



UNIVERSITY OF
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Faculty of Education



Executive functions sandbox

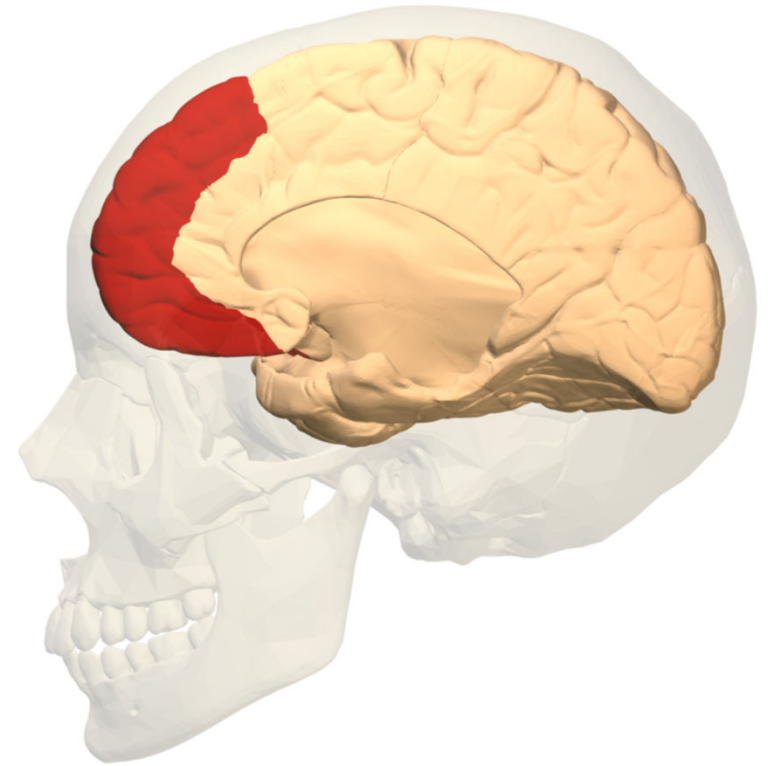
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Executive functions and self-regulation in the early years and primary

Skills for active learning, adjusting to expectations, being independent, making 'good' decisions



Executive functions and self-regulation in the early years and primary

Executive functions:

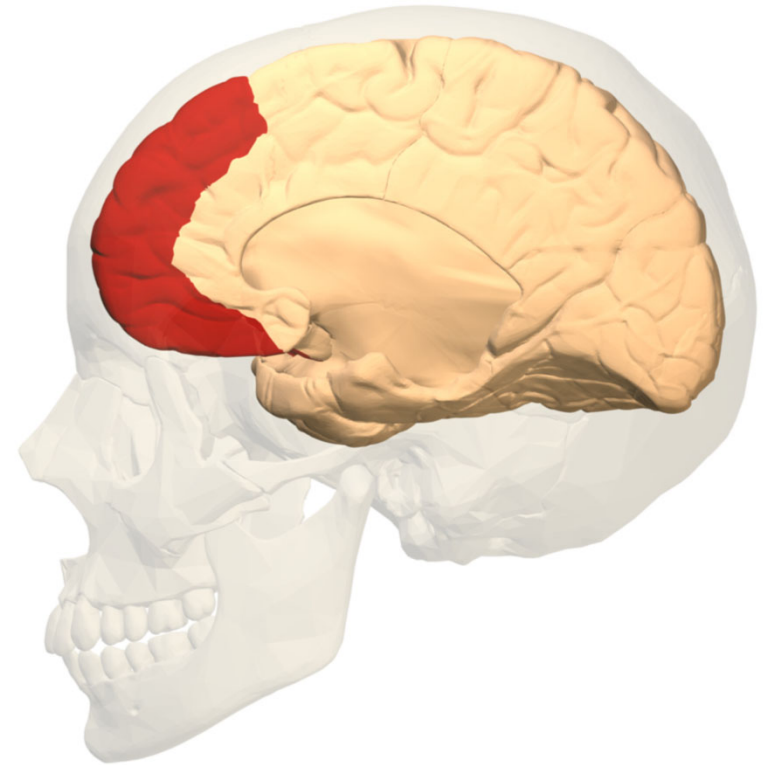
Inhibition
Working memory
Shifting



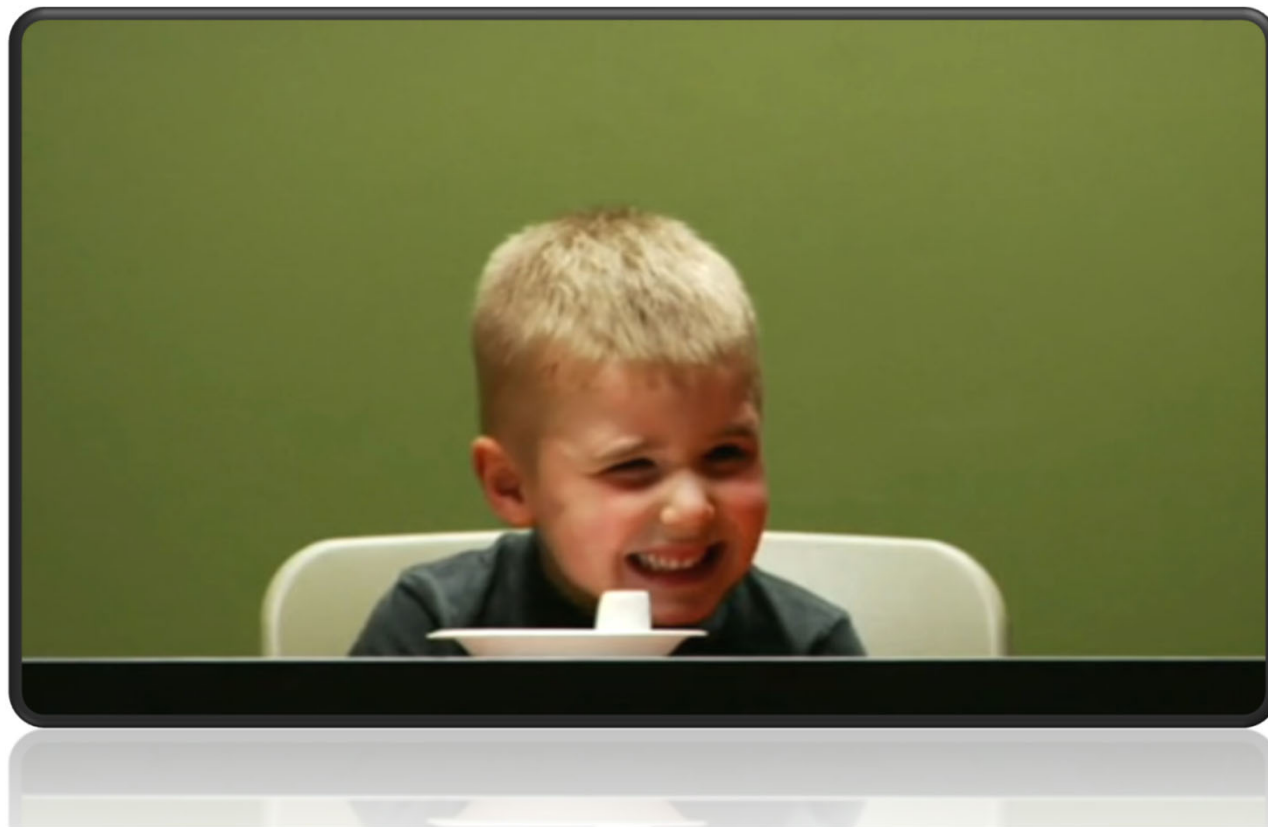
Early Years Library resource on self-regulation

Myth busting

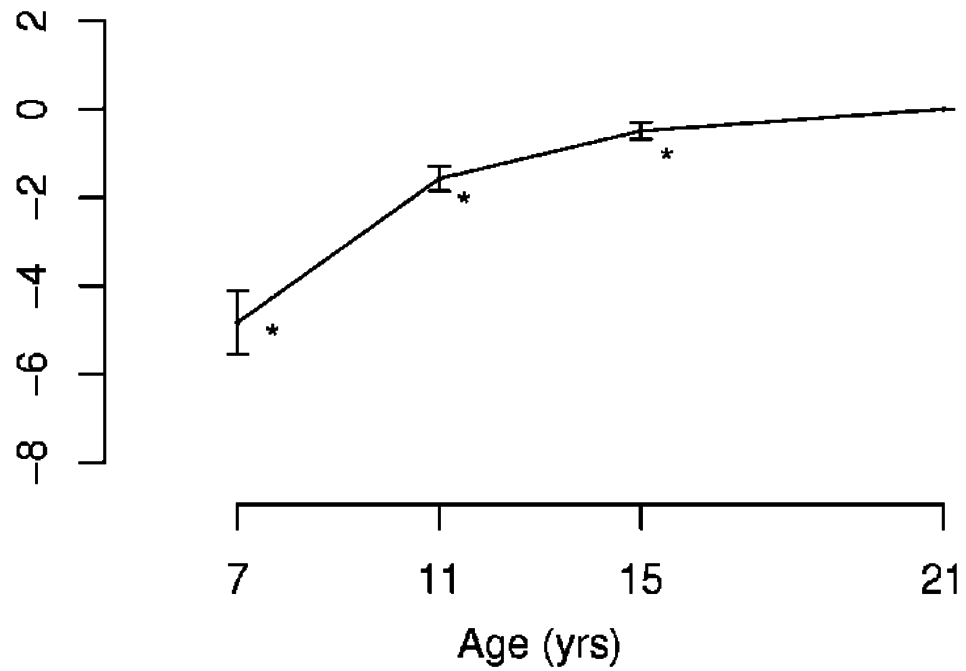
- ✗ Executive functions matter only for children who are struggling on the fringes.
- ✗ Executive functions can be trained with 'brain games'.
- ✗ Once developed, we don't need to focus on executive functions any more.



Executive functions and self-regulation in the early years and primary



Working Memory



Huizinga, Dolan and Van Der Molan (2006)

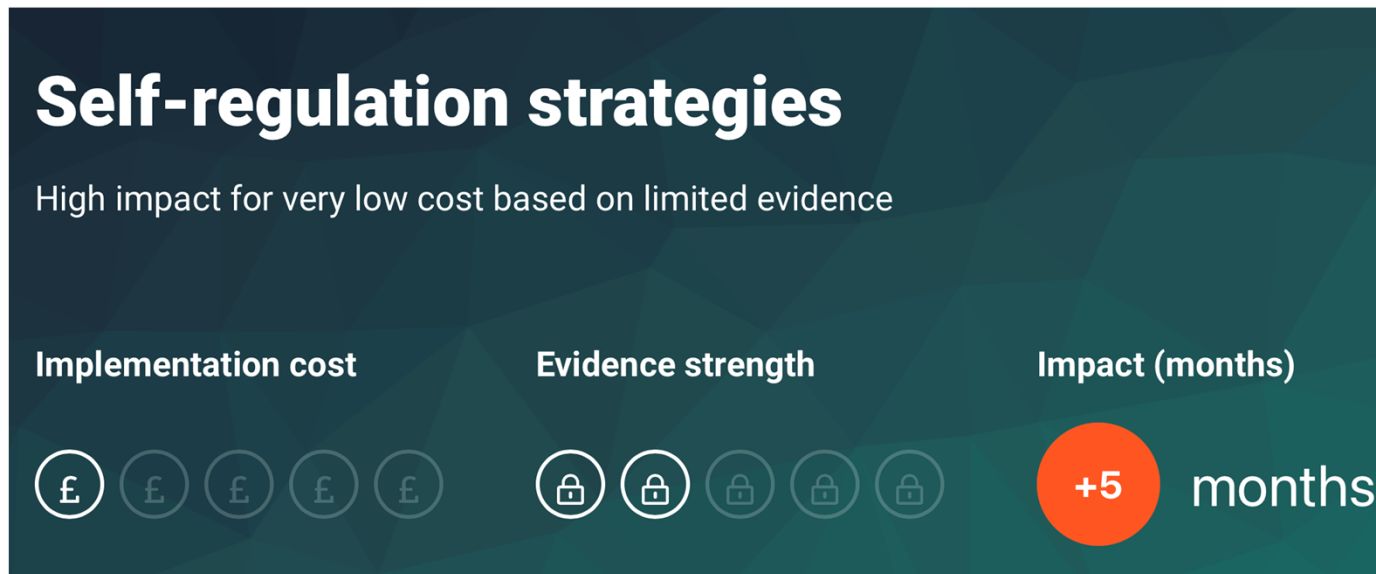
Executive functions and self-regulation as a foundation for lifelong learning



Gradients in the data suggest everyone can benefit from improving EF and SR.

While children from lower income backgrounds tend to have weaker EF skills at school entry and can particularly benefit from EF support, all children face EF/SR challenges. Universal supports can be less stigmatizing and ensure nobody misses out.

Executive functions and self-regulation



EEF evidence review

Executive functions and self-regulation in the early years and primary

Diverse trajectories of regulation
e.g. emotion regulation and the pandemic cohort

Screening tool
(Strengths and Difficulties Questionnaire):

Often has temper tantrums or hot tempers

Constantly fidgeting or squirming

Can stop and think things out before acting

Sees tasks through to the end, good attention span



Executive functions and self-regulation in the early years and primary

EF skills may be at the root of other behaviours. Consider the mechanisms before deciding on the target.

For example, if a child is reluctant to play outside, it might be because they need extra support with transitions during the day (as opposed to not liking the cold weather).

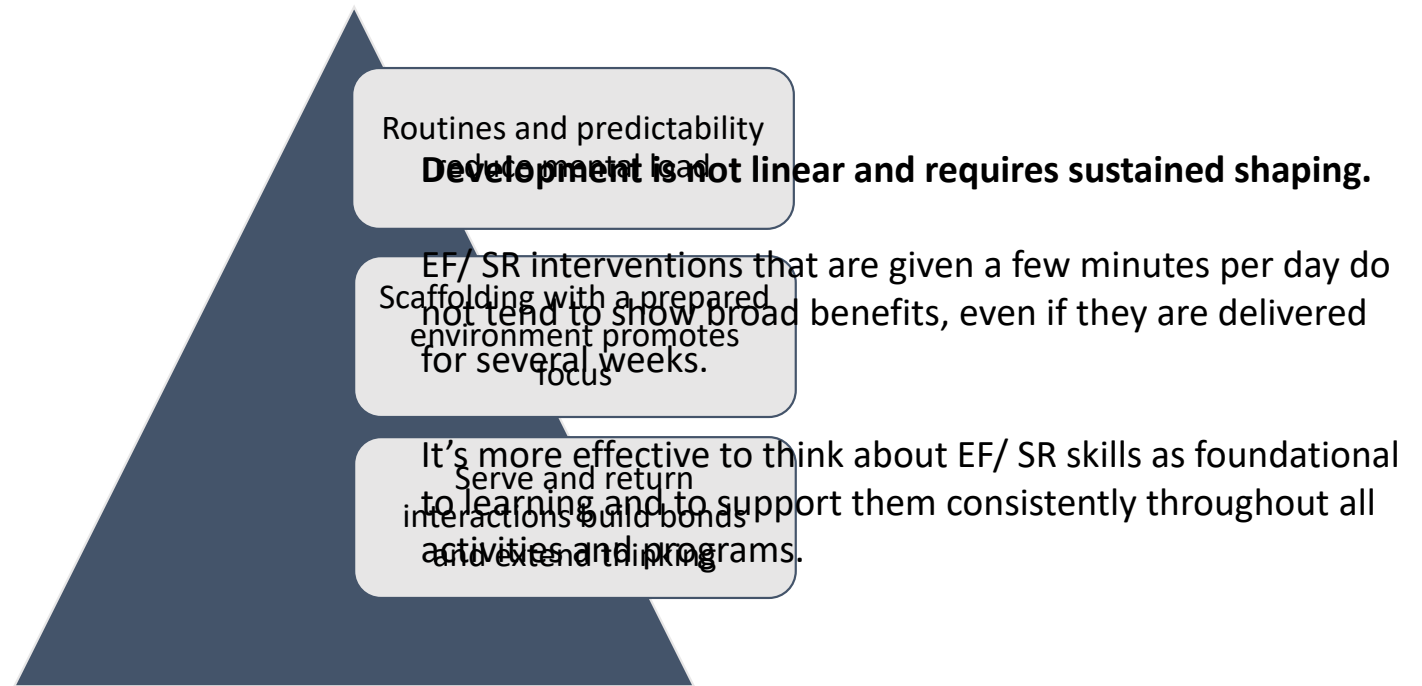


Unsplash

Spot the Executive functions...

- Getting dressed to go outside takes a very, very long time.
- Emotions run high during free play time in the block building zone.
- A learner wanders around, not really engaged deeply in anything.

Executive functions and self-regulation are malleable



Supporting executive functions

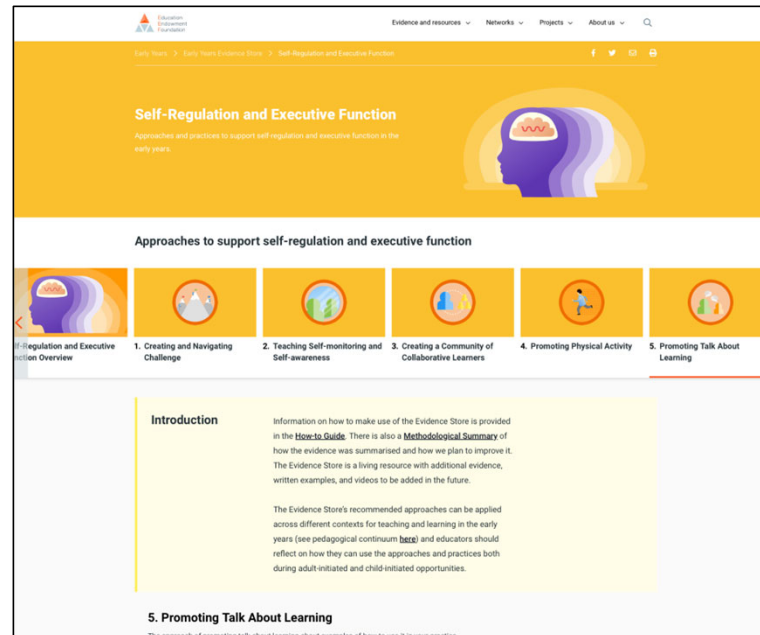
Video

Can you identify...

Goldilocks challenge?

Meaning for children?

Thinking about thinking?



Spotting the supports for executive functions and self-regulation in early years and primary classrooms

- Room routines
 - E.g. Self-register; visual timetable
- Opportunities for self-regulation
 - E.g. through songs and nursery rhymes; support from staff during transitions between activities
- Aspects of the environment that scaffold children's thinking and feelings
 - E.g. Visual timetable; posters with emotional expressions
- Serve and return interactions, or sustained shared thinking, between children and adults
 - More likely to be in individual interactions or with small groups; adults posing open questions, affirming children's ideas etc.

Home environment, executive functions and self-regulation

Parenting can mediate the effect of external circumstances on children's EF/ SR.

Bidirectional relation between **parents' own EF, parental stress and parenting style** and children's self-regulation. **Parental views of children's safety** can also affect the opportunities given to children for exercising self-regulation.

Multiple factors influence a child's development.

For example emotional reactivity may be more pronounced with one adult than another, suggesting children adapt in a very nuanced way. Therefore a single point of intervention is unlikely to bring about holistic changes.



Expectations about executive functions in different contexts

What differences in expectations are you aware of in the groups you work with, which may value self-regulation differently at different ages?

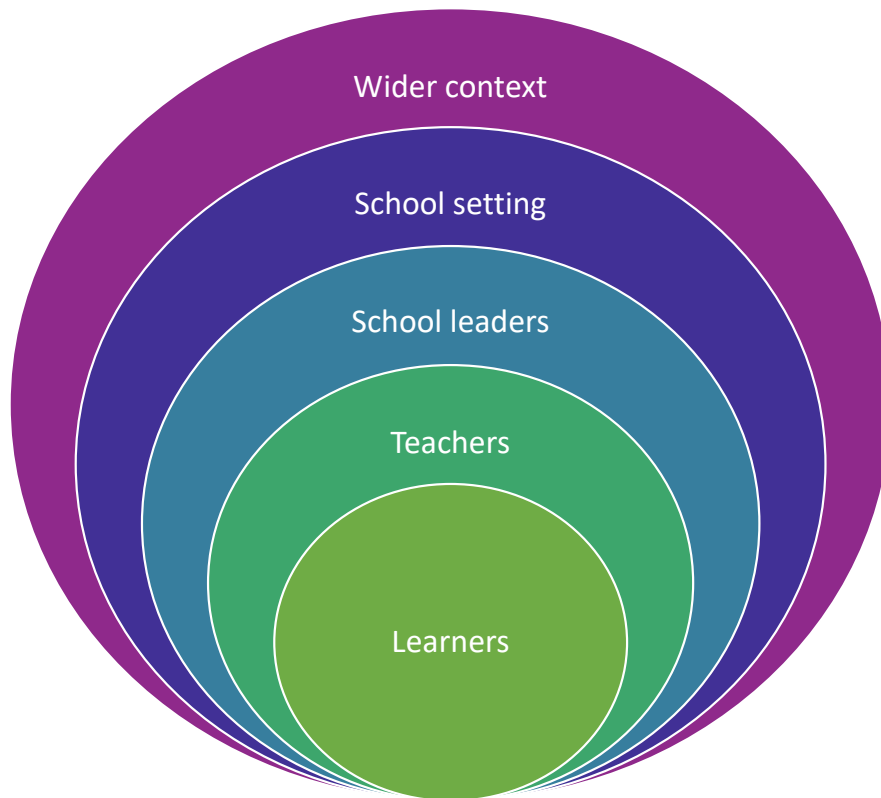
For example are children expected to sleep on their own at a certain age?

Are children expected to put on their own coat at a certain age?



Bringing it all together

Can you identify barriers and enablers of executive functions in your context?
How might you address those?



Teachers and school leaders:

Need
Capability
Opportunity
Motivation

School setting:

Infrastructure
Culture
Compatibility

Wider context:

Parenting attitudes and values
Policies & law
Economic & social conditions

Key take-aways

EF skills may be at the root of other behaviours. Consider the mechanisms before deciding on the target.

Gradients in the data suggest everyone can benefit from improving EF and SR.

Multiple factors influence a child's development. Work with parents and community partners, develop a shared language.

Development is not linear and requires sustained shaping. It's most effective to think about EF skills as foundational to learning and to support them consistently throughout all activities and programs.

Further resources on executive functions and self-regulation

Report with overview of the concepts

Executive function mapping project: Untangling the Terms and Skills Related to Executive Function and Self-Regulation in Early Childhood, Stephanie Jones 2019

Podcast with Deborah Leong, developer of Tools of the Mind, explaining self-regulation and executive functions in the early years

<https://childinst.org/tools-of-the-mind-with-deborah-leong/>

Age-appropriate activity guides from 6 months – 12 years

Center on the Developing Child at Harvard University (2014). *Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence*. Retrieved from www.developingchild.harvard.edu

Blog on nursery rhymes and self-regulation

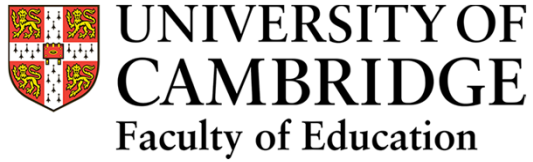
<https://researchschool.org.uk/eastlondon/news/what-do-nursery-songs-and-self-regulation-have-in-common>

Webinar on self-regulation in the early years with the East London Research School (includes connections to EYFS)

<https://www.youtube.com/watch?v=RmcJdaLEr48>

Guide from Early Years Library on self-regulation (what is it and how to support it in early years)

<https://www.eif.org.uk/resource/early-years-library> > see 'Laying the foundations: Supporting children's self-regulation'



Thank you!

You can find me on LinkedIn or
during the breaks.