

Research Brief

Validity of the Independent Reading Level Assessment (IRLA)

Independent Reading Level Assessment (IRLA)

American Reading Company's Independent Reading Level Assessment® (IRLA) is a standards-based, formative assessment framework that is used on a regular basis throughout the year to measure the extent to which students independently demonstrate reading proficiency. The IRLA outlines a research-based, transparent progression of skills mapped to the Common Core State Standards (CCSS). Designed to work for every student, at every reading level, the IRLA delivers specific and actionable data that tell the teacher where a student is, why, and the sequence of skills and behaviors needed to learn next to accelerate reading growth.

IRLA scores show students' relative placement along a continuum of grade-level proficiency. A risk status is used to identify the intensity of student need. Students who have demonstrated reading proficiency at or above their grade level are considered "proficient" and are not likely to be at risk for academic difficulties. Students who need to make more than a year of growth in one year's time are assigned an "at risk" designation that alerts teachers that the student may need additional supports to make sufficient accelerated progress. Students reading significantly below grade level are assigned "emergency" status. These students need multiple years of growth per year to gain grade-level proficiency and require the most intensive supports to make this type of accelerated progress.

Validity

Validity is the most fundamental consideration in evaluating an assessment. Validity is the degree to which evidence supports interpretations of test scores for a given purpose.¹ The process of validation involves accumulating relevant evidence over time to provide a sound basis for the proposed score interpretations.

A primary use of the IRLA is to identify students who have not yet achieved grade-level proficiency and are at risk for academic difficulties and to monitor their reading progress. Thus, one particularly relevant form of validity evidence is the extent to which performance on the IRLA correlates with performance on other reading assessments, which are called criterion measures.

Correlation coefficients can range from -1.0 to 1.0 , with values close to 1.0 indicating a strong relationship. Positive 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 strong positive correlation between two assessments provides evidence that the two assessments are measuring similar constructs. When an assessment is strongly correlated with several different criterion measures, there is greater confidence that results can be generalized to other measures of student proficiency.

Purpose

This research brief summarizes a series of studies conducted across the United States to examine the relationship between the IRLA and summative state assessments, and several commonly used interim assessments.

Summative State Assessments

Each state administers a summative assessment to students in grades 3–8 and once in high school annually under the provisions of the Every Student Succeeds Act (ESSA)². ARC researchers utilized data provided by school districts to examine the relationship between students' scores on the IRLA and scores on the state test.*

¹ American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (Eds.). (2014). *Standards for educational and psychological testing*. American Educational Research Association.

² Every Student Succeeds Act, 20 U.S.C. § 6301 (2015).

* All studies conducted by ARC researchers utilized data provided by school districts. All assessments were administered independently by school district personnel using standard protocols.

Wyoming’s Test of Proficiency and Progress (WY-TOPP)

American Reading Company (ARC) researchers examined the relationship between the IRLA and Wyoming’s state test (WY-TOPP) in a small Wyoming school district that has been using ARC Core since the 2018–2019 school year. The study included 106 students in grades 3–6 (88% white, 17% receive special education). The correlation between students’ 2021–2022 scores on the IRLA and WY-TOPP ELA test is strong and statistically significant (see Table 1).

Table 1. IRLA–WY-TOPP Correlation Coefficient

	2022 Gr. 3–6	
	n	r
IRLA–Wyoming State Summative Assessment (WY-TOPP)	106	.758*

* $p < .001$

Smarter Balanced Assessment (SBA): Delaware Study 1

ARC researchers conducted a multi-year study in a mid-size district in Delaware. The school district serves a population of students that is 67% white; 17% of students are from low-income families. The number of students in the study grew each year as the implementation shifted from grades K–5 to grades K–8. Correlations between IRLA scores and Smarter Balanced ELA scores were strong and statistically significant in all three years (see Table 2). The study did not examine scores from the 2019–2020 school year because SBA was not administered that year due to the pandemic.

Table 2. IRLA–SBA Correlation Coefficients

	2019 Gr. 3–5		2021 Gr. 3–8		2022 Gr. 3–8	
	n	r	n	r	n	r
IRLA–Smarter Balanced Assessment (SBA)	1099	.737*	1446	.723*	2273	.702*

* $p < .001$

Smarter Balanced Assessment (SBA): Delaware Study 2

A mid-size school district in Delaware serving a population consisting of 49% nonwhite students and 26% students from low-income families was studied in 2021–2022 by ARC researchers. The correlation between IRLA and Smarter Balanced ELA scores was strong and statistically significant (see Table 3). 2021–2022 is this district’s third year implementing ARC Core.

Table 3. IRLA–SBA Correlation Coefficient

	2022 Gr. 3–5	
	n	r
IRLA–Smarter Balanced Assessment (SBA)	1854	.698*

* $p < .001$

Smarter Balanced Assessment (SBA): Washington

A large school district in Washington began implementation of ARC Core in the 2021–2022 school year. ARC researchers examined the relationship between scores on the IRLA and Smarter Balanced ELA test and found a correlation approaching the .70 threshold for what is considered a strong correlation (see Table 4). This study included 3,684 students in grades 3–5, 82% of whom are nonwhite, 40% are English-language learners, and 14% are in special education.

Table 4. IRLA–SBA Correlation Coefficient

	2022 Gr. 3–5	
	n	r
IRLA–Smarter Balanced Assessment (SBA)	3684	.691*

* $p < .001$

Oregon Assessment of Knowledge and Skills (OAKS)

A 2016 study conducted by researchers at the University of Portland and Northwest Evaluation Association (NWEA) and published in *The Journal of At-Risk Issues*³ examined the relationship between scores on the IRLA and Oregon’s statewide assessment, the Oregon Assessment of Knowledge and Skills (OAKS). The study examined data from students in grades 3–5 in one Oregon school district. Participants included 2,303 students attending 11 elementary schools. The public school district serves almost 11,000 ethnically and linguistically diverse students with nearly 75% qualifying for free/reduced price lunch.

The study found strong statistically significant correlations between the IRLA and OAKS scores at each grade level and all grades combined (see Table 5).

³ Ralston, N.C., Waggoner, J. M., Tarawasa, B., & Jackson, A. (2016). Concurrent validity of the independent reading level assessment framework and a state assessment. *Journal of At-Risk Issues*, 19(2), 1–8.

Table 5. IRLA–OAKS Correlation Coefficients

Grade	n	<i>r</i>
3	803	.713*
4	720	.775*
5	780	.751*
All 3–5	2303	.766*

* $p < .001$

Interim Assessments

Measures of Academic Progress (MAP) Growth

The Measures of Academic Progress (MAP) tests are published by the Northwest Evaluation Association (NWEA). The MAP Growth reading assessment is a computer-adaptive test that includes items across the grade-level spectrum for the purpose of pinpointing a student’s reading skills relative to grade-level expectations.⁴

Nebraska

A 2022 study conducted by ARC researchers examined data from K–8 students in one Nebraska school across two academic years. The study included scores from roughly 400 students. The public school district serves approximately 600 students with nearly 45% qualifying for free/reduced price lunch.

Scores from five testing windows were correlated: fall 2020, winter 2020, spring 2021, fall 2021, and winter 2021. The study found strong statistically significant correlations between students’ scores on the IRLA and MAP reading test across each of the five testing windows (see Table 6).

Table 6. IRLA–MAP Growth Reading Correlation Coefficients

	n	<i>r</i>
Fall 2020	365	.804*
Winter 2020	336	.781*
Spring 2021	402	.832*
Fall 2021	373	.891*
Winter 2021	396	.878*

* $p < .001$

⁴ NWEA. (2019). MAP® Growth™ technical report. Portland, OR.

Minnesota

A 2014 study conducted by Measurement Incorporated⁵ examined data from K–5 students in one Minnesota elementary school across two academic years. The school serves a population of ethnically and linguistically diverse students with nearly 75% qualifying for free/reduced price lunch.

Teachers administered the IRLA and MAP reading assessments during five testing windows: fall 2012, winter 2013, spring 2013, fall 2013, and winter 2014. The study found very strong correlations between students' scores on the IRLA and MAP across the five assessment intervals (see Table 7).

Table 7. IRLA–MAP Growth Reading Correlation Coefficients

	n	r
Fall 2012	522	.88*
Winter 2013	522	.88*
Spring 2013	522	.88*
Fall 2013	736	.88*
Winter 2014	736	.90*

* $p < .001$

iReady Diagnostic Reading

The iReady Diagnostic tests are published by Curriculum Associates. The iReady Diagnostic Reading assessment is a computer-adaptive assessment that measures a series of early reading skills codifying students' performance and progress toward reaching grade level.⁶

Oregon

As part of a study of a 2021–2022 school year pilot implementation of the IRLA in kindergarten, grade 1, and grade 2 in one mid-size Oregon school district, ARC researchers examined the relationship between scores on the IRLA and iReady Reading assessment. The study examined data from K–2 students whose classes

⁵ Griswold, A., & Bunch, M. (2014). A study of the independent reading level assessment framework. Measurement Incorporated. Durham, NC.

⁶ iReady (n.d.). Retrieved June 10, 2022, from <https://www.curriculumassociates.com/programs/i-ready-assessment/diagnostic>.

participated in the pilot. The study included scores from roughly 300 students (80% white, 20% receiving special education services) attending eight elementary schools.

Scores from three testing windows were correlated: fall 2021, winter 2022, and spring 2022. Due to the nature of the pilot, fewer students were administered both assessments during the spring 2022 testing window. The correlations between the IRLA and iReady were strong and statistically significant for all three time points (see Table 8).

Table 8. IRLA–iReady Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA–iReady	237	.812*	258	.845*	95	.786*

* $p < .001$

New York

As part of a study of a first-year ARC Core implementation in kindergarten, grade 1, and grade 2 in a mid-size New York school district, ARC researchers examined the correlations between the IRLA and iReady Reading assessment. The study included scores from roughly 650 students attending six elementary schools with about 20% qualifying for free/reduced price lunch. The correlations between scores on IRLA and iReady were strong and statistically significant for all three time points (see Table 9).

Table 9. IRLA–iReady Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA–iReady	678	.850*	651	.877*	904	.884*

* $p < .001$

Washington

A large school district in Washington began implementation of ARC Core in the 2021–2022 school year. ARC researchers found a strong correlation between scores on the IRLA and iReady Reading assessment at three points across the school year (see Table 10). This study included students in grades K–5, 82% of whom are nonwhite, 40% are English-language learners, and 14% are in special education.

Table 10. IRLA–iReady Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA–iReady	4216	.856*	6925	.862*	7209	.863*

* $p < .001$

Star Reading

The Star assessments are published by Renaissance. Star Reading is a computer-adaptive assessment that measures reading skills as students’ progress from grades K–12.⁷

Rhode Island: Study 1

As part of a study in a large, urban Rhode Island school district implementing ARC Core in grades K-8, ARC researchers examined the relationship between IRLA scores and Star Reading scaled scores. The study included scores from approximately 9,300 students (68% Hispanic, 6% white, 26% other race/ethnicity; 96% qualifying for free/reduced price lunch). The study found strong and statistically significant correlations during all three testing windows: fall, winter, and spring of the 2021–2022 school year (see Table 11).

Table 11. IRLA–Star Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA–Star	9316	.820*	9184	.827*	9547	.820*

* $p < .001$

Rhode Island: Study 2

As part of a study in a mid-size Rhode Island school district, ARC researchers examined the correlation between IRLA scores and Star Reading scaled scores at three time points during the 2021–2022 school year. The study included scores from 1,100 students (51% Hispanic, 18% white, 31% other race/ethnicity; 98% qualifying for free/reduced price lunch) and found strong and statistically significant correlations (see Table 12).

⁷ Renaissance Star Reading (n.d.). Retrieved January 19, 2023 from <https://www.renaissance.com/products/star-reading/>.

Table 12. IRLA–Star Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA–Star	998	.837*	1183	.814*	1277	.751**

* $p < .001$

Dynamic Indicators of Basic Early Literacy Skills (DIBELS): mCLASS, DIBELS 8th Edition

DIBELS 8th Edition, published by Amplify, is a set of measures used to assess the acquisition of literacy skills. Five of the six subtests are administered to students individually; the sixth subtest is group-administered.⁸

Oregon

As part of a study of a 2021–2022 school year pilot implementation of the IRLA in kindergarten, grade 1, and grade 2 in one mid-size Oregon school district, ARC researchers examined the relationship between scores on the IRLA and DIBELS 8th Edition. The study examined data from K–2 students whose classes participated in the pilot. The study included scores from roughly 300 students (80% white, 20% receiving special education services) attending eight elementary schools.

Scores from three testing windows were correlated: fall 2021, winter 2022, and spring 2022. Due to the nature of the pilot, fewer students were administered both assessments during the spring 2022 testing window. The correlations between the IRLA and DIBELS 8th Edition were strong and statistically significant for all three time points (see Table 13).

Table 13. IRLA–iReady and IRLA–DIBELS Correlation Coefficients

	Fall 2021		Winter 2022		Spring 2022	
	n	r	n	r	n	r
IRLA-DIBELS	298	.731*	360	.773*	96	.826*

* $p < .001$

⁸ DIBELS (n.d.). Retrieved June 10, 2022 from <https://dibels.uoregon.edu/about-dibels>.

Conclusion

The validity studies described in this research brief show strong positive correlations between the IRLA and criterion measures for K–8 students. The subset of studies that examined correlations over multiple school years showed that the correlations are stable over time. Correlation coefficients consistently exceed .70, the threshold for what is considered a strong correlation. These strong, positive, and statistically significant correlations provide evidence that, when students score high on the IRLA, we can expect students to also score high on the other reading assessments.

Suggested Citation

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AMERICAN READING COMPANY

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