



Stop, Think, Act: *Promoting Executive Function and Self- Regulation for School Success*



Megan McClelland, Ph.D.

Shauna Tominey, Ph.D.

Hallie E. Ford Center for Healthy Children & Families
Oregon State University
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Organization

What is self-regulation?

What influences the development of self-regulation?

Why is it important?

How can we measure these skills?

How can we improve self-regulation?

Conclusions & resources



Cookie Monster does Self-Regulation

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What is Self-Regulation?

Executive function (EF):

- 1.Attentional/cognitive flexibility¹
- 2.Working memory²
- 3.Inhibitory control³



Self-regulation:

The integration of EF skills into behavior. In other words, the conscious control of thoughts, emotions, and actions – the ability to stop, think, and THEN act.⁴

Examples of Self-Regulation in the Classroom

- Listen and follow directions
- Ignore distractions
- Focus and stay on-task
- Put away materials
- Raise your hand
- Negotiate social situations
- Remember and follow through with instructions



What Influences Children's Self-Regulation?

Child Factors

- Temperament

Features of the Home and Family

- Attachment and sensitive parent–child interactions
- Cognitively stimulating environment

Classroom Characteristics

- Autonomy support
- Play!



Self-Regulation and Healthy Development

Self- regulation has emerged as a key predictor of a variety of outcomes including:

- **Social competence** in children.^{5,6}
- **Obesity**⁷
- Short and long-term **academic success**^{8,9,10}
- In a recent study, children with strong attention/persistence at age 4 had nearly *50% greater odds* of completing college by age 25.¹¹
- Long-term **health** and educational outcomes, **wages**, and **employment**¹²

Self-Regulation and Children Experiencing Early Risk

Accumulating research suggests that self-regulation is an important buffer for children experiencing early risk.^{13,14,15}



Measuring Self-Regulation in Young Children

- The Head-Toes-Knees-Shoulders (HTKS): a self-regulation game which taps children's attention or cognitive flexibility, working memory, and inhibitory control.
- In preschool and early elementary school, performance on the HTKS predicts early literacy, math and vocabulary over the school year^{9,16,17}
- Similar results have been found in Asian and European countries^{18,19,20,21}



The Head-Toes-Knees-Shoulders Task

Strengthening Self-Regulation

- A number of interventions have been shown to help improve children's self-regulation and academic success.^{22,23,24}
- Activities that help children: stop, think, and then act, help develop self-regulation.
- In two recent studies, a preschool intervention using classroom games predicted stronger self-regulation and early achievement skills.^{25,26}
- Children in the intervention who were low-income ELLs showed large gains in math skills.



Supporting Self-Regulation in the Classroom

Teachers play two primary roles in the development of self-regulation:

1. Teachers provide regulation (external regulation)
2. Teachers help children develop self-regulation skills through modeling, repetition, practice, feedback, etc.

Translating research to practice!

Games and activities that promote self-regulation



Dr. Megan McClelland

Katherine E. Smith Endowed Professor in Child Development, Oregon State University

“Dance with your child! Have children dance slow to slow music and fast to fast music. Then try mixing up the rules.”

Games from the Red Light, Purple Light Circle Time Games Intervention

The Freeze Game. Children and teachers danced to music. When the teacher stopped the music, everyone froze.

Sleeping, Sleeping, All the Children are Sleeping. Children pretended to sleep and when children woke up and pretended to be an animal

Conducting an Orchestra. Every child used a musical instrument. The circle leader used a drum stick as a conducting baton.

Red Light, Purple Light. Like *Red Light, Green Light*, a teacher acted as a “stop light” by standing at the opposite end of the room from the children.”

“Help Me, Please” Freeze Game

Strengthening Self-Regulation

To be successful, activities to promote self-regulation must:

- Include components that help children: stop, think, and then act
- Be embedded into everyday activities
- Increase in complexity over time with repeated practice
- Expose children to the intervention in multiple contexts (school, home)
- Be engaging for children to internalize and generalize skills to other domains



Self-regulation is one piece of the bigger puzzle

- Self-regulation can protect a child from risk
- Predicts school readiness and school success (social and academic)
- *Can* be improved through practice
- Improving communication and links between families, and schools is critical for promoting success in children.



The Role of Emotions

Imagine a child hits another child during circle time. How do you respond?

It depends.

What if the child hit the other child because he feels...

- angry because the other child took his toy.
- frustrated because he likes the other child and does not have the words to say, “Will you play with me?”
- bored because the circle time activity was too long and is now looking for something else to do.

Reframing how we teach self-regulation

- Consider how we teach a child to cut with scissors.
 - Self-regulation needs to be practiced and learned.
 - Help children see themselves and others as learners (and help families do the same).



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Resources

Key Concepts: Self-Regulation/Executive Function

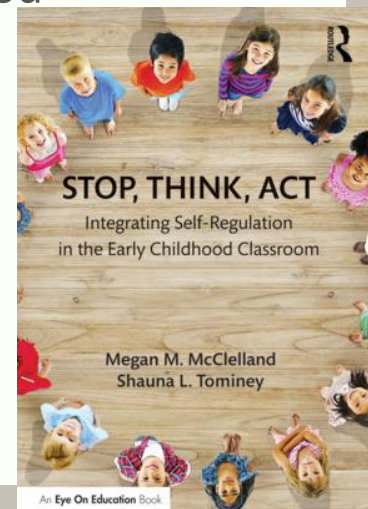
http://developingchild.harvard.edu/key_concepts/executive_function/

Parent/Teacher Resources

- <http://www.pedlex.no/artikkel/skl14/snart-forsteklassing/>
- Vroom! www.joinvroom.org
- Mind in the Making: <http://www.mindinthemaking.org/>
- PBS resources: www.pbs.org/wholechild/parents/building.html,
- Stop, Think, Act! Promoting Self-Regulation in the Early Childhood Classroom (McClelland & Tominey, 2015)
<https://www.routledge.com/products/9780415745239>

Children's Books:

- *Waiting Is Not Easy*, Mo Willems (2014)



Resources

Building the Brain's "Air Traffic Control" System: How Early Experiences Shape the Development of Executive Function

http://developingchild.harvard.edu/resources/reports_and_working_papers/working_papers/wp11/

Building Social and Emotional Skills at Home

<http://families.naeyc.org/learning-and-development/child-development/building-social-and-emotional-skills-home>

Developing Young Children's Self-Regulation Through Everyday Experiences

http://www.naeyc.org/files/yc/file/201107/Self-Regulation_Florez_OnlineJuly2011.pdf

Helping Children Make Transitions Between Activities

<http://csefel.vanderbilt.edu/resources/www/www4.html>

Helping Your Child Begin Developing Self-Control

<http://www.zerotothree.org/child-development/social-emotional-development/teaching-your-child-discipline-and-self-control.html>

Self-Regulation: A Cornerstone of Early Childhood Development

<https://www.naeyc.org/files/yc/file/200607/Gillespie709BTJ.pdf>

Sesame Street Does Self-Regulation

EMOTION REGULATION EXAMPLE

<http://www.youtube.com/watch?v=9PnbKL3wuH4>

http://www.sesamestreet.org/play#media/video_dd18672c-667b-4b10-8f33-ccb0281d98fb

EXECUTIVE FUNCTION EXAMPLE

<http://www.sesamestreet.org/parents/theshow/crumby-pictures#f8409b20-e8bf-4545-b2ef-c5e8b65ab415>

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