

Waggle Math

Meets ESSA Moderate Evidence Criteria

The Every Student Succeeds Act (ESSA) promotes evidence-based education programs by ensuring that programs are proven to be effective in increasing student achievement. ESSA includes four levels of evidence: strong, moderate, promising, and evidence that demonstrates a rationale. The ratings of the ESSA level of evidence reflect the quality, rigor, and statistical significance of the research study design and findings of the study.

PROGRAM OVERVIEW

Waggle® Math is a Grades K–8 supplemental digital learning solution that provides adaptive, personalized practice and instruction designed to support engagement, persistence, and achievement. Ongoing formative assessment is delivered through skills-based practice activities that assess knowledge in real time, providing teachers with data to differentiate instruction at the individual, small-group, and class levels.

MODERATE
ESSA EVIDENCE
RATING



DISTRICT: Blue Springs School District, MO
STUDY YEAR: 2020–2021
STUDY CONDUCTED BY: JEM & R, LLC

EVIDENCE CRITERIA

STUDY EVIDENCE & HIGHLIGHTS

Well-designed & well-implemented quasi-experimental design study (QED)

To examine the impact of *Waggle*, a quasi-experimental design (QED) study was conducted by JEM & R, LLC. Students who used *Waggle* were compared to closely matched students who did not (control students). The final analytical control sample was selected based on propensity scoring and matching methods. Students were matched based on race/ethnicity, gender, free/reduced-price lunch eligibility, special education status, English learner status, and gifted status.

Large & multi-site sample

MATH SAMPLE

- 1,172 Grade 3–5 Students
- (586 Matched Students)

MATH SUBGROUP SAMPLE

- 67% White
- 12% Black
- 9% Hispanic
- 3% Asian
- 1% Native American or Alaska Native
- 8% Multiracial
- 19% Free/reduced-price lunch eligibility
- 15% Students with disabilities

Shows statistically significant & positive effects

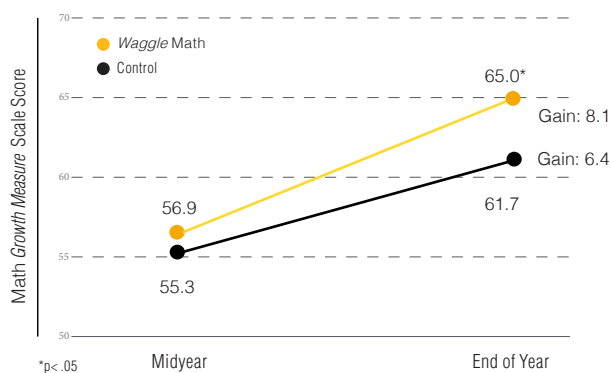
In order to determine the impact of *Waggle*, Math *Growth Measure*® scale scores were analyzed. Statistical analysis of program effects was conducted primarily via repeated measures ANOVA to examine differences in growth rates between students who used *Waggle* and those who did not.

Results indicated that students using *Waggle* Math with fidelity (attempted 10+ skills/completed 10+ goals) demonstrated statistically significantly learning gains over students who did not use *Waggle* as measured by the Math *Growth Measure*, $F(1, 757)=4.26, p<.05$.

A 8.1-point increase was seen for *Waggle* Math students from MOY to EOY in comparison to a 6.4-point increase for students who did not use the program.

Results highlight the importance of accounting for implementation fidelity when determining program efficacy.

STUDENT LEARNING GAINS:
MATH GROWTH MEASURE PERFORMANCE BY GROUP



To learn more about the research behind *Waggle*, visit hmhco.com/programs/waggle

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