

INTRODUCTION

Children from low-income backgrounds enter school with less knowledge in critical content areas such as language and math (e.g., Jordan et al., 2009). Pre-K teachers need valid information about their classroom practices before they can take steps to improve these practices. Instructional coaches are in the position to be able to provide this type of feedback. In order to do so, coaches need to know when to observe in a classroom, what to look for, a systematic way to collect information on what they see, and an understanding of how to use the observation data to inform their coaching with teachers.

In August of 2018, we received a Discovery Research K-12 grant (1813008) from the National Science Foundation to address this need. The goal of our work is to create a user-friendly web-based coaching tool that will 1) guide instructional coaches to collect specific data targeting classroom practices that are linked to student gains, 2) visualize data in real-time, and 3) connect what they see in the classroom to specific coaching strategies.

The focal classroom practices that serve as the foundation for our coaching tool were identified over the course of a four-year partnership between education researchers and a southeastern metropolitan school district (Farran et al., 2017). The same 8 practices were replicated in the subsequent years of the partnership.

We have named our process **CHALK Coaching**: Coaching to Help Activate Learning for Kids.

Development and Validation of a Mobile, Web-based Coaching Tool to Improve Pre-K Classroom Practices to Enhance Learning



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PROCESS

In order to create the CHALK coaching tool, we have engaged the following partners:

- Instructional coaches and teachers based in public schools, United Way, and a university lab school
- An elementary school principal
- Computer science undergraduate and graduate students
- Education researchers
- Early education policy groups
- Independent evaluator
- External school district for pilot work

Logistics:

- Weekly internal team meetings
- Bi-weekly meetings with partner coaches/instructional leaders
- Bi-weekly progress meetings with programmers
- Teacher focus groups
- Annual advisory board meeting

The CHALK tool focuses on eight classroom practices that are predictive of children's academic and self-regulatory gains across the Pre-K year.



PREVIOUS RESEARCH

CHALK coaching is rooted in four years of research in preschool classrooms. Beginning in 2014, observers conducted day-long classroom (N = 26 classrooms) observations using the Child Observation Protocol (COP; Farran & Anthony, 2014) and Teacher Observation Protocol (TOP; Bilbrey, Vorhaus & Farran, 2007). These measures require the observer to collect data across nine dimensions of student and teacher behaviors.

Assessors collected individual child assessments (N = 407) in the fall and spring. Multi-level models were used to examine the relationship between behavioral indicators of instructional practices and students gains. This data collected in the first year of the partnership led us to identify eight clusters of classroom practices that were linked to children's gains across a number of different domains (Farran et al., 2017).

CURRENT STUDY TIMELINE



NEXT STEPS

Validation Study (2020-21): Partner with University of Dayton (UD) and Preschool Promise

External Evaluator will:

- Enroll 10 coaches in the study
- Randomly assign 5 to use CHALK and 5 to conduct business-as-usual coaching
- Collect interviews and tool usage information
- Analyze data to determine CHALK tool efficacy

UD Research partners will:

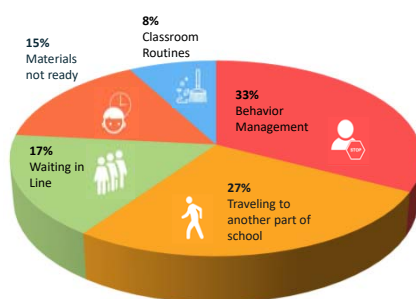
- Conduct classroom observations and child assessments in the fall and spring

Figure 1. Collect Data



The observation tools we are creating based on each of the eight practices (above) are designed to be simple and intuitive for the user. The goal is that the tool will guide the coach to collect **objective behavioral data**. Each button/behavior indicator is chosen because it represents a practice that a coach and teacher can directly focus on in their work together.

Figure 2. Use Data to Drive Decisions



To help bridge the gap between the **what** and the **what next**, we link the results from each observation to coaching prompts and questions that can be used to guide data reflection and goal setting. A tool-embedded **Action Plan** encourages coaches and teachers to co-construct plans for what is next.

Figure 3. Co-create an Action Plan

