EFFICACY

Amplify Reading pilot efficacy research report

Amplify.

Table of contents

Background 3

Methodology 3

Results 4

- Phonics 4
- Phonological Awareness 4
- Fluency 4

Discussion 5

Next steps 5

Annex 6

Background

Amplify Reading (AR) is a game-based online supplemental reading curriculum composed of mini-games that were released on a rolling basis during the 2017–2018 school year. To explore the initial effectiveness of the program, we compared growth rates for students scores on mCLASS:DIBELS Next measures of Phonological Awareness, Phonics, and Fluency in K–2 classrooms using AR with a random sample of ~10,000 mCLASS users of similar skill levels in classrooms not using AR. The new program provides instruction in phonological awareness, basic and advanced phonics, vocabulary, language, and comprehension skills; most games that were available to play during this initial time period pertained to phonics. For both kindergartners and 1st grade students, average growth on measures of phonics ability was significantly higher for students who played Amplify Reading.

Methodology

Student growth was measured by comparing middle-of-year (MOY) scores to end-of-year (EOY) scores from the 2017–2018 school year in three early literacy skills using DIBELS Next measures: phonological awareness (Phoneme Segmentation Fluency), phonics (Nonsense Word Fluency) and fluency (Oral Reading Fluency). Treatment groups for each of these skill areas were chosen from the whole Amplify Reading population (students from all DIBELS Next risk categories were represented) by including students who had completed at least one level of one Amplify Reading game that taught the target skill.[1] We also removed students in Well Above Benchmark range at MOY, due to concerns about a "ceiling effect" on growth. A control population was randomly sampled from a database containing DIBELS Next results from Amplify mCLASS customers across the country. The control population was chosen so that their skills at MOY closely resembled that of our treatment population, as determined by risk status on the DIBELS Next relevant measure.[2]

Results

Phonics

Kindergarten and 1st grade users of Amplify Reading saw a statistically significant increase in growth on DIBELS Next Nonsense Word Fluency when compared with students in the control population.[1]

- The number of Correct Letter Sounds the average AR Kindergartner could produce grew by 5 more than Kindergartners in the control population (effect size = .40).
- The number of Correct Letter Sounds the average AR 1st grader produced grew by 4 more than 1st graders in the control population (effect size = .36).
- The number of Whole Words Read by the average AR 1st grader grew by ~2 more than 1st graders in the control (effect size = .20).

+5

Increase in Correct Letter Sounds pronounciation by AR Kindergartners at end-of-year, compared with the control population.

Phonological Awareness

Kindergarten students did not see statistically significant growth on DIBELS Next measures of Phonological Awareness. It is important to note, though, that the average effect and effect sizes were positive, but our treatment sample sizes were not large enough to definitively state that these effects are not random.

Fluency

No significant effects were expected or found when comparing growth of 1st and 2nd grade Amplify Reading users to our control population on the DORF Measure of Fluency. Lack of significant results for fluency was expected at this point in time. Students were required to play only one level of any game, which is a very small dosage of the program, and none of the games targeted reading fluency directly.

Discussion

The majority of Amplify Reading games were tailored to kindergarten and 1st grade students and focused on teaching phonics skills during the period in question. It was therefore somewhat expected that the strongest growth effects were in phonics in Kindergarten and 1st grade. Given the development schedule and release dates for the games, we believe that the lack of significant results in Phonological Awareness and Fluency is largely due to small sample sizes and the smaller amount of instruction in these target areas within the program, and we are encouraged by the small positive average effects that we see in kindergarten and 1st grade.

Next steps

Future analyses of the comprehensive product will include additional mini-games, a broader range of target skills, more game play (e.g., higher program dosage), and a larger sample of students. With a larger sample of students playing a greater variety of games, analyses will also explore the preliminary efficacy of AR for students of differing pretest skills.

Annex

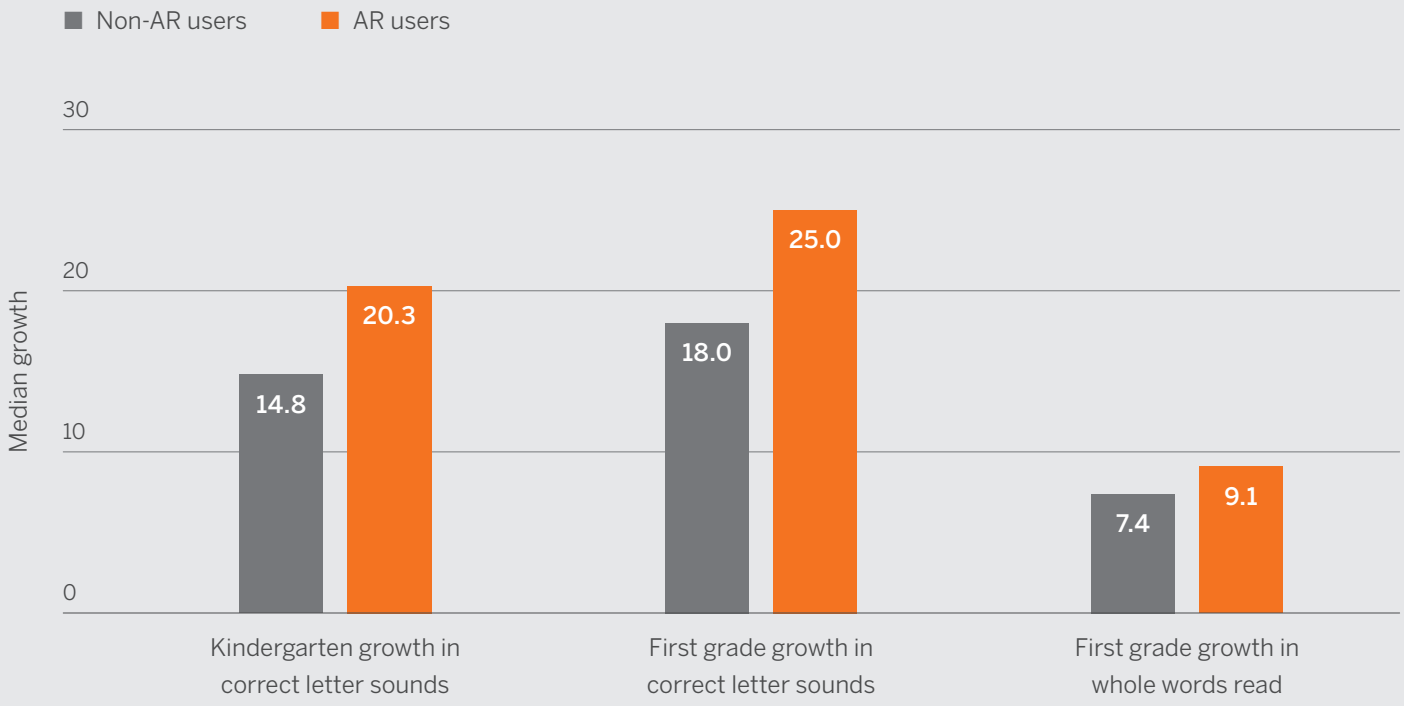
Table 1: Treatment Group N's

Grade Level	Measure Name	Treatment N	Control N
K	NWF (CK	76	10,000
K	PSF	109	10,000
1	NWF (CLS)	170	10,001
1	NWF (WWR)	164	9999
1	DORF (Accuracy)	164	10,000
1	DORF (Fluency)	177	10,000
2	DORF (Fluency)	170	999

Table 2: Phonics & Phonological Awareness Growth Scores and t-Test Results

		Pilot group				National mCLASS database			Statistics		
Measure	**Grade**	**MOY mean score**	**EOY mean score**	**Growth**	**N**	**MOY mean score**	**EOY mean score**	**Growth**	**t-stat**	**p**	**Effect size**
NWF (CLS)	K	17.7	38.0	20.3	76	17.4	32.3	14.8	3.34	0.001	0.39
	1	39.9	64.9	25.0	170	40.1	58.1	18	4.27	0.000	0.36
NWF (WWR)	1	9.5	18.6	9.1	164	9	16.4	7.4	2.32	0.021	0.17
PSF	K	27.2	49.3	22.1	109	26.2	46.8	20.6	1.01	0.314	0.09

Phonics Growth from MOY to EOY for AR and non-AR Users



For more information, visit amplify.com

Corporate:
55 Washington Street
Suite 900
Brooklyn, NY 11201-1071
(212) 796-2200

Sales inquiries:
(866) 212-8688 • amplify.com

Amplify.