

"I think a lot of kids could have progressed further, but was that the point of the game?": Exploring preschool teachers considerations of a gamified tablet assessment of executive functioning



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Overview

Background

- Preschool teachers need to minimize screen time in the classroom
- Overburdensome workloads in early childhood persist
- Many states now require evidence-based assessment in preschool
- Direct assessments are preferable to teacherreports, reducing implicit bias and providing teachers with new information about their children, that may in turn influence their interactions with the children

The Current Project

- Pilot of a gamified, child-directed tablet assessment of executive functioning (EF) in early childhood.
- Based on the widely used global EF measure, Head-Toes-Knees-Shoulders Revised (HTKS-R), HTKS-Kids trains children to say and then do the opposite, by tapping a panda bear on the screen (e.g., tap panda's head, when told to tap its toes)

- 79 children
 - 4.4 (3.9-4.9) y
 - 49% female
- 10 teachers
 - 90% between 29-
 - 60% hold a Master's

Measures:

- demographics
- User experience survey



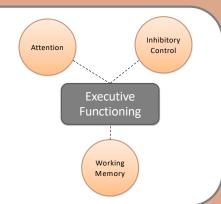
Analysis

Research Questions:

- (1) Do preschool teachers think HTKS-Kids is a feasible way to assess EF inside the classroom?
- (2) What are preschool teachers perceptions of EF in early childhood?
- RQ 1:

Joe | Master's Degree / 6-9), exp.

- Approach: Narrative
- Coding: Inductive & thematic
- · High Level Finding:
 - 1) HTKS-Kids is relatively feasible across teachers with minimal recommended changes
- - Approach: Phenomenology
 - · Coding: Deductive
 - Inclusion criteria: ≥9 quotes indicative of EF constructs (n=3)
 - · High Level Finding:
 - 2) Teacher perceptions of EF seem inconsistent



Findings

ace Moderately knowledgeable about Ex Acknowledged the need for inhibitory control, and wanted to reduce this by reframing task.

> "I think a difference in opposites is that it's auditory, and then having it tangibly and visually [in Parts 1-3], where they're in control of it, cognitively does something different."

memory challenge, and wanted to support students by including visual cues. "This group needs way more

visuals than any other students I've ever had. It's really down to the very specific detail for them. So, this does help with following directions and steps to take, and breaking down tasks."

Miss Nina | Master's Degree / JOX

Acknowledged working

Acknowledged that inhibitory control was challenged, but attributed this to attention.

Three relatively

educated and

experienced teachers

attributed EF

components as

reasons why kids

were not performing

as well as anticipated

on an EF measure.

the opposition that was going to that was going to that was going to the Panda can they were so distracted."

they were so distracted."

they were so distracted."

They were so distracted." "I was surprised that 2 of my 3,

Discussion

Key Takeaways:

- 1. HTKS-Kids is a feasible tablet assessment of EF within the preschool classroom context.
- 2. When EF was referenced colloquially by teachers, it was in reference to why the kids did not progress farther and how we could change the app so that they would.

Implications:

Moderately knowledge about

- Early childhood educators may lack the lens that EF is on a developmental continuum, rather viewing it as a concrete and isolated skill.
- More research and increased awareness and education about EF would allow preschool teachers to better support this kindergartenreadiness skill.

References

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Methods

Participants:

- 78% WIC subsidy
- - 39v
- 80% female
- · Family & teacher
- Focus groups

