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THE SCHOOL DISTRICT OF PHILADELPHIA

Reading Specialists

Implementation and Outcomes, 2016-2017

Key Findings

- During the 2016-17 SY, Reading Specialists provided reading and writing support to 838 K-3 students at 18 schools.
- The amount and duration of support that students received from Reading Specialists varied; 56% of students received support for at least 8 months of the school year and 89% of students received between 1-6 hours of Reading Specialist support per month.
- Fifteen of the 18 of Reading Specialists completed the Reading Specialist survey. All (100%) Reading Specialists who took the survey reported that they were able to fulfill the role and responsibilities of their job and meet the needs of the students they support.
- On the survey, Reading Specialists identified a number of barriers to the successful implementation of their work, including a lack of resources and materials, student absences, wide-ranging academic needs, and behavioral issues.
- AIMSweb data shows that K-3 students who received support from a Reading Specialist saw improvements in their National Percentile Rank (NPR) from fall to spring. Kindergarten students had the largest increase in their average NPR from fall to spring.
- K-3 students who received Reading Specialist support also saw an increase in the percent of students in Tiers 1 and 2 (At Target or Strategic Intervention) and a decrease of students in Tier 3 (Intensive Intervention) from the fall to spring. Kindergarten and first grade students experienced the largest change.
- Across all grades, Reading Specialist students demonstrated improvements in their average accuracy scores from fall 2016 to spring 2017.

Introduction

In 18 schools in the School District of Philadelphia (SDP), certified Reading Specialists provide additional support to K-3 students whose reading level is significantly below grade level. Reading Specialists work with their students at least weekly in small groups using specially designed lesson plans to address deficiencies in reading, writing, phonics, and word study. During the 2016-17 SY, Reading Specialists served 838 students (which we call intervention students in this report) at 18 schools. To examine the implementation and effectiveness of this program, ORE administered a Reading Specialist Survey and examined the AIMSweb outcomes of the intervention students who were seen by a Reading Specialist for the length of the school year.

Exploratory Questions

Implementation

1. How many students received support from a Reading Specialist and what were their characteristics?
2. With what frequency did students receive support from a Reading Specialist?
3. What is the perception of the Reading Specialists in terms of their ability to fulfill their role and responsibilities and meet the needs of students?
4. What are the primary barriers to implementation as reported by Reading Specialists?

Satisfaction

5. How satisfied are the Reading Specialists with the training and support provided by SDP?

Literacy Outcomes

6. Do students who receive support from a Reading Specialist (intervention students) demonstrate improvements in literacy outcomes? How does this compared to students who did not receive support (comparison students)?
7. Is there a relationship between the frequency of Reading Specialist support and student growth?

Data and Methods

Teacher Survey

In January of 2017, ORE sent surveys and reminders to the 18 Reading Specialists. ORE received 15 completed surveys, representing an 88% response rate. On the survey, Reading Specialists were asked questions regarding their understanding of student needs, professional responsibilities, and expectations; the quality of communication, collaboration, and professional support; the challenges and barriers to program implementation, and their confidence in various areas of student support. The results of the survey were reported in full in the mid-year implementation report in March 2017 and selected results are also included in this report.

Student Dosage Logs

Reading Specialists kept a monthly record of each student they served and the approximate number of hours that they worked with each student. Reading Specialists also recorded reasons for students exiting the program. ORE collected these monthly longs and used the frequency and duration data as a variable when examining student outcomes.

AIMSweb

AIMSweb is a universal early literacy screening, benchmarking, and progress-monitoring tool that SDP began implementing in spring 2015. Kindergarten students receive the Test of Early Literacy (TEL), which includes four sub-tests: Letter Naming Fluency (LNF), Letter Sound Fluency (LSF), Phonemic Segmentation (PSF), and Nonsense Word Fluency (NWF). First to third grade students receive the Reading Curriculum Based Measurement (R-CBM) assessment of oral reading fluency. The benchmark periods for AIMSweb are fall, winter, and spring and the use of AIMSweb sub-tests varies based on the benchmark period. For the purposes of this report, researchers focused on analyzing the changes between fall and spring on SDP's core assessment for each grade level (Kindergarten=LNF; first grade=NWF; and second and third grade= R-CBM). All student baseline data was collected in September during the fall administration and summative data was collected in May during the spring administration window.

Findings

1.   How many students received support from a Reading Specialist and what were their characteristics?

Reading Specialists filled out monthly dosage logs for each student that they served. Over the course of SY 16-17, Reading Specialists reported serving 838 students from 18 schools. ORE was able to locate 794 of these students in SDP's enrollment files. Additionally, 777 students also completed AIMSweb assessments. In total, 94% of the students entered into dosage logs by Reading Specialists have both enrollment and AIMSweb data. Compared to first, second, and third grade, Reading Specialists saw few Kindergarteners, accounting for just 11% of the sample. See Table 1 for additional information.

Table 1. Compared to the other grades, there were fewer Kindergarteners in the intervention group

	Kindergarten	First Grade	Second Grade	Third Grade	OVERALL
Reported on dosage logs	98	287	299	220	838
Found in enrollment	89	260	229	216	794
AIMSweb	87	254	225	211	777

The majority of intervention students were African American/Black (78%) and this is particularly true for Kindergarten students, of whom 92% were African American/Black. Additionally, 89% of intervention students were low-income, according to their Free from TAPE status.[1] See Table 2 for additional demographic information.

Table 2. Across all grades, about 90% of intervention students receive qualify for free lunch from TAPE

Grade	Kindergarten	First Grade	Second Grade	Third Grade	OVERALL
% Female	53%	49%	45%	55%	50%
% African American/Black	92%	75%	79%	74%	78%
% Hispanic	6%	15%	16%	21%	16%
% ELL	3%	1%	3%	5%	3%
% SPED	5%	13%	8%	7%	9%
% Free lunch from TAPE	86%	90%	89%	89%	89%

Over three-fourths (76%) of the intervention students were reading in Tier 3 (intensive intervention) on their baseline (fall) AIMSweb assessment. Nearly all intervention students (97%) qualified for a Tier 2 or 3 intervention. The average National Percentile rank of all students was 12%, which is located below the Tier 3 cut point of 15%. See Table 3 for additional assessment information.

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[1] Free from TAPE status is the designation assigned to children of families who receive federal assistance and is a proxy for "low-income." This does not include children of families who qualify for, but do not receive, federal assistance.

Table 3. At baseline, almost all intervention students fell in Tier 2 or 3

Grade	Kindergarten (LNF)	First Grade (NWF)	Second Grade (R-CBM)	Third Grade (R-CBM)	OVERALL (N=777)
% Tier 1	14%	12%	1%	3%	6%
% Tier 2	20%	16%	15%	22%	18%
% Tier 3	66%	72%	84%	75%	76%
Average NPR	16%	15%	8%	11%	12%
Average Accuracy	22%	51%	51%	74%	55%

2.   With what frequency did students receive support?

Table 4 shows how many months of Reading Specialist support students received, by grade level. Overall, a greater percentage (35%) of students received a full year (10 months) of support than any other dosage, particularly for second- and third-graders (36% and 44%, respectively). This was true for all grades except Kindergarten, where a slightly larger percentage (29%) of students received 4-5 months of support, compared to 24% of students receiving 10 months of support. A very small percentage of students (2% on average) reported receiving one month of dosage.

Table 4. About a third of intervention students received 10 months of Reading Specialist Support

Grade	1 month	2-3 months	4-5 months	6-7 months	8-9 months	10 months
K	2%	9%	29%	14%	21%	24%
1	3%	8%	21%	15%	23%	30%
2	2%	9%	15%	17%	21%	36%
3	0.5%	10%	13%	14%	18%	44%
Total	2%	9%	18%	15%	21%	35%

Based on Reading Specialist service logs, 22% percent of students (n=185) who began seeing a Reading Specialist within the first two months of school were exited early. The most frequent reasons why students exited the program were: reaching reading goal (22), received IEP (31), teacher discretion (31), and transferred schools (58).

Table 5 illustrates the average monthly dosage – that is, how many hours of support intervention students received, on average, each month. Half (50%) of students received an average of 1-4 hours

of support from a Reading Specialist each month. Thirty-nine percent of students received an average of 4-6 hours and an additional 11% received an average of 6-8 hours a month.

Table 5. Half of the intervention students received 1-4 hours of support per month

Grade	1-4 hours	4-6 hours	6-8 hours	8-10 hours
K	59%	33%	8%	0%
1	46%	41%	13%	0%
2	50%	44%	6%	0%
3	49%	33%	15%	3%
Total	**50%**	**39%**	**11%**	**1%**

To calculate the total number of hours of support intervention students received, ORE multiplied a student's approximate average monthly dosage by the number of months of support they received. Table 5 illustrates the distribution of total hourly dosage. The greatest number of students (148, or 19% of students) received a total of 30-39 hours of support over the course of their participation in the program. The fewest number of students (8, or about 1%) received a total of 80-90 hours of support (Figure 1).

Figure 1. Nineteen percent of intervention students received a total of 30-39 hours of support
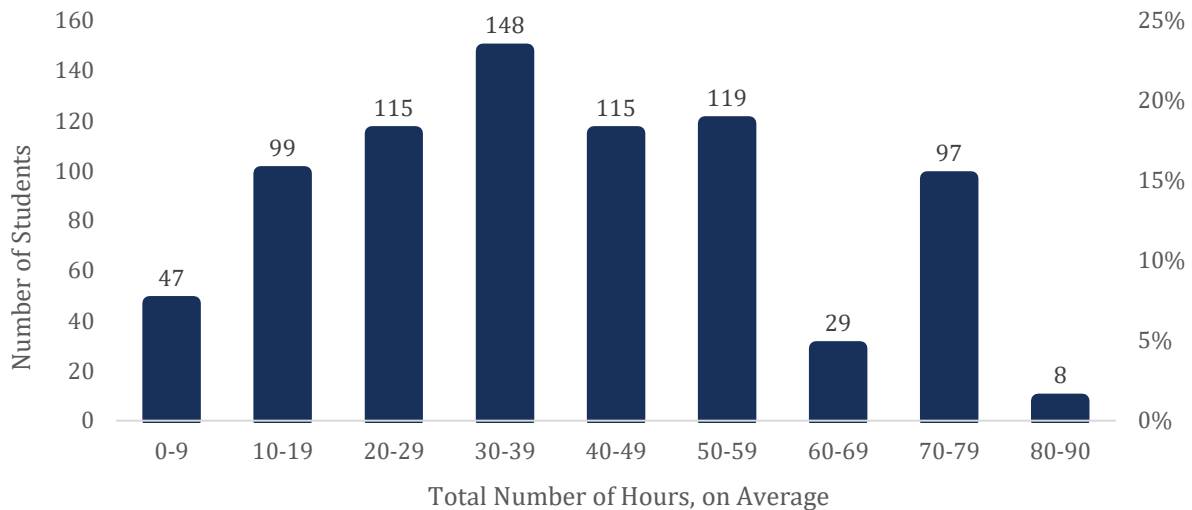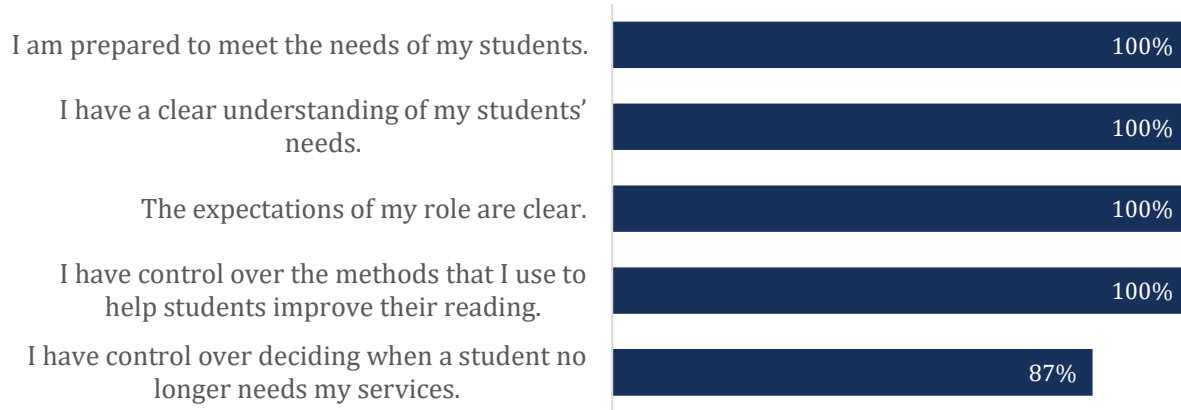

3. What is the perception of the Reading Specialists in terms of their ability to fulfill their role and responsibilities and meet the needs of students?

Survey data shows that Reading Specialists felt positively about their ability to meet the needs of the students they serve. See Figure 2. All Reading Specialists (100%) agreed they were prepared to meet the needs of their students and that they had a clear understanding of those needs. Similarly, 100% of respondents said that their role and expectations were clear and that they had control
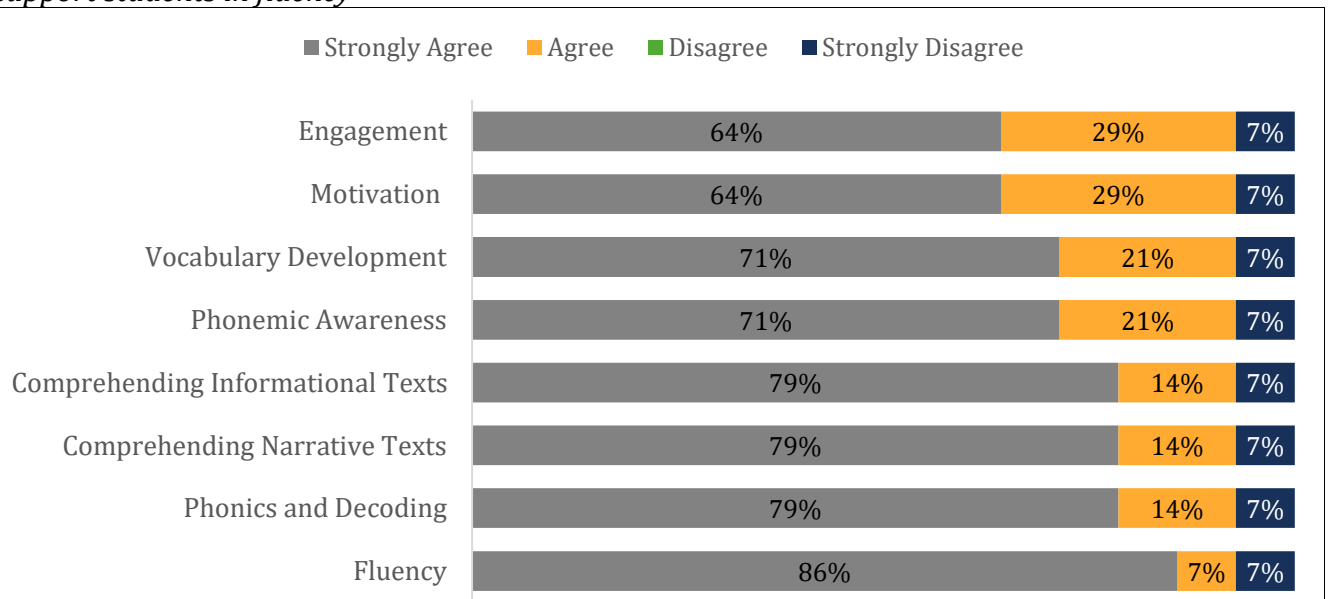
over the methods that they used to help students. A majority of Reading Specialists (87%) reported having control over when they release a student from support services.

Figure 2. All Reading Specialists that agree/strongly agree they can meet the need of their students

Statement	Percentage
I am prepared to meet the needs of my students.	100%
I have a clear understanding of my students' needs.	100%
The expectations of my role are clear.	100%
I have control over the methods that I use to help students improve their reading.	100%
I have control over deciding when a student no longer needs my services.	87%

Across all components of student support, 93% of Reading Specialists either agreed or strongly agreed that they were confident in their ability to support students. Fluency was the area in which the most Reading Specialists (86%) strongly agreed in their ability to support students. Motivation and Engagement were areas in which the fewest respondents (64%) reported that they "strongly agree" with their ability to support students.

Figure 3. Eighty-six percent of Reading Specialists reported confidence in their ability to support students in fluency

	Strongly Agree	Agree	Disagree	Strongly Disagree
Engagement	64%	29%		7%
Motivation	64%	29%		7%
Vocabulary Development	71%	21%		7%
Phonemic Awareness	71%	21%		7%
Comprehending Informational Texts	79%	14%		7%
Comprehending Narrative Texts	79%	14%		7%
Phonics and Decoding	79%	14%		7%
Fluency	86%	7%		7%

## 4.	What are the primary barriers to implementation as reported by Reading Specialists?

Reading Specialists reported several barriers related to program organization and infrastructure that were at least a "slight challenge" to effectively serving students (Figure 4). Half of Reading Specialists (50%) reported that issues with school and classroom schedules were either a slight (43%) or moderate (7%) challenge. Over half (57%) reported that a lack of training or professional development was either a slight (36%) or moderate (21%) challenge. A lack of resources or materials was the most frequently cited challenge to implementation, with 79% of Reading Specialists citing it as a slight (43%), moderate (29%), or great (7%) challenge.

Figure 4. No Reading Specialists reported issues with classroom teachers as a barrier
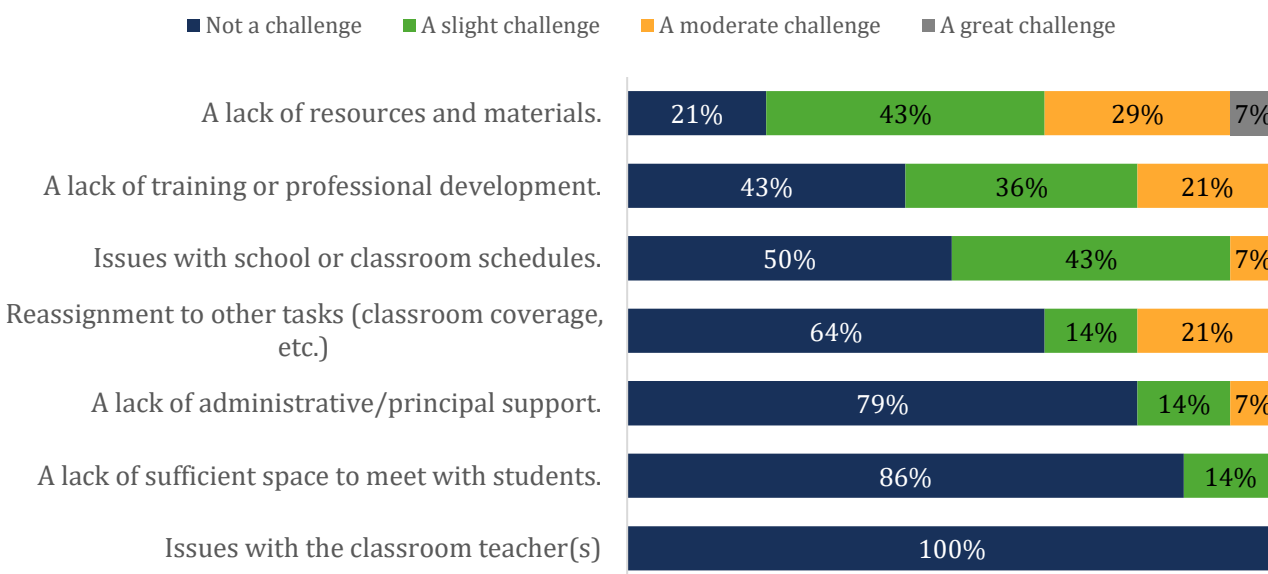
Compared to the reported barriers associated with program organization and infrastructure, there were considerably more student related barriers (Figure 5). Over two-thirds (71%) of Reading Specialists reported that the number of students on their caseload was at least a slight challenge, with 29% reporting that it was moderate (21%) or great (7%) challenge. Related to the number of students served, 86% of Reading Specialists reported that the amount of time they were able to spend with students is either a slight (57%), moderate (21%), or great (7%) challenge. Most Reading Specialists also cited student behavioral issues and wide-ranging student needs as at least a slight challenge (86% and 92%, respectively). The most frequently reported barrier is frequent student absences, with 93% of Reading Specialists reporting that absences were at least a slight issue and over one-third (35%) reporting at that absences were a moderate (21%) or great (14%) challenge.

Figure 5. Ninety-three percent of Reading Specialist reported that frequent student absences were a challenge to implementation.
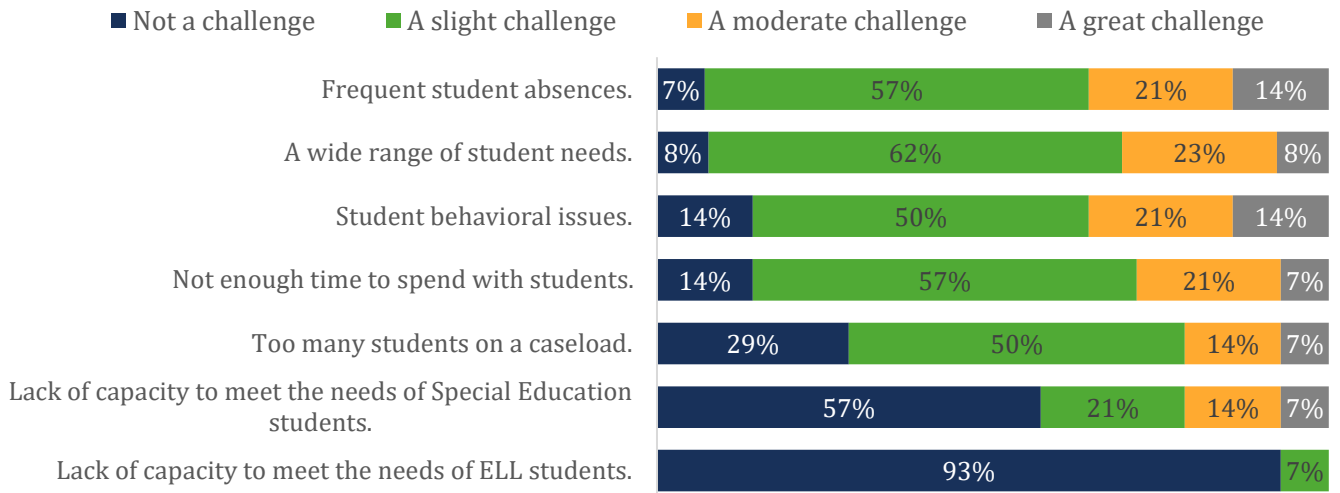
5.   How satisfied are the Reading Specialists with the training and support provided by SDP?

Reading Specialists were generally satisfied with the training and support they received. All Reading Specialists (100%) reported that monthly meetings were helpful to their practice and that they know who to ask if they need help, Nearly all (93%) agree or strongly agree that their trainings were useful and relevant. However, less than one-third (29%) reported that they have enough time to collaborate with other Reading Specialists.

Figure 6. All Reading Specialists agree/strongly agree that monthly meetings were helpful
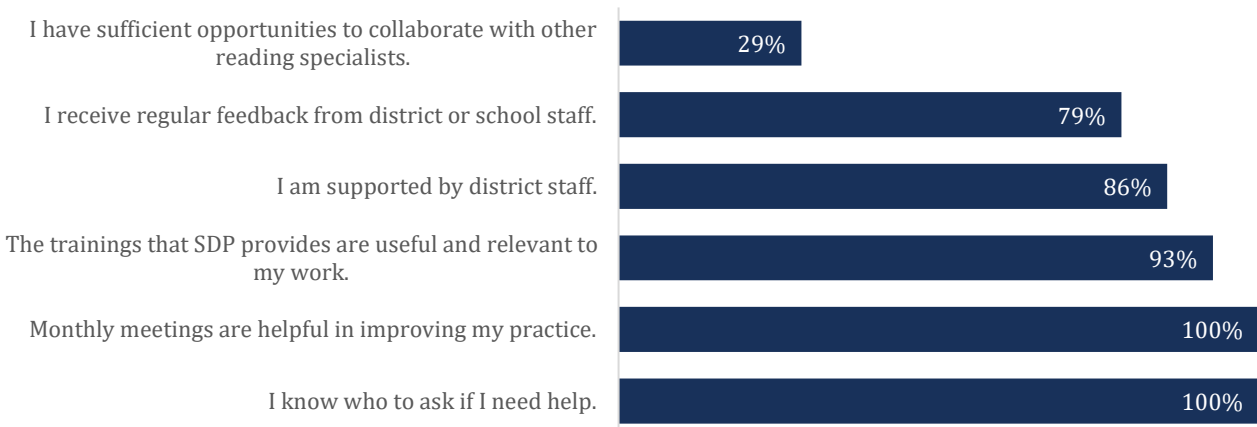
6.   Do students who receive support from a Reading Specialist demonstrate improvements in literacy outcomes?

Analysis of AIMSweb Outcomes

SDP uses AIMSweb, a universal early literacy screening, benchmarking, and progress-monitoring tool from Pearson, to assess literacy proficiency for all K-8 students. Teachers score students' performance on each AIMSweb assessment according to the number of cues students identify correctly or incorrectly in a 60-second period. Each grade level is administered one core assessment (in addition to other standardized measures) at three time points across the year (fall, winter, and spring):

- Kindergarten; **Letter Naming Fluency (LNF)** assessment: Measures letter identification
- 1st Grade; **Nonsense Word Fluency (NWF)** assessment: Measures phonemic awareness
- 2nd Grade; **Reading Curriculum Based Measurement (R-CBM)**: Measures oral reading fluency
- 3rd Grade; **Reading Curriculum Based Measurement (R-CBM)**: Measures oral reading fluency

For each core assessment, ORE examined the descriptive outcomes of the intervention group (the students that received support from a Reading Specialist) and then compared the outcomes of the intervention and comparison students (students in Reading Specialist schools that did NOT receive any support from Reading Specialists) on the following data points:

- **National Percentile Rank (NPR)**: A norm-referenced measure that compares students' raw scores to a national sample of students
- **Tier Level**: Based on their raw scores, students are placed into three groups: Tier 1 (At Target), Tier 2 (Strategic Intervention), or Tier 3 (Intensive Intervention).
- **Accuracy**: Accuracy is computed as the ratio of the number of cues correctly identified to the total number of cues identified in 60 seconds [i.e., correct/(correct + incorrect), or more simply, the percent cues answered correctly.
- **Rate of Improvement (ROI):** The number of points a student or group of students increased per week between assessment periods [i.e., (fall correct-spring correct)/number of weeks]
- **Student Growth Percentile (SGP):** Percentile norms that indicate the percentage of students in the nationally representative sample with similar baseline scores (very low, low, average, high, very high) that had an ROI equal to or smaller than a particular student's or group of students' average ROI.

All students in each grade level (both intervention and comparison) saw improvements in their National Percentile Rank (NPR) from fall to spring (Figure 6). Kindergarten students had the largest increase in their average NPR from fall to spring (8 percentage points), while second grade had the smallest increase (1 percentage point). The increase from fall to spring was statistically significant for Kindergarten and first grade (see table footnote), but was not statistically significant for second and third grade. Reading Specialist students in aggregate **("RS Avg")** saw an average increase of

three percentage points in their NPR from fall to spring. All comparison students – that is, those students who did NOT receive support from a Reading Specialist **("School Avg")** – saw no change in their NPR from fall to spring, but these students' average NPR was higher overall than the intervention students'. However, this difference in scores is expected, as students who were reading below grade level were especially targeted to receive Reading Specialist support.

Figure 6. Changes in National Percentile Rank (NPR) from Fall to Spring
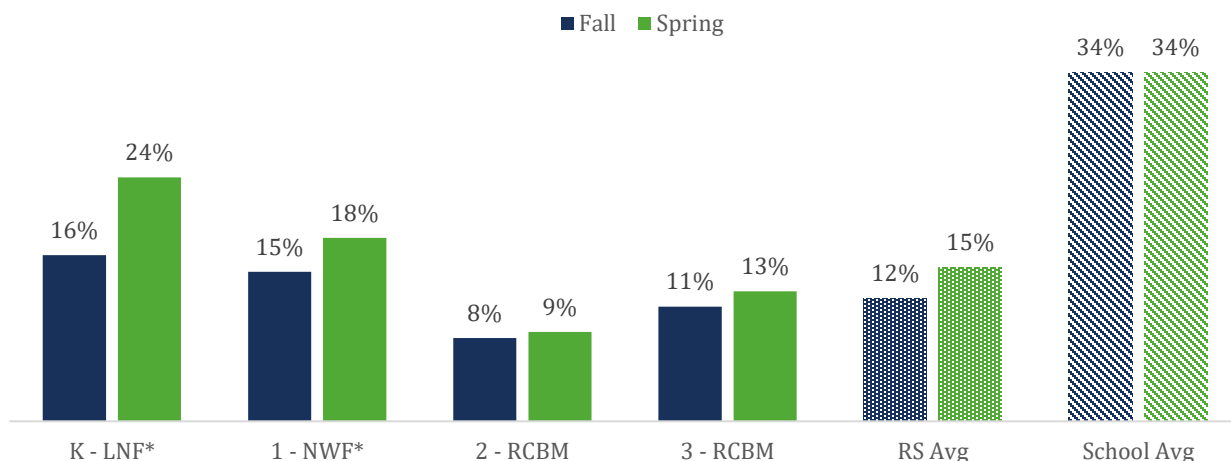
* Change is statistically significant at *p*=.005 and *p*=.001, respectively

Figure 7 illustrates intervention students' Tier changes from fall to spring. Each grade level had an increase in the percent of students in Tiers 1 and 2 (At Target or Strategic Intervention) and a decrease of students in Tier 3 (Intensive Intervention) from the fall to the spring. Kindergarten and first grade students experienced the largest change: the percent of students scoring in Tier 1 nearly doubled (from 14% to 26% for Kindergarten and from 12% to 21% for first grade). The percent of Kindergarten and first grade students in Tier 2 remained somewhat stable. Second and third grade students saw smaller increases in the percent of students in Tier 1 (compared to other grades), but saw larger increases in the percent of students in Tier 2. Overall, the trends for all grades are positive.

Figure 7. Across all grades, there was a decrease in the percentage of intervention students in Tier 3 from fall to spring
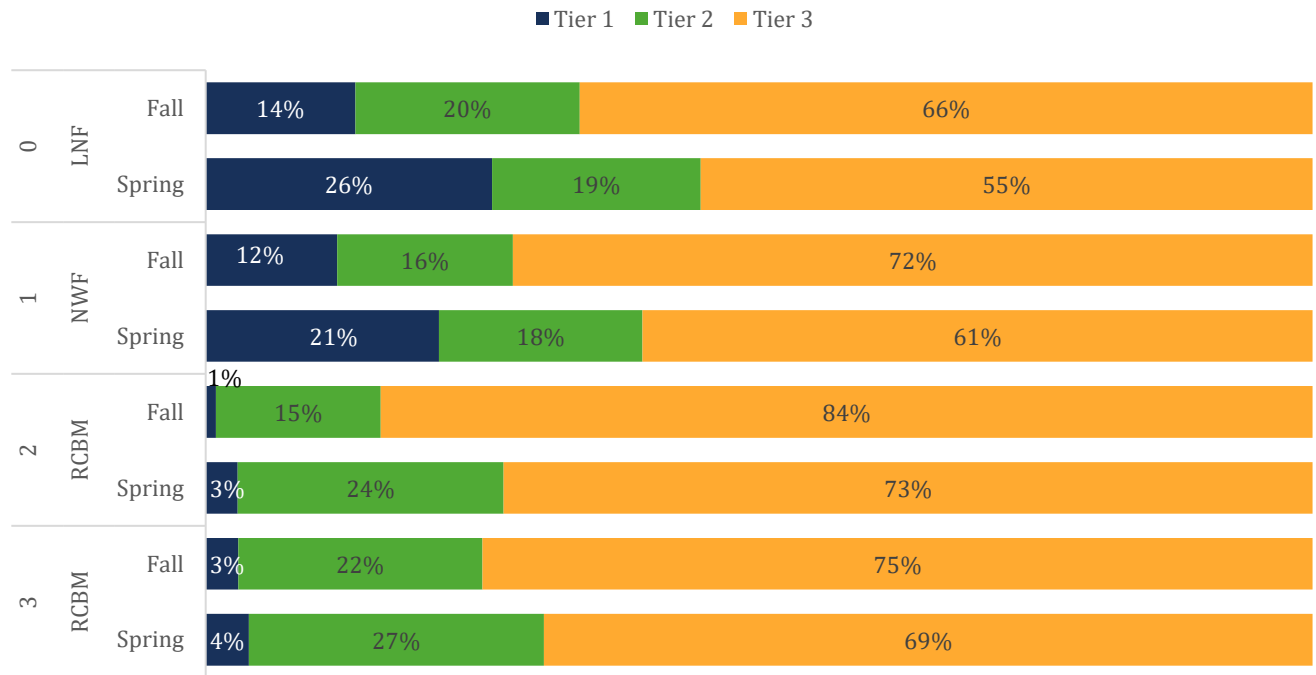
Tier 1 ■ **Tier 2** ■ **Tier 3** ■

			Tier 1	Tier 2	Tier 3
0	LNF	Fall	14%	20%	66%
		Spring	26%	19%	55%
1	NWF	Fall	12%	16%	72%
		Spring	21%	18%	61%
2	RCBM	Fall	1%	15%	84%
		Spring	3%	24%	73%
3	RCBM	Fall	3%	22%	75%
		Spring	4%	27%	69%

Figure 8 shows the overall average Tier changes for intervention students ("RS Average") as well as the Tier changes for comparison students ("School Average"). On average, intervention students saw positive Tier movement, with an average of 6% in Tier 1 in the fall and an average of 12% in Tier 1 in the spring. Comparison students saw little change in Tier distributions over time, though, as expected, a greater percent of students who did not receive support scored in Tier 1.

Figure 8. More intervention students moved out of Tier 3 from fall to spring (10%) compared to comparison students (2%)

Tier 1 ■ **Tier 2** ■ **Tier 3** ■

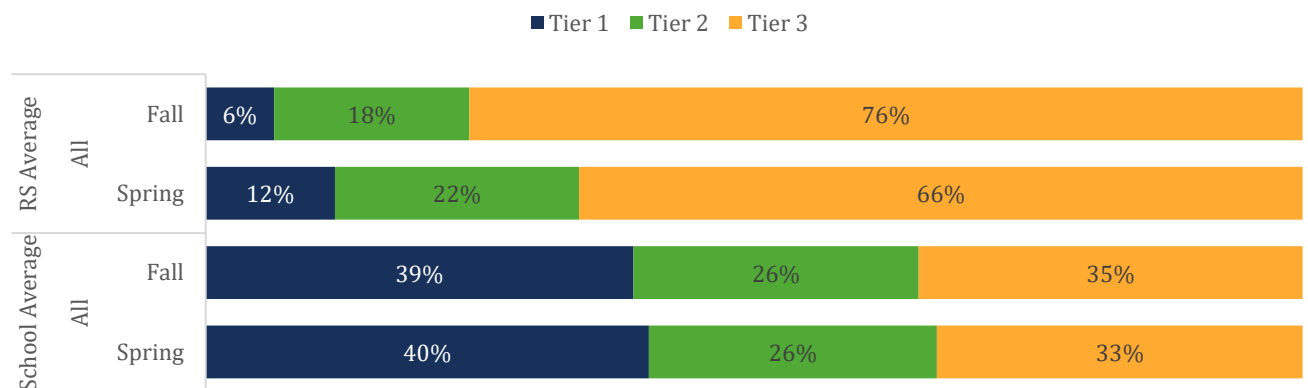|			Tier 1	Tier 2	Tier 3
RS Average	All	Fall	6%	18%	76%
		Spring	12%	22%	66%
School Average	All	Fall	39%	26%	35%
		Spring	40%	26%	33%

Figure 9 illustrates the changes in all students' accuracy from fall to spring. Across all grades, students demonstrated improvements in their average accuracy scores (the proportion of correctly-identified cues to the overall number of attempted cues). Kindergarten students had the

largest increase in accuracy scores (59 percentage points) from fall to spring; first grade and second grade also experienced large increases (31 and 28 percentage points, respectively). Third grade students had the smallest increase in accuracy (15 percentage points). On average, intervention students increased their accuracy by 29 points. Comparions students increased their accuracy by 19 points, but their overall accuracy is higher than that of Reading Specialist students.

Figure 9. Intervention students' accuracy increased, on average, 29 percentage points from fall to spring
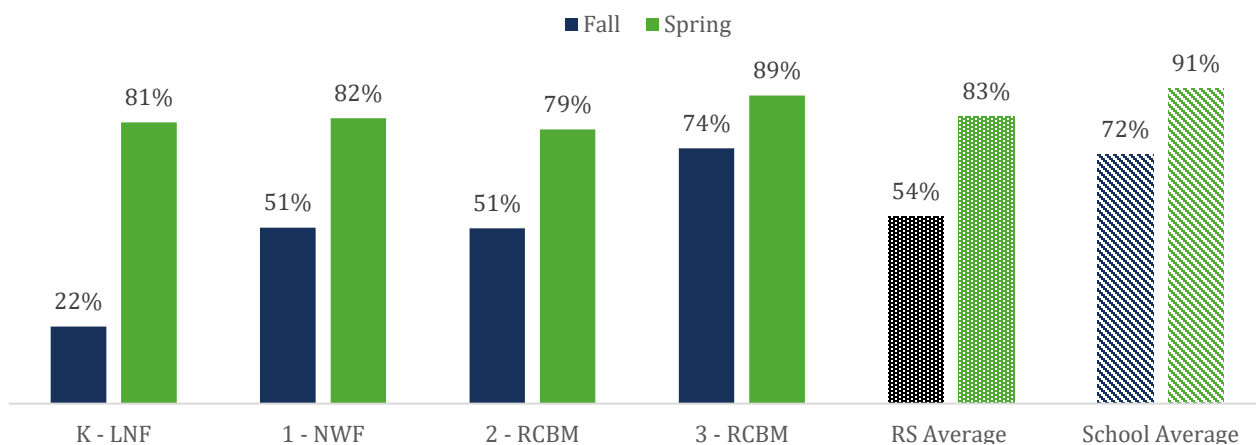

Figure 10 shows all students' average rate of improvement (ROI), or the average increase in raw number correct /number of weeks between assessments, from fall to spring by grade. Third grade and Kindergarten had the highest ROIs (.83 and .82, respectively), followed by second grade (.80). First graders had the lowest ROI (.75). Intervention students had an average ROI of .80, compared to comparison students' ROI of .88. See Appendix A for ROI scores disaggregated by school and grade level for students receiving Reading Specialist support.

Figure 10. On average, comparison students' ROI was greater than intervention students' ROI
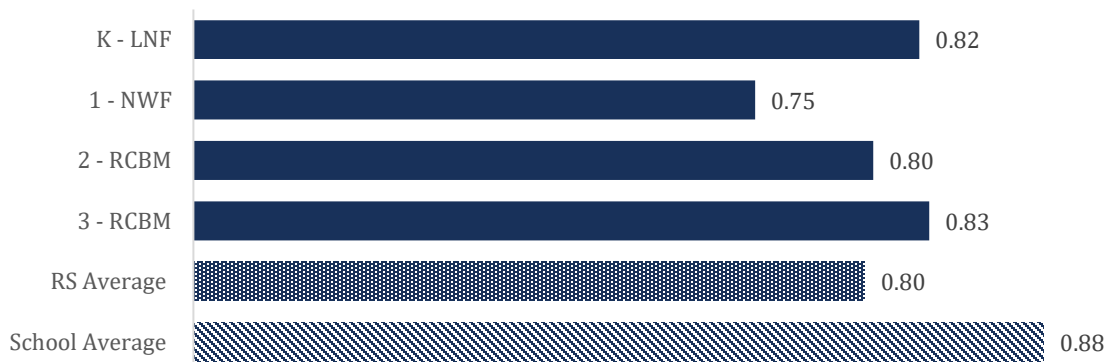
Student Growth Percentiles (SGPs) are used to analyze the growth of intervention students in comparison to other students across the country with similar baseline scores. These groupings are more nuanced than Tier placements and provide a more accurate depiction of a student's growth

based on their baseline performance (as measured by their initial fall NPR). The following table and chart explore students' SGPs based on their initial percentile ranking. Since the Reading Specialist program targets students who are reading below grade level, it is not surprising that there are very few or no students in the "high" or "very high" initial NPR categories. Comparison students had a higher percentage of students with Average, High, and Very High initial NPRs and a smaller percentage of students with Low and Very Low NPRs.

Table 6. Sixty-three percent of intervention students had an initial NPR of Very Low

| Grade | Assessment | N Assessed | Initial NPR | | | | |
			Very Low (0-10%)	Low (11-25%)	Average (26-75%)	High (76-90%)	Very High (91-100%)
K	LNF	74	46%	32%	20%	1%	0%
1	NWF	227	55%	29%	15%	1%	<1%
2	R-CBM	215	74%	20%	6%	0%	0%
3	R-CBM	204	67%	24%	9%	<1%	<1%
RS Average		720*	63%	25%	11%	1%	0%
Schools Average		4,045	27%	22%	41%	8%	3%

* Only includes students with both a fall and spring assessment score.

After students are categorized based on their initial NPR, SGPs are calculated by comparing the ROI of students within each group. With the exception of Kindergarten students designated "Average" on their baseline assessment (n=14), across all grades and assessments, intervention students grew at a slower rate than at least 50% of their peers nationally. First- and third-grade students with a "Very Low" baseline designation (NPR of 1-10%, n=114 and 121, respectively) demonstrated especially low growth percentiles of 26%. This means that this group of students grew at a slower rate than 74% of their "Very Low" peers nationwide (and at a faster rate than 26% of those peers).

*Figure 11. All intervention students with a baseline of "Very Low" or "Low" grew at a slower rate than at least 50% of their peers nationally.^*
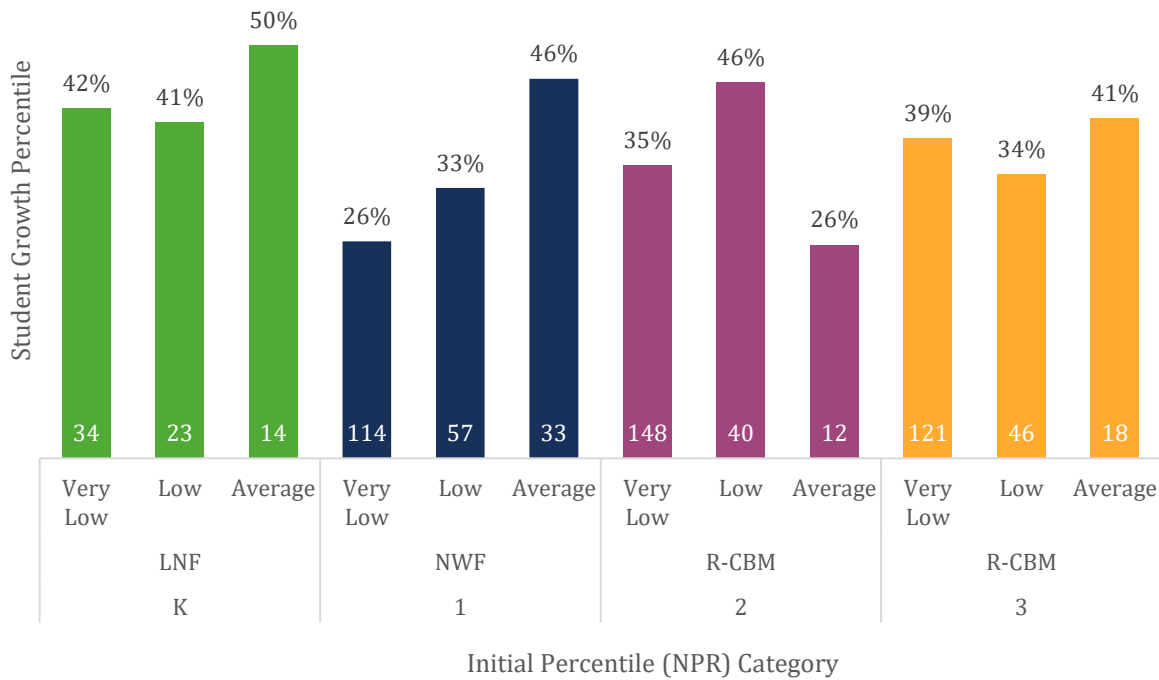
^ "High" and "Very High" results are excluded due to low N counts (<5).

Comparison students showed somewhat similar SGPs to treatment students (Figure 12). For example, Kindergarten comparison students whose initial NPR was "Very Low" (n=200) grew at a faster rate than 43% of their "Very Low" peers nationally, similar to "Very Low" intervention Kindergarteners (who had an average SGP of 42%, see Figure 11, n=34). In some cases, intervention students had higher SGPs than comparison students– "Average" first-grade students and "Low" second-grade intervention students improved at a faster rate than comparison. However, comparison Kindergarteners categorized as "Low" using their initial NPR improved at a faster rate than "Low" intervention Kindergarteners (51% and 41% and n=209 and 23, respectively).

Figure 12. Kindergarten comparison students saw the highest SGP
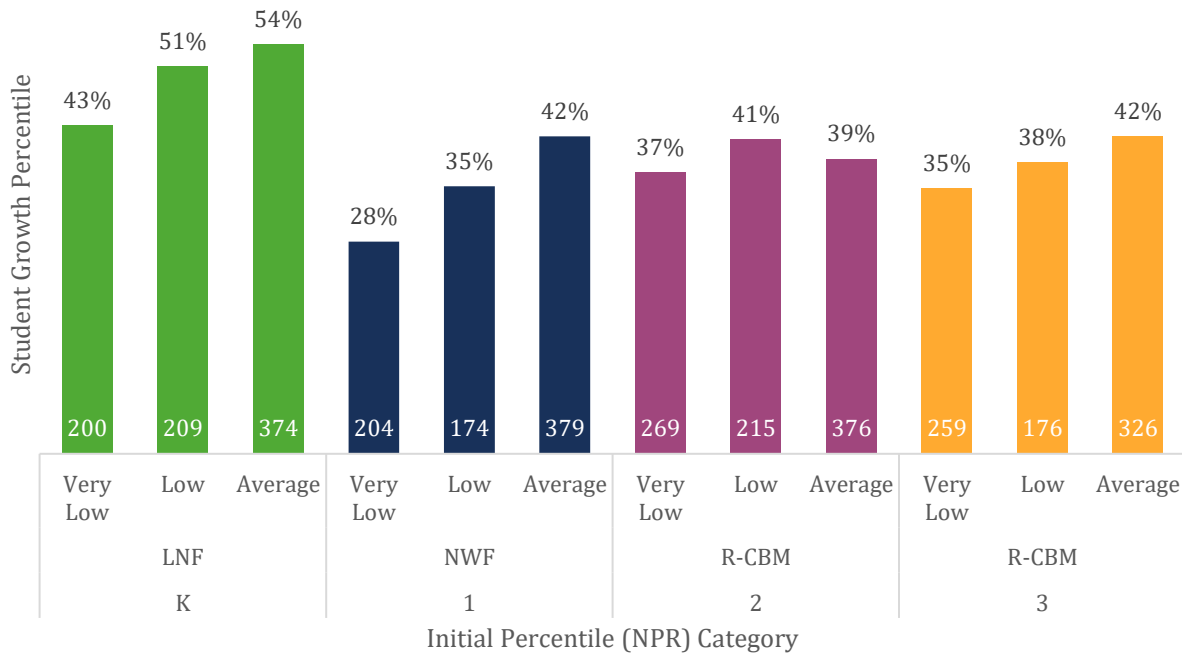
7.   Is there a relationship between the frequency of Reading Specialist support and student growth?

Correlations between estimated dosage and ROI demonstrate that there is no statistically significant relationship between hours of Reading Special support and a student's ROI. However, the "average total hourly dosage variable" is based on a "bucket" of tutoring hours (e.g., 1-3 hours, 4-6 hours) multiplied by the number of months a student was tutored, and should thus be interpreted as a best estimate of service. In order to verify this conclusion, additional research that uses a more refined dosage variable and takes into account student attendance is required.

Table 7. No significant correlation between Dosage and ROI

	N	Average Total Hourly Dosage	Average ROI	Correlation
Very Low (0-10)	405	39	0.70	.078
Low (11-25)	160	39	0.98	.050
Average (26-75)	73	37	0.95	.210

^ "High" and "Very High" results are excluded due to low N counts (<5).

Conclusions and Recommendations

- The majority of Reading Specialists report that the amount of time they have to spend with students and the number of students on their caseload is at least a slight challenge. Each Reading Specialists saw an average of 47 students during the school year.
- There was notable variation between the baseline literacy levels of students that saw a Reading Specialist, the number of months a student participated in the program, and the hourly dosage of services. It may be useful for program staff consider developing guidelines that ensure reasonable caseloads and to increase dosage in order to maximize student outcomes.
- Reading Specialists report overwhelming satisfaction with the clarity of their role, their preparedness, and the autonomy that they have to determine the interventions they use to serve students.
- Reading Specialists are slightly less confident in their ability to engage and motivate struggling readers, compared to supporting students with developing specific literacy skills. Program staff may want to consider providing additional professional development in this area.
- The majority of Reading Specialists report that limited access to materials and resources (79%) and professional development/training (57%) is at least a slight challenge. Program staff, in collaboration with ORE, should further investigate what types of additional materials, resources, or PD would improve Reading Specialists' work.
- AIMSweb data show that K-3 students who received support from a Reading Specialist saw improvements in their National Percentile Rank (NPR) from fall to spring. Kindergarten students had the largest increase in their average NPR from fall to spring. K-3 students who received Reading Specialist support also saw an increase in the percent of students in Tiers 1 and 2 (At Target or Strategic Intervention) and a decrease of students in Tier 3 (Intensive Intervention) from the fall to spring. Kindergarten and first-grade students experienced the largest change. Across all grades, Reading Specialist students demonstrated improvements in their average accuracy scores.
- ORE did not find a correlation between dosage of services and student's rate of improvement. However, there were significant limitations in how dosage was reported, and dosage estimates may not reflect actual hours. ORE should work with program staff to improve dosage logs in order to strengthen further analysis.
- Treatment student outcomes were not consistent across schools. ORE should further study the schools in which treatment students made the most progress to identify school-level factors that may contribute to positive outcomes for these students.

School and Grade	N Students	Avg N Correct - Fall	Avg N Correct - Spring	Avg NPR – Fall	Avg NPR – Spring	Avg Accuracy – Fall	Avg Accuracy - Spring	Avg ROI
Anderson*	74	27	57	15	15	66%	86%	0.85
1	22	14	42	15	20	50%	82%	0.77
2	26	25	59	18	15	66%	86%	0.94
3	26	39	69	13	11	80%	91%	0.83
Barry*	29	24	65	13	19	75%	95%	1.18
1	6	20	62	24	39	64%	94%	1.27
2	13	21	69	14	18	76%	97%	1.32
3	10	28	63	7	9	81%	93%	0.99
Bryant	39	12	31	14	9	42%	77%	0.53
0	11	11	28	30	13	43%	86%	0.42
1	13	11	34	13	12	37%	78%	0.66
2	9	5	20	3	2	25%	63%	0.43
3	6	23	45	5	5	70%	83%	0.60
Duckrey	59	14	40	9	12	46%	78%	0.77
0	14	1	22	8	10	7%	68%	0.60
1	20	14	39	14	19	54%	82%	0.88
2	11	9	37	5	6	44%	72%	0.76
3	14	31	60	7	7	77%	88%	0.84
Dunbar	50	28	52	19	18	57%	88%	0.74
0	11	4	33	17	19	29%	89%	0.81
1	20	10	31	10	8	53%	82%	0.54
2	8	11	35	6	4	39%	86%	0.71
3	11	81	120	44	43	91%	97%	1.07

*Signifies schools with an average treatment ROI higher than the aggregate treatment average for all schools.

School and Grade	N Students	Avg N Correct - Fall	Avg N Correct - Spring	Avg NPR – Fall	Avg NPR – Spring	Avg Accuracy – Fall	Avg Accuracy - Spring	Avg ROI
Gideon	30	9	34	6	10	48%	82%	0.71
0	6	1	32	8	24	7%	77%	0.86
1	6	8	14	7	2	46%	66%	0.21
2	12	13	41	7	6	65%	86%	0.77
3	6	9	28	1	2	57%	83%	0.54
Lea*	59	17	55	21	35	62%	92%	1.09
K	17	6	46	19	47	30%	84%	1.16
1	28	20	58	24	37	76%	96%	1.08
2	14	23	60	16	18	72%	93%	1.03
Locke	32	19	41	12	20	60%	78%	0.32
1	18	16	39	16	23	56%	77%	0.34
3	14	24	52	6	5	64%	83%	0.25
Meade	26	11	24	3	4	42%	63%	0.39
1	5	-	26	-	10	-	59%	-
2	10	7	17	3	2	35%	57%	0.32
3	11	15	35	3	3	49%	73%	0.47
Mitchell	29	10	36	6	7	45%	78%	0.74
1	11	5	31	4	9	37%	79%	0.71
2	14	13	45	8	8	51%	85%	0.90
3	4	12	18	2	1	45%	51%	0.18
Morton*	77	22	55	11	13	58%	85%	0.91
1	22	11	30	13	10	42%	73%	0.57
2	24	13	47	7	11	46%	83%	0.94
3	31	38	80	13	18	78%	95%	1.12

*Signifies schools with an average treatment ROI higher than the aggregate treatment average for all schools.

School and Grade	N Students	Avg N Correct - Fall	Avg N Correct - Spring	Avg NPR - Fall	Avg NPR - Spring	Avg Accuracy - Fall	Avg Accuracy - Spring	Avg ROI
Pennell	**28**	**15**	**41**	**5**	**7**	**54%**	**77%**	**0.74**
2	17	9	35	5	7	46%	72%	0.75
3	11	24	49	5	8	68%	84%	0.73
Sheppard	**30**	**17**	**43**	**8**	**10**	**53%**	**84%**	**0.71**
1	**5**	13	47	13	24	46%	88%	0.96
2	11	16	46	10	10	54%	87%	0.80
3	14	18	38	4	4	55%	80%	0.53
Sheridan*	**55**	**37**	**73**	**20**	**24**	**77%**	**93%**	**1.00**
1	18	23	64	29	42	62%	93%	1.19
3	37	44	77	15	17	84%	93%	0.93
Stearne	**32**	**6**	**23**	**4**	**4**	**43%**	**69%**	**0.52**
1	16	4	24	4	5	45%	75%	0.56
2	15	8	23	4	3	41%	62%	0.52
3	1	9	15	1	1	47%	68%	0.17
Steele	**44**	**13**	**38**	**14**	**16**	**52%**	**87%**	**0.71**
K	15	6	43	21	32	31%	93%	1.04
1	10	13	22	14	7	47%	78%	0.25
2	12	15	41	9	8	67%	85%	0.76
3	7	27	46	7	5	75%	87%	0.59
T. Marshall*	**47**	**11**	**40**	**8**	**12**	**40%**	**83%**	**0.84**
K	10	2	26	10	14	10%	69%	0.78
1	16	9	37	10	17	37%	80%	0.77
2	13	10	49	4	8	47%	93%	1.10
3	8	25	46	8	6	66%	93%	0.59

*Signifies schools with an average treatment ROI higher than the aggregate treatment average for all schools.

School and Grade	N Students	Avg N Correct - Fall	Avg N Correct - Spring	Avg NPR - Fall	Avg NPR - Spring	Avg Accuracy - Fall	Avg Accuracy - Spring	Avg ROI
Taylor	37	5	24	5	5	27%	70%	0.51
K	3	1	15	8	3	6%	70%	0.40
1	18	8	29	8	7	35%	84%	0.61
2	16	4	20	2	4	21%	57%	0.45
Grand Total	*777*	*18*	*46*	*12*	*15*	*54%*	*83%*	*0.80*

*Signifies schools with an average treatment ROI higher than the aggregate treatment average for all schools.