The Relationship between *i-Ready Diagnostic* and the 2022 Kentucky Summative Assessment (KSA)

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Research Overview

i-Ready Diagnostic and the 2022 KSA are highly correlated—**with an average spring correlation of .77 for Reading 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 2022 KSA for Grades 3–8 in Reading and Mathematics, the primary grades in which *i-Ready* is used in Kentucky for which there is a state summative assessment in place. Students came from a total of 12 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 Kentucky Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program	% English Language Learners[1]
1	16	Town (9), Rural (7)	7,000–7,499	55%	<5%
2	14	Rural (9), Town (5)	6,000–6,499	70%	<5%
3	9	Town (7), Rural (2)	5,000–5,499	50%	5%
4	8	Rural (6), Town (2)	3,000–3,499	70%	<5%
5	8	Rural (6), Town (2)	2,500–2,999	70%	<5%
6	7	Rural (6), Town (1)	2,500–2,999	60%	5%
7	6	Rural (6)	2,000–2,499	70%	<5%
8	7	Rural (4), Town (3)	2,000–2,499	70%	<5%
9	4	Rural (2), Town (2)	1,500–1,999	65%	<5%
10	6	City (6)	1,500–1,999	60%	<5%
11	4	Rural (4)	1,000–1,499	50%	<5%
12	2	Town (2)	1,000–1,499	65%	<5%
Average of Participating Districts[2]				62%	2%
Average across All Districts in the State[2]				56%	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.
[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 KSA (see Figure 1). Specifically, spring correlations for Reading ranged from .75 for Grade 8 to .78 for Grade 5, and spring correlations for Mathematics ranged from .74 for Grade 8 to .82 for Grades 4 and 5. These correlations, **all meeting or surpassing the .70 standard generally considered to be strong in education research**, provide evidence of a substantial relationship between *i-Ready Diagnostic* and the KSA.

Figure 1

Correlations between Fall, Winter, and Spring
i-Ready Diagnostic Scores and 2022 KSA Scores
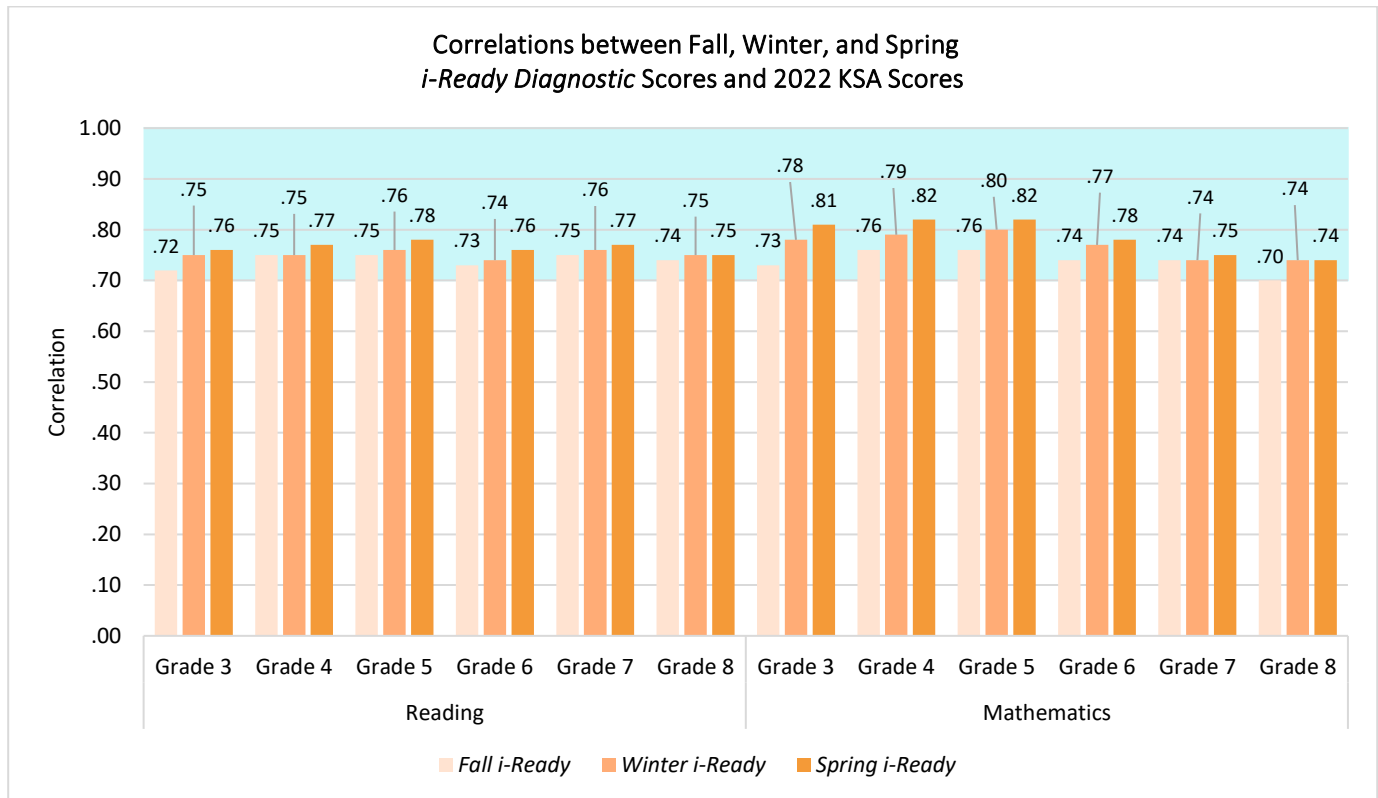
Why Correlations Matter

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 22,000 students, with between 3,061 and 3,919 students per grade for Reading for the spring *i-Ready* assessment and between 3,110 and 3,913 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the KSA 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

	Reading			Mathematics		
	Fall	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**
Grade 3	3,535	3,654	3,919	3,520	3,665	3,913
Grade 4	3,332	3,469	3,713	3,349	3,471	3,710
Grade 5	3,470	3,603	3,868	3,489	3,611	3,876
Grade 6	2,652	2,737	3,061	2,713	2,781	3,110
Grade 7	2,910	2,975	3,397	2,886	3,062	3,335
Grade 8	2,789	2,918	3,111	2,679	3,014	3,113

Table 3 shows the percentage of students in each race/ethnicity group from the study samples. In both the Reading and Mathematics samples, we have strong representation from students of different racial/ethnic groups.

Table 3. Race/Ethnicity Information for Sample of Kentucky Students in this Study

	American Indian or Alaska Native	**Asian**	**Black**	**Hawaiian or Pacific Islander**	**Hispanic**	**Two or More Races**	**White**
Reading	.2%	.7%	3.0%	.1%	5.2%	3.9%	87.0%
Mathematics	.2%	.7%	2.9%	.1%	5.3%	3.8%	87.0%