

Executive function and self-regulation

Support children to understand and control their emotions and behaviours

Early Years Learning Framework | All outcomes



This guide is one in the Australian Education Research Organisation (AERO)'s Tried and Tested series on evidence-informed teaching practices in early childhood education and care (ECEC) settings that make a difference. Educators and teachers can use these guides to reflect on their practice and inform their planning for future instruction.

For this guide, AERO has synthesised the most rigorous and relevant evidence-based practices from meta-analyses, systematic reviews and literature reviews. AERO has rated these sources of information against its [Standards of Evidence](#), focusing on evidence generated in an Australian context where possible.

Executive function refers to the ability to control our attention, remember instructions, manage emotional reactions and behaviours and organise our thinking. **Self-regulation** is when learners use these skills to control their behaviour. For young children, executive function and self-regulation are essential for a range of tasks, including engaging in purposeful play, sustaining attention, persisting with challenging tasks and taking turns. Executive function and self-regulation are important foundations for success in life and learning. These capabilities develop particularly rapidly in toddlers but continue to develop throughout childhood and into adulthood.

Executive function and self-regulation contribute to all five outcomes in the Early Years Learning Framework by enabling children to engage in learning, develop strong relationships with others and make choices that enhance their wellbeing.

This guide lists evidence-based practices for supporting executive function and self-regulation in ECEC settings. Note that some examples may not apply in all contexts and/or may be more suitable for particular learners or age groups.

1. Establish clear goals, expectations and guidelines for behaviour.

Shared goals, predictable routines and consistent expectations help learners to take responsibility and self-regulate their behaviour.

- Give learners opportunities for setting goals and managing their own behaviour. Positive behaviour is the result of self-regulation, as children have opportunities to make choices about how they behave within clear expectations, and to experience the positive or negative consequences of those choices.¹
- Name desired behaviours and progress towards goals to help learners manage their attention and develop effortful control. Say, 'I can see you are working hard to build a higher tower than you did yesterday. How high will you build it tomorrow?' or 'I can see you are eager to take your turn. But let's see if you can be patient so I can have my turn first'.²
- Reinforce specific, desired behaviours to help learners internalise rules. Notice and celebrate when positive behaviours are displayed or when obstacles are overcome.³
- Play group games that require children to follow sequences, control their impulses and concentrate, such as 'Red Light, Purple Light' or 'Simon Says'. Children can learn to adapt or switch their thinking (cognitive flexibility) when games progressively get more difficult or when they need to listen or adapt to new instructions.⁴

2. Provide opportunities for self-regulation by taking an active role in facilitating play. Learners should have opportunities in their play to understand and manage emotions and behaviours through doing and practising.

- Assist learners to recognise feelings and to express emotions. Teach learners to use simple words such as 'sad', 'happy', 'angry' or 'excited' to communicate feelings and to practise expressing different emotions during play with others (during which learners develop their own 'rules', often relating to their roles in the game).⁵
- Provide opportunities for play that involve rules, or play that involves turn-taking. These types of games encourage learners to self-regulate their behaviours. Peer scaffolding of self-regulation also often occurs during such play – for instance, children may remind each other of roles and rules: 'You can't do that. You're the puppy, not the mother'.⁶
- Join in with play as appropriate, following learners' rules (for example, taking on roles allocated to you). Use these opportunities to extend play, building on learner's interests, skills, experience and knowledge. This encourages sustained attention. Model the use of words to express feelings and to negotiate differences of opinion.⁷

3. Seek opportunities to build executive function and self-regulation within the learning program. 'Tune in' to the learning moments occurring throughout the day.

- Model appropriate behaviour for all learners when they are experiencing difficulties or challenges. For example, if a child is feeling frustrated with a challenging puzzle, acknowledge their feelings with calmness and understanding. 'This is a tricky puzzle. How about I help you to turn it gently and slide it in? You see? You can do it!'.⁸
- Provide opportunities for physical activities that combine both movement and thinking skills to help your children manage stress and increase self-confidence – for example, team games such as obstacle courses, risky play and physical challenge.^{9,10}
- Be attentive to learner's emotional, physical and learning cues and respond appropriately. This helps learners to feel safe, secure and supported.¹¹

4. Be a learner yourself. Build your own understanding of how executive function and self-regulation develop in children and use this knowledge to reflect on children's learning.

- Expand your understanding of concepts related to executive function and self-regulation such as working memory, inhibition control and cognitive flexibility.¹² Learn to recognise when children demonstrate these skills and how they are related.
- Engage in critical reflection with your colleagues, informed by your professional reading and research. Conversations between colleagues working with different age groups are particularly useful so that observations can be shared about how children develop during the different stages of childhood.¹³
- Become curious about your own executive function and self-regulation and how they continue to change in adulthood.¹⁴ Noticing your own development can help you to notice children's learning.



Teach learners to use simple words such as 'sad', 'happy', 'angry' or 'excited' to communicate feelings.

To provide feedback on this guide or view further information, including full references and additional resources, visit [AERO's website](https://aero.edu.au).

- 1 Vandenbroucke et al., 2018
- 2 Vandenbroucke et al., 2018
- 3 Vandenbroucke et al., 2018
- 4 Pandey et al., 2018
- 5 Pandey et al., 2018
- 6 Pandey et al., 2018
- 7 Pandey et al., 2018
- 8 Vandenbroucke et al., 2018
- 9 Diamond, 2012
- 10 Jian-Bin et al., 2021
- 11 Vandenbroucke et al., 2018
- 12 Diamond, 2013
- 13 Best & Miller, 2010
- 14 Diamond, 2012



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