Mid-Year Results at an Independent School for Girls

Located in the southeastern United States, this independent, college preparatory school for girls serves pre-K to 12th grade. This program evaluation focuses on the school's students in first through eight grade — about 375 girls.

This school began using SpringMath in third and fourth grades in the late fall of 2017. One month later, first and second grade classes also began using SpringMath.

Grade-wide screening in first through fourth grade indicated that all classes could benefit from supplemental classwide math mastery practice guided by SpringMath.

Teachers implemented the SpringMath classwide intervention supplement consistently in the spring of 2018 (January through the end of April), and made impressive gains.

In the table below, the average number of weeks required to reach the mastery criterion across all skills in the classwide intervention is shown by grade, with teacher in the second column. In the third column, the number of skills mastered of the number of total skills in the sequence is also reported by grade and by teacher. This information indicates the rate of progress teachers made across classes in mastering targeted skills and also in the amount of the intervention supplement that was completed (i.e., intervention dosage). The coach dashboard in SpringMath tracked use of the classwide intervention supplement and directed coach attention and support to any classes that were not implementing intervention consistently. Overall, use of SpringMath was similar across teachers within each grade and overall teacher use was strong.

		Mean Weeks to Skill Mastery	Number of Skills Mastered
Grade 1			
	Teacher 1	1.4	9/10
	Teacher 2	1.56	9/10
	Teacher 3	1.33	9/10
	Mean	**M = 1.43**	**M = 9 of 10 skills mastered**
Grade 2			
	Teacher 1	1	13/13
	Teacher 2	1.4	10/13
	Teacher 3	1.17	12/13
	Mean	**M = 1.19**	**M = 11.67 of 13 skills mastered**
Grade 3			
	Teacher 1	1	15/17
	Teacher 2	1.07	15/17
	Teacher 3	1	17/17
	Mean	**M = 1.02**	**M = 15.67 of 17 skills mastered**
Grade 4			
	Teacher 1	1.36	11/16
	Teacher 2	1.55	11/16
	Teacher 3	1.55	11/16
	Teacher 4	1.78	9/16
	Mean	**M = 1.56**	**M = 10.5 of 16 skills mastered**

The classwide intervention supplement produced strong growth for most students. Below is a sample graph showing the growth of all students in a single fourth grade class on the first skill in the sequence of skills practiced. This graph comes from the teacher's dashboard in SpringMath.
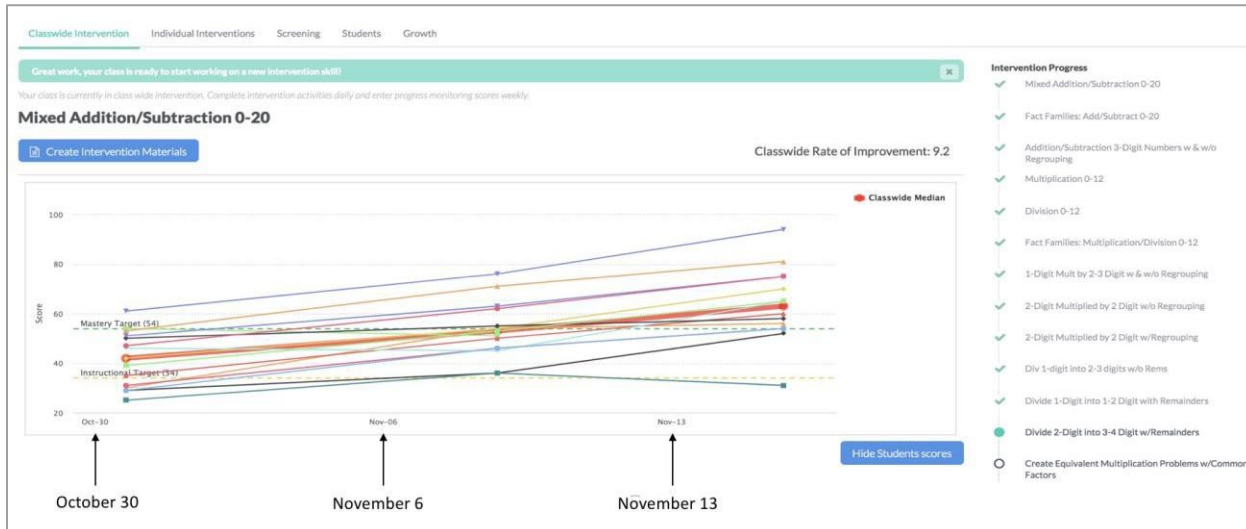

Within only a few weeks of beginning the classwide supplement, effects were apparent at all grade levels. Shown below, for example, is the percentage of students proficient on the winter screening (blue bar) versus the percent proficient following the final classwide supplement (orange bar) for each skill in grades 1 and 3.

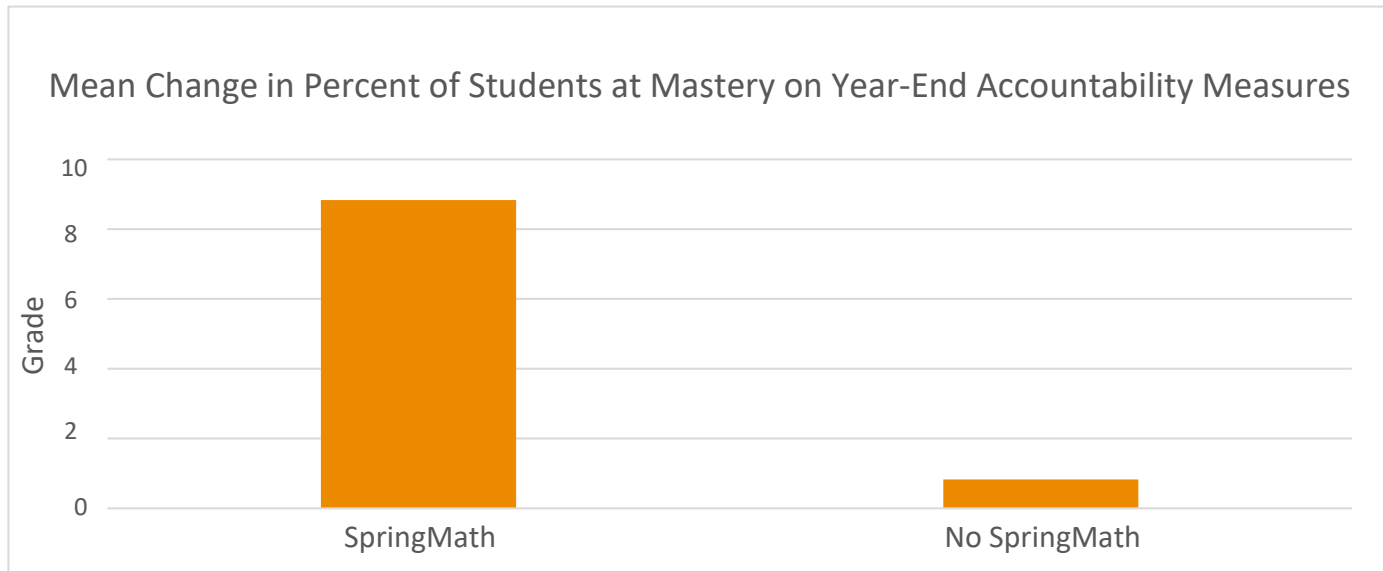## Grade 1

Grade 3

Percent of Students Proficient
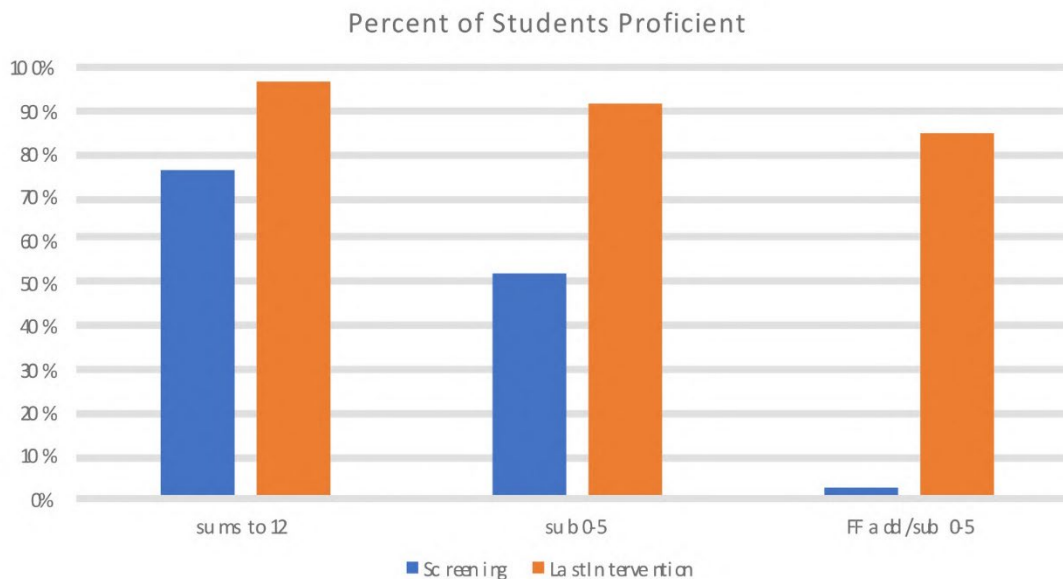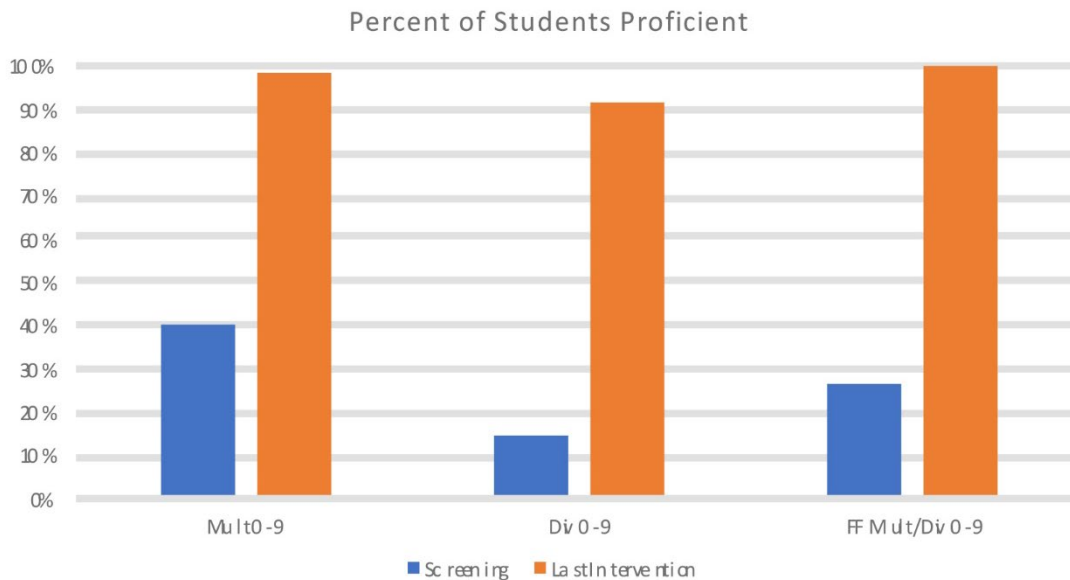
Based upon these data, we anticipated that the distal measure, the year-end accountability measure used by the school for math, would also show gains in proficiency for students who used SpringMath.

Like many independent schools, this school used the Comprehensive Testing Program (CTP) published by ERB for summative program evaluation for second through eighth grade students. The CTP math yields a score reflecting the percentage of students at mastery on subscales and for total math. Percent at mastery for total math is reported here since total math is generally a more stable indicator of achievement than are individual subtests.

For all participating grades, we computed the rate of improvement in percent of students at mastery on the CTP using ordinary least squares regression from 2014 to 2017 (the year before SpringMath was introduced for second through fourth grades). For the years 2017 to 2018, we report the change in percent of students at mastery on the ERB for second through eighth grade. See below for actual values. Grades that used SpringMath are in bold type.

	Rate of Improvement 2014 to 2017 (Before SpringMath)	Change from 2017 to 2018 (After SpringMath)	Difference (After SpringMath – Before SpringMath)
Grade 2	**-1.3**	**9**	**10.3**
Grade 3	**-2.9**	**5**	**7.9**
Grade 4	**-2.3**	**6**	**8.3**
Grade 5	-1.2	-10	-8.8
Grade 6	-0.3	7	7.3
Grade 7	-0.2	4	4.2
Grade 8	0.4	1	0.6

Below we can compare the average change in percent of students at mastery on the year-end accountability assessment in grades with SpringMath versus grades that did not use SpringMath.

Mean Change in Percent of Students at Mastery on Year-End Accountability Measures

These data indicate that, on average, students in grades with SpringMath gained 8.83 percentage points for percent of students reaching mastery on the CTP versus an average gain in percent at mastery of .83 in grades not using SpringMath.

These data suggest SpringMath produced a positive and strong benefit for students who experienced it. These data would support the school's decision to expand SpringMath to additional grade levels and continued evaluation to be certain that desired growth is obtained.