Strategies to support executive functioning in primary school aged children with FASD

This factsheet has been developed to assist primary school teaching and support staff to understand the impact of Fetal Alcohol Spectrum Disorder (FASD) on executive functioning, and to adapt teaching and learning strategies to meet the needs of children with FASD. It's important to be aware that every individual with FASD is different, each will have their own strengths and challenges. As such, these strategies may not be effective every time or may require ongoing reinforcement.

Additionally, it's important to note FASD is so prevalent, many educators may not realise they are interacting daily with students who have undiagnosed or misdiagnosed FASD. The strategies in this factsheet are designed to support children with FASD, however, due to the overlap between FASD and other neurodevelopmental disorders they may be useful for other children experiencing executive functioning challenges. As the pathway to a FASD diagnosis can be lengthy, it's important that support strategies are implemented as soon as possible, even if a young person does not have a formal FASD diagnosis.

What is executive functioning?

Executive functioning is the term used to describe the set of mental processes that allow us to organise our thoughts, set and plan goals, stay focused on tasks and connect ideas in our minds.

Executive functioning underlies daily behaviours such as social interactions, following and completing instructions, and managing changes in routine by helping the brain organise and prioritise incoming information to plan and execute actions effectively. Without strong executive functioning, individuals are more prone to impulsive behaviours as they may struggle to process and regulate their thoughts and actions. Executive functioning skills are important for success in school and daily life. In the classroom, challenges with executive functioning can affect a student's ability to learn, stay organised, manage emotions and complete tasks.

It is understood that there are **three core executive functions**. From these core functions, many higher-order cognitive functions evolve, such as planning, organisation, abstract thinking and idea generation. These are essential in the learning process as they allow us to apply knowledge to form solutions, and to connect different ideas together. Executive functions are related to (but not the same) as other cognitive abilities such as intelligence.

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Core executive functions

Control over attention, behaviour, thoughts and emotions to overcome impulses and resist distractions.

For example:

- Does things without thinking about it first
- The ability to resist impulsive urges, such as talking at inappropriate times, pushing in line, or grabbing something that does not belong to them
- A tendency to respond immediately, rather than thinking through an answer

Being able to hold, update and actively manipulate information mentally. This allows us to keep track of relevant information, and connect information from earlier to what we are working on now

For example:

- Unable to hold multi-step instructions in mind
- Updating or adapting to a change of instructions during a task
- Solving a maths problem in your head
- Following a sentence with multiple clauses

The ability to switch between different thoughts or actions, adjust to new situations or demands, or to think creatively.

For example:

- Completing a maths exercise, being interrupted, and then being able to return to the maths exercise
- Connecting different concepts together to form broad understandings (e.g., understanding addition and subtraction, but having trouble counting money or time)
- Having difficulty viewing or analysing a problem from multiple perspectives
- Noticing that one way of solving a problem isn't working, and trying a new strategy

Executive functioning & FASD

Executive functioning is one of the nine neurodevelopmental domains that can be affected by FASD (see our resource Understanding FASD in a school environment for more information). Throughout childhood and adolescence, executive functioning skills develop in alignment with a young person's rapidly growing brain. Challenges with executive functioning often reflect a mismatch between the expectations placed on a child and their current level of ability. In the classroom, these can manifest as difficulties with following instructions, completing tasks, or transitioning between activities.
Some children may also experience emotional and/or behavioural responses to these challenges – such as frustration, anxiety, or withdrawal – which can further impact their ability to learn and participate in classroom activities.

How can teaching and support staff help?

Teaching and support staff can help by building skills and habits that support executive functioning. It may be useful to begin by identifying: i) the skills that need improvement, ii) the child's individual strengths (e.g., willingness to ask for help), and iii) any potential problems or concerns. This can allow for an individualised, strengths-based approach to building long-term skills for success. Support should be targeted to where it is most needed, and aim to challenge without being overwhelming.
It is important to balance external supports with long-term skill-building. Initially, many children with FASD will likely need direct support and accommodations from teaching and support staff. Educators can begin by explicitly teaching foundational strategies, and then gradually prompting the child to use strategies on their own, rather than providing direct support. For example, building the child's habit of checking their diary to see when homework is due, rather than telling them explicitly.

The below table outlines some common executive functioning challenges and provides teaching and learning strategies to address them. Some strategies focus on environmental modifications, such as reducing distractions, adjusting class plans, or altering routines. Others focus on building skills that help the student develop their own routines and systems to support executive functioning.

Example of executive functioning challenge	Strategy
May act with some impulsivity (e.g. speaking up at an inappropriate time)	• Seat the student closer to the teacher to allow for closer supervision and modelling of appropriate times to talk • Provide positive reinforcement when the child demonstrates self-control based on clear and collaboratively set goals

May give the first answer that comes to mind, rather than taking time to retrieve the correct answer	• Allow extra time to answer questions
	• Encourage a 5 second pause before answering
	• Use a framework such as 'Stop and breathe, Think, Act, Reflect (STAR)' to teach problem-solving skills.
	  ◦ Stop: Take a deep breath and consider the question/situation
	  ◦ Think: Slow down and think about possible solutions
	  ◦ Act: Try out the solution
	  ◦ Reflect: Consider how well that worked, or what could have gone differently

May get restless or distracted during long periods requiring sustained attention	• Consider the classroom environment. Aim to minimise clutter, noise and distractions (see 'Classroom Strategies' factsheet) • Establish regular routines that balance focused work with short movement breaks • Try check-in periods during independent work to help monitor progress
May struggle to hold information about what they are currently working on, or what you have asked them to do	• Keep instructions short, clear and direct • Keep visual aids handy, such as a process checklist or timeline • Use instructions that can easily be referred to during a task • Use mnemonics (e.g., an acronym, sentence or song) to help group information easily
May speak at inappropriate times or interrupt peers during conversations	• Encourage taking turns and asking questions in conversation • Use social role-play to demonstrate and develop conversational skills
Makes the same mistakes, despite having experienced the consequences	• Use real-world examples to help reinforce learning • Use rewards and positive support strategies to encourage correct behaviours • If a student does not seem to learn from past consequences, there is likely to be an underlying unsolved problem such as the impact of executive functioning challenges, rather than intentional bad behaviour
May take longer to transition between tasks or topics (e.g., moving from a maths lesson to reading time)	• Establish a consistent, structured routine • Use visual schedules or sequence planners to refer back to • Give warnings to communicate upcoming transitions • Use simple instructions, empathy and active listening to help ease transitions between tasks

Example of executive functioning challenge	Strategy
Might have difficulty seeing things from another person's perspective, for instance in a disagreement with another child	• Use social stories or role-playing to create understanding of other points of view
May procrastinate, not know where to begin a task, or know the order in which to do things	• Encourage getting started by doing one small section or five minutes first • Break down tasks into small, manageable steps • Scaffold assignments with smaller milestones and more frequent review points
May have difficulty managing multiple goals, such as focusing too much on one aspect of a task while neglecting other aspects (e.g., struggling to prioritise tasks when given a list of things to do)	• Make goals explicit and easy to understand • Try to reduce time demands • Teach strategies for identifying and planning goals (e.g., SMART goals) • Write down tasks and provide visual cues • Break tasks into shorter steps • Scaffold prioritisation by providing template for planning
May not consider what books or tools are needed when packing their backpack	• Use a visual checklist to help when packing their bag • Build a habit of regularly checking what materials are needed and when – this will require initial prompting which can gradually be reduced • Utilise digital tools to keep homework readily available online
Difficulty keeping their desk or personal space tidy	• Group similar items to help the child easily identify where something should go, and where to find it later • Set aside a regular time to clean and organise
May struggle to do mathematics in their head	• Use visual tools and concrete materials, such as pictures, dice, or blocks to represent numbers • Model breaking down complex problems into discrete steps and encourage writing down the outcome of the steps to help reduce what needs to be held mentally
May have difficulty consolidating learning across different contexts, or finding different ways to reach a similar conclusion	• Provide information in a structured way (e.g., grouping material by category and linking categories in a logical way) • Explicitly teach consolidation strategies • Encourage students to summarise ideas in their own words at the end of each lesson • Use sorting activities, mind-maps or graphic organisers to help physically categorise and connect information • Pair with a peer to help consolidate information and fill knowledge gaps (e.g., take turns explaining their understanding to each other)

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