

# The Relationship between *i-Ready Diagnostic* and the 2022 Alaska System of Academic Readiness (AK STAR)

Curriculum Associates Research Brief | April 2023

## Research Overview

*i-Ready Diagnostic* and the 2022 AK STAR are highly correlated—with an average fall correlation of **.80** for English Language Arts (ELA) and **.78** 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 AK STAR for Grades 3–8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in Alaska, for which there is a state summative assessment in place. Students came from a total of three school districts, all public, none of which were charter agencies (see Table 1). The school districts were selected for participation in the study specifically to represent the state in terms of factors such as urbanicity, race/ethnicity, and socioeconomic status (using the National School Lunch Program as a proxy). See the Appendix for more information on the sample.

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

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Learners <sup>1</sup>
1	76	City (62), Rural (7), Town (7)	25,000–29,999	55%	20%
2	25	Rural (13), Town (12)	8,500–8,999	55%	5%
3	23	City (11), Suburb (7), Rural (4), Town (1)	6,000–6,499	55%	5%
<b>Average of Participating Districts<sup>2</sup></b>				56%	12%
<b>Average across All Districts in the State<sup>2</sup></b>				44%	12%

Note: Demographic data are available at the school and district levels 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.

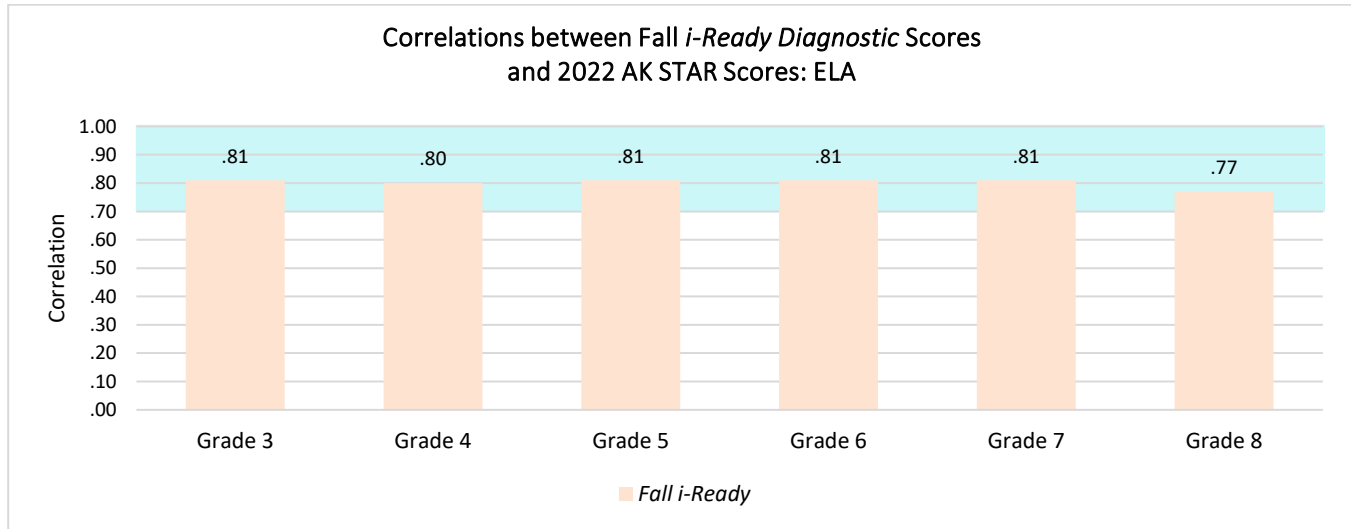
<sup>2</sup>Weighted averages

Data are from the [National Center for Education Statistics' Common Core of Data](#). 2020–2021 was the most recent full dataset available at the time of the study.

## Correlation Results

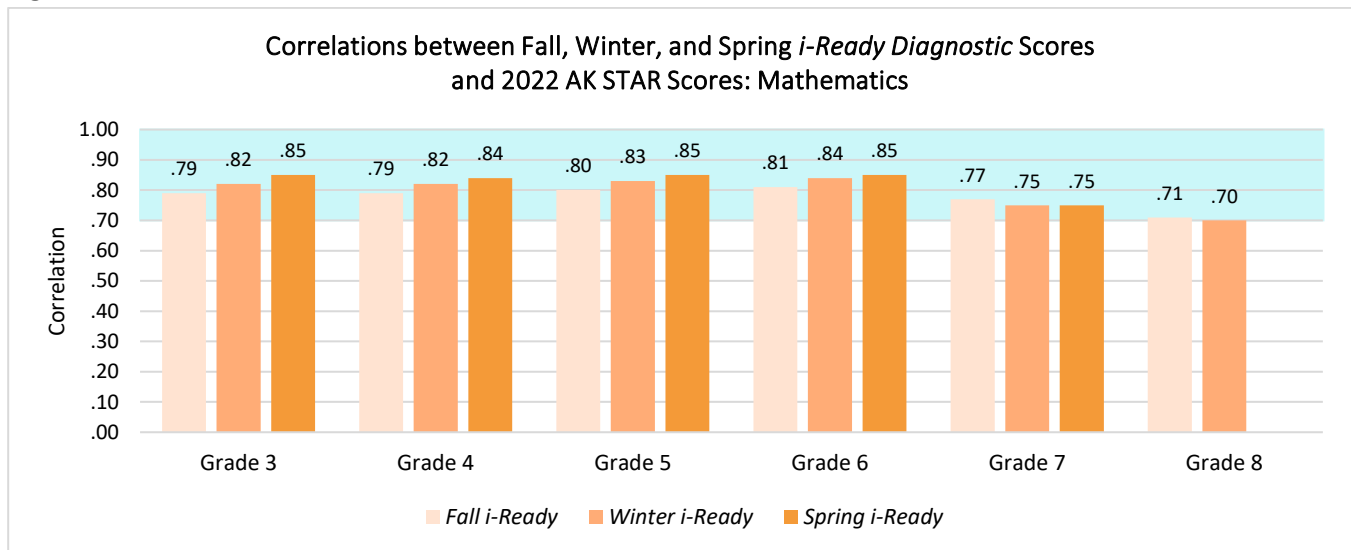
Across all grades and subjects included in the study, results provide evidence for the strong correlation between *i-Ready Diagnostic* and the AK STAR (see Figures 1 and 2). Specifically, fall correlations for ELA ranged from .77 for Grade 8 to .81 for Grades 3 and 5–7, and fall correlations for Mathematics ranged from .71 for Grade 8 to .85 for Grades 3 and 5. These correlations, **all meeting the .70 standard generally considered to be strong in education research**, provide evidence of a substantial relationship between *i-Ready Diagnostic* and the AK STAR.

Figure 1



Note: Due to reduced sample sizes in winter and spring, ELA correlations were calculated for fall *i-Ready Diagnostic* scores only.

Figure 2



Note: Due to reduced sample sizes in spring, Mathematics Grade 8 correlations were calculated for fall and winter *i-Ready Diagnostic* scores only.

## 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 24,000 students, with between 2,097 and 3,361 students per grade for ELA for the fall *i-Ready* assessment and between 2,689 and 4,156 students per grade for Mathematics for the fall *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the AK STAR 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 <sup>1</sup>	Mathematics <sup>2</sup>		
	Fall	Fall	Winter	Spring
<b>Grade 3</b>	3,200	4,156	3,875	3,871
<b>Grade 4</b>	3,269	4,122	3,877	3,888
<b>Grade 5</b>	3,361	4,094	3,774	3,730
<b>Grade 6</b>	2,766	3,707	3,372	3,068
<b>Grade 7</b>	2,345	3,356	2,820	2,236
<b>Grade 8</b>	2,097	2,689	2,122	N/A

<sup>1</sup>Due to reduced sample sizes in winter and spring, ELA correlations were calculated for fall *i-Ready Diagnostic* scores only.

<sup>2</sup>Due to reduced sample sizes in spring, Mathematics Grade 8 correlations were calculated for fall and winter *i-Ready Diagnostic* scores only.

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 Alaska Students in This Study**

	American Indian or Alaska Native	Asian	Black	Hawaiian or Pacific Islander	Hispanic	Two or More Races	White
<b>ELA</b>	8.8%	8.4%	3.6%	5.4%	11.5%	17.2%	45.2%
<b>Mathematics</b>	8.9%	6.9%	3.5%	4.6%	10.9%	17.1%	48.1%