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

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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
Executive function (EF):
1. Attentional/cognitive flexibility
2. Working memory
3. Inhibitory control

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.
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.\textsuperscript{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.
Games and activities that promote self-regulation

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“Dance with your child! Have children dance slow to slow music and fast to fast music. Then try mixing up the rules.”
**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
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.
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).
Colleagues, Graduate Students & Staff

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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

Developing Young Children’s Self-Regulation Through Everyday Experiences

Helping Children Make Transitions Between Activities
http://csefel.vanderbilt.edu/resources/wwb/wwb4.html

Helping Your Child Begin Developing Self-Control

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
References


References


