The Relationship between *i-Ready Diagnostic* and the 2022 Maryland Comprehensive Assessment Program (MCAP)

Curriculum Associates Research Brief | June 2023

Research Overview

i-Ready Diagnostic and the 2022 MCAP are highly correlated—**with an average spring correlation of .79 for English Language Arts/Literacy (ELA) and .80 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 MCAP for Grades 3–8 in ELA and Grades 3–7 in Mathematics, the primary grades in which *i-Ready* is used in Maryland for which there is a state summative assessment in place.* Students came from a total of 7 school districts, all public and none of which were charter agencies (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 Maryland Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
1	160	Suburb (156), Rural (4)	85,000–89,999	70%	25%
2	94	City (94)	40,000–44,999	65%	10%
3	30	Suburb (21), Rural (9)	15,000–19,999	40%	5%
4	7	Rural (4), Town (3)	3,500–3,999	60%	10%
5	14	Rural (7), City (3), Suburb (3),Town (1)	3,500–3,999	50%	<5%
6	9	Rural (6), Town (3)	3,000–3,499	100%	5%
7	7	Rural (4), Suburb (2), Town (1)	2,500–2,999	35%	5%
Average of Participating Districts[2]				65%	15%
Average across All Districts in the State[2]				45%	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.
[1]Data on English language learners is only available at the district level. [2]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.

*In Maryland, not all Grade 8 students take the same Mathematics state test. Some students take a Grade 8 Mathematics MCAP while others take an Algebra test. To avoid confusion, we have omitted Mathematics Grade 8 from this report.

Correlation Results

Across all grades and in both subjects, results provide evidence for the strong correlation between *i-Ready Diagnostic* and the MCAP (see Figure 1). Specifically, spring correlations for ELA ranged from .72 for Grade 8 to .82 for Grade 3, and spring correlations for Mathematics ranged from .76 for Grade 7 to .83 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 MCAP.

Figure 1
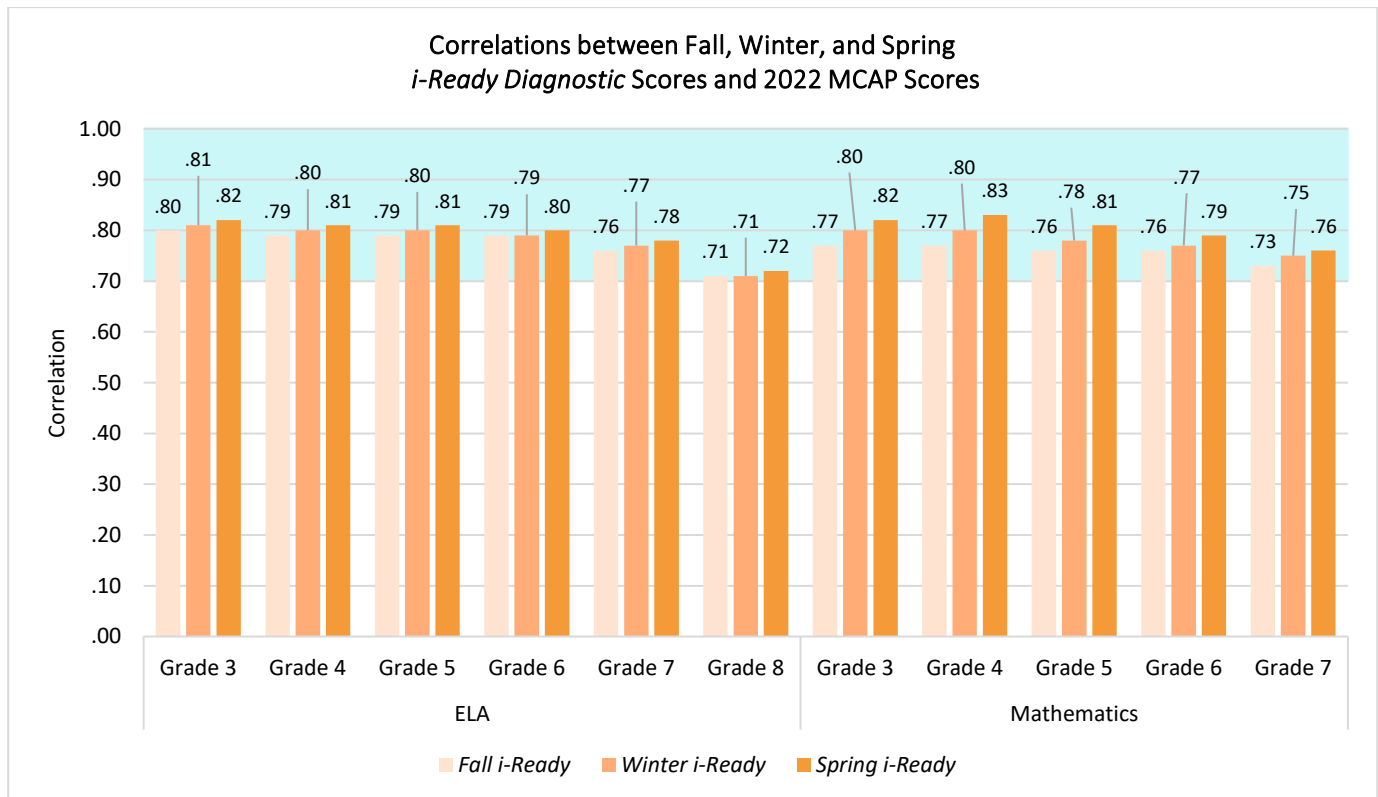
Correlations between Fall, Winter, and Spring *i-Ready Diagnostic* Scores and 2022 MCAP Scores

Note: In Maryland, not all Grade 8 students take the same Mathematics state test. Some students take a Grade 8 Mathematics MCAP while others take an Algebra test. To avoid confusion, we have omitted Mathematics Grade 8 from this report.

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.

MCAP Percent Proficient by *i-Ready* Placement Results

Across all grades and in both subjects, students who scored Mid On Grade Level or above on the spring *i-Ready* assessment had a high probability of scoring proficient on the MCAP. In ELA, the percentage of students who scored proficient on the MCAP, out of those who placed Mid On Grade Level or above in *i-Ready*, ranged from 86 percent in Grade 8 to 90 percent in Grades 3–6, with an average of 89 percent. In Mathematics, the percentage of students who scored proficient on the MCAP, out of those who placed Mid On Grade Level or above in *i-Ready*, ranged from 73 percent in Grades 6 and 7 to 92 percent in Grade 3, with an average of 80 percent.

Figure 2
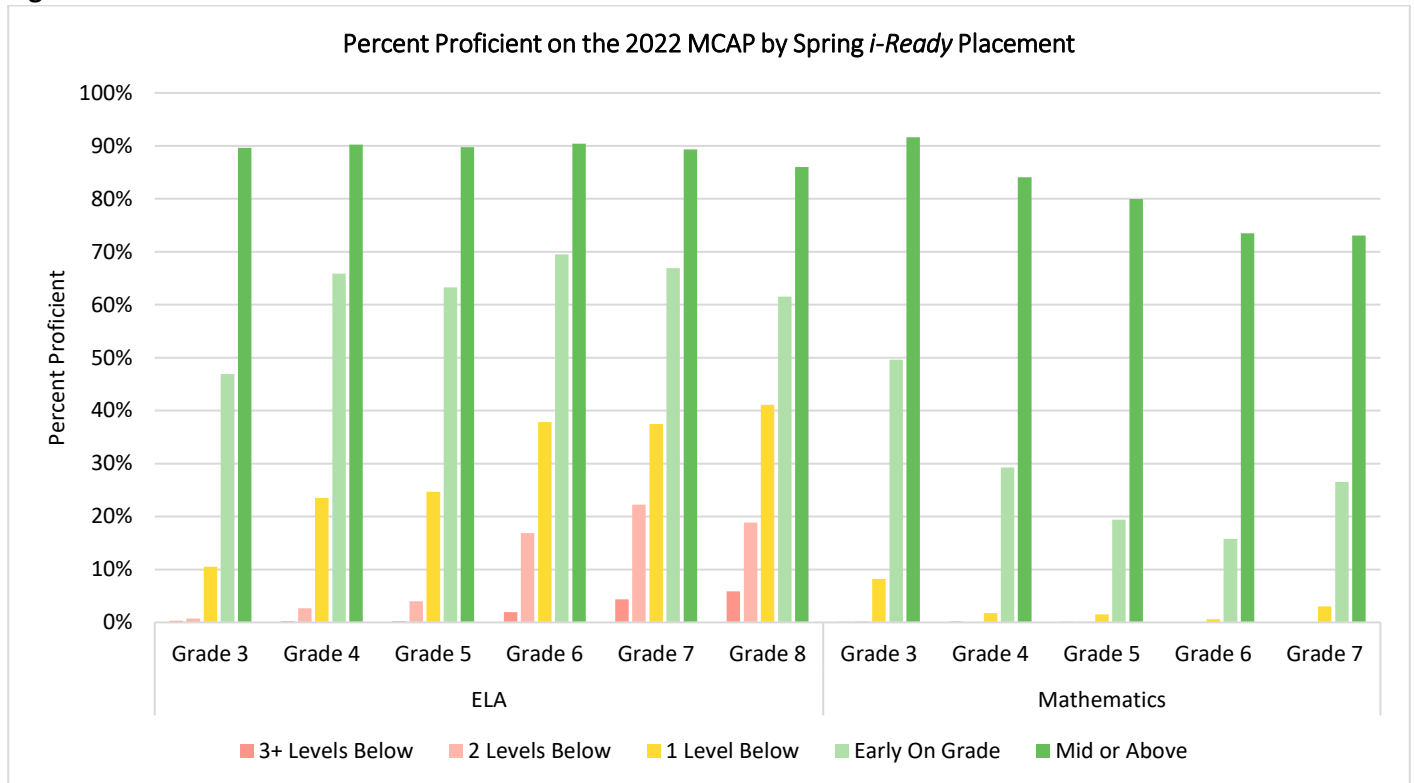
Percent Proficient on the 2022 MCAP by Spring *i-Ready* Placement

Note: In Maryland, not all Grade 8 students take the same Mathematics state test. Some students take a Grade 8 Mathematics MCAP while others take an Algebra test. To avoid confusion, we have omitted Mathematics Grade 8 from this report.

These results may help Maryland educators understand *i-Ready* placement levels in a state-specific context. Maryland students who score Mid On Grade Level or above in the spring *i-Ready* assessment have a high probability of scoring proficient on the MCAP. Additionally, students who score Early On Grade Level or even below grade level in the spring *i-Ready* assessment sometimes score proficient on the MCAP, but at much lower rates than those who score Mid On Grade Level or above.

Appendix

The sample included more than 58,000 students, with between 3,043 and 10,927 students per grade for ELA for the spring *i-Ready* assessment and between 4,678 and 6,050 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the MCAP 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**
Grade 3	9,001	9,237	10,693	5,216	5,332	5,764
Grade 4	9,001	9,458	10,927	5,460	5,649	6,050
Grade 5	9,206	9,424	10,780	5,383	5,533	5,781
Grade 6	3,249	3,284	3,503	4,356	4,555	4,678
Grade 7	2,966	2,996	3,074	4,566	4,546	4,745
Grade 8	2,995	2,905	3,043	N/A	N/A	N/A

Note: In Maryland, not all Grade 8 students take the same Mathematics state test. Some students take a Grade 8 Mathematics MCAP while others take an Algebra test. To avoid confusion, we have omitted Mathematics Grade 8 from this report. Additionally, to improve sample representativeness, select districts have been sampled down in the final study sample.

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 Maryland Students in this Study

	American Indian or Alaska Native	**Asian**	**Black**	**Hawaiian or Pacific Islander**	**Hispanic**	**Two or More Races**	**White**
ELA	.2%	2.5%	51.9%	.2%	30.3%	3.5%	11.4%
Mathematics	.2%	1.8%	51.4%	.2%	16.7%	5.1%	24.7%