The Relationship between *i-Ready Diagnostic* and the 2022 Smarter Balanced Assessment (SBA) in California

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Research Overview

i-Ready Diagnostic and the 2022 SBA are highly correlated—**with an average spring correlation of .83 for English Language Arts/Literacy (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 SBA for Grades 3–8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in California for which there is a state summative assessment in place. Students came from a total of 35 school districts, four of which are 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 California Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
1	69	City (59), Suburb (9), Town (1)	45,000–49,999	65%	15%
2	46	Suburb (45), Rural (1)	25,000–29,999	25%	10%
3	34	City (29), Rural (4), Suburb (1)	15,000–19,999	70%	15%
4	26	Suburb (20), City (5), Rural (1)	15,000–19,999	75%	25%
5	32	City (27), Suburb (5)	15,000–19,999	45%	20%
6	28	Suburb (25), City (3)	15,000–19,999	50%	15%
7	24	Suburb (24)	10,000–14,999	75%	40%
8	17	Suburb (17)	10,000–14,999	65%	15%
9	18	Suburb (17), Rural (1)	10,000–14,999	35%	10%
10	15	Suburb (13), City (2)	10,000–14,999	30%	15%
11	18	Suburb (9), Rural (7), Town (2)	10,000–14,999	90%	40%
12	21	Suburb (21)	10,000–14,999	50%	25%
13	23	Suburb (23)	10,000–14,999	30%	20%
14	22	Suburb (22)	10,000–14,999	60%	20%
15	19	City (12), Rural (6), Suburb (1)	10,000–14,999	70%	15%
16	17	Town (9), Rural (6), Suburb (2)	9,000–9,499	65%	15%
17	15	Suburb (15)	7,500–7,999	90%	35%
18	12	Suburb (12)	6,500–6,999	60%	5%
19	12	Suburb (12)	5,500–5,999	75%	15%
20	11	Suburb (11)	5,500–5,999	90%	60%
21	12	Suburb (12)	4,000–4,499	70%	40%
22	7	Town (6), Rural (1)	4,000–4,499	75%	35%
23	8	Suburb (6), City (2)	4,000–4,499	55%	25%
24	7	Suburb (5), City (2)	3,000–3,499	95%	25%
25	6	Town (6)	2,500–2,999	80%	35%

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
26	5	Suburb (4), Rural (1)	2,500–2,999	70%	15%
27	6	City (6)	2,500–2,999	40%	15%
28	4	Town (3), Rural (1)	2,500–2,999	90%	55%
29	5	City (5)	1,500–1,999	95%	25%
30	3	Suburb (3)	1,500–1,999	30%	5%
31	4	Suburb (4)	1,500–1,999	75%	40%
32	2	Suburb (2)	1,500–1,999	15%	5%
33	3	City (2), Suburb (1)	1,000–1,499	75%	20%
34	2	Suburb (2)	1,000–1,499	5%	<5%
35	1	Rural (1)	100–199	95%	75%
Average of Participating Districts[2]				59%	19%
Average across All Districts in the State[2]				59%	19%

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.

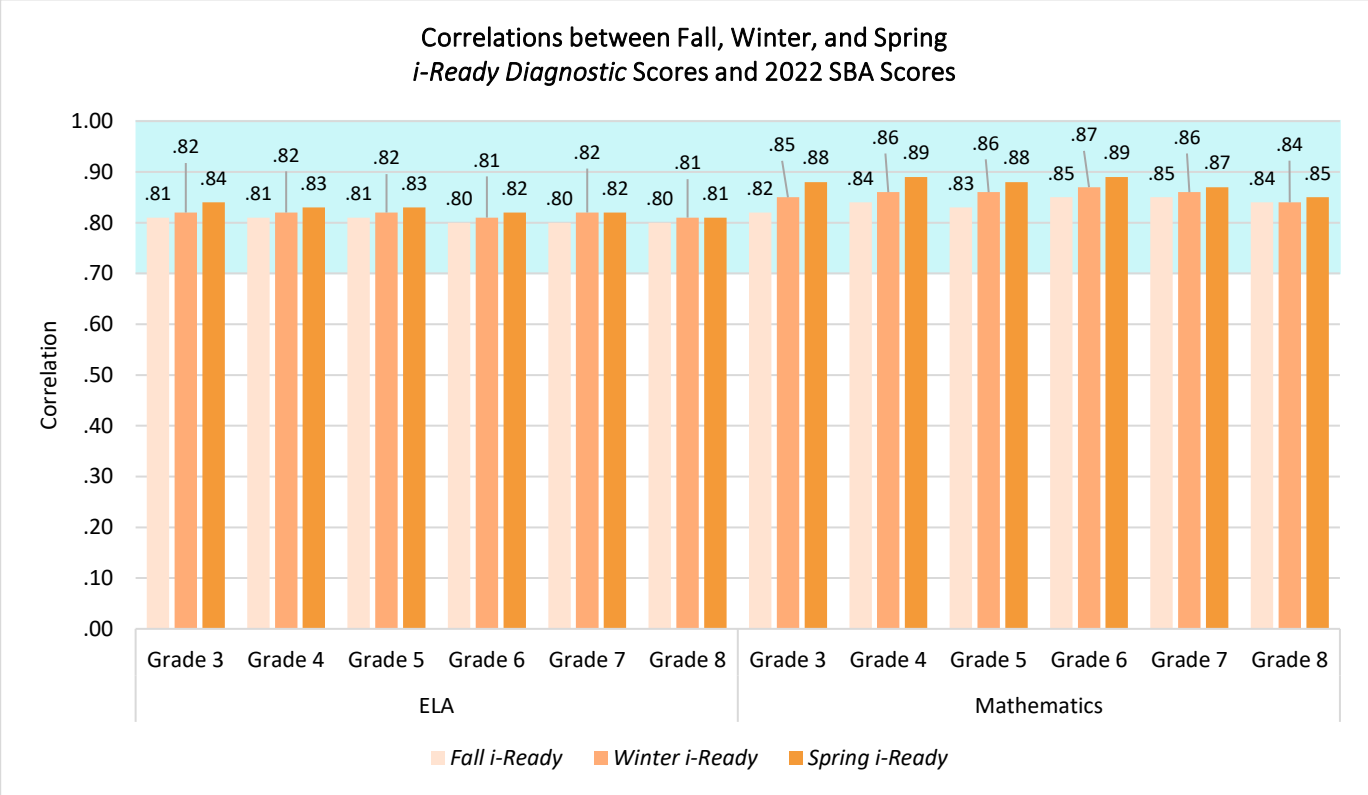
[2]Weighted averages.

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.

Correlation Results

Across all grades and in both subjects, results provide evidence for the strong correlation between *i-Ready Diagnostic* and the SBA (see Figure 1). Specifically, spring correlations for ELA ranged from .81 for Grade 8 to .84 for Grade 3, and spring correlations for Mathematics ranged from .85 for Grade 8 to .89 for Grades 4 and 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 SBA in California.

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 201,000 students, with between 24,023 and 30,352 students per grade for ELA for the spring *i-Ready* assessment and between 26,236 and 31,652 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the SBA 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	27,800	27,786	27,773	29,665	29,551	30,318
Grade 4	28,687	28,566	28,456	30,485	30,095	30,810
Grade 5	29,028	28,563	28,603	31,160	30,596	31,116
Grade 6	30,836	30,249	30,352	31,783	31,158	31,652
Grade 7	27,385	26,790	24,146	28,381	28,145	26,473
Grade 8	28,101	27,623	24,023	29,501	28,876	26,236

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 California Students in this Study

	American Indian or Alaska Native	Asian	Black	Hawaiian or Pacific Islander	Hispanic	Two or More Races	White
ELA	.2%	10.5%	3.9%	.3%	62.2%	4.4%	18.4%
Mathematics	.2%	10.3%	4.0%	.3%	61.5%	4.5%	19.1%