

EF in Educare



What are Executive Functions?

- Brain-based skills involved in deliberate, top-down, goal-directed control of attention, thought, emotion and behavior
- Cognitive processes located in the prefrontal cortex that coordinate and integrate the broader functions of thought, memory, emotions and motor movement. Likened to an Air Traffic Control Center.

- Cognitive Flexibility
- Working Memory
- Inhibitory Control



Why does **EF** matter for children?

- EF provides a foundation for learning and adaptation across situations.
 - In social situations; to change behaviors; for problem solving (get outside the box)
- **School Readiness**
 - Pay attention to teacher directions
 - Remember and apply teacher directions
 - Focus
 - Transition
 - Manage emotions
 - Maintain positive peer relations
 - Think with flexibility



What does early **EF** predict?

- Theory of Mind (Carlson et al., 2004)
- Math Proficiency (Blair & Razza, 2007)
- Reading Ability (Clark, Prior & Kinsella, 2002)
- Verbal and Nonverbal Reasoning (Carlson et al., 2007)
- Academic Achievement (Biederman et al., 2004)
- Social and Moral Competence (Kochanska et al., 2000)
- Emotion Regulation (Carlson & Wang, 2007)
- Physical health, personal finance (Moffitt et al., 2011)



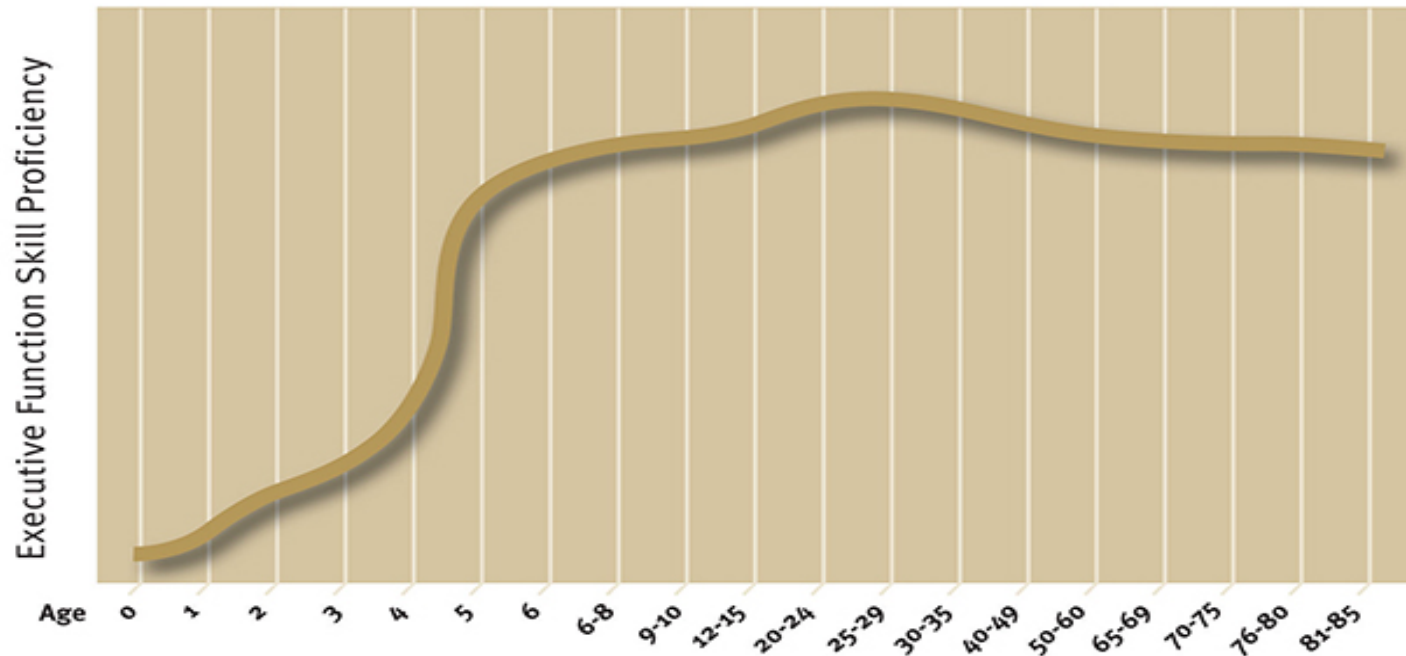
EF in Adults



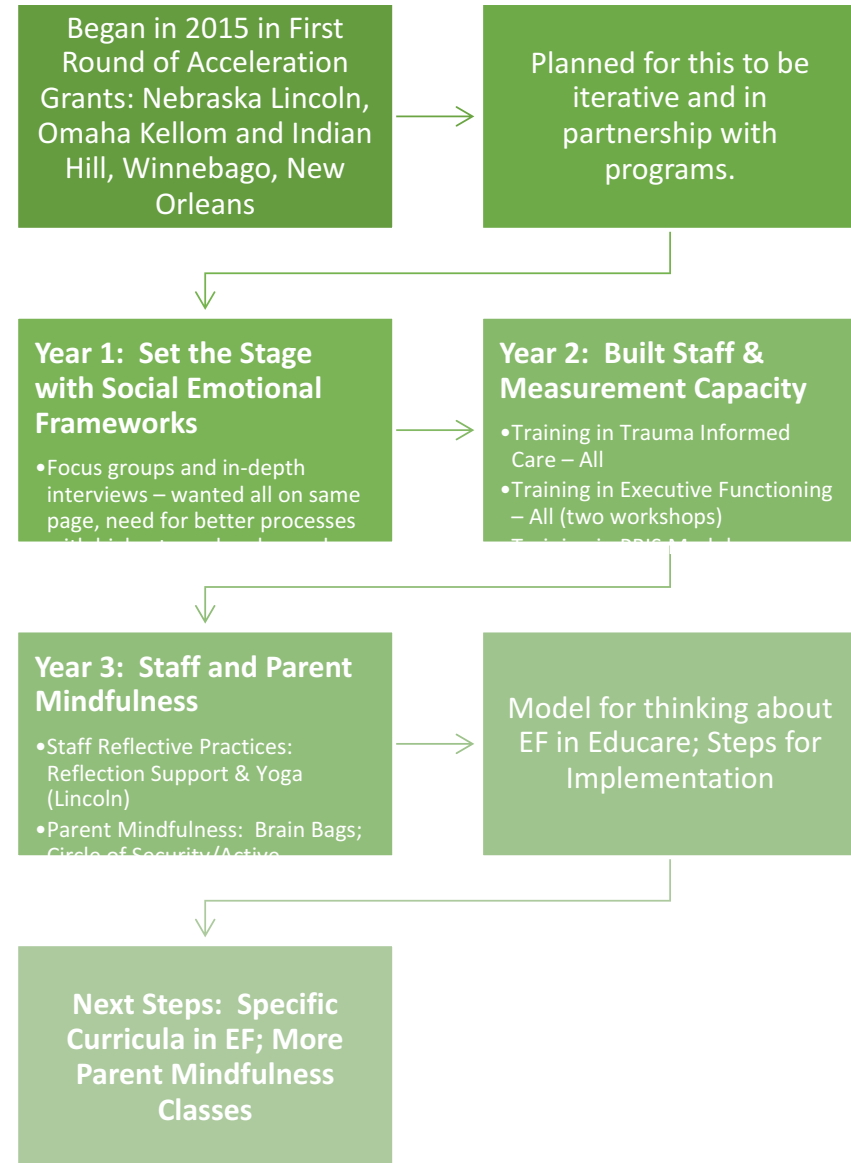
- Many studies of EF in Adults
- Feelings inform thoughts and vice versa—appraisal networks
- Self-directed actions directed towards a future action
- **Sets of Actions to the Self:**
 - Self-Awareness
 - Self-Inhibitory –Self-Control
 - Non Verbal Working Memory-Images
 - Verbal—Self-Talk using Words
 - Emotional/Self-Motivating
 - Planning & Problem Solving—Internalized Play
- Reflection
- Mindfulness
- Problem solving
- Detachment or ability to examine emotions
- Higher-order thinking
- Purposeful, goal-directed behavior
- More purposeful teaching and parenting

Why is EF So Important in Educare? How Do Executive Functions Develop?

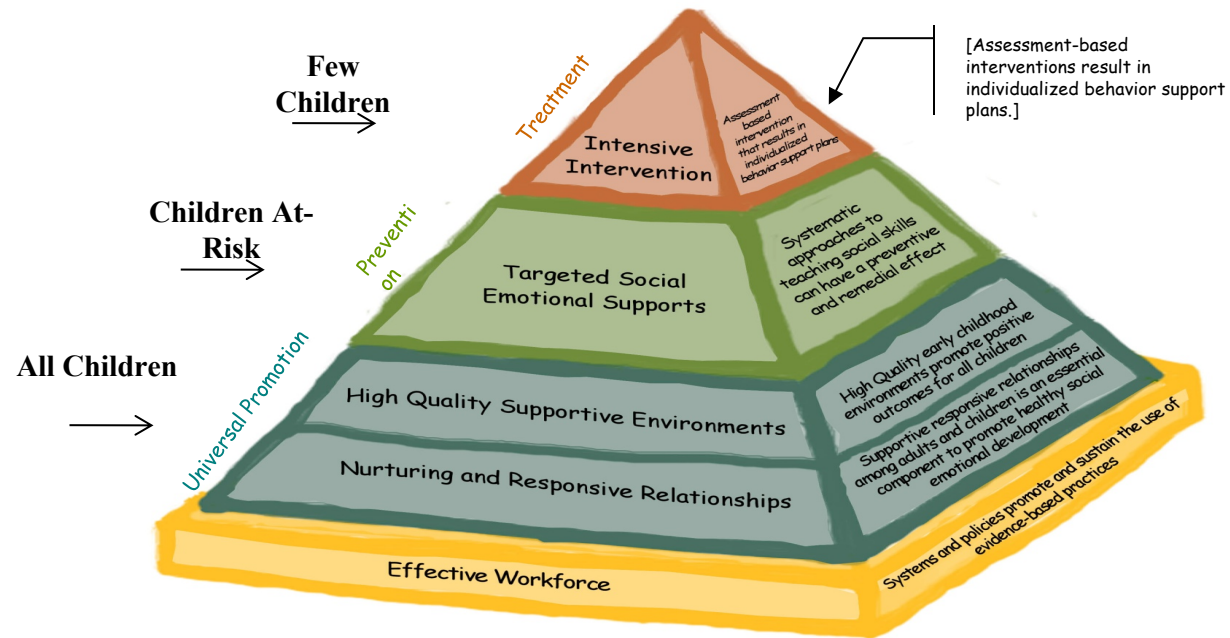
Executive Function Skills Build Into the Early Adult Years



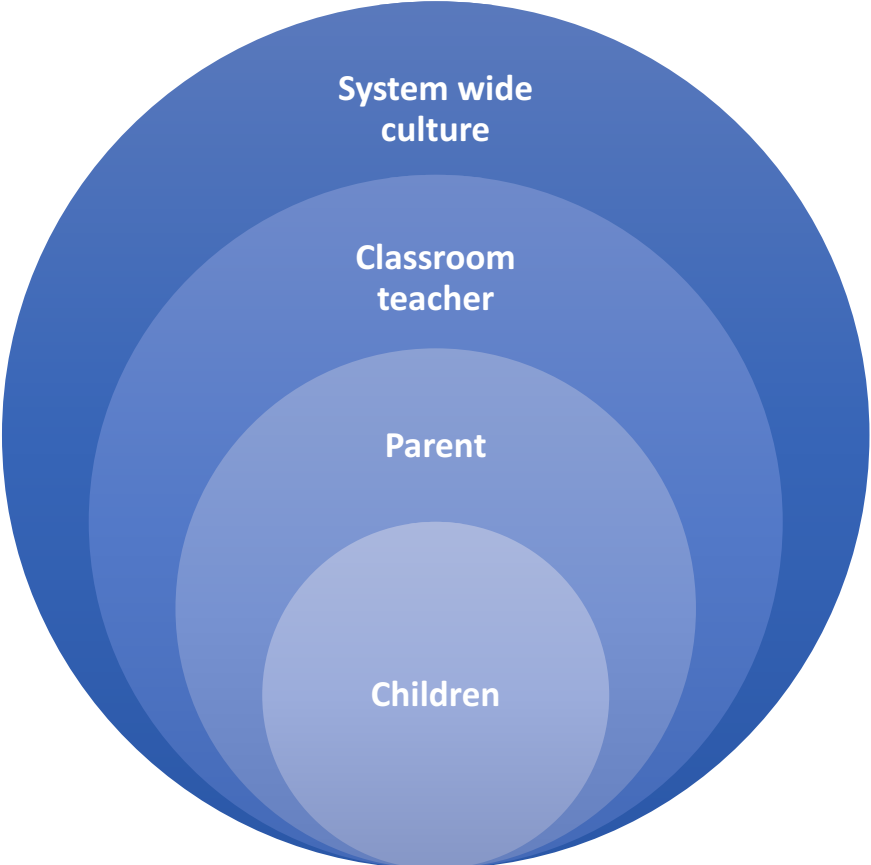
History of Nebraska/NOLA Acceleration Project



The Pyramid Model: Promoting Social Emotional Competence in Infants and Young Children

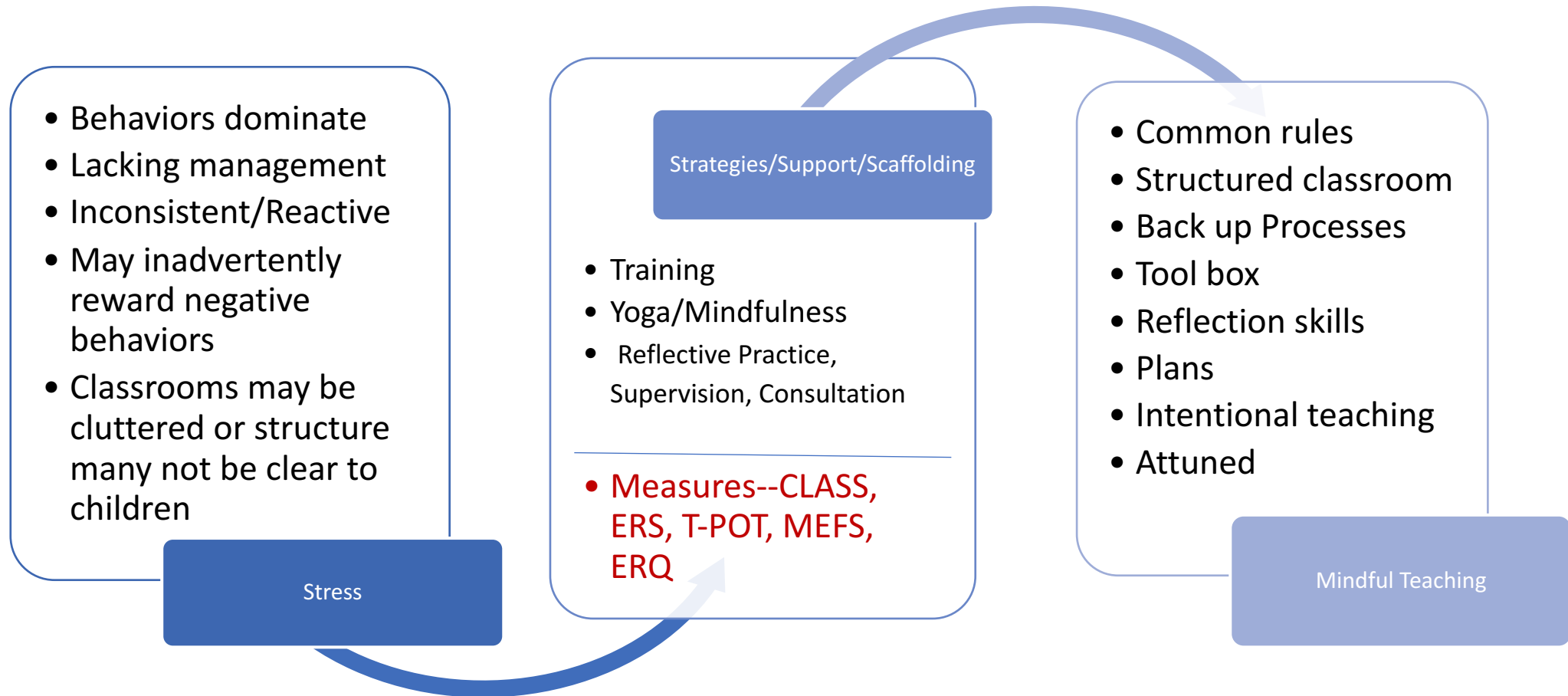


System, Adult & Child **Executive Function**



	Stress →	Strategies/Support/Scaffolding →	EF Control Center
System Wide-Culture	<ul style="list-style-type: none"> • Reacting to behavior problems • Under staffed • Lacking agreed upon practice/goals • Lacking common language 	<ul style="list-style-type: none"> • State PBIS • Consultants • Help with highest need children/ families <hr/> <p>EC SET-SW</p>	<ul style="list-style-type: none"> • Strategies for high needs • Common language • Common framework • Understanding trauma • Large tool box • Agreed rules
Classroom Teachers	<ul style="list-style-type: none"> • Behaviors dominate • Lacking routines and management strategies * Burnout & Turnover 	<ul style="list-style-type: none"> • PBIS Modules • Consultants • Help with highest need children/ families • Reflective Consultation • Yoga • EF & Trauma training • Conscious Discipline <hr/> <p>CLASS, ERS, T-POT, MEFS, ERQ</p>	<ul style="list-style-type: none"> • Common rules • Structured classroom • Back up Processes • Tool box • Reflection skills • Plans • Intentional teaching • Attuned
Parents	<ul style="list-style-type: none"> • Life stressor dominate • Parenting stress triggers behaviors • Reactive parenting 	<ul style="list-style-type: none"> • Circle of Security • Active Parenting • Brain Games • Conscious Discipline <hr/> <p>MEFS</p>	<ul style="list-style-type: none"> • Intentional parenting • Planning, Reflection • Mindfulness • Goal setting • Relating • Attuned
Children	<ul style="list-style-type: none"> • Don't know rules • Toxic stress 	<ul style="list-style-type: none"> • Strategies for building EF • <i>Tools of the Mind (e.g., as curriculum)</i> <hr/> <p>MEFS, HKTS, PENCIL TAP, DECA</p>	<ul style="list-style-type: none"> • Know rules • Working memory • Focused attention • Able to shift focus • Learn about emotion

Classrooms/ Teachers



Teacher & Classroom Scales - Emotion Regulation

Questionnaire (ERQ; Gross & John, 9/03) & Minnesota Self Regulation Scale (MEFS); Environment Rating Scales (ERQ); Classroom Assessment Survey Scales (CLASS);

ERQ

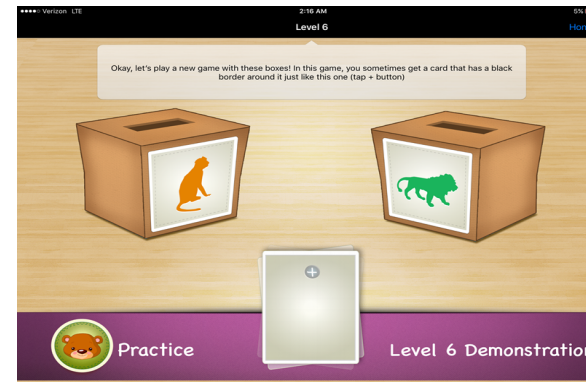
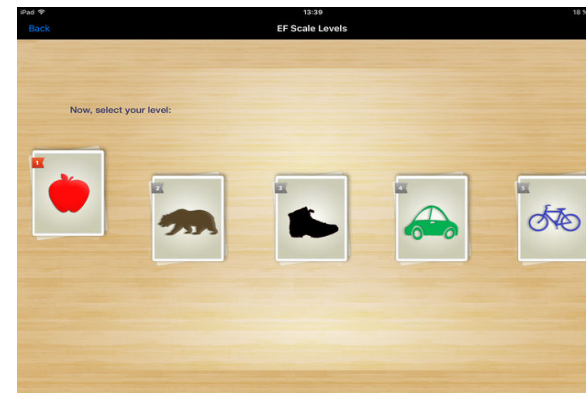
1-----2-----3-----4-----5-----6-----7

strongly disagree neutral strongly agree

1. ___ When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
2. ___ I keep my emotions to myself.
3. ___ When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
4. ___ When I am feeling positive emotions, I am careful not to express them.
5. ___ When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. ___ I control my emotions by not expressing them.
7. ___ When I want to feel more positive emotion, I change the way I'm thinking about the situation.
8. ___ I control my emotions by changing the way I think about the situation I'm in.
9. ___ When I am feeling negative emotions, I make sure not to express them.
10. ___ When I want to feel less negative emotion, I change the way I'm thinking about the situation.

- Reappraisal Items: 1, 3, 5, 7, 8, 10;
- Ex/Suppression Items: 2, 4, 6, 9.

MEFS



(Very Preliminary) Relations Between teacher EF Measures & Classroom Quality

• Overall

- Teacher Expression of Emotions (ERQ; n=36)
 - ERS Caregiving $r = .365^*$
 - CLASS Instructional Support $r = .352^*$
- Teacher Reappraisal (n =36)

No significant associations
- Teacher MEFS
 - CLASS Classroom Management (n=17) $r = .531^*$
 - Yoga Attendance (n=36) $r = .390^*$

• Lead Teachers

- Teacher Expression of Emotions (n=13)
 - ERS Caregiving $r = .637^*$, Interacting $r = .585^*$
- Teacher Reappraisal (n=13)
 - ERS Caregiving $r = .586^*$
- Teacher MEFS (n=6)
 - CLASS Classroom Management $r = .799^+$

Next Steps

Continue to explore relations between EF and teacher classrooms practices—
learn more about differences between lead and other teachers.

Explore relations between teacher EF and children's growth in EF.

Enhance our teacher mindfulness supports—currently providing yoga.

Build on teacher emotional expressiveness.

Build on teacher mind mindedness.

Continue to provide yoga. 😊

Nameste!