

**Project Title:** Scalability, Capacity, and Learning Engagement for Underserved Populations (SCALE UP) for *Fraction Face-Off*

**Type of Grant Requested:** Expansion-phase

**Absolute Priorities:** *Absolute Priority 1* addressed by implementing at a national level an efficacious mathematics intervention that has “strong evidence” of effectiveness. *Absolute Priority 3* by elevating and strengthening the educators who provide supplemental instruction for students experiencing difficulty in mathematics (referred to as students with MD). *Competitive Preference Priority 1* addressed by collaborating with four partner universities that are identified as minority-serving institutions. *Competitive Preference Priority 2* addressed by implementing an evidence-based intervention to target COVID-19 pandemic recovery efforts.

**Total number of students to be served in the project:** 1,440

**Grade level(s) to be served by the project:** Grades 4-5

**Your definition of high-need students:** Students with MD in grades 4-5 who have weak foundational knowledge, low proficiency, and who score significantly below typically achieving peers in terms of fraction knowledge. We recruit nationally from rural schools and out-of-school programs and diverse groups (e.g., socio-economic status, race/ethnicity, emergent bilinguals).

**Brief project description including project activities:** Across the five years of this project, we contribute rigorous evidence of effectiveness of *Fraction Face-Off* (FFO, Fuchs et al., 2013), a math intervention with strong evidence (as determined by the What Works Clearinghouse). FFO is designed as a Tier 2 intervention for Grade 4 students to be implemented in small groups over 36, 30-min sessions. We conduct randomized controlled trials with diverse student populations in two novel settings – rural schools and out-of-school programs – to determine the impact on student outcomes (fraction knowledge, general mathematics proficiency, self-efficacy).

In Experiment 1 (3 cohorts of 60 interventionists each, beginning in 2025-26), we examine the broader effectiveness of FFO (Fuchs et al., 2013), with students with MD in Grades 4-5 in rural schools. Interventionists are randomly assigned to three conditions—FFO with Professional Development (PD), FFO with PD and Coaching, and business-as-usual (BAU). Pre- and post-tests are administered to interventionists and students. Follow up data will be collected the subsequent year of participation.

In Experiment 2 (3 cohorts of 60 service providers each, beginning in 2026-27), we examine the effectiveness of FFO (Fuchs et al., 2013) for high-dosage tutoring with students with MD in Grades 4-5 in out-of-school settings. Interventionists are randomly assigned to three conditions—FFO with Professional Development (PD), FFO with PD and Coaching, and business-as-usual (BAU). Pre- and post-tests are administered to interventionists and students.

**Summary of project objectives and expected outcomes:** We take a WWC-approved intervention with strong evidence of effectiveness and contribute rigorous evidence in two novel settings to address the ongoing impact of the COVID-19 pandemic. We seek to understand under which conditions the program is most effective at improving student outcomes. We predict positive and significant results across settings for both students (fraction knowledge, general math proficiency, self-efficacy) and interventionists (fraction knowledge, pedagogical and content knowledge for teaching, self-efficacy) compared to BAU.

**List all organizations partnering with this project:** Southern Methodist University is the lead organization, and WestEd is the external evaluator. University of Texas-Austin (identified as a Minority Serving Institution [MSI]) and University of Missouri will serve as key implementation partners. Coordination partners include University of Hawaii (MSI), Georgia State University (MSI), University of California, Riverside (MSI), and University of Virginia.