

# The Relationship between *i-Ready Diagnostic* and the 2022 Massachusetts Comprehensive Assessment System (MCAS)

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## Research Overview

*i-Ready Diagnostic* and the 2022 MCAS are highly correlated—with an average spring correlation of **.81** for English Language Arts (ELA) and **.88** for Mathematics.

## About the Students Included in the Study

Curriculum Associates conducted a large-scale study on the relationship between the *i-Ready Diagnostic* and the 2022 MCAS for Grades 3–8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in Massachusetts for which there is a state summative assessment in place. Students came from a total of 14 school districts, one of which is a charter agency (see Table 1). The school districts were selected for participation in the study specifically to be representative of the state in terms of factors such as urbanicity, race/ethnicity, and socioeconomic status (using National School Lunch Program as a proxy). See the appendix for more information on the sample.

**Table 1. Demographic Information for Massachusetts Districts in Study**

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners <sup>1</sup>
1	10	Suburb (10)	5,000–5,499	35%	5%
2	6	Suburb (6)	4,500–4,999	65%	25%
3	6	Suburb (5), Rural (1)	3,500–3,999	70%	15%
4	9	Suburb (9)	3,000–3,499	45%	5%
5	5	Suburb (5)	2,000–2,499	15%	5%
6	5	Rural (4), Suburb (1)	2,000–2,499	25%	<5%
7	5	Suburb (5)	2,000–2,499	55%	15%
8	2	Suburb (2)	2,000–2,499	45%	20%
9	5	Suburb (5)	1,500–1,999	10%	<5%
10	3	Rural (2), Suburb (1)	1,500–1,999	30%	5%
11	3	Suburb (2), Rural (1)	1,500–1,999	10%	<5%
12	1	City (1)	1,000–1,499	50%	10%
13	2	Suburb (2)	1,000–1,499	20%	<5%
14	4	Suburb (3), Rural (1)	1,000–1,499	15%	<5%
<b>Average of Participating Districts<sup>2</sup></b>				39%	10%
<b>Average across All Districts in the State<sup>2</sup></b>				37%	11%

Note: Demographic data are available at the school and district level and may not precisely describe the study sample. District-specific statistics are provided as ranges or rounded to the nearest five percent in order to ensure the anonymity of participating districts.

<sup>1</sup>Data on English language learners is only available at the district level.

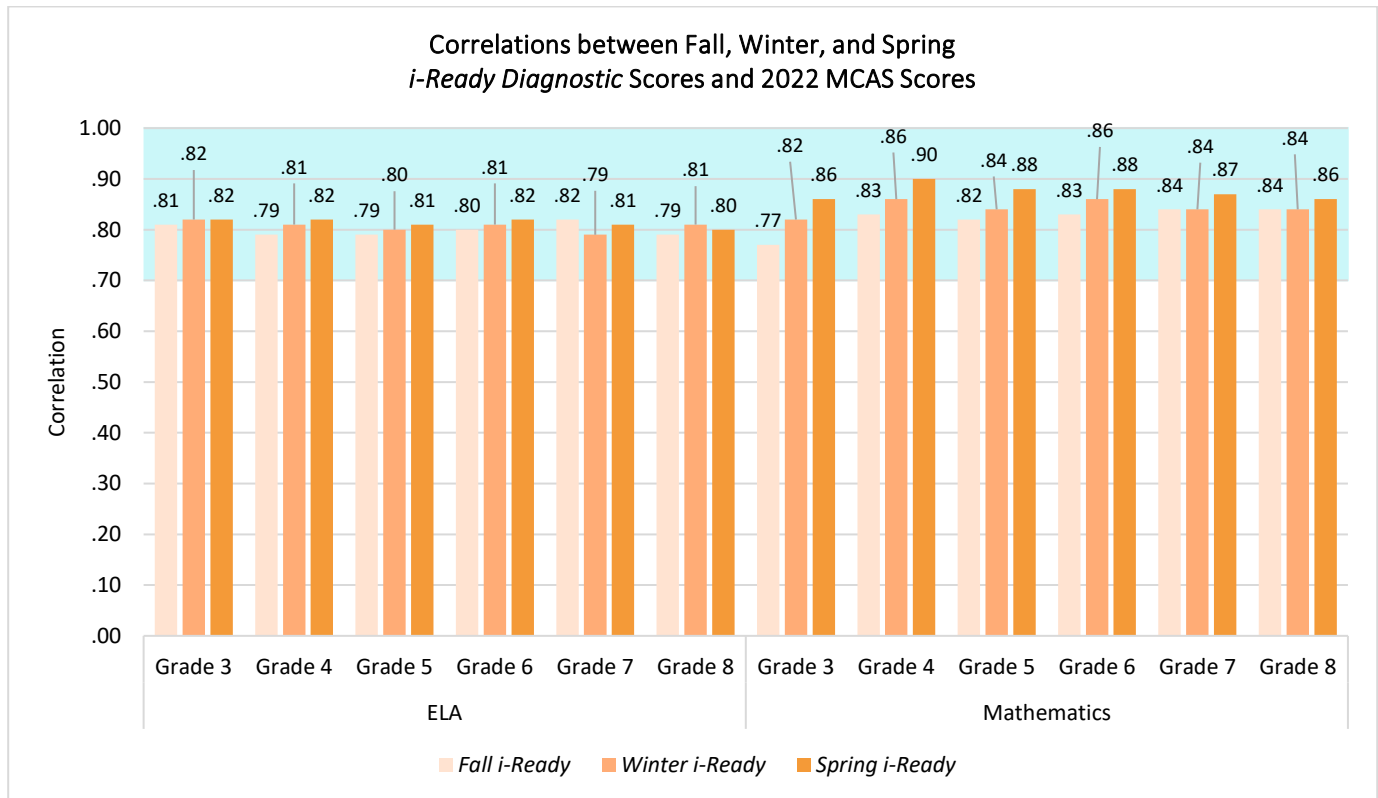
<sup>2</sup>Weighted averages.

Data from U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Local Education Agency (School District) Universe Survey”, 2020–2021 v.1a. (obtained from <https://nces.ed.gov/ccd/pubagency.asp>), represent 2020–2021 data, which was the most recent full dataset available from NCES at the time of the study.

## Correlation Results

Across all grades and in both subjects, results provide evidence for the strong correlation between *i-Ready Diagnostic* and the MCAS (see Figure 1). Specifically, spring correlations for ELA ranged from .80 for Grade 8 to .82 for Grades 3, 4, and 6, and spring correlations for Mathematics ranged from .86 for Grades 3 and 8 to .90 for Grade 4. These correlations, **all surpassing the .70 standard generally considered to be strong in education research**, provide evidence of a substantial relationship between *i-Ready Diagnostic* and the MCAS.

Figure 1



## Why Correlations Matter

Correlations are one of the most commonly used and widely accepted forms of validity evidence. Correlations demonstrate that when students score high on one assessment, they also tend to score high on the other, and similarly, when students score low on one assessment, they also tend to score low on the other. A high correlation between two assessments provides evidence that the two assessments are measuring related constructs.

## Appendix

The sample included more than 20,000 students, with between 2,463 and 3,099 students per grade for ELA for the spring *i-Ready* assessment and between 2,776 and 3,398 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the MCAS during the 2021–2022 school year. For the purposes of this study, *i-Ready Diagnostic* scores were included only if the student indicated that the test was taken completely in school.

**Table 2. Sample Sizes for Correlations**

	ELA			Mathematics		
	Fall	Winter	Spring	Fall	Winter	Spring
<b>Grade 3</b>	3,008	3,038	3,099	3,281	3,314	3,398
<b>Grade 4</b>	2,995	2,988	3,050	3,305	3,281	3,389
<b>Grade 5</b>	2,975	2,934	2,980	3,251	3,195	3,311
<b>Grade 6</b>	2,906	2,841	2,660	3,176	3,130	2,836
<b>Grade 7</b>	2,843	2,777	2,473	3,103	2,881	2,776
<b>Grade 8</b>	2,770	2,758	2,463	3,067	2,737	2,898

Table 3 shows the percentage of students in each race/ethnicity group from the study samples. In both the ELA and Mathematics samples, we have strong representation from students of different racial/ethnic groups.

**Table 3. Race/Ethnicity Information for Sample of Massachusetts Students in this Study**

	American Indian or Alaska Native	Asian	Black	Hawaiian or Pacific Islander	Hispanic	Two or More Races	White
<b>ELA</b>	.2%	5.0%	9.9%	.1%	26.1%	4.0%	54.7%
<b>Mathematics</b>	.2%	4.8%	9.3%	.1%	25.3%	3.9%	56.3%