

## 2017–18 Efficacy study — Preliminary results

# Examining the efficacy of Amplify Reading, a game-based reading curriculum

### Background

We compared the growth rates of students using a new, game-based online instructional reading curriculum in their classrooms with those of a very large database of same-aged children. The game-based curriculum provided instruction and practice in phonological skills; basic and advanced phonics skills; and vocabulary, language, and comprehension skills. For both kindergartners and first-grade students, average growth was significantly higher for students who played Amplify Reading.

### Participants

The study used data from pilots in seven schools representing both urban and rural populations across four states. Participants were 88 kindergarten and 110 first-grade students. (The pilots also included second- and third-grade students who have been excluded from this analysis, as the early version of the curriculum was focused on beginning reading skills.) The comparison data includes over 400,000 students per grade for whom data is maintained in the national mCLASS:DIBELS database.

### Methodology

Amplify Reading was provided to classrooms in the pilot group throughout the 2017–18 school year with a recommendation of a 45-minutes-per-week usage. Teachers were trained on setup and configuration on iPads or Chromebooks. Students in pilot schools are assessed at least three times per year using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS®) assessment, which covers phonemic awareness and phonics and oral reading fluency skills. This study used mCLASS:DIBELS Next Composite Score data from beginning-of-year (BOY, typically September) and middle-of-year (MOY, typically December–January) benchmarks. Students who were missing either BOY or MOY data, or who did not complete a single round of any game in the curriculum, were excluded from the analysis.

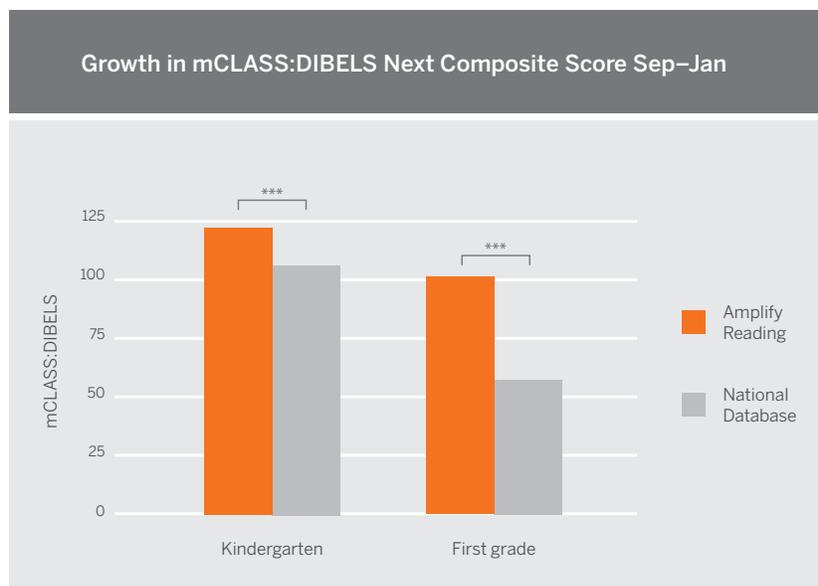
## Results

The table and chart below compare growth on mCLASS:DIBELS Next Composite Score (an overall measure of early reading skills) for the pilot and national database groups.

- Students in kindergarten gained an average of 122.0 points in the pilot group versus 104.7 in the national database, an effect size of 0.39. That means, on average, a student who began at the 50th percentile increased to the 66th percentile.
- In first grade, pilot students gained an average of 100.5 points versus 57.6 points in the national database group, an effect size of 0.58. That means, on average, a student who began at the 50th percentile increased to the 73rd percentile.

Both results are statistically significant at a high level ( $p < 0.001$ ), which means there is less than 0.1% chance of getting these results if Amplify Reading actually has no positive effect.

Measure	Grade	Pilot group				National mCLASS database			Statistics		
		BOY average score	MOY average score	Change, BOY-MOY	# Included	BOY average score	MOY average score	Change, BOY-MOY	z-test	p	Effect size
Composite score	Kinder	41.4	163.3	122.0	88	32.4	137.1	104.7	3.69	0.00	0.39
	1st grade	130.2	230.7	100.5	110	121.3	178.9	57.6	6.10	0.00	0.58



## Discussion

The results of this study show that kindergarten and first-grade students benefited from a relatively small amount of time playing a highly engaging online curriculum focused on building their early reading skills. We plan to run a larger study for the 2018–19 school year.