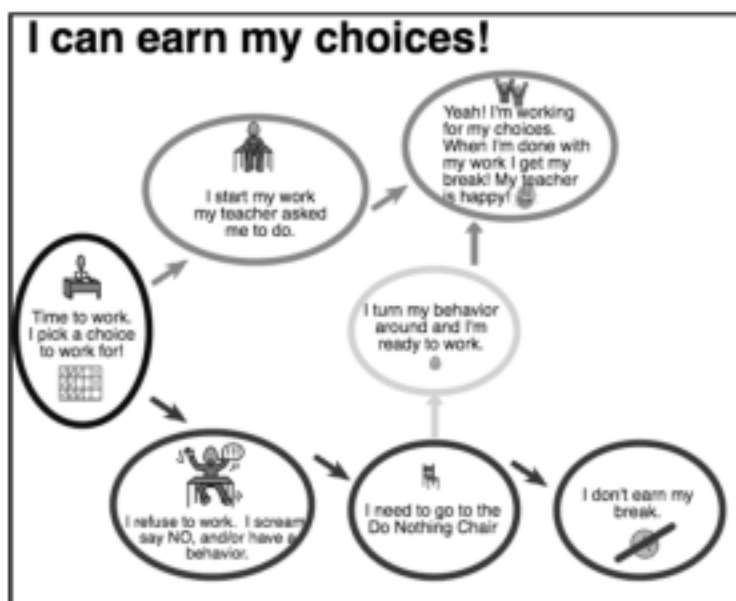
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Strategies to Support Problem Solving

- Demonstrate using a problem-solving template
- Build in choice or self directed study in assignments
- Encourage goal setting and self monitoring
- Teach and use conflict mediation

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Consequence Map



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SOCCSS Situation - Options - Consequences - Choices - Strategies - Simulation		
Situation: Include Who, What, When, Where, and Why		
Options/Solutions	Consequences	Choice
Strategy - Plan of Action		
<p>Simulation: Practice is the last part of the SOCCSS strategy. Simulation can be visually imagining carrying out the strategy, talking with another person about the plan, writing down the plan, or role-playing. After the simulation, the person evaluates it to determine whether he now has the skills and confidence to carry out the plan. If not, more simulation must take place.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Find a quiet place and imagine how your situation would work (or not work) based on various Options and Consequences <input type="checkbox"/> Talk with a peer, staff, or other person about your plan of action. <input type="checkbox"/> Write down what might happen in your situation based on your Options and Consequences. <input type="checkbox"/> Practice your Options with one more people using behavioral rehearsal. <input type="checkbox"/> Video Self Modeling <input type="checkbox"/> Other 		Simulation Outcomes
Follow up		

Time for Reflection

- Focus/Attention Skills
- Organization
- Planning/Prioritizing
- Working Memory
- Emotional Control
- Problem Solving



Interdependence among Executive Functioning Skills

Executive functions are highly interrelated. Each type of skill draws on elements of the others, and the successful application of executive function skills requires them to operate in coordination with each other.

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Questions



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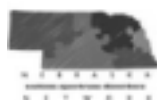
THANK YOU!

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