Executive FUNction in Preschool—We can teach it!

Nancy Miller, M.Ed., OTR/L
Stephanie Parks, Ph.D, OTR/L

KDEC February 25, 2016
Your presenters are well-known for their well-developed self-regulation and executive functioning skills.
Agenda – Part 1

Overview of Executive Function

• What is EF and why is it important for young children?
• Quick look at the developmental progression of EF
• How do we assess EF?
• Targeting EF skills for intervention
Executive Functioning

http://developingchild.harvard.edu/resources/inbrief-executive-function-skills-for-life-and-learning/
“If one were to gather 100 researchers, policymakers and practitioners and ask them the importance of the development of executive function (EF) skills in preschool-age children, it is likely that most if not all, would place a high importance on such an outcome.”

“If one were to ask the same 100 to define executive function, at least 100 different definitions would likely be given. Such is the state of the field – there is general agreement regarding the importance of EF in early childhood and later adolescence but little consensus on the definition and components of EF.”

Self-Regulation is the ability to integrate all three aspects of executive function. It is the conscious control of thoughts, behaviors, and emotions.
Executive Function/Self-Regulation

1. Attentional (Cognitive) Flexibility
2. Inhibitory Control
3. Working Memory
Attentional (or Cognitive) Flexibility

- Paying attention
- Listening to and following directions
- Switching focus from one task to another
- Ignoring distractions
Attentional/Cognitive Flexibility

https://www.youtube.com/watch?v=5odWkym0RMw
Inhibitory Control

- Controlling Impulses
- Stopping one behavior and choosing another more appropriate action
- Calming down when upset
- Taking turns
- Waiting/delaying gratification
Inhibitory Control

https://www.youtube.com/watch?v=9PnbKL3wuH4
Working Memory

- Ability to use short-term memory
- Holding and processing information
- Remembering single and multi-step directions
- Remember instructions and rules (ex. Who’s turn is it?)
- Recalling and recognizing facts and information (ex. Call friends name before rolling them the ball)
Long Term Memory

Short-Term Memory

Working Memory
Working Memory
LET’S DO AN ACTIVITY
Development of EF Skills

<table>
<thead>
<tr>
<th></th>
<th>Working Memory</th>
<th>Inhibitory Control</th>
<th>Cognitive Flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9-16 months</strong></td>
<td>Execute simple 2-step plan (means-to-end tasks)</td>
<td>Begin to maintain focus despite distractions</td>
<td>Seek alternate methods when first attempt fails</td>
</tr>
<tr>
<td><strong>2-5 years</strong></td>
<td>Remember 2 rules (shoes here, coats there)</td>
<td>Delay eating a treat, follow arbitrary rule</td>
<td>Shift actions as rules change</td>
</tr>
<tr>
<td><strong>5-16 years</strong></td>
<td>Ability to search varying locations, recall where something is found</td>
<td>Ignore irrelevant, peripheral stimuli and focus on central stimulus</td>
<td>Improvement in accuracy when switching focus and adaptation to changing rules</td>
</tr>
<tr>
<td><strong>Adult</strong></td>
<td>Remember multiple tasks, rules and strategies that may vary</td>
<td>Self-control; situationally appropriate responses</td>
<td>Revise actions and plans in changing circumstances</td>
</tr>
</tbody>
</table>

Assessment of EF in Preschool

- ASQ/ASQ-SE (screener)
- BRIEF-P
- SEAM
- Curriculum-based measures (AEPS, HELP, etc.)
HEAD TOES KNEES SHOULDERS (HTKS)
Head, Toes, Knees & Shoulders

https://www.youtube.com/watch?v=CVT6FQ9czoc
Goals/Benchmarks: IEPs or not?

• Recognizing emotions in self and others
• Selecting and using (pre-taught) self-control strategies
• Using a multi-step problem-solving strategy (peer conflict; play; task)
• Persists/Completes non-preferred (challenging) task
• Participate in preferred/non-preferred activity for ______ minutes
• Follow multi-step directions
• Tolerates unexpected change in schedule or routine
• Transition between classroom activities when requested
Please come back after the Break for PART 2 – Teaching EF Across the Preschool Day
Executive FUNction in Preschool - We can teach it!

Part 2

Stephanie Parks, Ph.D, OTR/L
Nancy Miller, M.Ed., OTR/L

KDEC February 25, 2016
Agenda – Part 2

• Teaching self-regulation (EF) across the preschool day
  • Good Old Fashioned Positive Behavior Supports (PBIS)
  • Embedding opportunities all day long
Executive Function

Self-Regulation
(Skills & Ability)

Attentional/Cognitive Flexibility

Inhibitory Control

Working Memory
Setting up your classroom for Self-regulation Success

“Even when the majority of children in a classroom have adequate self-regulation skills, it can be extremely challenging to have even one or a few children who have serious difficulties with these skills.”
• Large Groups
  • Circle/Morning Meeting
  • Music/Movement
  • Outdoor Play
  • Story Time/Read Alouds
  • Transitions
• Small Groups
  • Learning Centers
  • Snack
  • Pre-academic/Literacy
• Individual opportunities
  • Free Play
  • Arrival/Dismissal
  • Individual Work Time
BEST PRACTICES FOR PROMOTING SELF-REGULATION

• Modeling self-regulation skills
• Embed self-regulation into classroom management practices (PW-PBIS; PBIS; Pyramid Model)
• Teach self-regulation skills
• Increase the complexity of children’s self-regulation activities over time
• Provide children with opportunities to practice self-regulation
• Give children supportive (descriptive) feedback to guide them toward prosocial and well-regulated behaviors and strategies.
What is the hardest part of your preschool day?
Embedding Self-Regulation Activities into Routines

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Expectation(s) for Routine</th>
<th>Self-Regulation Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Arrival/Dismissal

• Visual supports depicting steps or sequence of routine
• Teach walking in line/waiting and other expectations
• Positive, descriptive praise for expected behaviors
Ten Tips for a well-regulated circle time:

• Set yourself up for success
  • Consider timing (time of day, activities, length of circle)
  • Provide the children with a home base (carpet squares)
  • Chose a quiet sign or signal (gesture, sound etc.)

• Create a circle time routine (routine within routine-predictable)
  • Circle time welcome (opening routine; hello song etc.)
  • Circle time lesson
  • Circle time closing

• Choose activities that are developmentally appropriate for the children in your class and present activities in fun and engaging ways.
  • Use emotional expression to promote engagement
MUSIC, MUSIC, MUSIC and MOVEMENT

• FUN
• Motivating
• Repeated Practice
• Learn by doing, singing, anticipating

https://www.youtube.com/watch?v=nWwP0bY0PUg

Body Check

www.tunedintolearning.com

https://www.youtube.com/channel/UC3onsB94Yy47BGbm6XH06uA
Centers-Free Play

- Support and Expand Play
- Opportunities to learn and practice self-regulation and social competence with peers
What EF Skills are might be happening........
Outdoor Play

• Group motor games
• Go outside “the BOX”
• “Invent” new games and have the children help (they will anyway)
Red Light Green Light...(and oh so much more)
Freeze Dance
Simon Says.....
Mr. Potato Head Says....

http://stavishclan.com/2014/07/3-language-learning-activites-mr-potato-head.html
Small Group

- Math Activities
- Literacy Activities
- Pre-Academic Activities
- Table top games
- Social Skill Activities
- Incorporate Books
Snack

- Waiting
- Taking Turns
- Conversations with peers......
- What else
Transitions

• Warnings prior to transitions (visual, songs etc.)
• Pre-correction-reminder of expected behaviors
• M-O-V-E Strategies developed by Rochelle Lentini and colleagues for TACSEI
  • M – model for success
  • O – organize and prepare ahead of time
  • V – visual strategies clarify routines and changes
  • E – excite the children: use transition tricks

http://challengingbehavior.fmhi.usf.edu/communities/make_n_take/make_n_take_home.html
“Learning self regulation happens within children’s everyday experiences with trusted adults who regulate their own thinking, attention, emotions, behavior and motivation”

Ida Rose Florez

Engaging Families

• Tips:
  • Foster a classroom community for children as well as for parents
  • Create a classroom that serves as a learning environment for children and parents
  • Provide parents with resources to support their own knowledge of self-regulation development
  • Provide information in formats that are relevant to families
  • Be creative in the ways that you reach out to parents
  • Engage children in teaching their parents and caregivers
  • Invite parents and caregivers to attend “learn with me” activities
Resources-Curriculum

• Second Step
• Incredible Years
• PATHS
• Conscious Discipline
• Tools of the Mind
• Al’s Pals
• CSEFEL/TACSEI
Resources: Links

- http://csefel.vanderbilt.edu/
- http://challengingbehavior.fmhi.usf.edu/
- https://self-regulationinthe classroom.wikispaces.com/Games+and+Exercises
- https://www.pinterest.com/nancyot/

- Video and Picture links can be found on specific slides
Questions, Comments Deep Thoughts?

Nancy: nmiller@bluevalleyk12.org
Steph: s.parks@ku.edu
“Our lives are defined by opportunities, even the ones we miss.”

F. Scott Fitzgerald
Executive FUNCTION in preschool—YOU can teach it.
Thank you.