

i-Ready Classroom Mathematics and State Assessment Performance

i-Ready Classroom Mathematics (iRCL) is a student-centered core mathematics program designed to prepare all students to succeed with grade-level content. Built on the Effective Mathematics Teaching Practices as defined by the National Council of Teachers of Mathematics (NCTM)¹, iRCL supports teachers in identifying where students are in their mathematical understanding to accelerate their progress toward grade level. This study offers initial insight into mathematics achievement for schools who have reported using iRCL for two consecutive years compared to similar schools who have not implemented the program.

Key Findings

- Schools who report using iRCL demonstrate **significantly higher state test scores** than comparable schools who have not implemented the program.
- Schools who report using iRCL demonstrate **significantly higher proportions of students scoring proficient in most grades** on state tests than comparable schools who have not implemented the program.
- If non-iRCL students scored comparably to iRCL students, in some grades, this would equate to a **doubling of the proportion of students scoring proficient** in the non-iRCL group.

Methods

To attempt to isolate the effects of iRCL on school performance, researchers employed propensity score matching to find comparable or similar schools. iRCL and non-iRCL schools were matched on demographic makeup, including race/ethnicity, free/reduced-priced lunch status, and fall performance on the *i-Ready Diagnostic* for Mathematics. Data were examined for 40 schools for students in Grades 3–5 and 22 schools for Grades 6–8. After matching, schools were appropriately balanced on the variables of interest (see Table 1), with standardized mean differences of < .25. Significance testing was conducted to evaluate the differences between the iRCL and non-iRCL schools in terms of average state test scale score and percentage of proficient students by grade.

Table 1. iRCL and Non-iRCL School Characteristics after Matching

Grade and iRCL Status		Count Schools	Mean Fall Diagnostic Score	Mean Enrollment	Percent Free/Reduced-Price Lunch	Mean Teacher Ratio	Percentage Hispanic	Percentage Black	Percentage White
Grades 3–5	iRCL	20	429.4	515	.62	19.5	.06	.36	.48
	Non-iRCL	20	429.3	473	.63	18.6	.11	.30	.54
Grades 6–8	iRCL	11	473.4	405	.66	20.9	.04	.40	.53
	Non-iRCL	11	471.4	581	.66	21.1	.07	.37	.49

¹NCTM. (2014). *Principles to actions: Ensuring mathematical success for all*. Author.

Results

Schools who reported using iRCL demonstrated significantly higher scores (see Figure 1) and proportions of students scoring proficient, in most grades (see Figure 2), on the state assessment than schools not implementing the program. To further contextualize these differences, researchers evaluated the relative change in percentage of proficient students in the non-iRCL group if student scores were to increase by the difference in average score between the iRCL and non-iRCL groups. This would equate to an average of 8% (ranging from 3.7% to 11.4%) more students scoring proficient in every grade examined. For some grades, this relative increase would translate to twice the proportion of students scoring proficient.

Figure 1. Average Scale Score for iRCL and Non-iRCL Users

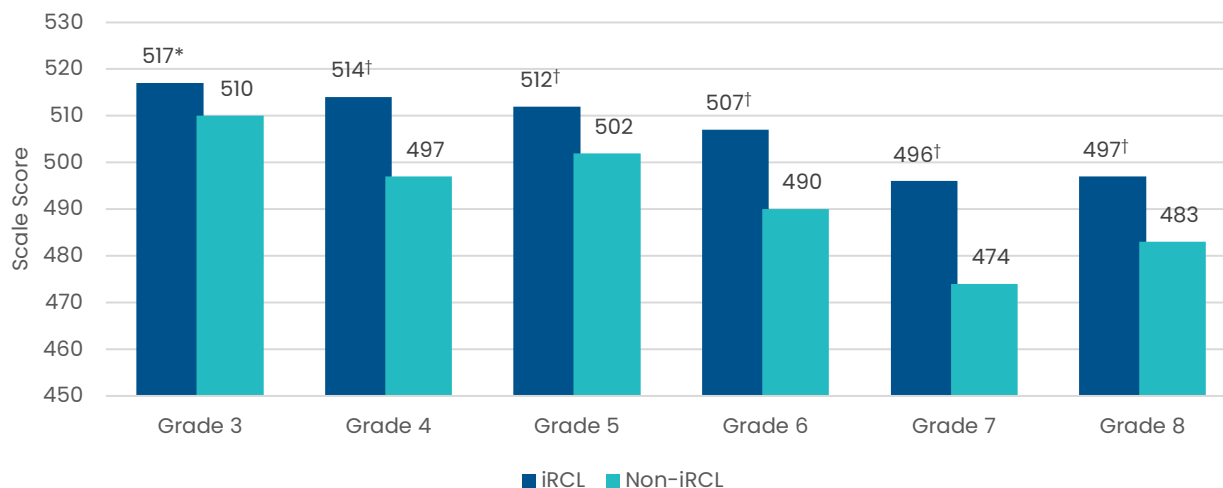
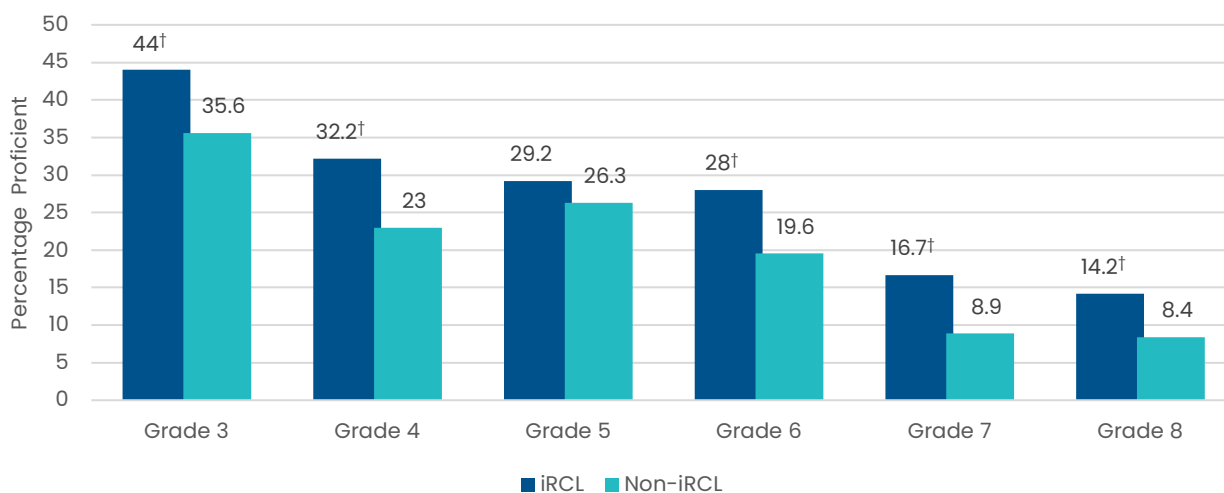


Figure 2. Average Percentage Proficient for iRCL and Non-iRCL Users



* $p < .05$. | † $p < .001$

Discussion

The current study provides high-level estimates of use of iRCL in relation to student achievement. Limitations in iRCL data prevented a measure of implementation and matching at the student level. Despite these caveats, results suggest schools who have implemented iRCL may demonstrate higher scores on state assessments as well as greater proportions of students scoring proficient. More research is needed to build on this work and further evaluate the efficacy of iRCL for students' mathematics performance.