Increased Math Proficiency in Birmingham Public Schools with Imagine Learning Illustrative Mathematics

Overview

Birmingham Public Schools is a suburban district in Michigan that serves approximately seven thousand students across thirteen schools. They piloted Imagine Learning Illustrative Mathematics in a subset of their Grades K–7 classrooms during the 2022–2023 school year. They chose to implement Imagine Learning Illustrative Mathematics district-wide for students in Grades K–8 during the 2023–2024 school year. To measure changes in math proficiency, Imagine Learning longitudinally analyzed i-Ready performance for students in Grades K–2, M-STEP performance for students in Grades 3–7, and PSAT performance for students in Grade 8 before and after the implementation of the Imagine Learning Illustrative Mathematics.

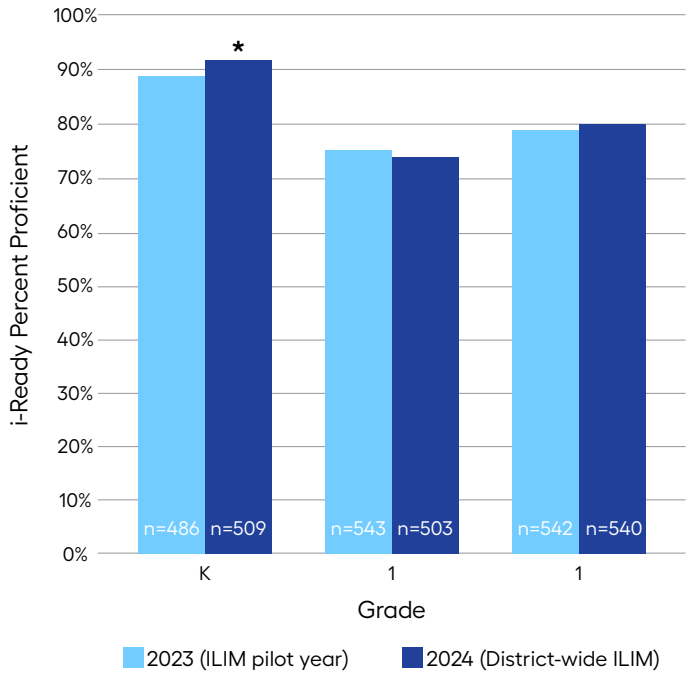
Birmingham Public Schools, Michigan

Demographics	Percent
White	77%
Black or African American	9%
Hispanic or Latino	3%
Asian	4%
Two or More Races	7%
English as a Second Language (ESL)	6%
Female	48%
Special Education	17%
Economically Disadvantaged	9%

Results

Findings show that after implementing Imagine Learning Illustrative Mathematics, students demonstrated gains in mathematics proficiency as measured by the i-Ready, M-STEP, and PSAT assessments. Specifically, Kindergarten math proficiency levels were statistically significantly higher in Spring 2024 compared to Spring 2023 based on the i-Ready math assessment; changes in math proficiency levels for Grades 1 and 2 were not statistically significant (Figure 1). Further, M-STEP assessment results show statistically significant gains in math proficiency for Grades 4, 6 and 7; changes in math proficiency levels for Grades 3 and 5 were not statistically significant (Figure 2).

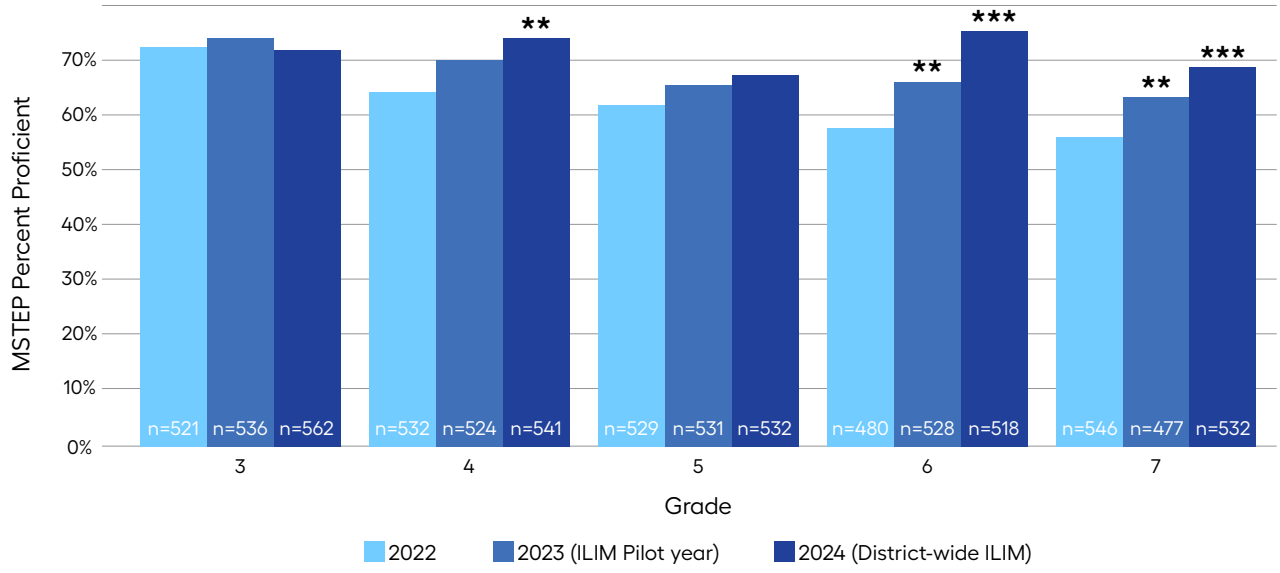
Figure 1. Percent of Grade K–2 Students in Birmingham Public Schools Achieving Math Proficiency on i-Ready Assessment by School Year



Note: *: p < .05; **: p < .01; ***: p < .001

Finally, proficiency levels for Grade 8 students on the PSAT assessment were higher in 2024 compared to the previous two years (the difference was not statistically significant, Figure 3).

Figure 2. Percent of Grade 3–7 Students in Birmingham Public Schools Achieving Math Proficiency on M-STEP Assessment by School Year



Note: *: p < .05; **: p < .01; ***: p < .001

Overall, these findings demonstrate the effectiveness of Imagine Learning Illustrative Mathematics for supporting math achievement of students in Grades K–8. The cohort analyses indicate that there were higher average proficiency levels after the introduction of the Imagine Learning Illustrative Mathematics.

Figure 3. Percent of Grade 8 Students in Birmingham Public Schools Achieving Math Proficiency on PSAT Assessment by School Year