The Relationship between *i-Ready Diagnostic* and the 2023 Michigan Student Test of Educational Progress (M-STEP) and the Preliminary SAT (PSAT 8/9)

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Research Overview

i-Ready Diagnostic is highly correlated with both the 2023 M-STEP and PSAT 8/9 —**with an average spring correlation with the M-STEP of .83 for English Language Arts (ELA) and .89 for Mathematics, and a spring correlation with the PSAT 8/9 of .77 for ELA and .79 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 2023 M-STEP for Grades 3–7 and the PSAT 8/9 for Grade 8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in Michigan for which there is a state summative assessment in place. Students came from a total of 11 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 Michigan Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
1	77	City (77)	30,000–34,999	85%	10%
2	8	City (8)	6,000–6,499	10%	20%
3	12	City (12)	5,000–5,499	75%	5%
4	10	Suburb (9), Rural (1)	5,000–5,499	30%	<5%
5	11	Suburb (10), City (1)	4,500–4,999	10%	<5%
6	7	Suburb (7)	4,000–4,499	50%	5%
7	6	Town (4), Rural (2)	3,000–3,499	45%	<5%
8	9	Suburb (9)	3,000–3,499	75%	<5%
9	2	Suburb (2)	1,500–1,999	85%	55%
10	3	Suburb (2), Rural (1)	1,000–1,499	35%	5%
11	4	Rural (3), Town (1)	1,000–1,499	40%	<5%
Average of Participating Districts[2]				62%	10%
Average across All Districts in the State[2]				50%	7%

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. Data from U.S. Department of Education, National Center for Education Statistics, ED*Facts* file 141, Data Group 678, 2020–2021, extracted May 10, 2023.
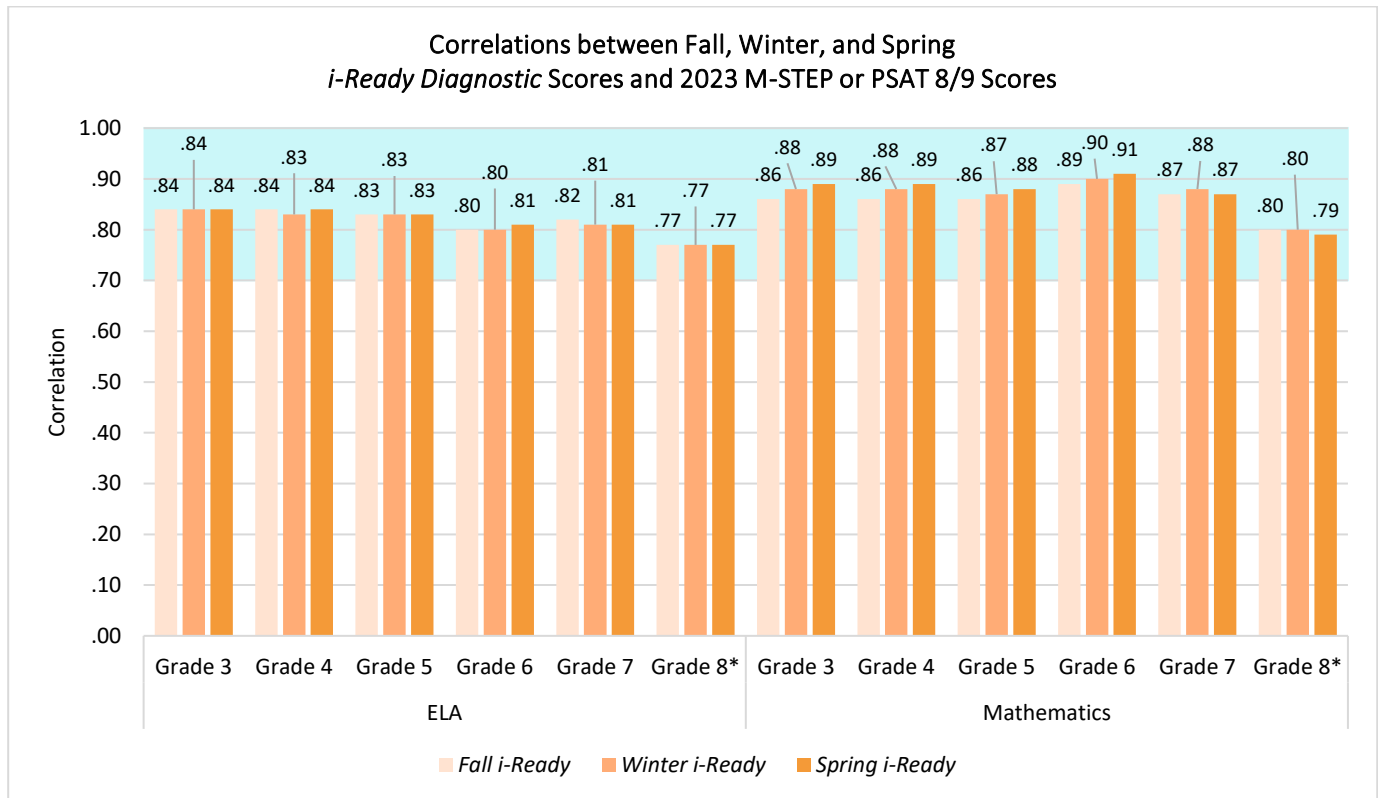
[2]Weighted averages.

Data from U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey", 2021–2022 v.1a. (obtained from https://nces.ed.gov/ccd/pubagency.asp), represent 2021–2022 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 both the M-STEP and PSAT 8/9 (see Figure 1). Specifically, spring correlations for ELA ranged from .77 for Grade 8 to .84 for Grades 3 and 4, and spring correlations for Mathematics ranged from .79 for Grade 8 to .91 for Grade 6. 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 both the M-STEP and PSAT 8/9.

Figure 1

Correlations between Fall, Winter, and Spring
i-Ready Diagnostic Scores and 2023 M-STEP or PSAT 8/9 Scores

*Grade 8 correlations are between *i-Ready Diagnostic* and the 2023 PSAT 8/9; correlations in Grades 3–7 are between *i-Ready Diagnostic* and the 2023 M-STEP.

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 39,000 students, with between 3,187 and 6,785 students per grade for ELA for the spring *i-Ready* assessment and between 3,158 and 6,856 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the M-STEP (Grades 3–7) or PSAT 8/9 (Grade 8) during the 2022–2023 school year.

Table 2. Sample Sizes for Correlations

	ELA			Mathematics		
	Fall	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**
Grade 3	6,572	6,782	6,785	6,652	6,843	6,856
Grade 4	6,408	6,607	6,628	6,452	6,657	6,674
Grade 5	6,546	6,689	6,734	6,616	6,778	6,825
Grade 6	6,079	6,232	6,257	6,183	6,318	6,351
Grade 7	5,779	5,978	5,997	5,890	6,069	6,045
Grade 8	3,199	3,229	3,187	3,173	3,193	3,158

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 Michigan Students in this Study

	American Indian or Alaska Native	**Asian**	**Black**	**Hawaiian or Pacific Islander**	**Hispanic**	**Two or More Races**	**White**
ELA	.2%	5.4%	46.6%	.1%	11.2%	2.9%	33.6%
Mathematics	.2%	5.0%	46.8%	.1%	11.4%	2.9%	33.7%