The Relationship between *i-Ready Diagnostic* and the 2021 Tennessee Comprehensive Assessment Program (TCAP)

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Research Overview

i-Ready Diagnostic and the 2021 TCAP are highly correlated—**with an average spring correlation of .81 for English Language Arts (ELA) and .83 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 2021 TCAP for Grades 3–8 in ELA and Mathematics, the primary grades in which *i-Ready* is used in Tennessee 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 Tennessee Districts in Study

District	Schools Participating	Location	Total Enrollment	% National School Lunch Program[1]	% English Language Learners[2]
1	116	City (101), Suburb (10), Rural (5)	65,000–69,999	60%	5%
2	61	City (33), Suburb (22), Rural (6)	30,000–34,999	40%	5%
3	37	Suburb (22), Rural (8), City (7)	30,000–34,999	40%	5%
4	14	Town (14)	7,500–7,999	55%	5%
5	14	Suburb (7), Rural (4), City (3)	7,000–7,499	45%	<5%
6	10	Rural (7), Town (3)	5,000–5,499	55%	<5%
7	6	Town (6)	3,500–3,999	55%	5%
8	7	City (7)	3,500–3,999	35%	10%
9	8	City (8)	3,500–3,999	40%	10%
10	7	Rural (6), Town (1)	2,000–2,499	55%	<5%
11	6	Rural (6)	1,500–1,999	40%	<5%
12	2	Suburb (2)	1,000–1,499	80%	10%
Average of Participating Districts[3]				49%	6%
Average across All Districts in the State[3]				41%	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]Some schools do not report free/reduced-price lunch (FRPL) eligibility for their students, but instead report the count of students who were eligible based on direct certification. In calculating the percent of students eligible for National School Lunch Program for this report, FRPL counts were used if reported. If FRPL data were not available, direct certification data were used as a proxy.

[2]Data on English language learners is only available at the district level.

[3]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", 2019–2020 v.1a. (obtained from https://nces.ed.gov/ccd/pubagency.asp), represent 2019–2020 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 TCAP (see Figure 1). Specifically, spring correlations for ELA ranged from .80 for Grades 4, 6, and 7 to .82 for Grade 3, and spring correlations for Mathematics ranged from .79 for Grade 8 to .85 for Grade 4. 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 TCAP.

Figure 1

Correlations between Fall, Winter, and Spring *i-Ready Diagnostic* Scores and 2021 TCAP Scores
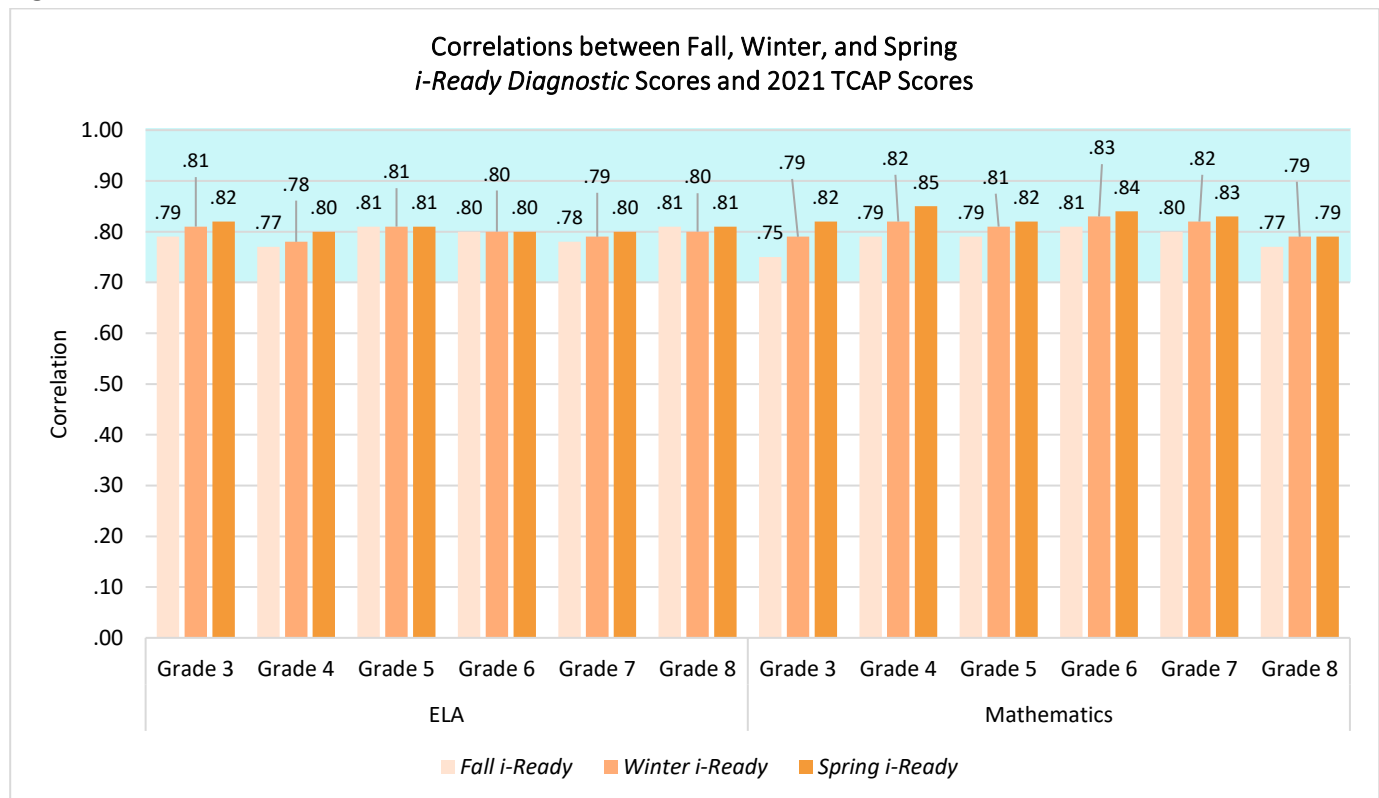
Why Correlations Matter

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 63,000 students, with between 3,831 and 7,865 students per grade for ELA for the spring *i-Ready* assessment and between 7,349 and 10,610 students per grade for Mathematics for the spring *i-Ready* assessment (see Table 2). These students took both the *i-Ready Diagnostic* and the TCAP during the 2020-2021 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. As such, the sample sizes tended to increase from fall and winter to spring as more students returned to in-school testing.

Table 2. Sample Sizes for Correlations

	ELA			Mathematics		
	Fall	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**
Grade 3	4,092	3,867	7,865	6,143	6,289	10,610
Grade 4	3,886	3,420	7,308	5,893	5,922	10,102
Grade 5	3,574	3,215	6,490	5,755	5,642	9,451
Grade 6	2,821	1,738	4,581	5,518	4,557	8,399
Grade 7	2,684	1,693	4,217	5,422	4,763	8,470
Grade 8	2,729	1,632	3,831	4,984	4,334	7,349

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. Specifically, Black, Hispanic, and White students each made up more than 17 percent of the samples in both ELA and Mathematics.

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

	American Indian or Alaska Native	**Asian**	**Black**	**Hawaiian or Pacific Islander**	**Hispanic**	**Two or More Races**	**White**
ELA	.6%	2.2%	33.2%	.2%	17.4%	< .1%	46.3%
Mathematics	.5%	2.7%	27.2%	.2%	17.6%	< .1%	51.9%

Note: One district containing about 3% of students in the sample did not provide complete race/ethnicity information for its students and therefore is not included in this table.