

Paper 4 Title: What happens after the efficacy trial ends? Sustainment of intervention use

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Background/Context: There has been a recent call for early childhood education research to use the field of implementation science, which aims to understand factors that support individuals and organizations in adopting, using, and sustaining evidence-based practices. (Aboud, Yousafzai & Nores, 2018). Studying the process of implementation is important to ensure that evidence-based practices, once identified, are used in real-world settings. It is particularly important to understand strategies to promote sustained implementation (Aarons, Hulburt & Horwitz, 2011). After the end of an efficacy trial, such as the *Zoology One* evaluation, it is common for study participants to continue to have access to intervention materials; however, little is known about the extent to which participants continue to implement the intervention after it is no longer expected and supported through the trial and the factors that influence this decision.

Purpose/Objective/Research Questions: This paper examines the extent to which teachers continued to implement the *Zoology One* curriculum after the end of the one-year research study period, when ongoing use of *Zoology One* is no longer expected and implementation supports (i.e., coaching) were removed. We will share mixed-method findings regarding how teachers used the intervention after the removal of implementation supports, and the factors that were important for sustained intervention use.

Setting: School District of Philadelphia

Population/Participants/Subjects: The *Zoology One* study includes 37 treatment group Kindergarten teachers, across two cohorts. This paper will use the longitudinal follow-up data from both cohorts of treatment group teachers.

Program: *Zoology One* is an integrated science and literacy curriculum for kindergarten. It comprises a 120-minute, daily, integrated instructional block that incorporates evidence-based literacy instruction and science immersion across the entire school year. *Zoology One* includes four 9-week units: An introductory unit that teaches routines and structures; Zoology; Ecology; and Entomology. All instructional elements are aligned with the Common Core standards and Next Generation Science Standards.

Research Design: This paper uses quantitative and qualitative data from the longitudinal follow-up with treatment group teachers who participated in the *Zoology One* efficacy evaluation.

Data Collection and Analysis: As part of the longitudinal follow-up, teachers completed a quantitative survey in which they reported the extent to which they used specific

components of *Zoology One* in the Spring of the year following the research study period (i.e., one year follow-up). Teachers also participated in qualitative interviews in which they were asked to describe the extent to which they continued to use *Zoology One* and their reasons for their sustained use or lack thereof. The first cohort of teachers also completed surveys and interviews in the Spring of the following year (i.e., two year follow-up). Quantitative data were analyzed with descriptive statistics and qualitative data were analyzed by coding themes using an integrated inductive and deductive approach.

Findings and Results: Preliminary results suggest that the majority of teachers continued to use *Zoology One* curriculum (exclusively or in combination with other literacy curricula) in the one and two years following study completion. Key qualitative findings regarding teachers' sustained use of the curriculum will be discussed (analyses are underway at the time of this submission). In addition, we will discuss the implications of considering intervention sustainment after efficacy trials.

Conclusions: This paper highlights the importance of considering the extent to which research participants continue to implement an intervention after the end of an efficacy or effectiveness trial. Continued intervention use, as observed here with *Zoology One*, suggests that the intervention has the potential to be implemented and sustained outside of the context of a research study.