The principals' associations of Ontario are pleased to welcome you to the first webinar of three webinars in 2021 pertaining to Autism Spectrum Disorder (ASD).

CATHOLIC PRINCIPALS' LEADERSHIP DEVELOPMENT | ONTARIO

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Welcome to the all participants, from ADFO, CPCO and OPC, to this second year of a three year series. This is the first of three Webinars on supporting Students with Autism Spectrum Disorder (ASD) through a lens of explicit teaching of the executive functions.

Leading to Strengthen Executive Functioning Skills of Students With Autism:
IEP Look Fors

This first webinar is one of three learning webinars developed to support school leaders with an in-depth understanding of students with Autism, as students with a neurological disorder, and how to support the school team to explicitly teach executive functioning skills as a way of scaffolding the student's access to learning and future life goals.

The second webinar in this series will deepen your understanding of the transdisciplinary approach through the lens of equity, inclusion and a collaborative stance.

The third webinar this year will explore a leader's role in maximizing the impact of caring and safe school policies and procedures for students with autism working through the transdisciplinary approach.
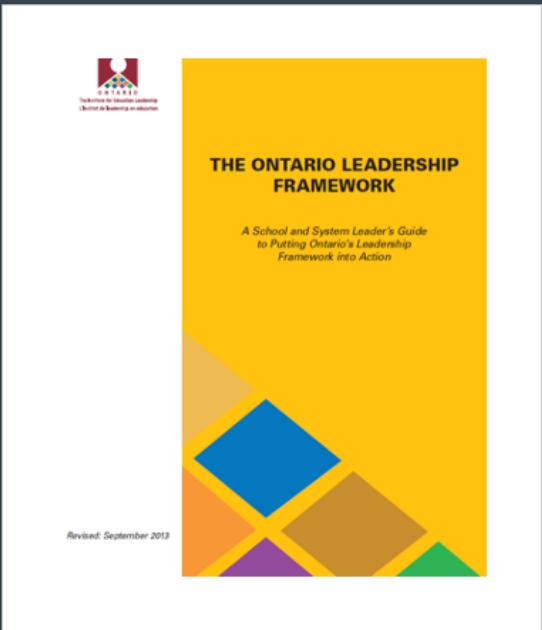
Land acknowledgement (for Toronto)

I acknowledge that I am on the traditional territory of nations within nations including the Anishnabe, the Ojibwe and the Michi Saagiig. This land has been and continues to be home to many diverse First Nations, Inuit and Métis peoples.

I would like to acknowledge the enduring presence of Indigenous peoples on the lands on which I gather with you today across Ontario and I thank the past, present and future caretakers of this land. I am grateful to have the opportunity to work and learn on these lands in a community of sharing.

As users of the land, we must continue to work to keep it clean and use it with care so that generations to come can also continue to benefit from the land.

CATHOLIC PRINCIPALS' LEADERSHIP DEVELOPMENT   LEADERSHIP EN ACTION   PRINCIPAL ASSOCIATION PROJECTS

Today's OLF Focus:

Improving the Instructional Program

All of our webinars are linked to the Ontario Leadership Framework. Today's webinar, in particular, will support the Principals and Vice-Principals in **improving the instructional program**.

To ensure the best possible learning experience and engagement for this webinar, please allow 45 minutes of your time with opportunity for follow-up questions.

Help us get to know who the audience is by participating in a few polling questions.

A look back...

What is Autism Spectrum Disorder (ASD)?

If you joined our learning series last year, you'll recall that our first webinar was a deep look at understanding the student with autism spectrum disorder. Please know that last year's webinar series was recorded and you can go back and review this or any of the webinars at anytime. These recorded webinars can be found on the association's website for members.

What is an Autism Spectrum Disorder (ASD)?

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder

Individual differences among children with ASD are considerable in areas like:

executive functions, language, sensory-motor coordination, social communication

Neurodevelopmental disorders are a group of disorders that affect the development of the nervous system, leading to abnormal brain function which may affect emotion, learning ability, self-control, and memory. The effects of neurodevelopmental disorders tend to last for a person's lifetime.
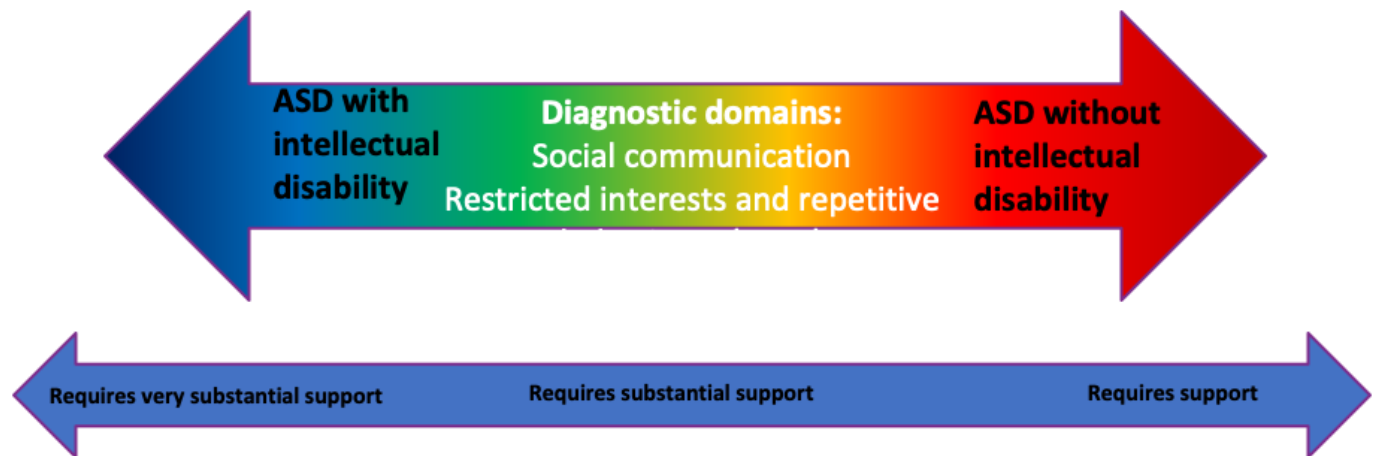
In Canada and the United States, the Diagnostic and Statistical Manual of Mental Disorders (DSM) is widely used by clinicians and psychiatrists for the diagnosis
- Under the previous editions of the manual, patients could be diagnosed with Autistic Disorder, Asperger's Disorder, Childhood Disintegrative Disorder, or Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS),
- DSM-5 now encompasses all four diagnoses under the umbrella of Autism Spectrum Disorder. Additionally, DSM-5 now groups communication and social interaction under a single domain.
- By using a psychiatric diagnostic manual, it's very complex for educators to understand classic autism as compared to autistic traits being part of the symptoms manifested by a student.

As of today, we know the existence of subgroups associated with autism (early onset autism, late onset autism and late onset autism with regression) which explains the different outcomes using evidence-based practices. The new DSM criteria are very helpful to identify the level of dependency of autistic individuals.
School principals should always make sure they have all the information about the developmental domains (social, emotional, behavioural and cognitive) before agreeing to the support of an EA
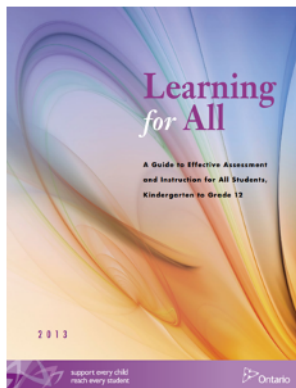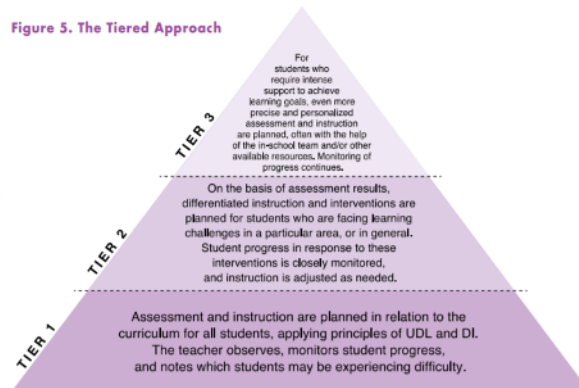
Universal Approach - Learning for All

Figure 5. The Tiered Approach

TIER 3 — For students who require intense support to achieve learning goals, even more precise and personalized assessment and instruction are planned, often with the help of the in-school team and/or other available resources. Monitoring of progress continues.

TIER 2 — On the basis of assessment results, differentiated instruction and interventions are planned for students who are facing learning challenges in a particular area, or in general. Student progress in response to these interventions is closely monitored, and instruction is adjusted as needed.

TIER 1 — Assessment and instruction are planned in relation to the curriculum for all students, applying principles of UDL and DI. The teacher observes, monitors student progress, and notes which students may be experiencing difficulty.

(L4All, p. 24) "An extremely effective approach to assessment and intervention is the 'tiered' approach, which sequentially increases the intensity of instructional interventions." UDL is foundational in Tier 1.

When working with the school team to support any child or youth to set-up the instructional program, think of the Tiered Approach to support. This is described in the Ministry resource, Learning for All. It states that "an extremely effective approach to assessment and intervention is the "tiered approach, which sequentially increases the intensity of instructional interventions."

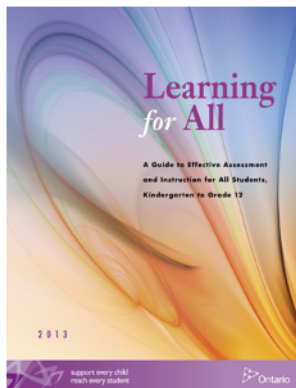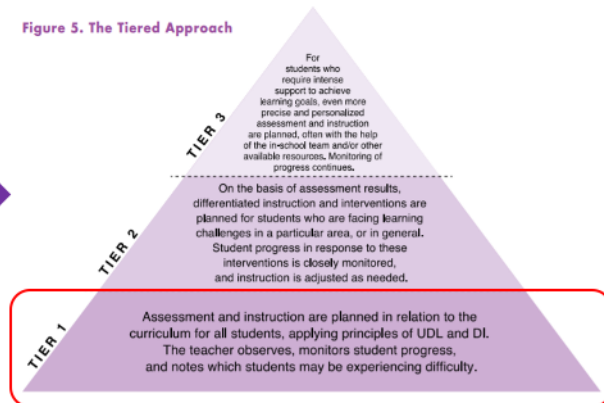Universal Approach - Learning for All

Today we are going to focus our attention on Tier one… the universal approach to support. The Universal Design for Learning or UDL framework supports the concept that "What is essential for a learner or some learners in a classroom, will be good for all learners in the classroom."

Best practice guidelines are developed using the best available research evidence in order to provide professionals with evidence-informed recommendations that support practice and guide practitioner decisions regarding assessment and intervention

Best practice requires the integration of professional expertise, each student's unique strengths and needs, family values and preferences, and the best research evidence (supported by rigorous peer-review) into the delivery of services. Professionals and families collaborate and work together as partners to prioritize domains of functioning for assessment and intervention planning. We know that best practices for school-based educators are best practices for students and their families.
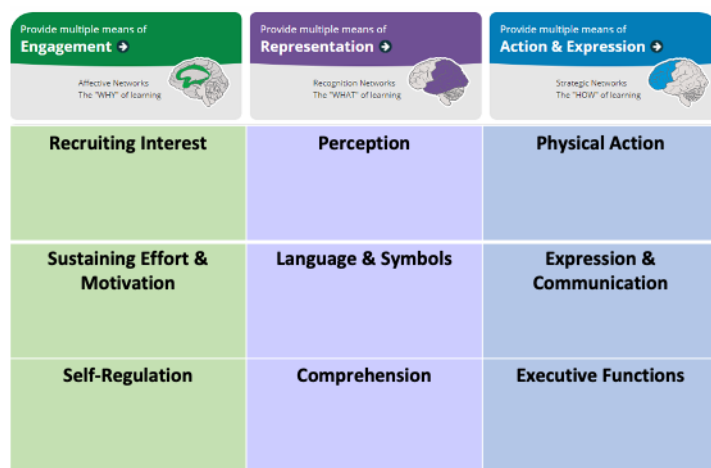
As educators, we are greatly influenced by educational trends. We look to our past and towards the future anticipating the "latest trend" and the "next big thing." We have seen open classrooms, experiential learning, brain-based education, personalized instruction and professional learning communities, to name a few. Educators, eminently practical and resourceful, have unpacked and reconfigured these ideas to fit their unique students and contexts. Having said that, it appears that the pace of educational change has reached epic proportions. Differentiated learning has evolved into universal design, personalized learning environments have created flipped classrooms and individualized learning spaces. Curriculum focused on environmental outcomes includes outdoor classrooms, play-based instruction and place-based learning. While innovation is exciting, invigorating and necessary, this influx of information also creates stress as educational leaders face continual pressure to change their perceptions about learning and focus on the interests of student motivation and wellness.
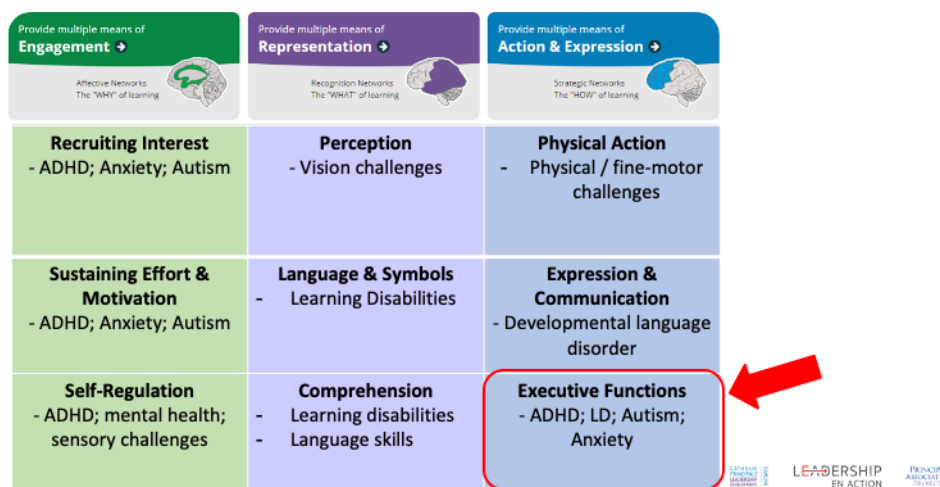
Universal Design for Learning (UDL) means a scientifically valid framework for guiding educational practice that--(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills and in the ways students are engaged; and (B) reduces barriers in instruction , provides appropriate accommodations, supports and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient (CAST, 2016)

Explicit Teaching on Identified Areas of Student Need

When contemplating the adoption of a new innovation or program, it is important that educational leaders approach "trending" in education with caution, insight, knowledge and understanding. Choosing the best changes, for the right reasons, is an important skill for educational leaders. In my work with these leaders exploring how to apply innovations within their context, a few key strategies have become clear. For example, create a framework based on self regulation around outcomes, teacher growth, assessment practice and instructional practice. Use this framework to help guide the application of innovations and trends, rather than having trends inform the choice of framework. Too much or the wrong innovations can get in the way of being an effective educator. Too few or unexamined innovations can get in the way of effective educational practice. Developing the skill of using trends selectively and intentionally is an important task for educators.

Explicit Teaching on Identified Areas of Student Need

Provide multiple means of **Engagement** →	Provide multiple means of **Representation** →	Provide multiple means of **Action & Expression** →
Affective Networks The "WHY" of learning	Recognition Networks The "WHAT" of learning	Strategic Networks The "HOW" of learning
Recruiting Interest - ADHD; Anxiety; Autism	**Perception** - Vision challenges	**Physical Action** - Physical / fine-motor challenges
Sustaining Effort & Motivation - ADHD; Anxiety; Autism	**Language & Symbols** - Learning Disabilities	**Expression & Communication** - Developmental language disorder
Self-Regulation - ADHD; mental health; sensory challenges	**Comprehension** - Learning disabilities - Language skills	**Executive Functions** - ADHD; LD; Autism; Anxiety

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If it sounds complicated, that's because it is! When we see a student is struggling, educators often try to help by focusing on weaknesses. But students with self regulation problems have a lot of potential in their areas of strength. For example, students may be frustrated by school but often have expertise in specific topics. Positive practices for supporting these students include targeting areas of strength, and teaching skills and strategies in areas of weakness where needed. Students also need social and emotional support to succeed in school. Some students hide their frustrations and low sense of self-efficacy behind behaviour such as acting the clown, expressing anger, withdrawing socially, or denying problems. For these students, explicit instruction in anger management, self-regulation and social thinking is often more important than pedagogy. Because many students with self regulation are not identified, educators and parents must pay special attention to learners who show a lack of achievement and frustrations that seem out of sync with their abilities, keeping in mind that negative behaviour can stem from unaddressed social or emotional issues.

What ARE Executive Functions?

EFs are the like the brain's conductor.
They help direct your
unique creativity and incredible smarts
so you can achieve your goals.

Activated Learning Teaching Approach ©Laurie Faith, 2017, @LCFaith, ActivatedLearning.org

Reviews of the existing literature suggest that cognitive flexibility, working memory, and inhibitory control are often impaired in autistic individuals. Each of these Executive Functions component processes play an important role in the acquisition of knowledge and social skills; the better children are at focusing and refocusing their attention, holding information in mind and manipulating it (i.e., working memory), resisting distraction, and adapting flexibly to change, the more positive the social, adaptive, and academic outcomes. The research findings contribute to the growing evidence that children with autism who participate in social skills interventions that integrate EF skills such as working memory, cognitive flexibility, emotional recognition, and self-regulation experience not only an improvement in social competence, but also underlying core neurocognitive EF processes.

Everyone has different strengths and weaknesses, like a fingerprint.

EFs help you express your creativity and smarts.

Incredibly smart people, like teachers and parents, have EF challenges too.

EFs will slowly get better with age.

4 FACTS About Executive Functions

Activated Learning Teaching Approach ©Laurie Faith, 2017, @LCFaith, ActivatedLearning.org

Executive dysfunction places a child at-risk and is likely to have an adverse impact on many areas of everyday life and affect adaptability in several domains (personal, social and communication). Systematic social skills instruction that incorporates EF process components in program delivery can help reduce the risk for negative outcomes for children on the autism spectrum. Likewise, an assessment of EF skills can add important information about the child's strengths and weaknesses and inform intervention/treatment planning.

Source: https://www.yourtherapysource.com/

Executive Functioning Skills are frontal lobe functions that begin to emerge shortly after birth but take a full 25 years to fully develop in neurotypical students. Adult modeling and shaping is how most children learn. Students with autism struggle to develop their skills through modeling and shaping alone and need practice and explicit teaching.

How are we explicitly teaching executive skills within the curriculum every day as a Tier One support - necessary for some - good for all?

Neurodevelopmental Disorders Affect Executive Functioning

Executive Control System

Prefrontal Cortex

Cognitive Flexibility — Divided attention, Working memory, Conceptual transfer, Feedback utilization

Attentional Control — Selective attention, Self-regulation, Self-monitoring, Inhibition

Goal Setting — Initiative, Conceptual reasoning, Planning, Strategic organization

Information Processing — Efficiency, Fluency, Speed of processing

(Adapted from Anderson, 2002, 2008 in Anderson & Reid, 2012, Figure 1. p3)

"Experts believe executive function is regulated by the frontal lobe of the brain -- the prefrontal cortex. Because humans are born with brains that are not fully developed, children are not born with these skills, but they have the potential to develop them.

Some students do not develop executive functions to the same degree as their peers. For these students with deficits, additional support in the classroom may improve their development of executive function."

Quote from Gina DiTullio (November 9, 2018) Helping Students Develop Executive Function Skills: Simple classroom strategies can assist students with deficits in executive function skills like time management and active listening. Brain-Based Learning https://www.edutopia.org/article/helping-students-develop-executive-function-skills
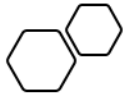
Executive Functions

- Consciousness.
- Self-awareness.
- Judgment.
- Initiation/Motivation.
- Control over emotional responses.
- Planning/Sequencing. - Word formation.
- Prospective memory - remembering to do something.

Executive Dysfunction

- Inability to synthesize signals from the environment.
- Inability to assign priorities.
- Inability to make decisions.
- Inability to initiate actions.
- Inability to control emotions.
- Inability to behave and interact socially and make plans.
- Inflexible, simplistic, and/or concrete thinking.
- Poor judgment.
- Inability to plan a sequence of complex movements needed to complete multi-stepped tasks.
- Inability to behave appropriately in social situations.

Markers of executive dysfunction may include difficulty initiating action, planning ahead, inhibiting inappropriate responses, transitioning, switching flexibly between response sets, and poor self-monitoring. Indeed, poor performance monitoring and self-regulation may be associated with the core features of ASD such as a lack of social reciprocity, perseverative responses, and intense emotional responses to change (e.g., meltdowns). Moreover, school success depends on mastery of basic EF skills, including remembering and following instructions, completing tasks independently and smoothly transitioning between tasks, and inhibiting inappropriate behaviors. EF plays an important role in the acquisition of knowledge and social skills; the better children are at focusing and refocusing their attention, holding information in mind and manipulating it (i.e., working memory), resisting distraction, and adapting flexibly to change, the more positive the social, adaptive, and academic outcome

Where is Executive Functioning in the IEP?

Take a moment to look at the IEP that you brought with you today. All children will benefit from the explicit teaching of executive functioning skills, however for students with ASD, the explicit teaching of executive functioning skills is essential to develop tools for life. How are we planning now for the end goal of life after school? Are the executive functioning skills present within the IEP that you have in front of you today?

Perhaps, EF skills have been assessed and are listed under the student's strengths and needs within the IEP. Perhaps, the explicit teaching of the skills appears within the program pages for the subject or as an alternative program page. Sometimes, the EF skills are discussed as areas to be supported within the accommodations page or with the transition pages of the IEP. Can you find evidence in the IEP in front of you?

An IEP Checklist

The IEP must include the following items:

- Relevant assessment data
  The student's strengths and needs
  Accommodations required by the student
  Teaching strategies and other accommodations tailored to the student's strengths, needs, learning style, and interests, to support learning and determine progress in achieving modified or alternative expectations
  A transition plan that identifies the student's goals and the steps and actions required to enable the student to achieve those goals
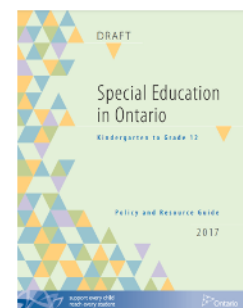
Part E: The Individual Education Plan (IEP) p. E73

When working with your school teams and in collaboration with your parents/guardians during the development or review of the IEP for students with autism - consider how you can ensure that the explicit teaching of the executive functioning skills is present? Consider the items listed on this slide and the multiple opportunities for including EF.

Today's presentation will focus on two EF skills, inhibition and working memory. 90% of all students diagnosed with ASD have deficits in these two areas. The students' inability to demonstrate impulse control and to effectively using their working memory directly impacts their poor success at school and later in life.

While we are only focussing on two EF skills in this short time that we have together; we are providing you with a tool called "Leading to Strengthen Executive Functioning Skills of Autistic Students: IEP Look Fors (K-12)". This resource will provide you an at a glance overview of each of the EF skills and the cognitive challenges that is skill area might present, along with how a deficit in this area may present for a student with ASD and potential IEP strategies or Look Fors. It is our hope that you will use this tool as a resource to support your conversations with your educator teams to support the instructional program for students with ASD.
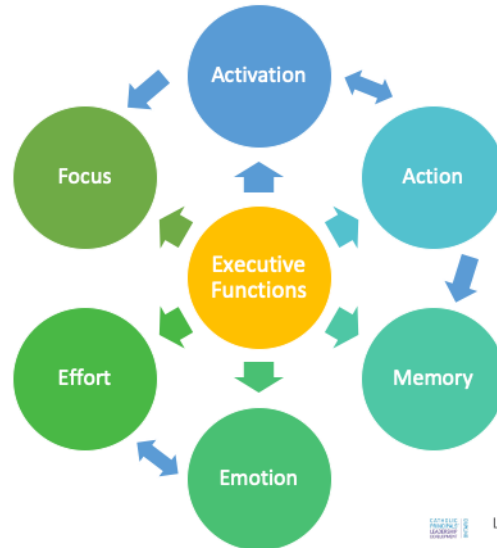
Let's begin by looking more closely at Working Memory for students with autism.

Working Memory - Information Processing

Holding information in mind while performing complex tasks

Activation
Focus
Action
Executive Functions
Effort
Memory
Emotion

Working memory (as opposed to long-term memory) is the ability to hold information in your head and manipulate it mentally. You use this mental workspace when adding up two numbers spoken to you by someone else without being able to use pen and paper or a calculator. Students at school need this memory on a daily basis for a variety of tasks such as following teachers' instructions or remembering sentences they have been asked to write down. In many cases, they even rely on it more than IQ.

Cognitive Challenges

Information processing

- Difficulty comprehending new concepts or settings.
- Inability to learn from previous mistakes.
- Difficulty staying oriented to a schedule or to activities.
- Difficulty registering new information or words that have been learned, particularly when under stress.
- Failure to complete assignments because the task request, if not written or repeated several times, is not remembered.
- Need for extraordinarily large number of repetitions to learn simple motor sequences (e.g., tying shoes), classroom routines and rules, and textbook information.

For Students with ASD this may look like...

- Student gets confused when too much information is presented
- Has trouble remembering things (ie. phone number)
- Lose track of what they are doing as the work
- Forget what they need to retrieve when sent on an errand
- Frequently switch tasks or fail to complete tasks
- Difficulty keeping up with classroom lessons

For Students with ASD this may look like...

- Difficulty remaining attentive and focussed
- Difficulty sequencing math problems
- Extreme difficulty solving problems mentally
- Poor reading comprehension
- Difficulty summarizing
- Inconsistent performance
- Difficulty following directions
- Difficulty keeping track of a lot of information

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Explicitly Teaching EF: Working Memory / Information Processing
Example of IEP Strategies / Look Fors...

- Teach visualizing techniques
- Pre-teach and preview new information
- Establish eye contact with student
- Give student copy of class notes
- Student should practice new skills over course of the day
- Use graphic organizers
- Use visuals
- Chunk information

Explicitly Teaching EF: Working Memory / Information Processing
Example of IEP Strategies / Look Fors...

- Use of mnemonics
- Avoid extraneous comments and information
- Colour-code information and/or materials
- Personalize the information taught
- Have student design own table and keys
- Use variety of tests that assess both recall and recognition

Creating an Environment for Success: Working Memory/ Information Processing Example of IEP Accommodations / Look Fors...

Instructional Accommodations	Environmental Accommodations	Assessment Accommodations
• Cue student's attention before giving instructions • Check for understanding before beginning a task • Provide checklist of steps to be completed for multi-step problems	• Post and review behavioural expectations • Minimize clutter • Provide visual support with problem-solving steps • Allow student choice of space/location to optimize their learning	• Provide checklists for student to refer to when completing an assignment/assessment • Allow for movement breaks as required by the student

As shared earlier, an assessment of EF skills can add important information about the child's strengths and weaknesses and inform intervention/treatment planning. If working memory is not well developed in a student with autism, you might expect to see these or similar accommodations on the IEP.

Think about an autistic student in your school. Can you identify where these accommodations may prove supportive to a student's success in the learning environment? From a Universal Design for Learning lens, these accommodations would be considered essential for this student, yet they are good accommodations to support all students in a class.

These accommodations along with systematic and explicit social skills instruction that incorporates EF process components in program delivery can help reduce the risk for negative outcomes for children on the autism spectrum.

Executive Functioning - **Inhibition**

Source: https://www.yourtherapysource.com/

Let's look at a second EF skill - inhibition and begin to explore how students diagnosed with ASD have a deficit in this area that directly impacts their success at school and later in life.

Inhibitory control, or the ability to control one's own impulses, is a core skill in self-regulation. It helps us to withhold or stop certain behaviors to reach our long-term goals. During early childhood, adverse life events and poor parenting practices may undermine the refinement of children's inhibitory control.

Evidence suggests that low levels of inhibitory control in early and middle childhood lead to problem behaviors during late childhood and adolescence.

Cognitive Challenges

Impaired response inhibition is associated with repetitive behavior in autistic individuals

- Inability to suppress irrelevant or interfering information and impulses
- Disregard for others and social norms
- Aggressive outbursts
- Misconduct and oppositional behaviours
- Cognitive impairment, with more prominent deficits in the rate of information processing, attention, memory, cognitive flexibility, and problem solving

For Students with ASD this may look like...

- Difficulty waiting
- Interrupts and disrupts group activity
- Student may call out
- Touching things or people
- Makes careless mistakes
- Displays hyperactivity
- Acting on autopilot without reflection

For Students with ASD this may look like...

- Many false starts
- Dives right into problems without pausing, reflecting or developing a strategy or game plan
- Excessive talking
- Unlikely to reflect or self-monitor
- Misinterprets directions

Explicitly Teaching EF: Inhibition
Example of IEP Strategies / Look Fors...

- Give explicit and clear rules and explanations
- Preferential seating near teacher with frequent eye contact
- "Catch" student being good
- Ignore disinhibited response
- Positive reinforcement plan
- Use checklists
- Have student hold pencil up until directions are given
- Have student repeat directions

Explicitly Teaching EF: Inhibition
Example of IEP Strategies / Look Fors...

- Student verbalize how they will solve problem before they begin
- Give verbal reminders
- Model your thought process
- Ask questions to make student stop and think
- Use visual cues (ie. stop sign)
- Emphasize procedures of an assignment
- Identify the skill to be worked on

Again, using an assessment of EF skills can add important information about the child's strengths and weaknesses and inform intervention/treatment planning. If inhibition is not well developed in a student with autism, you might expect to see these or similar accommodations on the IEP.

Again, I ask you to think about an autistic student in your school. Can you identify where these accommodations may prove supportive to a student's success in the learning environment? From a Universal Design for Learning lens, these accommodations would be considered essential for this student, yet they are good accommodations to support all students in a class.

These accommodations along with systematic and explicit social skills instruction that incorporates EF process components in program delivery can help reduce the risk for negative outcomes for children on the autism spectrum.

Planning for a UDL Classroom

Consider the following questions to know the learner and to be able to use that knowledge when planning/creating learning opportunities, lessons, units, and assessments:

What **Executive Functioning Skills** are needed to complete this task? Is there scaffolding that could be included that would offset any potential barriers related to Executive Functioning Skills?

Knowing the potential barriers enables us to proactively plan the necessary supports and increase the likelihood of student success.

As Stephane shared earlier, the research findings contribute to the growing evidence that children with autism who participate in social skills interventions that integrate EF skills such as working memory, cognitive flexibility, emotional recognition, and self-regulation experience not only an improvement in social competence, but also underlying core neurocognitive EF processes. And, as we know - we can all improve our EF skills - how can we set the conditions to support our teachers to better understand EF? How can we support them to teach EF as a Tiered One approach to support all learners in their classroom. We know that EF is essential for students with ASD and we know that good EF development is good for all students.

We want a school, where our educators are continuously ask themselves - "Am I providing each student in my classroom with an equal opportunity to be successful? If not, ask, what variability do I need to add to my planning to ensure that everyone has an equal opportunity?" When an educator can identify potential barriers to learning, they can then proactively plan the necessary supports and increase the likelihood of student success.

Resource from ActivatedLearning.org

If you are interested in supporting your educators to explore EF as a Universal Strategy, this slide lists some beginning points.

You wouldn't throw a non-swimmer into a deep pool of water and expect them to swim, and yet, every day, Autistic people are pushed into mainstream society and expected to function normally.

Joy of Autism

Photo by Mia Harvey on Unsplash

Think about this quote in terms of the expectations that you and your staff have of students with ASD in your school. "You wouldn't throw a non-swimmer into a deep pool of water and expect them to swim, and yet, every day, Autistic people are pushed into the mainstream society and expected to function normally."

As a school leader, how are you supporting students with ASD to learn in an environment that is set up for their success?

Let's circle back to the IEP that you have in front of you today as yourself:
- how is EF directly being addressed within the IEP?
- what needs to be celebrated in this IEP? What needs to be considered further?
- what is your next leadership move?
- how will you engage your staff to better understand the explicit teaching of EF in their classrooms and in particular with their autistic students?

How might you use the tool, "Leading to Strengthen Executive Functioning Skills of Autistic Students: IEP Look Fors (K-12)". Share some of your ideas in the chat.

Final words

- Quick polls – Please respond to the following questions
- Survey – Please complete the survey at the end of this webinar. You will also receive it by email .
- Glossary, references and some resources will be made available in a PDF format and emailed to you tomorrow.

CONTACT US

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- OPC www.principals.ca

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@OPCouncil

Glossary

Applied Behaviour Analysis (ABA)
The use of behaviour principles and methods to solve practical problems. In other words, it's the attempt to solve behaviour by providing antecedents and/or consequences that change behaviour

Applied Behaviour Analysis Program
A systematic approach to analyzing and changing behaviour. It entails establishment of behavioural objectives; selection and application of valid and reliable measures; regular recording; consistent application of selected procedures based upon principles of behaviour; plus an experimental evaluation of results.

Comorbid disorders
Two or more disorders diagnosed simultaneously in an individual

DSM V
Referred to as the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). Contains disorder criteria that capture the experiences and symptoms of children. Rather than isolating childhood conditions, DSM-5's organization underscores how they can continue to manifest at different stages of life and may be impacted by the developmental continuum that influences many disorders.

Executive Functioning Skills (EF)
Frontal lobe functions that begin to emerge shortly after birth but take a full 25 years to fully develop in neurotypical students. Adult modeling and shaping is how most children learn. Students with autism struggle to develop their skills through modeling and shaping alone and need practice and explicit teaching.

Interdisciplinary
A coordinated group of experts from several different fields who work together toward a common business goal. A business might use an interdisciplinary team of professionals to work on a complex project that requires multiple skills sets or areas of expertise in order to succeed

Neurodevelopmental disorders
A group of disorders that affect the development of the nervous system, leading to abnormal brain function which may affect emotion, learning ability, self-control, and memory. The effects of neurodevelopmental disorders tend to last for a person's lifetime.

Prevalence Rate
The total number of cases of a disease existing in a population divided by the total population

Transdisciplinary
A coordinated group of experts from several different fields members of the team come together from the beginning to jointly communicate, exchange ideas and work together to come up with solutions to problems.

Universal Design for Learning (UDL)

A scientifically valid framework for guiding educational practice that--(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills and in the ways students are engaged; and (B) reduces barriers in instruction , provides appropriate accommodations, supports and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient

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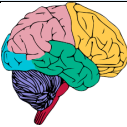
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Information Processing: Holding information in mind while performing complex tasks

Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…
• Difficulty comprehending new concepts or settings. • Inability to learn from previous mistakes. • Difficulty staying oriented to a schedule or to activities. • Difficulty registering new information or words that have been learned, particularly when under stress. • Failure to complete assignments because the task request, if not written or repeated several times, is not remembered. • Need for extraordinarily large number of repetitions to learn simple motor sequences (e.g., tying shoes), classroom routines and rules, and textbook information.	• Student gets confused when too much info is presented • Has trouble remembering things (ie. phone number) • Lose track of what they are doing as the work • Forget what they need to retrieve when sent on an errand • Frequently switch tasks or fail to complete tasks • Difficulty keeping up with classroom lessons • Difficulty remaining attentive and focussed • Difficulty sequencing math problems • Extreme difficulty solving problems mentally • Poor reading comprehension • Difficulty summarizing • Inconsistent performance • Difficulty following directions • Difficulty keeping track of a lot of information	• Teach visualizing techniques • Pre-teach and preview new information • Establish eye contact with student • Give student copy of class notes • Student should practice new skills over course of the day • Use graphic organizers • Use visuals • Chunk information • Use of mnemonics • Avoid extraneous comments and information • Colour-code information and/or materials • Personalize the information taught • Have student design own table and keys • Use variety of tests that assess both recall and recognition

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CATHOLIC
PRINCIPALS'
LEADERSHIP
DEVELOPMENT | ONTARIO

LEADERSHIP
EN ACTION

PRINCIPAL
ASSOCIATION
PROJECTS

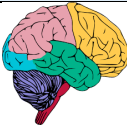| Inhibition: The ability to stop one's own behaviour at the appropriate time, including stopping actions and thoughts		
Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…

• Impaired response inhibition is associated with repetitive behavior in autistic individuals
   ○ Inability to suppress irrelevant or interfering information and impulses
   ○ Disregard for others and social norms
   ○ Aggressive outbursts
   ○ Misconduct and oppositional behaviours
   ○ Cognitive impairment, with more prominent deficits in the rate of information processing, attention, memory, cognitive flexibility, and problem solving
	• Difficulty waiting
	• Interrupts and disrupts group activity
	• Student may call out
	• Touching things or people
	• Makes careless mistakes
	• Displays hyperactivity
	• Acting on autopilot without reflection
	• Perseveration
	• Many false starts
	• Dives right into problems without pausing, reflecting or developing a strategy or game plan
	• Excessive talking
	• Unlikely to reflect or self-monitor
	• Misinterprets directions
		• Give explicit and clear rules and explanations
		• Preferential seating near teacher with frequent eye contact
		• "Catch" student being good
		• Ignore disinhibited response
		• Positive reinforcement plan
		• Use checklists
		• Have student hold pencil up until directions are given
		• Have student repeat directions
		• Student verbalizes how they will solve problem before they begin
		• Give verbal reminders
		• Model your thought process
		• Ask questions to make student stop and think
		• Use visual cues (ie. stop sign)
		• Emphasize procedures of an assignment
		• Identify the skill to be worked on

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Organizing/Planning/Initiating:

Organizing: The ability to impose order on work, plan or storage spaces

Planning: The ability to manage future and current oriented tasks

Initiating: The ability to begin a task or activity and to independently generate ideas, responses or problem-solving strategies

Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…
• Difficulty generalizing information from large amounts of unstructured information. • Late and/or consistently incomplete homework assignments. • Difficulty analyzing a task into component parts (i.e., breaking categories down into representative member of the category). • Inability to use different strategies to enhance comprehension (e.g., outlining the text, underlining key points, asking themselves questions as they read, discussing the text, objects into appropriate categories or groups and/or events into appropriate sequences) despite repeated teaching. • Inability to sequence properly. • Inability to gather required tools and/or information for a task.	• Student may forget homework assignment/materials • Student can be unprepared and not be able to find materials • Student has messy workspace • May get "stuck" • Appears to be daydreaming • Difficulty completing assignments in timely manner • Difficulty organizing and expressing ideas in oral or written form • Approaches tasks in half hazard fashion • Difficulty responding to open-ended questions • Performs better with multiple choice questions • Difficulty making decisions • Difficulty starting assignment independently	• Provide a written daily schedule for students to refer to and if necessary review it at the beginning of each day. • Provide an outline that is coordinated with each class lecture and have the students make notes for each session. • Colour code all materials associated with each class. • Write a checklist of steps for completing complex tasks. • Break instruction down into simple steps and have students check off each step as it is completed. • Practice sequencing material, (e.g., routines for going outside at recess). • Teach study skills. • Provide verbal encouragement cues after the completion of each step

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• Total inability to adapt to change in routines.	• Difficulty generating ideas, responses and problem solving	such as "good," "what would you do now?" • Conduct feedback sessions with the students to let them know how they are doing. • With the agreement of the student or parent, assign a buddy, or buddies to assist the student with such tasks as opening his/her locker, collecting the correct materials, keeping track of schedule. • Use checklists for multi-step tasks • Demonstrate where to begin and what steps to follow • Provide a model for completed projects • Have student verbalize plan of approach before beginning • Provide "to-do" list • Use colour coded materials • Use schedules • Provide timelines and deadlines for assignments • Provide "how-to" templates • Break long-term assignments into sequential steps • Use graphic organizers • Provide access to technology • Sign student planners to check for accuracy

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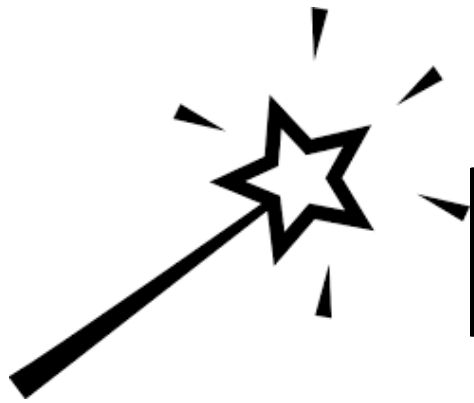| **Emotional Control:** The ability to modulate emotional responses by bringing rational thought to bear on feelings		
Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…
- Inability to stay calm when anxious - Inability to bounce back from a setback without letting disappointment or frustration take over - Emotional lability: frequent temper outbursts, tendency to cry, rapid mood changes and a tendency to be frustrated if demands are not easily met - Lack of intentional modifications of the individual's emotional state that promotes adaptive or goal directed behaviour	- Difficulty making or keeping friends - Emotional reactions out of sync with situations - May laugh hysterically or cry easily - Temper tantrums or explosive outbursts - Bossiness - Easily upset/overly sensitive - Aggressive behaviour - Rigid / inflexible thinking - Emotional lability (rapid mood changes without cause) - Low frustration tolerance - Socially immature - Appears insensitive to others' feeling	- Use of social stories and narratives - Role playing activities - Try to anticipate problem situations - Manage stimuli or antecedents that appear to lead to emotional outburst - Provide opportunities to discuss upcoming situations that may provoke emotional outbursts - Teach coping strategies - Provide scripts of appropriate language - Provide breaks - Model self-statements - Attempt to plan around child's optimal time of day - Utilize a positive reinforcement plan - Introduce self-monitoring strategies - Provide positive role models - Provide opportunity for physical exercise

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Self-Monitoring: The ability to monitor one's own performance and measure it against some standard of what is needed or expected

Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…
• High level of dependency (situational, contextual, episodic, global) • Inability to monitor their self-presentations, expressive behaviour, and nonverbal affective displays • It is defined as a personality trait that refers to an ability to regulate behaviour to accommodate social situations • Inability to use a checklist to stay focused on the tasks • Inability to complete and observe how often they get off task with non-work related activities	• Makes careless mistakes • Rushes through work • Appears to lack pride in work • Disorganized • Work may be sloppy • Acts without thinking things through • Unaware of behaviour or impact on others • Difficulty with time management • May have difficulty monitoring volume of voice • Difficulty with pragmatic skills • Difficulty empathizing • Procrastination • Missing deadlines Difficulty completing work	• Provide student with timer • Graphic organizer • Use of a picture schedule • Break tasks down into steps • Provide a peer buddy • Check on progress periodically during a project • Role playing situations • Provide scoring rubrics to define quality of work • Provide reinforcement for using a self-monitoring checklist • Provide self-monitoring questions

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Shift: The ability to move freely from one situation to another and to think flexibly in order to respond appropriately to the situation		
Cognitive Challenges	For students with ASD this may look like…	IEP Strategies/Look Fors…
• Inability to analyze a situation and come up with alternative behaviour or plan to reach their goals or requirements. • Being cognitively inflexible increases their likelihood of repeating the same mistakes • This inability to quickly adapt to new situations increases the need for sameness • Inability to mentally adapt to new demands or information	• Difficulty making transitions • Difficulty starting new tasks before the first task is complete • Difficulty switching gears • Perseverative behaviours • Gives the same answers to different questions • Difficulty switching to a new topic or different subject • Inflexibility	• Give sufficient warning for upcoming transitions • Make the day as predictable as possible • Provide a break between activities • Guide students to highlight math signs (+, -) before solving • Pause in between different chunks of information • Emphasize where one piece of information ends and another begins • Model problem solving techniques

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7

Magic Words

Model self-understanding and self-compassion!
Teach students how to feel good
about EF strengths and challenges:

"That EF is so tricky for me too."
"So many people struggle with that EF."
"I have strategies to work around that."
"That's just like me!"
"We have THAT EF strength in common!"
"You know me... this EF is my superpower!"
"You know me... guess what EF I'll struggle with in THIS task."
"We know each other so well. What EF will we all struggle with in this task?"

"My goodness – I slept poorly and my EFs are in rough shape!"
"I just had a rough conversation and I need to calm down before we start..."
"I know myself so well!"
"You know yourself so well!"
"Something that helps ME with that is..."
"I completely understand. I GET it!"
"This task is hard for me. How can I be strategic?"

What ARE Executive Functions?

EFs are the like the brain's conductor.
They help direct your
unique creativity and incredible smarts
so you can achieve your goals.

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4 FACTS About Executive Functions

Everyone has different strengths and weaknesses, like a fingerprint.

EFs help you express your creativity and smarts.

Incredibly smart people, like teachers and parents, have EF challenges too.

EFs will slowly get better with age.