

Abstract

Title: Impact of Professional Development on Preschool Teachers' Use of Embedded-Instruction Practices: An Efficacy Trial of *Tools for Teachers*

Goal: Efficacy (Goal 3) **Topic:** Early Intervention and Early Learning in Special Education

Resubmission of Successful Application: This Goal 3 study was submitted to IES in 2012, received a fundable score, and the panel commented they were "enthusiastic about the application." NCSER budget constraints precluded funding; thus it is being resubmitted.

Purpose: The primary purpose of the study is to conduct an efficacy trial of *Tools for Teachers* professional development interventions (*TjT* PD interventions), which we evaluated for potential efficacy in a Goal 2 project with promising results. The focus of the PD interventions is embedded instruction (EI). A secondary purpose is to evaluate if teachers sustain EI implementation in the year after their participation in *TjT* PD interventions has ended. In the Goal 2 project, we used iterative processes to develop and validate the interventions, associated materials, and procedures. We now have two fully developed *TjT* PD interventions, which differ according to the variant of coaching provided (on-site vs. self-coaching). In addition, we have fully manualized materials and resources for the EI focus of the PD interventions, procedural and implementation fidelity measures, and observational coding systems to evaluate impacts of the *TjT* PD interventions. Goal 2 study data showed *TjT* PD interventions improved teachers' implementation of EI, particularly for teachers who received on-site coaching, with respect to frequency and accuracy of EI learning trials. Both *TjT* PD interventions were associated with improvements in children's receptive language and early literacy skills. The theory of change in our Goal 2 application was supported by the findings from the potential efficacy study.

Setting: The Goal 3 study will be conducted in 108 preschool classrooms for early childhood special education (ECSE) in school districts located in FL and TN that have committed to participation and that enroll children with disabilities in these classrooms.

Sample: Participants will be 108 preschool teachers for ECSE and 324 target children with disabilities from these teachers' classrooms. Once a teacher enrolls in the study and before he/she is randomly assigned to experimental condition, three target children from her/his classroom who meet study eligibility criteria will be randomly selected for study participation.

Intervention: In 72 classrooms, the *TjT* PD interventions will be implemented for 24 weeks. Teachers participate in a 3-day, 16-hour workshop series and 16 sessions of either on-site coaching or self-coaching focused on embedded instruction. On-site coaching includes classroom observations and debriefing meetings with performance feedback. Self-coaching is guided by a project-developed website and 16 e-mail reminders to engage in self-coaching.

Business-as-Usual (BAU) Comparison: In 36 classrooms, teachers will receive BAU PD and implement their typical instructional practices for 24 weeks.

Research Method: Cluster RCT with repeated measures. Random assignment at the teacher/classroom level to *TjT* PD interventions or BAU PD. Data will be collected in two cohorts and each cohort will participate in an intervention year and a sustainability year.

Key Outcomes and Measures: Classroom Instructional Quality (*CLASS*); Teacher Implementation of EI Practices (*Learning Targets Rating Scale, Embedded Instruction Observation System*); Child Outcomes – Learning Targets (*EIOS*), Engagement (*Engagement Behavior Observation System*) Social Skills/Problem Behavior (*PKBS-II*), Language (*PLS-4*), Literacy (*TERA-3*), Basic Concepts (*BBCS-3-R*), and Adaptive Behavior (*ABAS-II*).

Data Analytics: MANCOVA, Multi-level ANCOVA and MANCOVA, multi-level mediation analysis, and latent growth curve analysis to address primary and secondary research questions.