The Relationship between *i-Ready Diagnostic* and the 2023 Ohio's State Tests (OST)

Curriculum Associates Research Brief | December 2023

Research Overview

i-Ready Diagnostic and the 2023 OST are highly correlated—**with an average spring correlation of .82 for English Language Arts (ELA) and .85 for Mathematics.**

About the Students Included in the Study

Curriculum Associates, in partnership with WestEd, conducted a large-scale study on the relationship between the *i-Ready Diagnostic* and the 2023 OST for Grades 3–8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in Ohio for which there is a state summative assessment in place. Students came from a total of 15 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 Ohio Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
1	39	City (39)	10,000–14,999	70%	10%
2	27	Suburb (20), City (3), Rural (3),Town (1)	10,000–14,999	*	15%
3	45	City (45)	10,000–14,999	70%	<5%
4	12	Suburb (11), City (1)	7,000–7,499	*	5%
5	7	Suburb (7)	4,500–4,999	*	<5%
6	9	Suburb (7), Rural (2)	4,000–4,499	*	5%
7	13	Suburb (13)	4,000–4,499	65%	10%
8	7	Town (5), Rural (2)	3,500–3,999	*	<5%
9	7	Town (7)	3,000–3,499	65%	<5%
10	7	Suburb (7)	2,500–2,999	*	<5%
11	7	Suburb (6), Rural (1)	2,500–2,999	*	5%
12	2	Suburb (2)	1,500–1,999	25%	<5%
13	4	Suburb (4)	1,500–1,999	45%	25%
14	2	Town (2)	1,500–1,999	*	<5%
15	2	Suburb (2)	900–999	85%	<5%
Average of Participating Districts[2]				62%	6%
Average across All Districts in the State[2]				50%	4%

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.

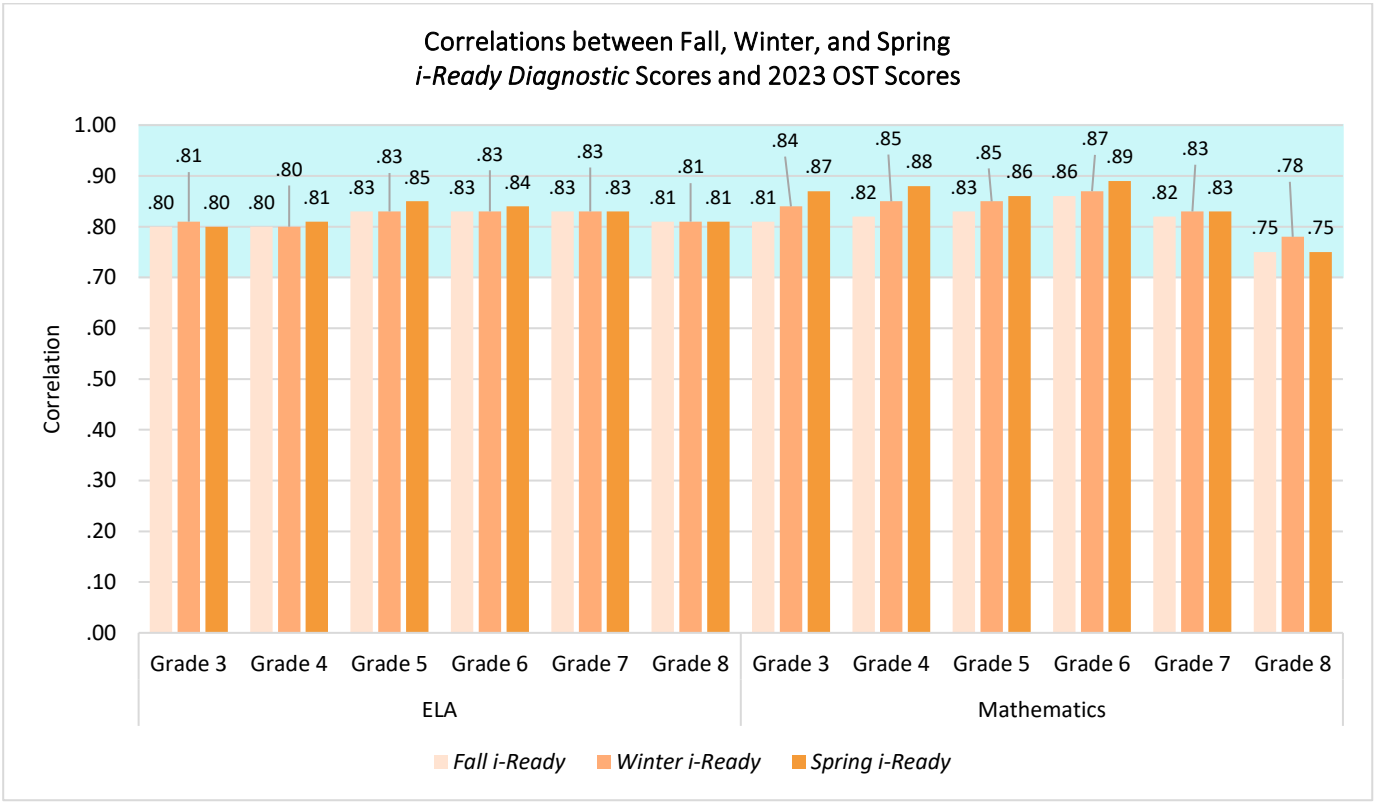
[2]Weighted averages.

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. An asterisk (*) signifies that NCES has recorded the data as missing, not available, or not reported data items.

Correlation Results

Across all grades and in both subjects, results provide evidence for the strong correlation between *i-Ready Diagnostic* and the OST (see Figure 1). Specifically, spring correlations for ELA ranged from .80 for Grade 3 to .85 for Grade 5, and spring correlations for Mathematics ranged from .75 for Grade 8 to .89 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 the OST.

Figure 1



Note: In Ohio, not all Grade 8 students take the same Mathematics state test. Some students take a Grade 8 Mathematics OST while others take an algebra test. This can restrict the sample of students and impact correlations in Mathematics Grade 8.

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 53,000 students, with between 7,093 and 8,874 students per grade for ELA for the spring *i-Ready* assessment and between 6,581 and 8,829 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the OST during the 2022–2023 school year.

Table 2. Sample Sizes for Correlations

	ELA			Mathematics		
	Fall	Winter	Spring	Fall	Winter	Spring
Grade 3	8,609	8,837	8,874	8,607	8,771	8,829
Grade 4	8,498	8,614	8,713	8,509	8,677	8,696
Grade 5	8,340	8,311	8,383	8,356	8,438	8,319
Grade 6	8,230	8,067	8,136	8,228	8,120	8,099
Grade 7	7,990	8,064	7,093	7,878	8,013	7,163
Grade 8	8,195	8,278	7,171	7,328	7,425	6,581

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 Ohio Students in this Study

	American Indian or Alaska Native	Asian	Black	Hawaiian or Pacific Islander	Hispanic	Two or More Races	White
ELA	.2%	3.5%	30.0%	.1%	13.5%	8.9%	43.9%
Mathematics	.2%	3.5%	30.6%	.1%	13.5%	8.9%	43.1%

Note: One district containing about 6% of students in the sample did not provide complete race/ethnicity information for its students and therefore is not included in this table.