

Math Expressions

Intervention Snapshot | Primary Mathematics Topic Area

A Publication of the National Center for Education Evaluation at IES

Acquiring math skills at an early age is important for students' long-term academic achievement and for success in learning more advanced mathematical content. *Math Expressions* is a curriculum for students in prekindergarten through sixth grade that aims to build students' conceptual understanding of mathematics and to develop fluency in mathematical problem solving and computation. The curriculum encourages student learning of mathematics through real-world situations, visual supports such as drawings and manipulatives, multiple approaches to solving problems, and opportunities for students to explain their mathematical thinking.

This What Works Clearinghouse (WWC) intervention report, part of the WWC's Primary Mathematics topic area, explores the effects of *Math Expressions* on general mathematics achievement. The WWC identified three studies of *Math Expressions*. One of these studies meets WWC standards. The evidence presented in this report is from one study of the effects of *Math Expressions* on students–including 37% White, 33% Black, 27% Hispanic or Latino, 2% Asian, and 1% American Indian or Alaska Native students–in first and second grades in urban, suburban, and rural districts.

Findings on *Math Expressions* from the one study that meets WWC standards are shown below. The table reports an effectiveness rating, the improvement index, and the number of studies and students that contributed to the findings. The effectiveness rating is based on the quality of the designs used in studies, whether the findings are favorable or unfavorable for the intervention, and the number of studies that tested the intervention. The improvement index is a measure of the intervention's effect on an outcome. A positive improvement index does not necessarily mean the estimated effect is statistically significant.

What Happens When Students Participate in Math Expressions?

		Study findings	Evidence meeting WWC standards (version 4.0)	
The WWC found that implementing Math Expressions:	Effectiveness rating	Improvement index (percentile points)	Number of studies	Number of students
May result in little to no increase in general mathematics achievement	No discernible effects	+1	1	8,060

FINDINGS ARE BASED ON:



1 study with 8,060 elementary students in 10 states covering grades 1 and 2

STUDENT CHARACTERISTICS: Free & reduced-price Gender: Race:

Free & reduced-price	Gender:	Race:	Ethnicity:
lunch: 51%	48% female	63% minority	27% Hispanic

What Does Math Expressions Cost?

Math Expressions includes several teacher and student components. The typical cost per teacher for teacher materials, including print and a single-year digital license, is \$646, or \$1,311 for the print materials and a 6-year license. The typical cost per student for student materials, including

print and a 1-year digital license, is \$48, or \$150 for 6 years of consumable print materials and a 6-year digital license. For a class of 20 students, the cost can range from about \$1,600 for 1 year to \$4,300 for 6 years based on these costs. The teacher and student components can be purchased separately.

-LEARN MORE

Read more about the *Math Expressions* intervention and the study that is summarized in this snapshot in the <u>Intervention Report</u>. Contact <u>Houghton Mifflin Harcourt</u> for additional information on implementing *Math Expressions*.

WHAT WORKS CLEARINGHOUSETM May 2021

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