

Abstract

Applicant Name: Wyoming Department of Education

Project Title: Project Skyword Literacy: Lifting Decoding and Fluency through Data-Guided Practice

Priorities Addressed: Midphase EIR—Absolute Priority 1—Field-initiated innovations: Promoting evidence-based literacy; Competitive preference priority 1—Returning education to the states; Competitive preference priority 2—Education choice (high-impact tutoring).

Goals: *Student outcome:* Improve decoding and silent reading fluency for struggling readers in grades 3-5 and increase the proportion meeting state reading proficiency using WordFlight, an evidence-based digitally delivered, personalized decoding intervention and teacher-delivered instruction and tools; *Causal evidence:* Conduct a waitlist cluster randomized evaluation with confirmatory analyses using multilevel models. *Implementation capacity:* Build sustainable district/capacity for implementation by (a) extending implementation in confirmatory cohorts for the duration of the grant and (b) exploring train-the-trainer and high-impact tutoring applications; *Cost and Scale:* Estimate costs and cost-effectiveness to inform future attempts to scale the intervention.

Expected Outcomes and Contributions: *Research:* (1) Preregistered, publicly documented confirmatory impact estimates of the effect of intervention on standardized decoding and fluency measures as well as state reading assessments; (2) generalization evidence from exploratory studies, moderator analyses, and fidelity analyses; (3) cost and effectiveness results; *Policy:* (1) Guidance on state implementation including procurement specification, staffing models, and scheduling options; (2) information regarding minimum fidelity, dosage, and school readiness needed for impact; and (3) correspondence with widely accepted evidence frameworks (e.g., ESSA) that LEAs may use to justify adoption; *Practice:* (1) Clear guidance for implementation and (2) processes and materials needed to initiate and sustain adoption (e.g., PD modules).

Students to be served: Includes students who require intervention due to (a) scores below proficiency on state literacy assessments or routine universal screening measures, (b) have Individualized Education Programs for reading or language, or (c) are designated as English language learners, who qualify to participate. Primary implementation will be Wyoming and Iowa, with additional LEAs to be finalized over the course of the project.

Organizations Partnering with this Project: (1) Wyoming Department of Education: Project lead, responsible for project direction, recruitment in Wyoming; (2) Iowa Reading Research Center: responsible for on-site assessment, fidelity monitoring, and recruitment in Iowa; (3) Foundations in Learning: Intervention developer, responsible for delivery and support of WordFlight, professional development, coaching; and recruitment outside of Wyoming and Iowa; (4) University of Iowa Center of Evaluation and Assessment: Project evaluation.

Research Background: *Theoretical and Conceptual Background:* Issues with automaticity and text-level fluency prevent students from reading complex texts. WordFlight targets sublexical–orthographic mapping and decoding and encoding efficiency to accelerate word recognition and automaticity. A prior (McMurray & Klein-Packard, 2024) demonstrated significant treatment effects on decoding and word recognition among Grades 6–7 struggling readers. This project will replicate and extend those findings. *Hypotheses:* Confirmatory—Years 1-2 Schools immediately assigned to WordFlight will exceed waitlist schools on decoding, reading fluency, and state proficiency; Exploratory—Years 3-5 Train-the-trainer + high-impact tutoring will be feasible at adequate fidelity, produce impacts directionally consistent with confirmatory estimates, and show promising cost-effectiveness. *Design:* Confirmatory study is waitlist cluster randomized trial aligned with WWC evidence standards. Treatment schools begin in Year 1; Control schools enter in Year 2. Both cohorts receive intervention for duration of the project. Sample includes 5,000 students grades 3-5 (confirmatory), grades 5-8 (exploratory); across 100-120 schools. Dependent variables include word attack (WRMT-3), reading fluency (TOSCRF-2), and state literacy assessments. Independent variable is the WordFlight system. The analysis plan involves intent-to-treat multilevel model; linear mixed effects for continuous outcomes and logistic mixed-effects for proficiency.