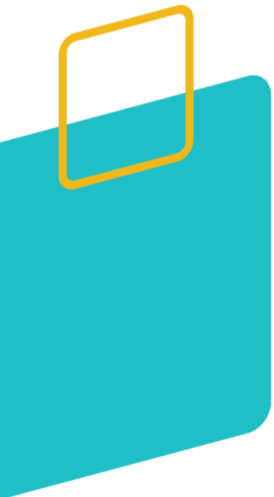




Impact of *i-Ready Personalized Instruction* with Fidelity on Student Achievement in English Language Arts

Executive Summary | February 2023



Overview

The Center for Research and Reform in Education (CRRE) at Johns Hopkins University (JHU) conducted a research study to examine the impact of *i-Ready Personalized Instruction* (i.e., *i-Ready*) on the reading achievement of students from five school districts across Massachusetts. Using a quasi-experimental design study and data from the 2020–2021 school year, CRRE found that students who used *i-Ready* with fidelity outperformed students who did not use *i-Ready* on the Massachusetts Comprehensive Assessment System for English Language Arts (MCAS ELA).

The design of this research study meets the Every Student Succeeds Act (ESSA) Level 2 criteria for Moderate Evidence. The results from this study demonstrate that using *i-Ready* is related to improved performance on a state summative test. The results of this study are summarized here.

The following paper summarizes results for *i-Ready Personalized Instruction* for Reading. To learn more about the results for *i-Ready Personalized Instruction* for Mathematics on the MCAS and other *i-Ready* research, click [here](#).

Introduction

The 2020–2021 school year was a challenging year for educators, students, and communities due to the global COVID-19 pandemic. Across the country, national and statewide standardized assessments showed a decline in both mathematics and reading scores (NAEP, 2022a; 2022b). Curriculum Associates contracted the CRRE at JHU to conduct an efficacy study of the effects of *i-Ready*, specifically for students meeting Curriculum Associates' usage guidance (i.e., used *i-Ready* with fidelity), during the 2020–2021 school year. The full report, *The Impact of i-Ready Personalized Instruction with Fidelity on 2021 MCAS ELA Achievement*, by Michael Cook and Steven Ross (2022) is available [here](#).

i-Ready is a research-based program for Grades K–8 students with an individualized plan for instruction based on each student's performance on the online, adaptive *i-Ready Diagnostic* (i.e., Diagnostic). Once students complete the Diagnostic, *i-Ready* builds a unique lesson plan with a differentiated starting point for every learner based on their overall and domain-level placement. *i-Ready* allows teachers to add lessons and/or adjust the lesson sequence provided to individuals or groups of students. *i-Ready* is aligned to college- and career-ready standards and embeds multimedia instruction and progress monitoring into every online lesson. Lessons provide explicit instruction and extensive practice, offer supportive feedback, and build conceptual understanding for learners of all levels. Curriculum Associates recommends that all students using *i-Ready* maintain an average of 30–49 minutes of Lesson Time-on-Task per subject per week with at least 70% of lessons passed for the year.

Study Overview

The purpose of the research study was to examine the impact of using *i-Ready* with fidelity on achievement gains on Massachusetts' state summative assessment, the MCAS ELA, between students who used *i-Ready* with fidelity (i.e., *i-Ready* group) and students who did not use *i-Ready* (i.e., comparison group). This study included 4,499 students in five Massachusetts school districts. This study was designed to learn more about the effectiveness of *i-Ready* on student achievement on a state summative assessment, particularly during a school year in which students faced significant learning disruption. This study provides evidence that using *i-Ready* with fidelity can improve student achievement outcomes on the MCAS ELA, even in a year when student achievement across the nation declined and students faced significant unfinished learning.

Included in the data sources for this study are *i-Ready Diagnostic* scores, *i-Ready* usage data, student demographic data, and student MCAS scores. Student data from the 2020–2021 school year were analyzed to compare achievement gains between students who received *i-Ready* instruction and students who did not receive *i-Ready* instruction throughout the school year. Student data in Grades 3–8 (except for Grade 6 due to unmet baseline equivalence criteria) were analyzed by examining patterns of MCAS and *i-Ready Diagnostic* scores and *i-Ready* usage and comparing achievement patterns between students who used *i-Ready* with fidelity and comparison group students. Researchers used hierarchical linear modeling at each grade level to compare the differences in MCAS achievement between the *i-Ready* and comparison group students. Baseline equivalence was not initially met for fall 2020 *i-Ready* Reading scores across all grade levels. Further, MCAS assessments were not completed in spring 2020 due to COVID-19-related school closures, which is why fall Diagnostic scale scores served as the pre-achievement measure for this study.

To adjust for the large standardized mean differences between the *i-Ready* and comparison group students on baseline achievement, propensity score weighting (PSW) was used for the purpose of creating comparison groups that were as similar as possible (e.g., prior achievement, demographics) to the groups of *i-Ready* students. As analyses were intended to be performed by grade level, PSW was also conducted separately at each grade level.

Findings

CRRE researchers found that, across Grades 3–8, using *i-Ready* with fidelity was associated with statistically significantly positive effects, with *i-Ready* students scoring an average of 6 points higher than their grade-level peers who did not use *i-Ready*. Within Grades 3–5, 7, and 8, students who used *i-Ready* with fidelity scored 3–12 points higher, on average, on the MCAS ELA than students who did not use *i-Ready*. When grouped by grade bands, using *i-Ready* with fidelity was associated with statistically significantly positive effects for elementary school (outgaining comparison students by nearly 6 points on average) and middle school students (outgaining comparison students by more than 7 points on average). See Graph 1 and Table 1.

Graph 1: Spring MCAS ELA Scores for *i-Ready* Students above and beyond the Comparison Group Students

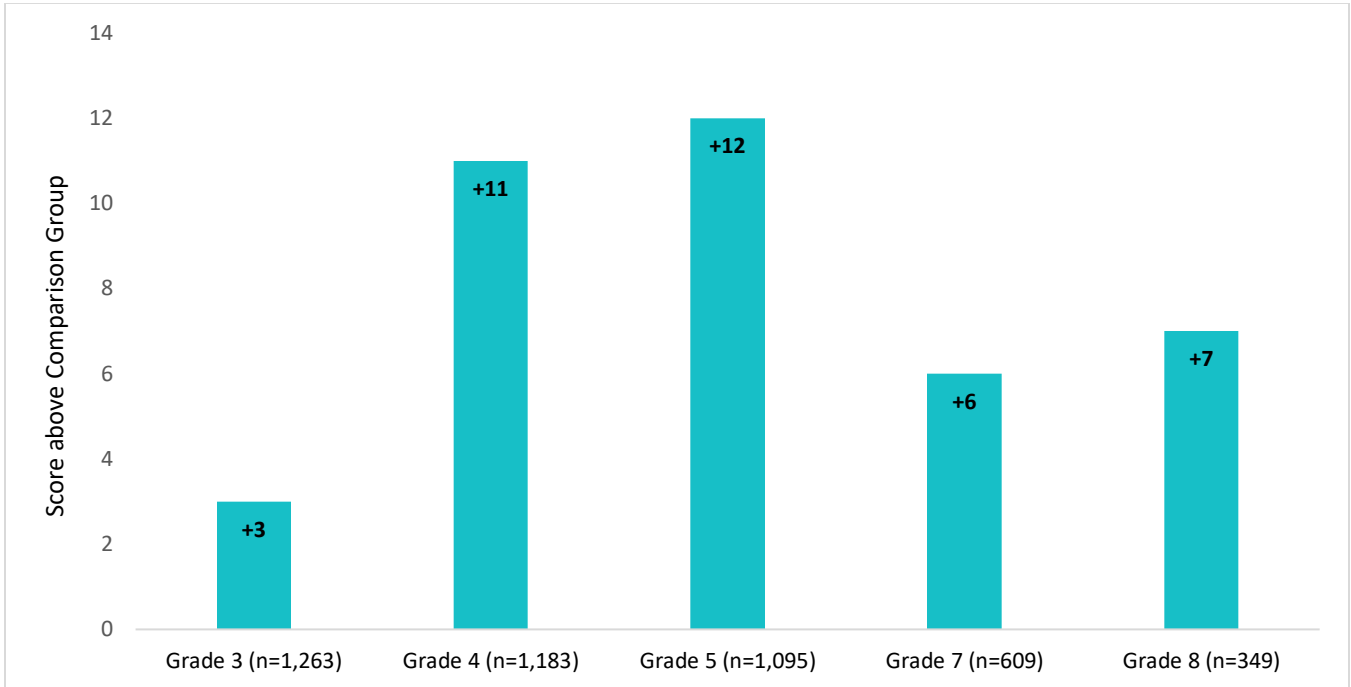


Table 1: Impact of *i-Ready* on MCAS ELA Scores by Grade Level and Grade Band Group

Treatment Group	Number of Students	Score Gain above Comparison Group	Effect Size
By Grade Level			
Grade 3	1,263	+3	.15
Grade 4	1,183	+11*	.49
Grade 5	1,095	+12^	.55
Grade 7	609	+6^	.26
Grade 8	349	+7***	.31
By Grade Band			

Elementary (Grades 3–5)	3,541	+6**	.28
Middle (Grades 7–8)	958	+7***	.31
By All <i>i-Ready</i> Users			
All Grades (3–5, 7, 8)	4,499	+6**	.29

Note: $\wedge p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. Grade 6 is not included due to not meeting weighting criteria.

While results at every grade level were not statistically significant, results across all grade levels were all directionally positive. A lack of statistical significance in Grades 3, 5, and 7—though Grades 5 and 7 both approached statistical significance—was due to factors such as treatment group size (i.e., analyses may have been underpowered to find a treatment effect), variability in MCAS scores due to out-of-school testing at the lower grades, and increased variability as a result of weighting for baseline equivalence that resulted in larger standard errors in some grades.

Conclusion

This study demonstrates the relationship between using *i-Ready Personalized Instruction* for Reading with fidelity and achievement on a statewide summative assessment during the 2020–2021 school year. CRRE researchers observed statistically significant positive effects of *i-Ready* on MCAS ELA scores in Grades 4 and 8, with *i-Ready* students in all grades averaging 3–12 points higher than their comparison group counterparts on the MCAS ELA. The findings from this study establish a positive influence of *i-Ready* on MCAS achievement while also suggesting a magnitude of effects that are comparable or larger than other educational programs on standardized assessment outcomes (Lipsey et al., 2012). The results of this study will, hopefully, benefit educators using *i-Ready* or those considering using *i-Ready*. In addition, students can significantly benefit from using *i-Ready* with fidelity to help improve their achievement outcomes in an era in which we are continuing to adjust to learning transitions and disruptions related to the pandemic.

References

Cook, M., & Ross, S. M. (2022). *The impact of i-Ready Personalized Instruction with fidelity on 2021 MCAS ELA achievement: Final report*. Johns Hopkins Center for Research and Reform in Education. <https://eric.ed.gov/?id=ED622942>



Lipsey, M. W., Puzio, K., Yun, C., Hebert, M. A., Steinka-Fry, K., Cole, M. W., Roberts, M., Anthony, K. S., & Busick, M. D. (2012). *Translating the statistical representation of the effects of education interventions into more readily interpretable forms*. Institute of Education Sciences, National Center for Special Education Research. <https://ies.ed.gov/ncser/pubs/20133000/pdf/20133000.pdf>

National Assessment of Educational Progress (NAEP). (2022a). *Explore results for the 2022 NAEP Mathematics Assessment*. <https://www.nationsreportcard.gov/mathematics>

NAEP. (2022b). *Explore results for the 2022 NAEP Reading Assessment*. <https://www.nationsreportcard.gov/reading>