




# THE WISDOM OF PLAY: THEATRE GAMES AND EXECUTIVE FUNCTION



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AATE, 2020



# Hello!

- In the chat:

- Your name
  - Pronunciation
- Your pronouns
- Your work (brief!)

- Example:

- Katherine
  - KA-thrin (KA like cat)
- She/her/hers
- Teaching artist, actor, and graduate student researcher



LET'S PLAY!



## Workshop plan

- Greeting and warm-up ✓
- Learning goals
- Introduction to Executive Function
  - *Definition*
  - *Context*
  - *Significance*
  - *Effective Elements of EF training*
- Games!
- Application
  - *Small group analysis*
- Evidence
- Discussion
- Thanks and closing

## Learning Goals

- What are Executive Functions?
- How might this theory of cognitive development connect to teaching artist practice?
- How can we apply this knowledge in the classroom?

# Executive Function



COGNITIVE SKILLS THAT ENABLE SELF-INITIATED,  
PURPOSEFUL, GOAL-DIRECTED BEHAVIOR

(Doebel, 2019; van der Fells, et al., 2019; Meyers & Berk, 2013; Friedman & Miyake, 2017)

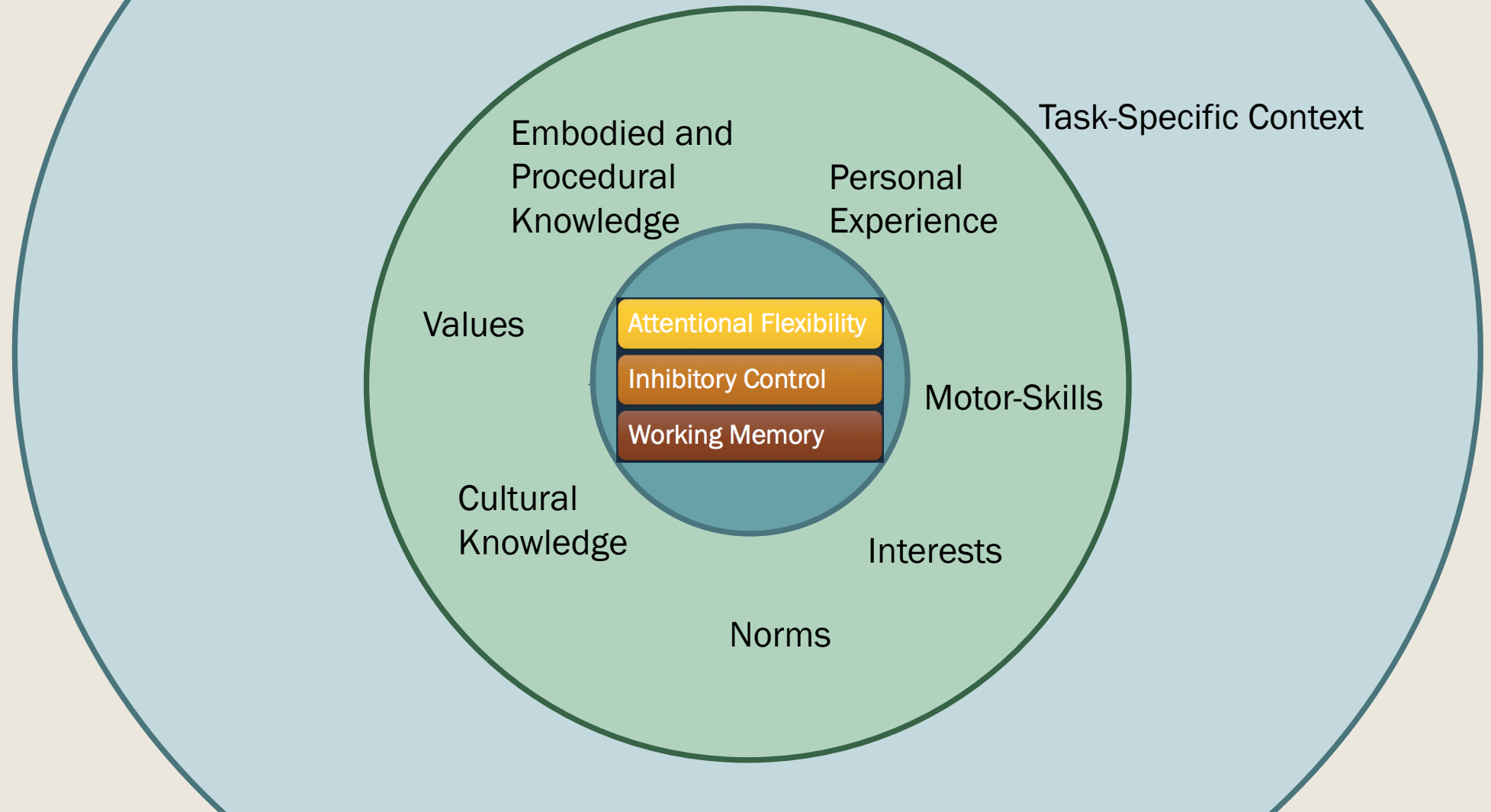
Attentional Flexibility

Inhibitory Control

Working Memory

EF: Three  
Component  
Model

# EF: Task Specific Model





# IMPORTANT EMPHASIS!

Executive Function/Self-Regulation  $\neq$   
Compliance/Obedience/“Good” students



# Significance

- Early childhood EF is correlated to:
  - Transition to kindergarten
  - Academic performance
  - Classroom relationships
  - Cascading influence on long-term outcomes
    - Career and income
    - Criminality
    - Health and relationship wellness

# Overarching Questions

Can Executive  
Function be taught?

If so, how?

# Overarching Questions

Can Executive Function be taught?

- Yes

If so, how?

- Curricular/Programmatic Interventions:
  - Active Physicality
  - Inherent Motivation
  - Contextualized Practice
  - Community Building
  - Reduce Stress
  - Increasing Challenge Level
  - Acknowledge developmental trajectories/children's inherent interests



# THE WISDOM OF PLAY: DRAMA GAMES

# Pretend- Play



Representational or  
non-literal play

Acting “as if”

Pretend frame

Child-generated

Many different categories



Development

Appears around 18-  
months

3 to 6-years, the “high  
season”



That “High Season” coincides with a vital  
period of EF and neuro development



Highly correlated to EF capacity

# Drama & Drama Games

- Drama as Adult-Guided, Structured Pretend-Play
- Drama Games incorporate:
  - *Elements of Guided Play and Games*
    - Fictional Framing
      - *(Safety of the fictional frame)*
    - Rules
    - Tasks
- Already a rich field of practice
  - *But neglected by developmental research*



## Attentional Flexibility

- Switch back and forth between pretend frame and real world

## Working Memory

- Remember and manipulate the as-if world as it is built

## Inhibitory Control

- Inhibit the prepotent response to react to the “reality” of objects and people

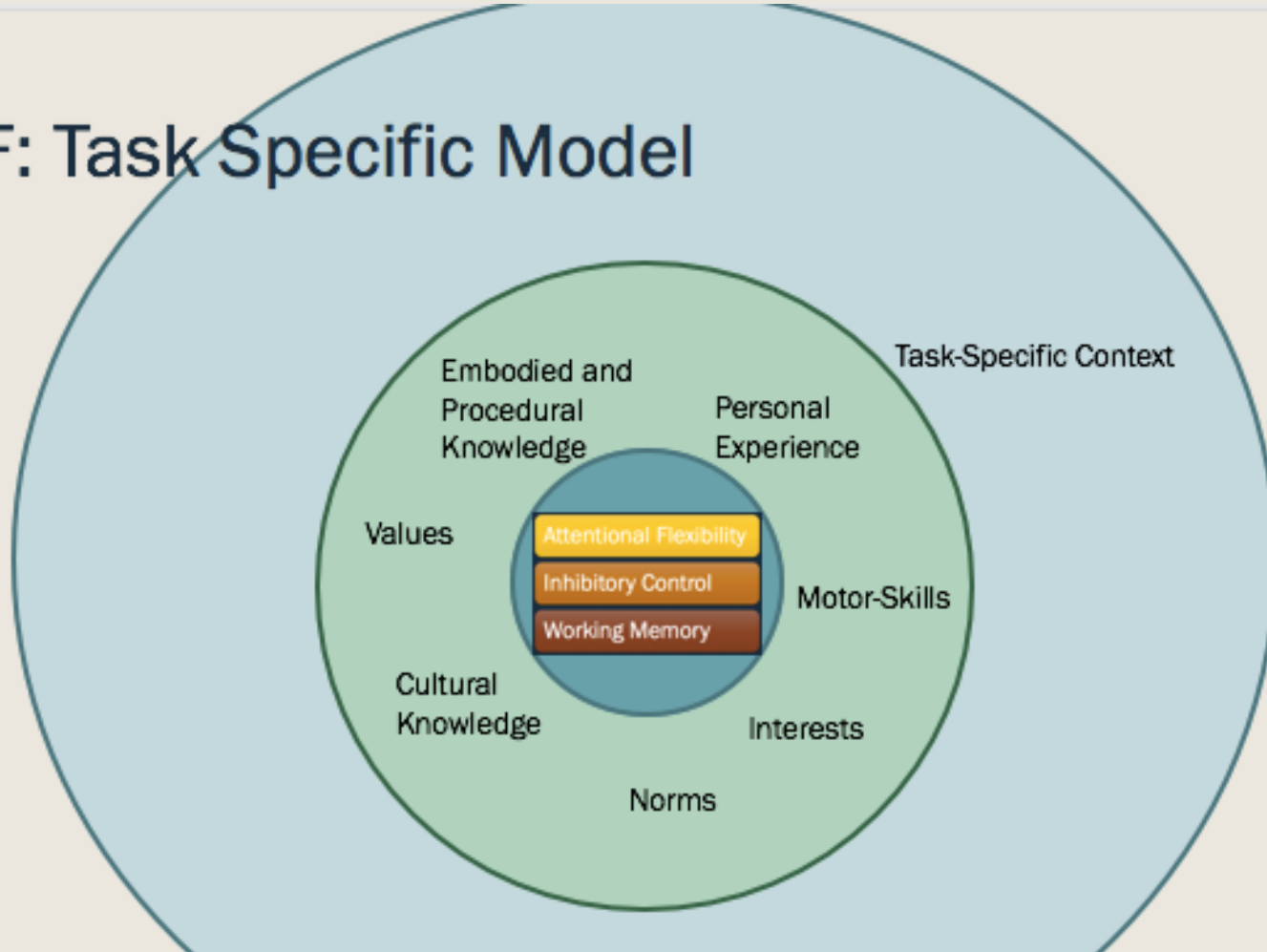


LET'S PLAY!



# Small Group Work 1

## EF: Task Specific Model



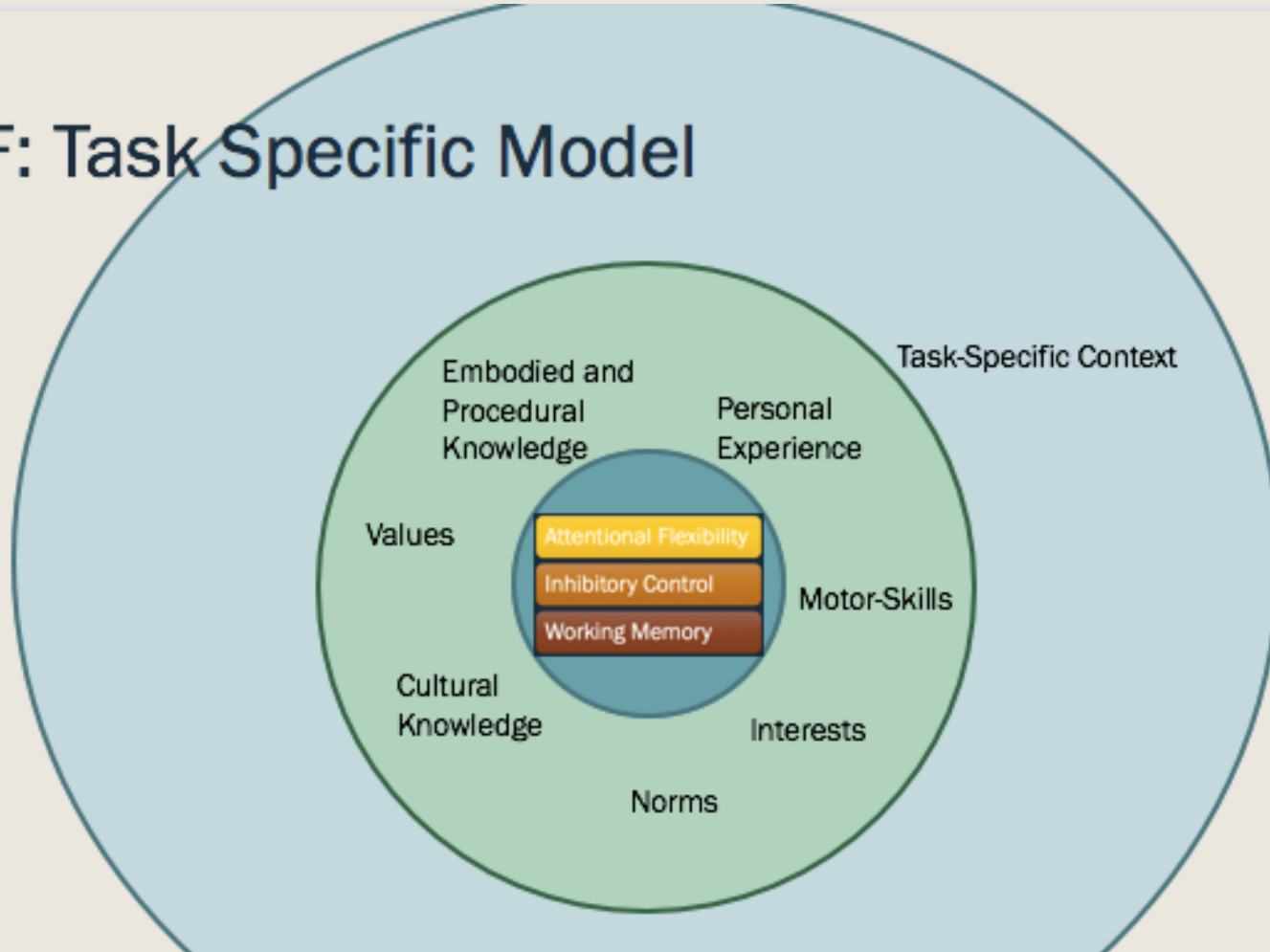
- Analyze the two games we just played through the lens of Executive Function

## Review

- Attentional Flexibility
  - *The ability to consciously direct your attention across multiple stimuli*
- Inhibitory Control
  - *The ability to inhibit prepotent/impulsive action that does not move you towards your goal*
- Working Memory
  - *The ability to both maintain and manipulate items in your memory*

# Small Group Work 2

## EF: Task Specific Model



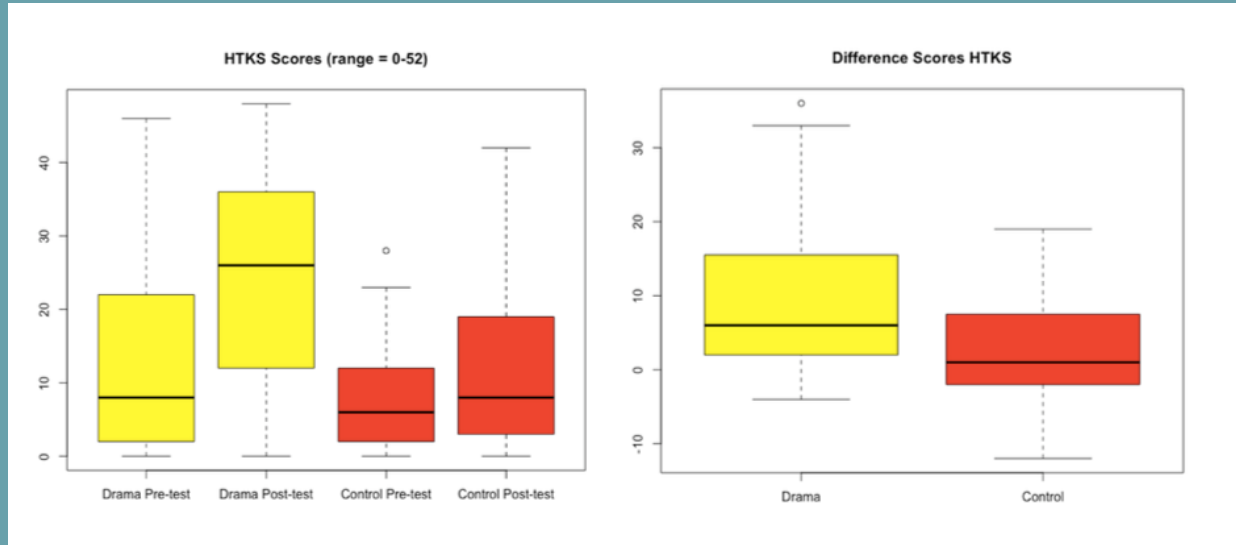
- Identify one of your favorite games to use in the classroom and apply the same analytical lens

## Review

- Attentional Flexibility
  - *The ability to consciously direct your attention across multiple stimuli*
- Inhibitory Control
  - *The ability to inhibit prepotent/impulsive action that does not move you towards your goal*
- Working Memory
  - *The ability to both maintain and manipulate items in your memory*

# Evidence

- Make-believe play is highly correlated to EF
  - *Thibodeau, et al., 2016; Pierucci, et al., 2014*
- Circle time/group games causally support EF development in early childhood settings
  - *McClelland, et al., 2019; Schmitt, et al., 2015; Tominey & McClelland, 2011; Rosas, et al., 2019*
- Drama games causally support socioemotional development in early childhood
  - *Goldstein & Lerner, 2018; Nicolopoulou, et al, 2015*
- Pretending to be a character improves EF in middle-childhood
  - *White & Carlson, 2015; White, et al., 2016*
- Drama and acting causally improves EF for elderly adults
  - *Noice, Noice & Staines, 2004*



N = 46 (total), p = 0.0286

## EARLY EVIDENCE PILOT TRIALS: 8-WEEK INTERVENTION

| Inhibition | Shift     | Working Memory | Emotional Control | Global Executive Control |
|------------|-----------|----------------|-------------------|--------------------------|
| p = 0.5404 | p = 0.708 | p = 0.3298     | p = 0.1032        | p = 0.7335               |

# Conclusion



Executive Functions are foundational cognitive skills that enable self-initiated, purposeful, goal-directed behavior



Drama games appear to be a pre-existing practice that enable embodied, socially-contextualized, playful practice of these cognitive skills



Although further research is needed, existing evidence indicates that incorporating Drama Games more consistently into curricula may be an effective and low-cost way to support EF development



DISCUSSION



THANK YOU!