

# Validity of Core5 Benchmark Status

## 2015-2016 School Year

### Lexia Reading Core5® Research Report

Data compiled and analyzed by the Research Team (research@lexialearning.com)

The Lexia Reading Core5® (Core5) technology-based instructional program contains performance measures that can be used to assess reading ability. One of the measures provided by Lexia's embedded Assessment Without Testing® tool is **Benchmark status**, which indicates whether students reached their end-of-year (EOY), grade-level benchmark in Core5.

This report documents the criterion validity of Core5 benchmark status using correlations with established outside assessments, both progress monitoring and outcome measurement tools. This report also provides descriptive statistics to illustrate the alignment between Core5 benchmark status and proficiency on outside assessments.

### **Benchmark Status**

Students are considered to have reached benchmark once they have completed all Core5 content that corresponds to their grade level. For example, grade 1 students who have completed material through Level 9 in Core5 by the end of the school year have reached their benchmark.

### **Sample Description**

Overall, 115 schools from 8 states provided assessment data for the 2015-2016 school year. Each school contributed scores for a minimum of 100 students. Students in the analyses used Core5 for at least 20 weeks during the 2015-2016 school year, and they met usage targets for at least 50% of their weeks of use.

## Outside Assessments

The following **progress monitoring tools** were examined in separate analyses:

- **aimsweb:** The aimsweb Reading Curriculum-Based Measure is a test of oral reading fluency that is standardized for grade 1 (starting in winter) through grade 5. The aimsweb scores were provided by 36 schools.
- **DIBELS Next:** The Dynamic Indicators of Basic Early Literacy Skills is a test of early literacy skills and/or reading proficiency for grades K-5. DIBELS Next scores were provided by 35 schools.
- **MAP:** The Northwest Evaluation Association Measures of Academic Progress is a computer-adaptive test of reading achievement for grades K-5. MAP scores were provided by 25 schools.
- **STAR:** STAR Early Literacy (for grades K-1) and STAR Reading (for grades 2-5) are brief, computer-adaptive tests. STAR scores were provided by 15 schools.

The following **outcome measurement tools** were examined in separate analyses:

- **PARCC:** The Partnership for Assessment of Readiness for College and Careers created an end-of-year assessment to measure student performance in English language arts/literacy. PARCC scores for grades 3-5 were provided by 3 schools.
- **SBAC:** The Smarter Balanced Assessment Consortium created the Smarter Balanced assessment system, which provides an end-of-year assessment for English Language Arts. SBAC scores for grades 3-5 were provided by 31 schools.

## Results

**Correlations.** Table 1 shows pairwise (Spearman's rank) correlations between Core5 Benchmark status and standardized scores from the outside assessments at the end of the school year for each grade. All but one of the pairwise correlations were significant ( $p < .001$ ) and fell within the medium (.4-.6) to high (.7-.9) range, which is considered strong when evaluating a reading assessment (or program).<sup>1</sup>

**Table 1. End-of-Year Correlations Between Core5 Benchmark Status and Outside Assessment Scores**

		Student Grade					
	N	K	1	2	3	4	5
<b>Progress Monitoring Tool</b>							
aimsweb	1,796	--	.6	.6	.6	.5	.5
DIBELS Next	10,347	.6	.7	.6	.6	.6	.6
MAP	4,577	.4	.5	.5	.5	.6	.5
STAR Early Literacy	779	.2	.5	--	--	--	--
STAR Reading	2,674	--	--	.5	.5	.6	.6
<b>Outcome Measurement Tool</b>							
PARCC	553	--	--	--	.7	.6	.4
SBAC	5,192	--	--	--	.5	.6	.5

Notes. Correlations can be categorized into three ranges: High = .7 – .9, Medium = .4 – .6, and Low = 0 – .3. Sample sizes are collapsed over grades.

### Alignment to Progress Monitoring and Outcome Measurement Tools at End-of-Year.

The following tables show what percentage of students who reached benchmark in Core5 also reached proficiency at the end of the school year on established progress monitoring tools (Table 2) and outcome measurement tools (Table 3). Proficiency on progress monitoring tools was defined as: at/above benchmark for DIBELS Next, and at/above the 40<sup>th</sup> percentile for all other assessments. Proficiency on outcome measurement tools was defined using similar criteria applied to publisher-created performance categories. Please see the “Validity of Core5 Performance Predictor Scores” report for full details.

<sup>1</sup> The lowest correlation ( $\rho = .2$ ) occurred for kindergartners on the STAR Early Literacy test. This was due to restricted variability in Core5 performance for this set of kindergartners. Close to 90% reached EOY, grade-level benchmark in Core5.

For PARCC, the top three performance categories – approached, met, or exceeded expectations – were considered to represent proficiency. For SBAC, the top three performance categories – nearly met, met, or exceeded standards – were considered to represent proficiency.

Of the students who reached benchmark in Core5, 80% or more reached proficiency on a progress monitoring tool, and 86% or more reached proficiency on an outcome measurement tool.

**Table 2. Alignment between Benchmark Status in Core5 and Proficiency on Established Progress Monitoring Tools**

	Reached Benchmark in Core5 at End-of-Year
Progress Monitoring Tool	Reached Proficiency on Assessment Tool at End-of-Year
aimsweb	80%
DIBELS Next	81%
MAP	84%
STAR Early Literacy	90%
STAR Reading	81%

Note. Sample sizes for each test and time period range from 467 to 5,628 students.

**Table 3. Alignment between Benchmark Status in Core5 and Proficiency on Established Outcome Measurement Tools**

	Reached Benchmark in Core5 at End-of-Year		
PARCC Expectations	Approached	Met/Exceeded	Reached Proficiency at End-of-Year
	29%	58%	87%
SBAC Standards	Nearly Met	Met/Exceeded	Reached Proficiency at End-of-Year
	28%	58%	86%

Note. Sample sizes for each test and time period range from 339 to 2,549 students.

## Conclusion

The results in this report establish that Core5 benchmark status is a valid indicator of reading ability based on comparisons with established progress monitoring and outcome measurement tools. Significant correlations were found between Core5 benchmark status and outside assessment scores at the end of the school year. Furthermore, Core5 benchmark status was well-aligned with reaching proficiency on outside assessments. These findings indicate that the Core5 program is a valid measure of reading ability and that Core5 can serve not only as an instructional program, but as a key component in a school's assessment of literacy skills.

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