



Fantasy Sports Math League

Three Years of Evidence: 2023 Pilot → Fall 2025 Pilot → Spring 2026 QED Study

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**Independent studies,
2023–2026**

N ≈ 97, 325, 133 (matched
samples)

+13pp

**Math score advantage
vs. comparison group
(2026)**

p = .004

+1.38

**Avg. math problems
correct, pre→post (2025)**

p < .001, *n* = 104

↓ anxiety

**Fraction/math anxiety
reduced in all 3 studies**

*largest for lower-confidence
& non-White students*

Study Designs Have Strengthened Over Time

2023 Pilot: *N* = 97, 3 schools, single-group pre/post over 4 weeks (Oct–Nov 2023). Exploratory; focused on math confidence, anxiety, and equation skills.

Fall 2025 Pilot (Phase 2): *N* ≈ 325 pre-survey / 104 matched pre-post, 9 teachers, 6 states, single-group pre/post over the 18-week NFL season.

Spring 2026 QED Study: *N* = 133 matched (107 treatment / 26 comparison), 6 teachers, PA & CT. First study with a comparison group and regression-controlled analysis (OLS, controlling for prescore, grade, gender, race/ethnicity).

Consistent Finding #1: Math Skill Gains

All three studies found significant gains in math performance among FSML participants. 2023: significant improvement on multiple equation items (Cohen's *d* = .38–.62). 2025: +1.38 problems correct (11-item scale, *p* < .001); 6th graders gained most (+2.10, 3x other grades). 2026: +13 percentage points vs. a comparison group (*p* = .004), plus a significant within-group pre-to-post gain (*p* = .024).

Consistent Finding #2: Confidence & Anxiety

2023: significant reductions in math/fraction anxiety and gains in math confidence (both sexes combined; boys drove the confidence gain). 2025: fraction confidence +0.50 (*p* < .001); fraction anxiety –0.29 (*p* = .044). 2026: fraction-equation confidence +0.15 in the treatment group (*p* = .05), with no comparable change in the comparison group.

Consistent Finding #3: Equity Pattern

A similar equity pattern recurs across studies: students who start with the lowest skill or confidence, and non-White students, tend to see the largest gains or biggest anxiety reductions — even when overall-sample effects are modest.

2023: FSML significantly increased math confidence for non-White participants (*p* = .01); Hispanic participants had significant reductions in homework stress and math anxiety.

2025: students entering with 0–5/11 correct in the math

equations questions gained +3.19 correct solutions (more than tripling baseline); non-White students showed substantially greater anxiety reduction than White students (–0.57 vs. –0.02).

2026: sample sizes were too small for a full subgroup breakdown, but the overall treatment effect held after controlling for grade, gender, and race/ethnicity.

Consistent Finding #4: Ease of Implementation

Across all three studies, teachers consistently reported that FSML was easy to bring into their classrooms, engaged students, and they wanted to keep using it. In the Fall 2025 pilot, 75% reported increased engagement, peer communication, and willingness to tackle challenging math; teachers described draft day as “full of excitement and energy” and that weekly scoring took as little as 10–15 minutes once set up. In the Spring 2026 QED study, teachers described low prep burden (roughly 30 minutes for setup, then 10–20 minutes weekly) and used FSML as a supplement, warm-up, or standalone project.

A Nuance Worth Noting

The Fall 2025 pilot showed a grade-level split: 6th graders drove the largest math skill gains (+2.10 problems, 3x other grades), while 7th and 8th graders showed smaller skill gains but the largest confidence and anxiety improvements (8th graders: –0.42 anxiety reduction). This tracks with FSML's standards alignment, built primarily around 6th-grade fraction and PEMDAS content. National data consistently show that many 7th and 8th graders lose confidence in math and become less likely to pursue advanced high school math. A tool that keeps older middle schoolers engaged and more confident may be one supportive strategy for keeping “the STEM door open” through the years when many students start to opt out.

What This Means Together

Across three cohorts, three designs, and three years, FSML is associated with improved math performance and reduced math/fraction anxiety, with the Spring 2026 QED study providing the strongest causal evidence to date via a comparison group and covariate-adjusted regression.