i-Ready Personalized Instruction and State Assessment Performance across Race/Ethnicity

State assessment performance is a key metric in accountability systems. As such, state and district leaders often require evidence of how instructional products may support this performance. Instructional products like the *i-Ready Diagnostic* and *i-Ready Personalized Instruction* (i.e., *i-Ready* PI), are state-agnostic, however, designed to serve broader populations. To better identify how these tools aid state assessment performance, Curriculum Associates (CA) conducts state-specific research. This existing research quantifies the association between *i-Ready* PI use and state summative exams. Studies are designed to evaluate whether greater student engagement with *i-Ready* PI is associated with higher achievement on state exams.

Prior work has shown students using *i-Ready* PI with fidelity tend to score higher on state summative exams in reading and mathematics than their peers using less consistently. This association held across states, grades, and subjects, but has not been explored across subpopulations. Given often limited samples within a state, pooling data across states for key subgroups allows for a larger sample through which to explore this relation. To understand the association between use of *i-Ready* PI and performance on state assessments across the nation, CA conducted a pooled analysis across 25 states (see full report). This analysis was then repeated to focus on different race/ethnicity subgroups.

Key Findings

- In all grades and subjects, across race/ethnicity groups, students using *i-Ready* PI with fidelity **scored higher on state tests** compared to peers using less consistently.
- These score differences are considered **medium to large**.
- On a common metric, fidelity users score anywhere from **four to 14 points higher**.

Methods

Scan to Read the Technical Report

The current research utilizes data from state assessments from the 2021–2022, 2022–2023, and 2023–2024 academic years with *i-Ready* PI usage data from the corresponding year. *i-Ready* PI usage data examined how students engaged with the product to determine fidelity users. To use with fidelity, students had to: 1) complete *i-Ready* PI lessons with at least a 70 percent pass rate, 2) use *i-Ready* PI for 18 or more weeks across the academic year, and 3) use *i-Ready* PI for at least 30 minutes per week. Students who met all criteria were considered fidelity users, whereas all other students were non-fidelity users. To make state assessment scores comparable across states, CA leveraged equipercentile linking[1]. This technique converts scores on one test to the

[1]Kolen, M. J., & Brennan, R. L. (2004). *Test equating, scaling, and linking*. Springer.

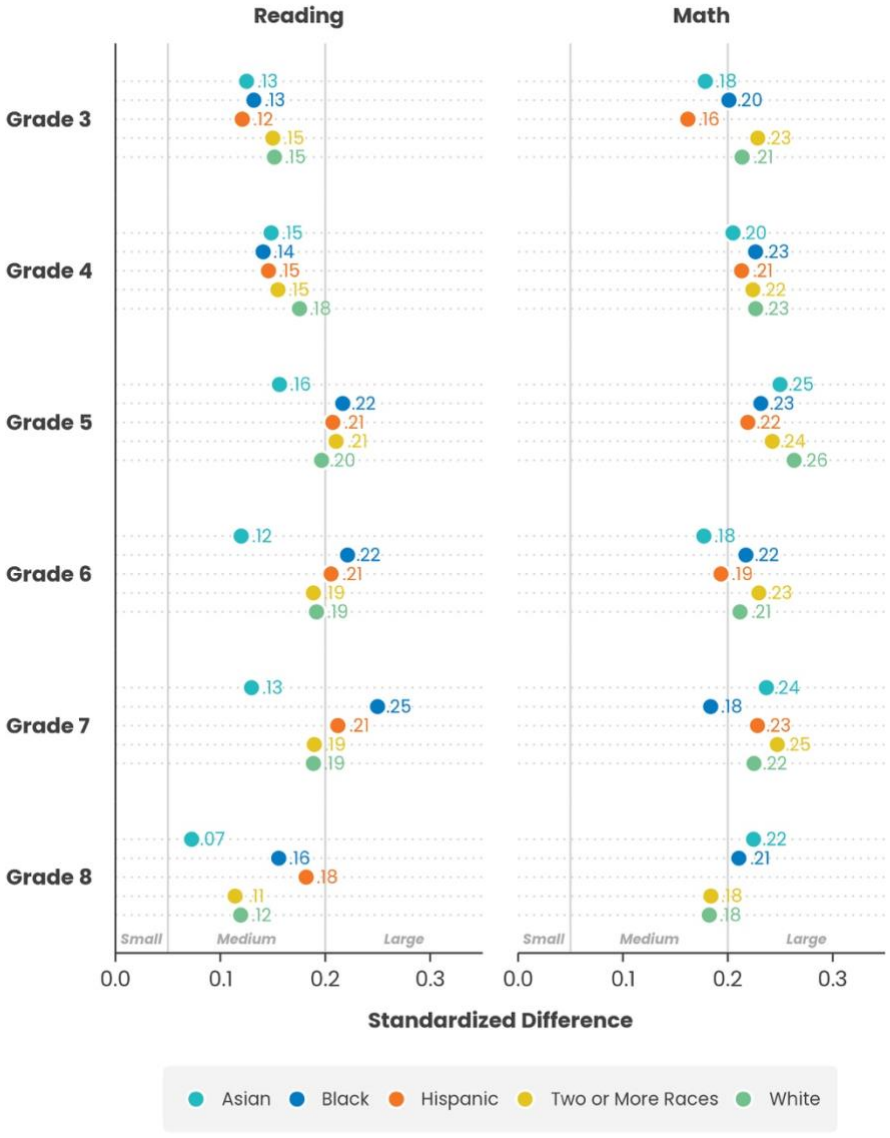
associated score on another test. After pooling and converting state data to a common metric, we utilized linear modeling to estimate state assessment performance differences between non-fidelity and fidelity students, accounting for fall performance and school context.

Results

Standardized Differences

Aggregating data with meta-analytic approaches provides a comprehensive view of the association between *i-Ready* PI and state assessment performance, especially for subpopulations that are often too small to explore in state-level samples. Results show medium to large score differences between non-fidelity and fidelity students after accounting for prior achievement and school context (see Figure 1). For example, Hispanic students in Grade 5 Reading who used *i-Ready* PI with fidelity scored .21 standard deviations higher than Hispanic peers in the same school, with similar baseline performance who used less consistently. These effects were consistent across grades and subjects.

Figure 1. Standardized Score Differences between Fidelity and Non-Fidelity *i-Ready* PI Use



Score Differences

To contextualize these standardized differences, we visualized score differences (based on scores from a common metric) for non-fidelity and fidelity students across race/ethnicity groups to identify the difference between an average student in the two groups. These results show that across states explored, on average, students, regardless of race/ethnicity, using *i-Ready* PI with fidelity scores anywhere from four to 14 points higher than other students of the same subgroup using less consistently, after accounting for fall performance and school context (see Table 1).

Table 1. Translated Reading and Mathematics State Scores by *i-Ready* PI Use

Subgroup *n* Reading *n* Math	Grade	Reading				Mathematics			
		Non-Fidelity	Fidelity	Point Difference	Standardized Difference	Non-Fidelity	Fidelity	Point Difference	Standardized Difference
	3	520	526	6	0.13	448	454	6	0.18
Asian	4	550	557	7	0.15	465	471	6	0.20
	5	568	576	8	0.16	475	483	8	0.25
40,456	6	576	582	6	0.12	486	492	6	0.18
43,791	7	593	600	7	0.13	492	500	8	0.24
	8	606	610	4	0.07	499	508	9	0.22
	3	510	517	7	0.13	440	446	6	0.20
Black	4	538	545	7	0.14	457	464	7	0.23
	5	555	566	11	0.22	467	475	8	0.23
163,831	6	562	574	12	0.22	478	486	8	0.22
187,349	7	578	592	14	0.25	483	490	7	0.18
	8	592	601	9	0.16	490	498	8	0.21
	3	515	522	7	0.12	444	449	5	0.16
Hispanic	4	543	551	8	0.15	460	467	7	0.21
	5	561	572	11	0.21	470	477	7	0.22
226,792	6	567	578	11	0.21	481	487	6	0.19
268,054	7	584	595	11	0.21	486	494	8	0.23
	8	597	607	10	0.18	-	-	-	-
Two or	3	515	523	8	0.15	443	450	7	0.23
More	4	543	551	8	0.15	460	467	7	0.22
Races	5	561	572	11	0.21	470	478	8	0.24
	6	568	578	10	0.19	481	489	8	0.23
36,744	7	585	596	11	0.19	487	496	9	0.25
43,864	8	599	605	6	0.11	494	501	7	0.18
	3	518	526	8	0.15	445	451	6	0.21
White	4	546	555	9	0.18	462	469	7	0.23
	5	563	573	10	0.20	472	480	8	0.26
288,604	6	570	580	10	0.19	484	491	7	0.21
347,253	7	587	598	11	0.19	490	498	8	0.22
	8	600	607	7	0.12	496	503	7	0.18

Conclusion

Prior research has shown the positive association between fidelity use of *i-Ready* PI and state assessment performance. The current study expands on this work to demonstrate this association holds across race/ethnicity. As educators are tasked with supporting a wider array of students, it's important the instructional resources implemented can equally benefit the diverse body of students served. These results indicate use of *i-Ready* PI with fidelity is associated with improved state assessment performance regardless of race/ethnicity.