Curriculum Associates® RESEARCH

i-Ready Students Make Outsized Gains on the Massachusetts Comprehensive Assessment System

Reading and Mathematics
Research Summary, March 2022

i-Ready

Curriculum Associates® RESEARCH

i-Ready Students Make Outsized Gains on the Massachusetts Comprehensive Assessment System

Reading and Mathematics
Research Summary, March 2022

Summary

As the COVID-19 pandemic spread across the globe, schools in the United States closed their doors to keep students, teachers, and staff safe. During this challenging time, educators sought creative alternatives to keep students engaged at home through online learning platforms. *i-Ready Personalized Instruction* was one of many digital learning solutions adopted by school districts in Massachusetts and across the country for the 2020–2021 school year. The purpose of this study was to learn more about the effectiveness of *i-Ready* instruction on Grade 5 student achievement during one of the most disruptive periods in the history of US education.

This study examined the impact of *i-Ready* usage on reading and mathematics achievement of students in Grade 5 in six school districts on the Massachusetts end-of-year state summative test, the Massachusetts Comprehensive Assessment System (MCAS). A total of 2,132 students were included in the MCAS English Language Arts (ELA) study sample and a total of 2,256 students were included in the MCAS Mathematics study sample. The study population included historically marginalized students, such as students with disabilities and students of color.

i-Ready®

Key Findings

Students Using i-Ready *Had Larger Gains on the MCAS Than Comparison Group Students*

- Students who used *i-Ready* for Reading scored statistically significantly higher on the MCAS ELA state test and students who used *i-Ready* for Mathematics scored statistically significantly higher on the MCAS Mathematics state test.

- Students who used *i-Ready* for Reading to any extent performed an average of three points higher on the MCAS ELA compared to a similar group of comparison students, and students who used *i-Ready* for Mathematics to any extent performed an average of four points higher on the MCAS Mathematics compared to a similar group of comparison students.

- Students who met a higher usage threshold for *i-Ready* for Reading scored an average of eight points higher on the MCAS ELA than the comparison group, and students who met a higher usage threshold for *i-Ready* for Mathematics scored an average of 10 points higher on the MCAS Mathematics than the comparison group. These gains are larger than the amount of unfinished learning evident in the statewide decline on the MCAS between spring 2019 and spring 2021 (five points and nine points lower for ELA and Mathematics, respectively, for Grade 5 students).

Figure 1: *i-Ready* **Students' MCAS ELA and MCAS Mathematics Score Gains above the Comparison Group, by** *i-Ready* **Usage Group**
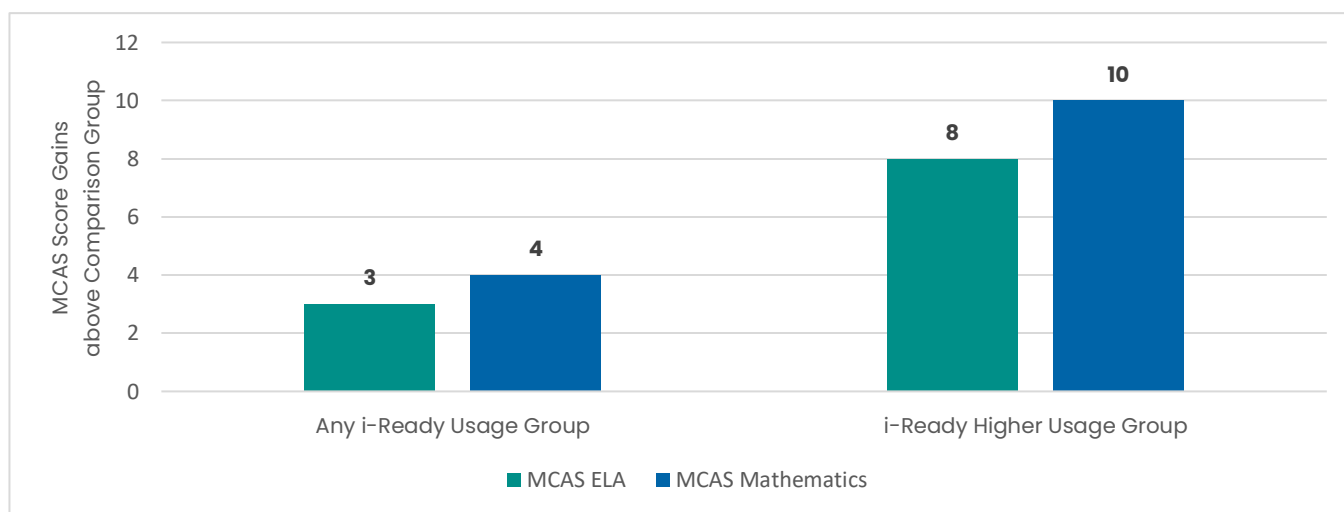
Note. Score gains are rounded to the nearest whole number. In the Any *i-Ready* Usage group, the effect sizes were .12 in ELA and .23 in Mathematics. In the *i-Ready* Higher Usage group, the effect sizes were .40 in ELA and .51 in Mathematics.

This study provides evidence that a strong relationship exists between using *i-Ready* to any extent and achieving higher scores on the MCAS assessment in both subjects. Furthermore, students who met a higher usage threshold for *i-Ready* experienced even greater gains on the MCAS assessment, and this was true in both subjects as well. This study meets the requirements of the Every Student Succeeds Act (ESSA) Level 2 (Moderate) evidence and received an ESSA Evidence Rating of Moderate from Evidence for ESSA at Johns Hopkins University.

Study Overview

The sample in this study included historically marginalized students, such as students with disabilities and students of color who were in Grade 5. Using an intent-to-treat design, the sample was divided into two groups, the *i-Ready Personalized Instruction* group and the Diagnostic-only comparison group. Approximately two-thirds of students were included in the *i-Ready* instruction treatment group, and the remaining students were placed into the comparison group.

With an intent-to-treat study design, any student who completed at least one *i-Ready Personalized Instruction* lesson was considered part of the *i-Ready* treatment group. It is recommended that students use *i-Ready* for at least 30–49 minutes on average per week with an average lesson pass rate of at least 70%. In the Reading study sample, students used *i-Ready* for an average of 37 minutes per week with an average lesson pass rate of 70% and completed an average of 31 lessons. In the Mathematics study sample, students used *i-Ready* for an average of 41 minutes per week with an average lesson pass rate of 78% and completed an average of 31 lessons. Although the sample, on average, met the recommended minutes of instruction usage per week, only 66% of the Reading study sample averaged at least 30 minutes per week and 74% of the Mathematics study sample averaged at least 30 minutes per week.

Results showed a statistically significant positive effect of *i-Ready* usage, regardless of the amount of usage, on both MCAS ELA and MCAS Mathematics scores. On average, students in the *i-Ready* for Reading intent-to-treat group performed three points higher, and for Mathematics, they performed four points higher on the MCAS compared to a comparison group of similar students. When the researchers looked at the impact of using *i-Ready* according to higher usage guidelines—for at least 30 minutes on average per week with a 70% lesson pass rate and a minimum of 18 weeks—MCAS gains were even higher. Students who used *i-Ready* according to the higher usage recommendations performed eight points higher on MCAS ELA than the comparison group, and students who used *i-Ready* for Mathematics according to the higher usage recommendations performed 10 points higher on MCAS Mathematics than comparison group students. Together, these results suggest that *i-Ready Personalized Instruction* can have a positive impact on student achievement in ELA and Mathematics and even more so when *i-Ready* usage is higher.

Research Methodology

For the primary analyses, students participating in this study were included in one of two groups: the *i-Ready* group or the comparison group. To be included in the *i-Ready* group, students must have completed at least one *i-Ready* lesson for a given subject between August 1 and November 15, 2020. Students who did not complete an *i-Ready* lesson during that same window of time were placed into the comparison group. The student characteristics were different between the *i-Ready* treatment and the comparison groups, with the instruction group having fewer White students and more Black and Latino students as well as more students with disabilities and lower-performing students on the fall Diagnostic than the comparison group. To address these differences, coarsened exact matching was used to minimize the sample differences on these key covariates.

The primary analyses were guided by two research questions:

1. What impact did *i-Ready* for Reading have on Grade 5 students' MCAS ELA achievement?

2. What impact did *i-Ready* for Mathematics have on Grade 5 students' MCAS Mathematics achievement?

Next, an exploratory analysis was conducted to examine the extent to which students in the *i-Ready* group used *i-Ready* as well as address the impact of *i-Ready* usage on MCAS achievement for students who used *i-Ready* at a higher dosage that more closely aligned to Curriculum Associates' recommended usage guidance. Two additional research questions were addressed during the exploratory phase of the research study:

3. To what extent were *i-Ready* students using *i-Ready Personalized Instruction* for Reading and Mathematics?

4. What is the impact of using *i-Ready* instruction according to usage recommendations on MCAS achievement for ELA and Mathematics?

To address these research questions, students were placed into one of three groups: the Any *i-Ready* Usage group (referred to as the *i-Ready Personalized Instruction* group in the Primary Analyses section of the full report), the Higher *i-Ready* Usage group (referred to as the Instruction Guidance group in the Exploratory Analyses section of the full report), or the comparison group (students who did not complete any *i-Ready* lessons but did have a Diagnostic score, referred to as the Diagnostic Only group throughout the full report).

Read the full research report to learn more.

Full Report Reference

Holzman, M. A., & Duncan, M. K. (2023). *Impact of* i-Ready® Personalized Instruction *on the Massachusetts Comprehensive Assessment System Achievement for Grade 5 in English Language Arts and Mathematics.* https://www.curriculumassociates.com/-/media/mainsite/files/i-ready/iready-impact-on-mcas-report-2022.pdf

4