

Reading for Results

New York State's



Prepared by:



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New York State's Reading for Results

The Reading Excellence Act (REA) has awarded more than \$327 million in grants to help states use scientifically based reading research to improve the reading skills of kindergarten through third grade children.

In April 2001, New York State received approximately \$82 million in Reading Excellence Act (REA) federal funds for fiscal years 2002-2004. Dubbed by New York State as Reading for Results (RFR), the state grant involved a statewide professional development program that was designed to prepare educators to implement scientifically based reading research (SBRR) practices. Called the Reading Academy, the program was developed by the New York State Education Department in consultation with national reading experts and Voyager Learning, Inc.

The Reading Academy included the essential components of high-quality practices in professional development and scientifically based reading instruction content aligned with Reading First legislation and New York State Learning Standards. The program was delivered within a three-tiered structure centered on an online course that teachers completed individually. At the top of the tiered system were highly experienced Tier I reading specialists who operated as regional coach leaders to a small group of in-school Tier II reading coaches. The Tier II reading coaches, in turn, worked within the schools to provide training and coaching to teachers who participated in the online coursework. RFR coordinators were strongly encouraged to serve in the role of a reading coach to ensure coordination between foundation material of the Reading Academy and the school's professional development activities.

Teachers participated in 80 hours of an online, interactive, eight-module reading program, which incorporated opportunities for teachers to practice their research-based instructional skills in the classroom and then report back to the facilitated group of participants. The modules covered the five essential elements



The Reading Academy included the essential components of high-quality practices in professional development and scientifically based content aligned with Reading First legislation and New York State Learning Standards.

of reading, as well as motivation to read. The essential elements of reading are phonemic awareness; phonics; fluency; vocabulary and comprehension. Each module consisted of 10 hours, 7 hours consisted of self-paced course content, online discussion, and classroom planning activities, and 3 hours consisted of teacher group study and discussion facilitated by the in-house Tier II reading coach. The Tier II reading coach also provided teachers with ongoing support such as modeling and feedback.

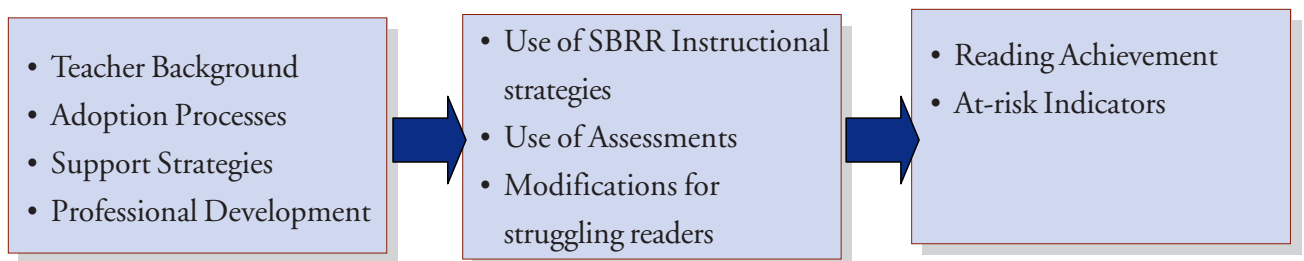
Evaluation of Reading for Results

MAGI Educational Services, Inc., a research and evaluation company located in White Plains and Albany, New York was contracted to evaluate the RFR grant activities. The purpose of the evaluation was to identify the conditions under which reading skills were most efficiently and productively developed in children. Of most interest was the impact of teachers' use of SBRR instructional strategies, assessments, and interventions upon students' reading abilities from kindergarten to third grade. Furthermore, we examined the impact of the RFR grant activities upon teachers' use of SBRR instructional strategies, assessments, and modifications for struggling readers. A conceptual framework was constructed to guide the evaluation.

Conceptual Framework for the Evaluation

The process of school change to improve student achievement is complex. It requires bringing together a variety of resources and strategies to make it work. **Figure 1** presents the conceptual framework for the evaluation. The model indicates that the impact on students was a function of teachers' implementation of SBRR practices. The model further indicates that SBRR implementation was influenced by the professional development program (Reading Academy) as well as certain antecedent factors that are known to impact teaching and learning, including the adoption process of RFR, teacher characteristics, and the strategies schools use to support SBRR implementation. **Table 1** lists the items that were used to define the variables.

Figure 1
Conceptual Model for Studying the Implementation and Impact of RFR



Several data collection strategies were utilized for the evaluation. These strategies are described in the remainder of this section.

Survey Methodology

Survey methodology was used to collect information from schools about the design, implementation and perceived outcomes of the reading program. Two surveys were developed, one for teachers and one for administrators and coaches (School Survey). The surveys included items that measured the variables listed in **Table 1**.

In the study, 35 schools were selected to participate in the survey component of the evaluation. Using stratified random sampling procedures, schools were selected to reflect the percent of schools that received funds in New York City and in the remainder of the state. Teacher surveys were administered to all K-3 grade teachers who participated in the NYS Reading Academy in each

Table 1
Definition of Variables

Antecedent Variables	
Teacher Background	<ul style="list-style-type: none"> • Highest Education degree • Number of Years Teaching
Adoption Process	<ul style="list-style-type: none"> • Priority for reading program • Readiness to use SBRR • Management structures
Support to Teachers	<ul style="list-style-type: none"> • Feedback on reading instruction • Type and frequency of in-class support
Professional Development	<ul style="list-style-type: none"> • Content • Scope • Effectiveness (e.g., teacher knowledge and skills)
SBRR Implementation Variables	
Instructional Practices	<ul style="list-style-type: none"> • Changes in use of SBRR instructional strategies • Levels of SBRR use (e.g., mechanical, routine, integrated use) • Time spent in reading dimensions
Assessment	<ul style="list-style-type: none"> • Type of assessments used • Extent/frequency of use
Classroom Modifications	<ul style="list-style-type: none"> • Type of classroom modifications • Timing of interventions
Outcomes	
Achievement	<ul style="list-style-type: none"> • Gains on DIBELS measures • Gains in percent of students on and above grade level
At-Risk Indicators	<ul style="list-style-type: none"> • Special education placement/identification • Academic interventions (e.g., the need for additional tutoring, intensive interventions)

Table 2
School and Teacher Characteristics of Survey Sample


School Characteristics	
Demographics	Percent of schools in the sample
Percent of New York City schools	74%
Percent of other Big 4 schools	26%
Percent of students eligible for reduced/free lunch	92%
Teacher Characteristics	
Grades taught:	Percent of teachers
Kindergarten	25%
1 st grade	28%
2 nd grade	30%
3 rd grade	27%
Average number of teaching experience	9.58 years
Percent of teachers who are certified to teach	90%


school. The teacher survey was completed by 264 teachers. Administrators and Tier II coaches were asked to work together to complete the school survey. This survey was completed by 25 administrators and coaches. **Table 2** presents school and teacher characteristics of the sample.


Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Assessment

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment is a set of standardized, individually administered measures of early literacy development. The measures were designed to tap into the major dimensions of reading that the National Reading Panel (2000) and National Research Council (1998) reports deemed as essential to the development of reading. These dimensions include phonological awareness, alphabetic understanding, and automaticity and fluency. The measures are linked to one another, both psychometrically and theoretically, and have been found to be predictive of later reading proficiency. A descrip-


tion of each measure is bulleted below.


 **Initial Sounds Fluency (ISF)**: Assesses a child's skill to identify and produce the initial sound of a given word.

 **Phonemic Segmentation Fluency (PSF)**: Assesses a child's skill to produce the individual sounds within a given word.

 **Letter Naming Fluency (LNF)**: Assesses a child's skill to identify letter names. This measure is not essential to achieving reading outcomes; nonetheless, it is used in

conjunction with the other measures to identify students at risk.

 **Nonsense Word Fluency (NWF)**: Assesses a child's knowledge of letter-sound correspondences as well their ability to blend letters together to form unfamiliar "nonsense" (e.g., fik, lig, etc.) words.

 **Oral Reading Fluency (ORF)**: Assesses a child's skill of reading grade level connected text effortlessly. Such capacity enables readers to attend to comprehen-

sion. Indeed, ORF is a proxy for reading proficiency and predicts reading comprehension.

The DIBELS assessment was included as part of New York State's Reading Academy professional development program. Teachers who participated in the online coursework and group discussions were trained to administer and interpret the DIBELS. Schools that received RFR grant money were strongly encouraged, but not mandated, to administer the DIBELS assessments throughout the school year to monitor students' reading development.

MAGI collected DIBELS data from schools that were included in the random sample in addition to any schools that administered the assessments in the fall and spring of the 2003-2004 school year (a.k.a., convenient sample). Schools were not mandated to use the DIBELS; therefore, data were not available for every school. Out of 251 schools, 41 schools collected viable DIBELS data from a total of 4, 871 students. The final sample included 21 schools from the random sample (51%) and 20 schools from the convenient

sample (49%); Table 3 lists the districts represented in both samples. No significant differences were found on the DIBELS scores between the random and convenient samples; therefore, the data were aggregated and reported as a whole.

In this report, the percent of students who met benchmarks on the measures for each grade level were compared at the beginning and end of the school year. In addition to documenting im-


Table 3
Districts with DIBELS Data

Districts
NYC Region's 1,2,5,6,7,8,9
Addison Central
Albany
Buffalo
Gloversville
Greater Johnstown
Rochester City School District
Schenectady
Troy
Utica
Wayne Central
Yonkers

provements within the school year, the evaluation documented the relationship between SBRR practices and student outcomes via regression analyses.

Teacher logs and observations

The purpose of the log and observation data was to obtain descriptive data about what and how teachers instructed students in reading. To this end, MAGI used an observation instrument and a corresponding log instrument that was developed by RMC Research Corporation (see Appendix A for instruments). The instruments were designed to document four areas of instruction during a reading block. These areas include:

-  Reading and language arts instructional content: teachers and observers documented the amount of time spent and the type of activities that were conducted for each reading dimension. The instruments documented a variety of reading content areas; however, the evaluation focused on the areas that were most relevant to the Big 5 dimensions of reading, which included phonemic awareness, phonics, fluency, vocabulary development, and

reading comprehension.

Characteristics of instruction: teachers and observers documented the predominant instructional strategy for each dimension of reading. Included were SBRR strategies such as explicit skills instruction.

Classroom feedback and assessments: teachers and observers documented the types of feedback and assessments (e.g. screening, diagnostic, progress monitoring or curriculum-based) that were used during the reading block.

Instructional materials: teachers and observers documented the predominant core, supplemental and/or intervention materials that were used as part of the reading block.

For the present study, MAGI focused on the reading and language arts content and characteristics of instruction. The sample included five schools: three from New York City, one from Yonkers, and one from Albany. All schools except Albany were also part of the

survey and DIBELS data collection; the Albany school did not participate in the survey data collection. Four teachers within each school, one teacher from grades kindergarten through third, were observed at two time points during the school year. The observation was conducted for a maximum of 90 minutes during a reading instruction block. The observers included reading experts who participated in a two-day training and a one-day follow-up session. The total number of observations made was 42.

One week prior to the observation, teachers recorded their reading instruction activities on the log instrument for a period of 5 consecutive days. The total number of logs recorded was 158.

Correlation analyses were conducted to determine the consistency between the observations and teacher logs. The logs were completed about five days prior to

the observations; therefore, we expected significant correlations if teachers were consistent in their instruction. The analyses found significant correlations in three out of the five areas, including phonemic awareness, phonics, and fluency. The outcome section will emphasize the observation data in these areas for the sake of condensing the information.



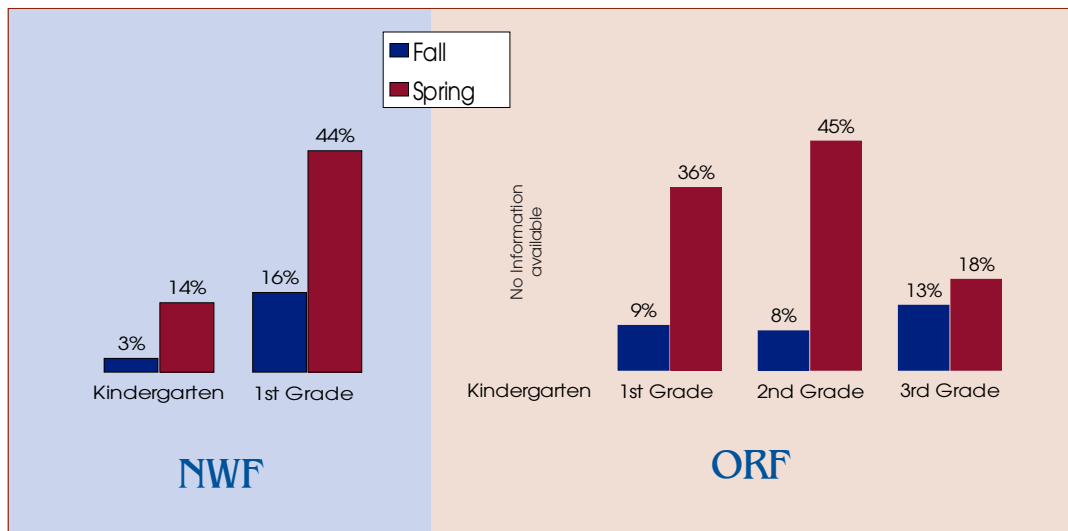
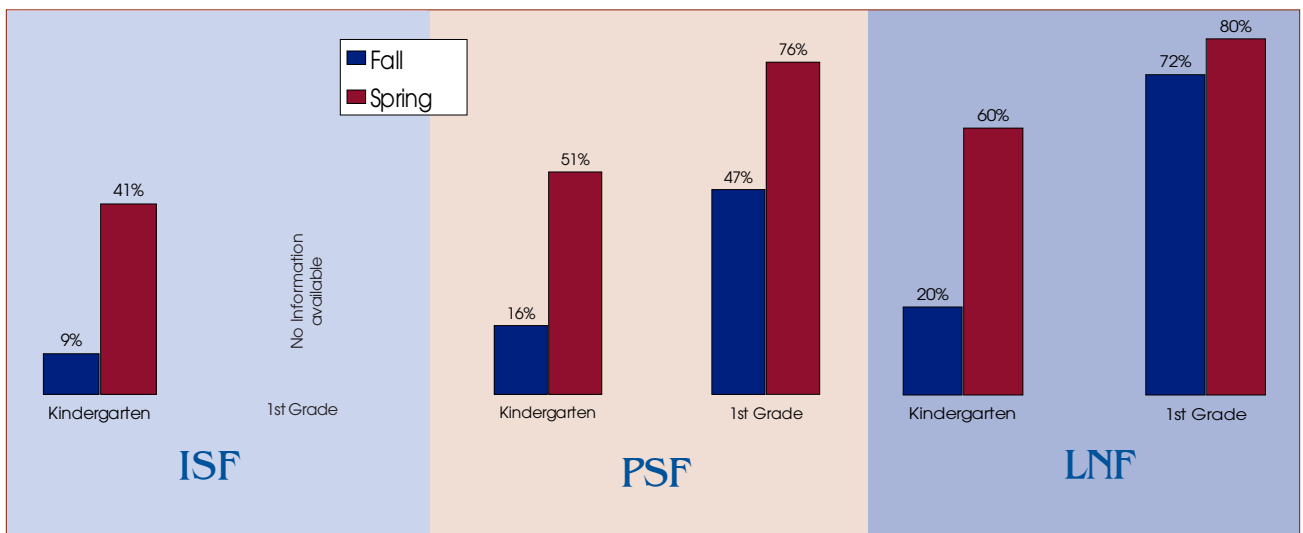
Teachers who participated in the online coursework and group discussions were trained to administer and interpret the DIBELS.

OUTCOME FINDINGS

The section of the report presents findings on student outcomes, including data on DIBELS measures, the percent of students on or above grade level, and at-risk indicators. For each outcome, findings are presented by grade level. Within year and cross year comparisons are made whenever possible.

DIBELS Assessment

Figure 2
Percent of Students Meeting
Benchmarks on DIBELS assessment
in the Fall and Spring (By Grade Level)

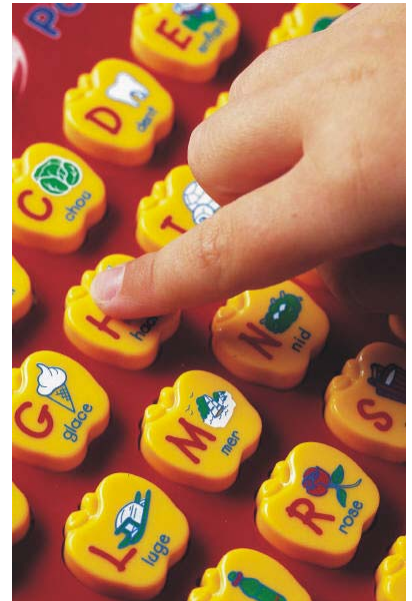


Kindergarten

The DIBELS included four measures that were administered to students in the kindergarten. These tests included initial sound fluency, phonemic segmentation fluency, letter naming fluency, and nonsense word fluency. Together, these measures tapped into phonological awareness and decoding skills, which are important precursors to reading.

Kindergarten students were expected to meet benchmarks for each measure by the end of the school year. As seen in **Figure 2** kindergarten students showed improvements on all four measures of the DIBELS. Across all measures, the average gain was 30 percentage points and on average, 42% of students met all four benchmarks by Spring 2004. Specific findings from the figure are explained below.

- 📖 **Initial Sound Fluency:** By year end, 41% of kindergarten students in RFR-funded schools met benchmarks for identifying initial sounds of words. This percent is up 32 points from the beginning of the school year when only 9% of students meet benchmarks.
- 📖 **Phonemic Segmentation Fluency:** By year end, over half of kindergarten students (51%) could produce the standard number of sounds within a given word compared to 16% who met benchmarks at the beginning of the year. This translates into a gain of 35 points.
- 📖 **Letter Naming Fluency:** By year end, 60% of students could identify a sufficient number of letter names to meet benchmarks as compared to 20% at the beginning of the school year. This translates into a 40-percent point gain.
- 📖 **Nonsense Word Fluency:** By year end, only 14% of students met the kindergarten benchmark for their knowledge of letter-sound correspondences and their ability to blend letters together to form unfamiliar nonsense words. This is up 11-percent points from the beginning of the school year when only 3% of students met benchmarks.



Kindergarten students were expected to meet benchmarks for each measure by the end of the school year.

First Grade

Similar to the kindergarten measure, the first grade DIBELS measures included phonemic segmentation and nonsense word fluency, the latter had higher benchmarks for first grade. Added to these measures was the oral reading fluency measure.

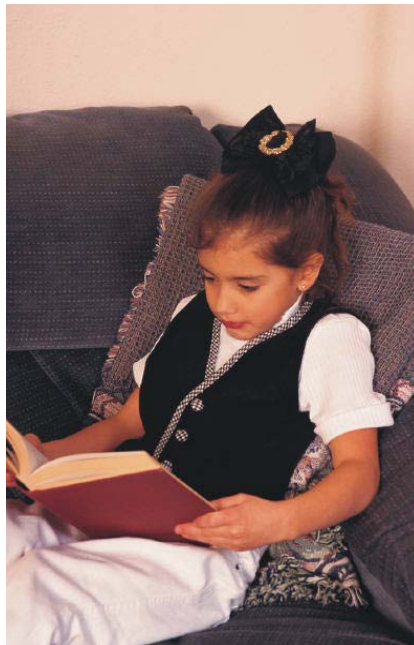
Figure 2 shows the percent of first grade students in RFR-funded schools who met benchmarks for each of the measures. Across the three measures, 52% of students met benchmarks by the end of the school year. Furthermore, the average gain from the beginning to the end of the school year was 28 percentage points. Specific findings on each measure are bulleted.

Phonemic Segmentation Fluency: 76% of first grade students could produce a sufficient number of individual sounds in words by the end of the school year as compared to 47% at the beginning of the school year.

Letter Naming Fluency: 80% of first grade students met benchmarks for letter names skills by the end of the school year.

Nonsense Word Fluency: 44% of first grade students met the benchmarks for their knowledge of letter-sound correspondences and their ability to blend letters together to form unfamiliar nonsense words by year end. This is up 28-percentage points from the beginning of the school year. Furthermore, the first grade students performed better than the kindergarten students.

Oral Reading Fluency: 36% of first grade students met benchmarks for their skill at reading connected text in grade level materials whereas only 9% met benchmarks at the beginning of the school year.



Second Grade

The second grade DIBELS measures included the oral reading fluency measure. By the end of the second grade, students were expected to read 90 words per minute, which was up 50 words from the first grade. As seen in **Figure 2**, nearly half of students met this benchmark by the end of the school year as compared to only 8% who met benchmarks at the beginning of the school year.

By the end of the second grade, students were expected to read 90 words per minute, which was up 50 words from the first grade.

Third Grade

The oral reading fluency measure was administered to third grade students. The benchmark for this grade was set at 110 words per minute. Unfortunately, few students met this benchmark. **Figure 2** shows that the percent of students who met the benchmark increased slightly from 13% to 18%.

Students on or above grade level in reading

Figure 3
Percent of students on or above grade level for reading

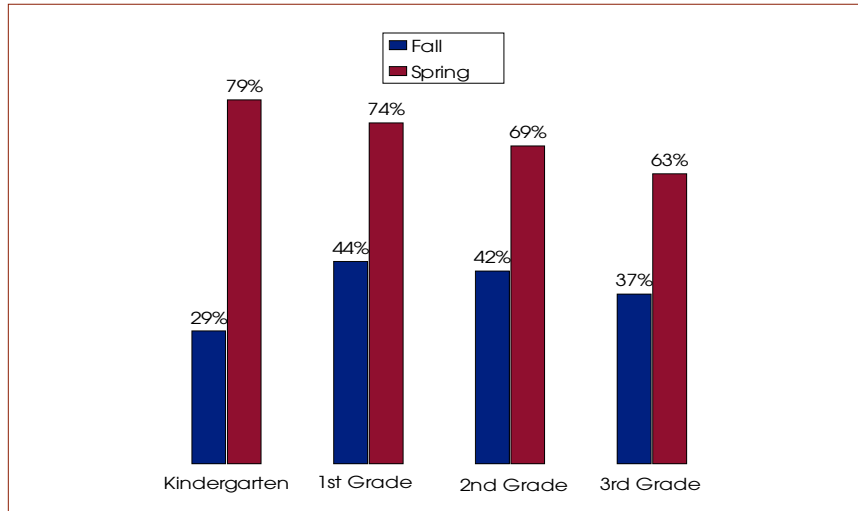


Figure 3 shows the percent of students who were on or above grade level at the beginning and end of the school year. Across all grades, the percent of students who were on or above grade level by the spring of 2004 averaged at 71%. This is up 33-percentage points from the fall of 2003 when only 38% of students were on grade level. Findings related to each grade level are explained in the bullets.

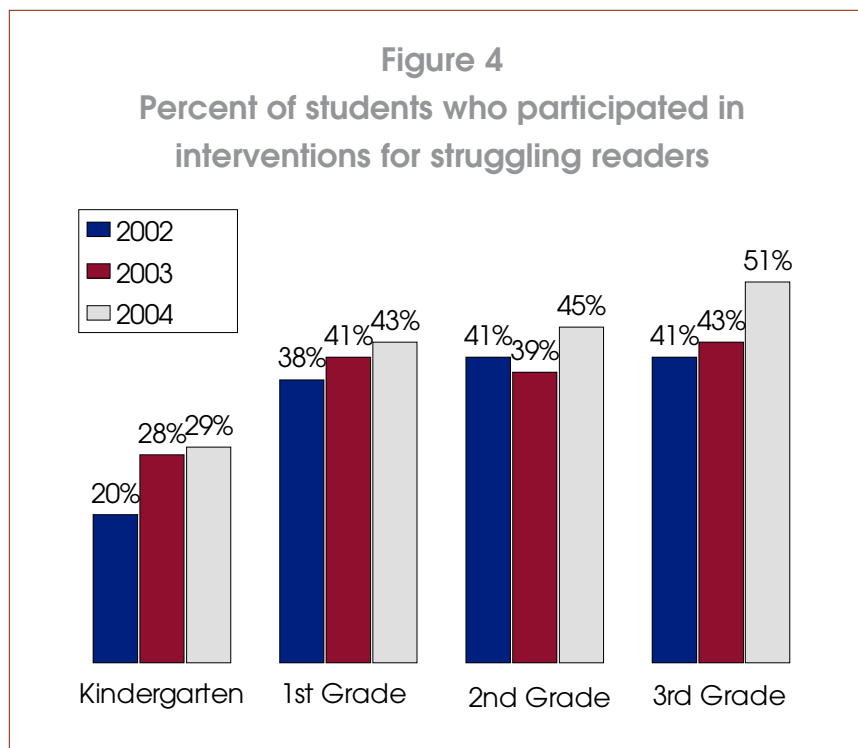
- 📖 Kindergarten experienced the largest leap in the percent of on or above grade level readers. In the fall, only 29% of kindergarten students were at or above grade level compared to 79% in the spring. This translated into a significant gain of 50-percentage points.
- 📖 First grade also produced sizeable gains. The average percent went from 44% to 74% by the spring. This translated into an increase of 30-percentage points.
- 📖 The percent of second grade students who were on or above grade level increased from 42% to 69%, resulting in a gain of 27-percentage points.
- 📖 The percent of third grade students who were on or above grade level increased from 37% to 63%, a 26-percentage point gain from fall to spring.



Kindergarten experienced the largest leap in the percent of on or above grade level readers.

At Risk Indicators

In addition to student assessment performance and reading grade level, the evaluation also examined at risk indicators including the percent of struggling readers who received extra support in their reading instruction. The evaluation looked at the percent of students who received intervention services in 2002, one year before the RFR-grant was implemented and in 2003 and 2004, 2 years during the implementation of RFR.



As seen in **Figure 4** the percent of struggling readers who participated in special interventions services increased in most of the grade levels across the three years. The largest increases in the percent of students were found at the kindergarten and third grade level; 9 and 10-percentage points, respectively. The increase at the kindergarten might be attributed to better screening assessments used to identify students who were having difficulty mastering phonemic and phonological skills. The increase at the third grade might be attributed to screening assessments and concerns regarding the fourth grade ELA statewide assessment.

Most interesting is the fact that a large number of students from grades first through third participated in interventions. Across the three grades, the average percent of students was 46%. This percent is not surprising given the large number of students who entered each grade below grade level. The RFR grant might not have been implemented long enough to show declines in the percent of struggling readers.

Most interesting is the fact that a large number of students from grades first through third participated in interventions.

What type of intervention services did students participate in? Nearly all schools provided before and after school programs though these programs may or may not have been specifically targeted for reading (see Figure 5). Nonetheless, a large number of schools employed teachers and specialists to work with students individually in reading. Furthermore, the majority of schools had tutorial and special reading programs, which included Voyager Passport, Reading Recovery, Waterford Early Reading and Reading Rescue programs.

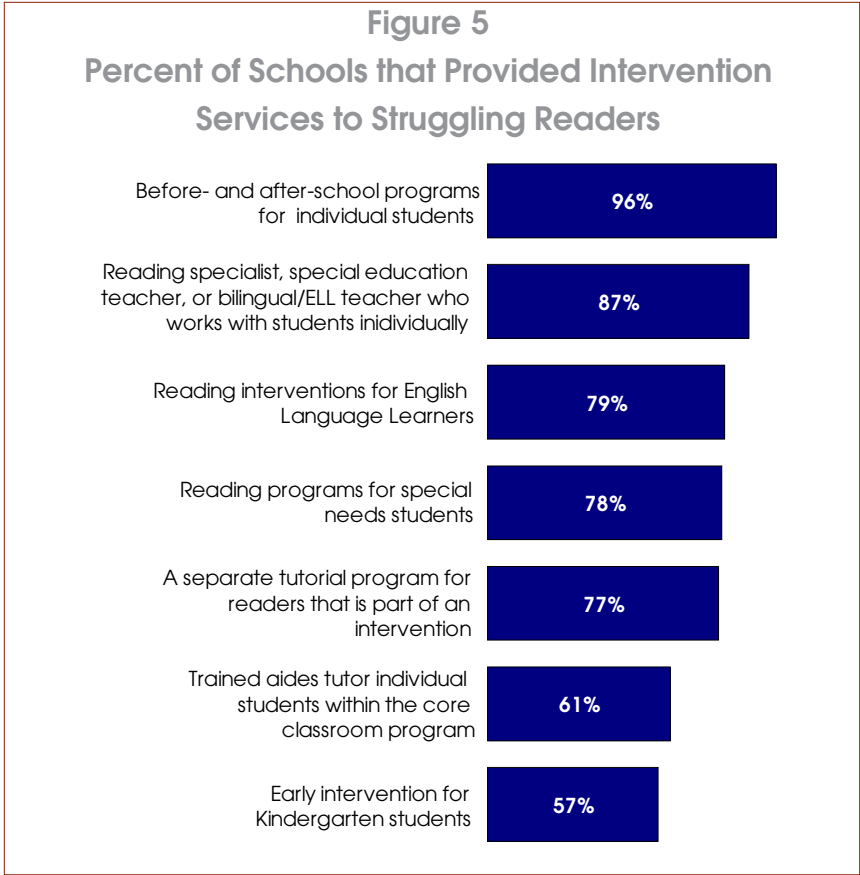
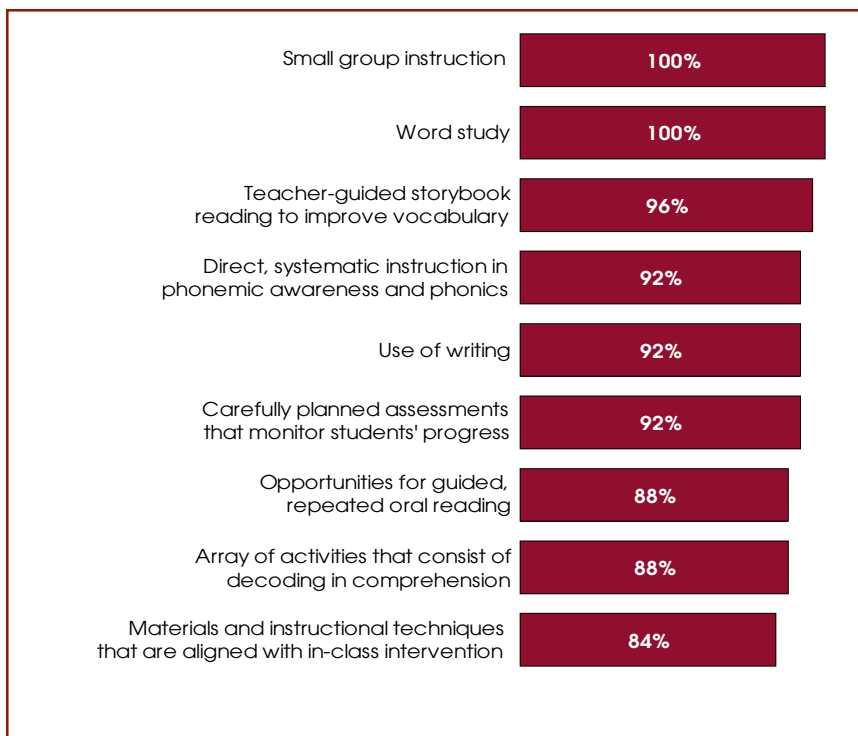


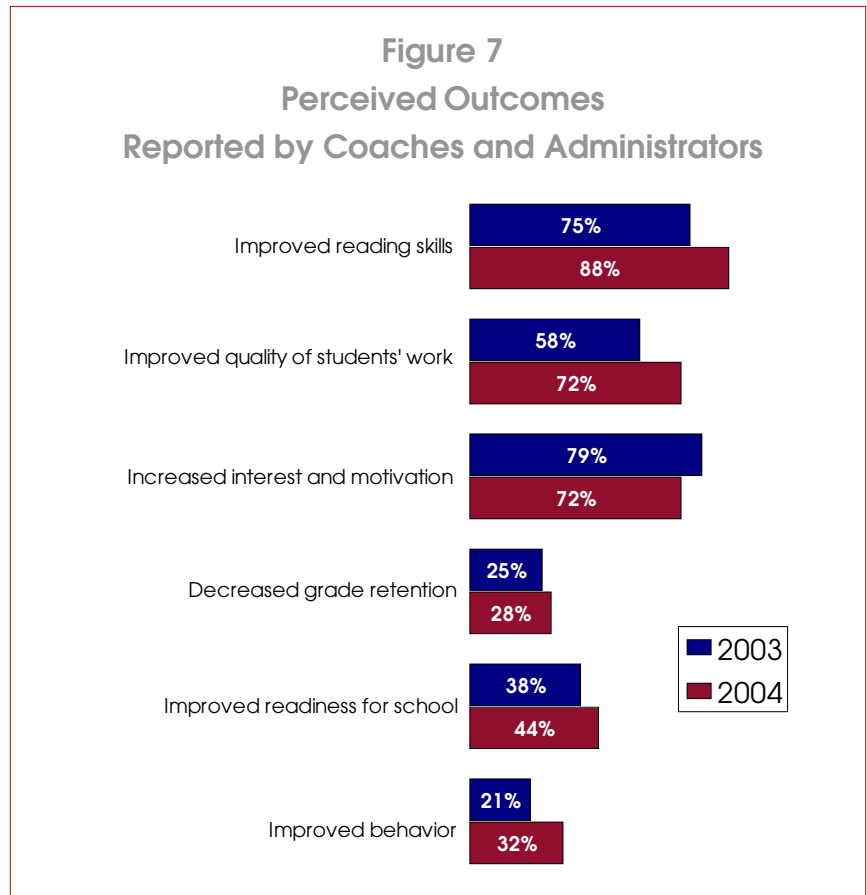
Figure 6
Content of Intervention Services As Reported by Administrators and Coaches



Across all types of interventions, students typically participated in these services daily for at least 45 minutes. Figure 6 displays the content components of intervention services that were characterized by schools.

Perceived Outcomes

Figure 7 lists the student outcomes that improved over the course of the grant period, as reported by coaches and administrators. In most outcome areas, there was an increase in the percent of coaches and administrators who reported improvements in areas such as student reading skills and quality of student work. To a lesser extent, coaches and administrators reported decreased grade retention, improved readiness for school and improved student behavior. On the flip side, there was a slight decrease student interest and motivation.



Summary

Overall, the data suggest that RFR schools were building capacity. In most grades, the DIBELS data showed a progressive increase in the percent of students who met benchmarks at each grade level, with sizeable gains. The percent of students reading on or above grade level also showed a strong pattern of gains across all grade levels. Furthermore, coaches and administrators reported improvements in reading skills

For struggling readers, schools used a variety of intervention approaches. Furthermore, there was a good degree of consistency between the percent of students who were not at grade level in reading and the percent of students who participated in an intervention, except at the kindergarten level. At this grade, only 29% of students participated in an intervention; however, 71% were not on grade level. Despite this gap, the kindergarten showed the biggest gain by year end.

On the other hand, the data also showed a pattern of stagnation by third grade, which raises red flags. For example, the gains made on the Oral Reading Fluency measure at the third grade were minimal. Moreover, despite the gains made in the percent of students who were at grade level *within* each grade, the pattern *across* grades showed a steady decline by third grade. Upon exploration of the observation and log data, we found patterns in teachers' instructional strategies that might offer plausible explanations for the small gains. The next section of the report will focus on what was documented within the classroom.

INSIDE THE CLASSROOM

This section of the report describes the activities and instructional strategies that occurred during reading blocks in a typical RFR school. The section is organized by five important dimensions of reading development including: phonemic awareness, phonics, fluency, vocabulary development, and reading comprehension. Within each dimension, the findings are presented by grade level.

Phonemic Awareness

Kindergarten

In helping students to develop the ability to distinguish sounds and the phonemic ability to notice, think about, and work with the individual sounds in spoken words, teachers utilized oral language activities that involved rhyming, segmenting, blending, and manipulating sounds. Phonemic awareness activities were most prominent in kindergarten classrooms when children were directly instructed in phonological awareness as a building block of reading/ language arts instruction. Time spent on phonemic awareness was still evident in winter of the

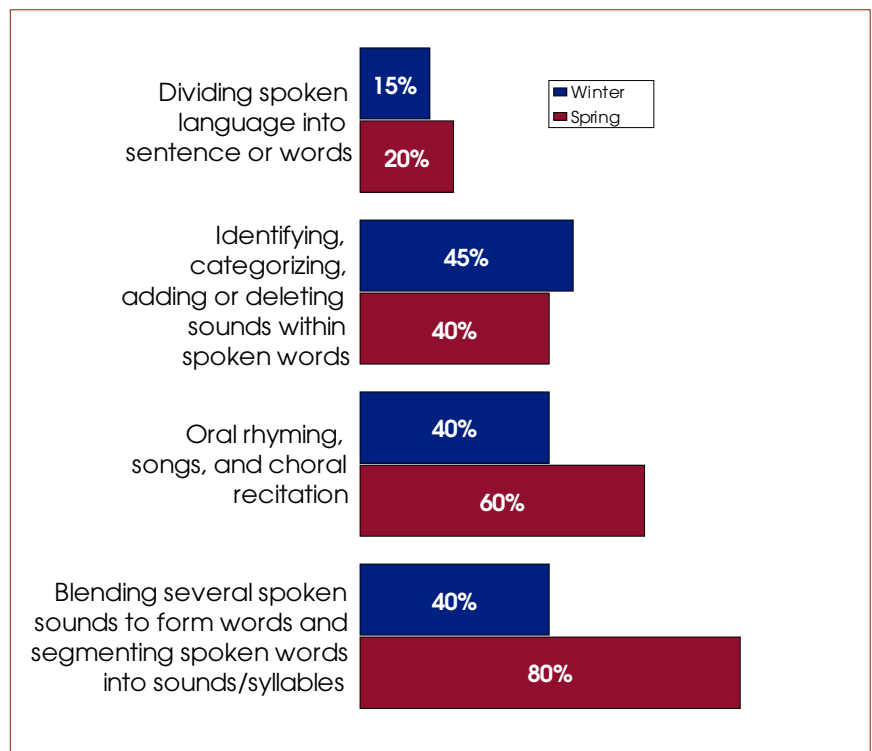
first grade, but negligible by the spring of first grade.

Overall, twenty percent or an average of sixteen minutes of the 90-minute literacy involved phonemic instruction in both the winter and spring. By the spring of first grade, the amount of time was significantly reduced to 3%. The amount of time spent in kindergarten is in line with research that suggests children should be engaged in direct instruction in phonemic awareness for 10 to 15 minutes every day.

Though the amount of time spent teaching phonemic awareness was

similar in the winter and spring, the nature of the activities changed. As seen in **Figure 9**, the type of oral language activities used by kindergarten teachers progressed from identifying, categorizing, and deleting sounds and dividing spoken language into words to more advanced activities such as blending and segmenting sounds and oral rhyming. This is consistent with guidelines that stress the importance of age appropriate activities that progress from easier phonemic awareness activities to harder activities. Research suggests that blending and segmenting are the

Figure 9
Phonemic Awareness Activities in Kindergarten



essential skills of phonemic awareness.

Teachers also changed their style of instruction from the winter to the spring. During the winter, teachers most frequently drilled students in activities requiring memorization or repetition, individually or in unison (75%). In the spring, the most frequently used instructional strategy for teaching the phonemic activities involved teacher-led instruction with the teacher modeling using text, demonstrating skills and explaining (60%). Conversely, drill strategies reduced to 20% by spring. Again, these instructional strategies were in line with research that suggests direct, explicit instruction in phonemic awareness through teacher-led instruction is critical for acquiring phonemic awareness.

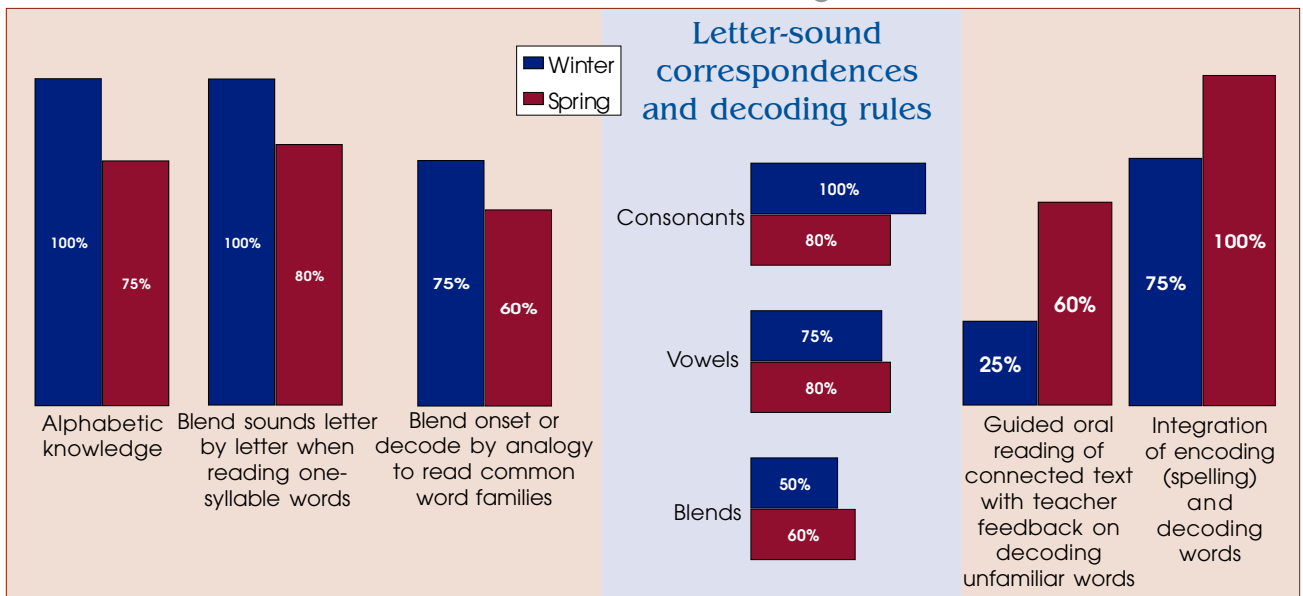
Phonics

Kindergarten

Kindergarten reading/language arts instruction included a number of phonics activities that build awareness and knowledge of the alphabetic principle and letter-sound correspondences, which were used to decode, pronounce, and spell words. Research has found that letter-sound knowledge and alphabetic principles are critical to children's success in learning to read and in becoming good readers; hence, phonics instruction should begin in kindergarten. In addition, children who acquire and learn to apply decoding early in their reading experience benefit long term in word recognition, reading comprehension, and spelling.

Indeed, kindergarten teachers incorporated phonics instruction into their instruction for approximately twenty minutes or 25% of time across the school term. **Figure 10** shows the range of decoding activities that were conducted in the winter and spring. Some activities, such as time spent on alphabetic knowledge or identifying printed letters by name that would occur more regularly in the beginning of kindergarten, were used less frequently by teachers by the spring.

Figure 10
Phonics Activities in Kindergarten



Instruction shifted from the beginning work of letter-sound correspondence and decoding rules for consonants to the more advanced work of letter-sound correspondence and decoding of vowels and blends by the spring term of the kindergarten. Guided oral reading of connected text with teacher feedback on decoding unfamiliar words also increased from 25% to 60% by the spring. Encoding and decoding words started high at 75% and increased to 100% in the spring.

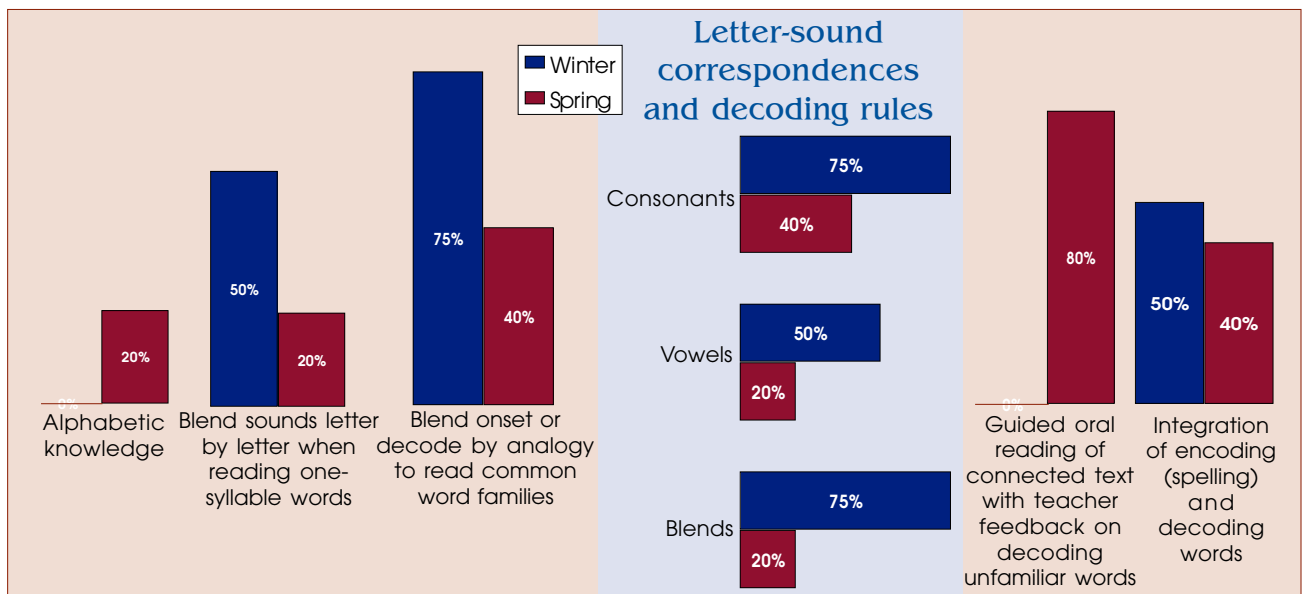
The most frequently used instructional strategies in the winter included explicit skills instruction within a systematic scope and sequence and teacher-led instruction (including modeling using text, demonstrating skills and explaining). By the spring, teachers primarily used only teacher-led instruction including modeling using text, demonstrating skills and explaining. Research supports the use of explicit and systematic instruction in phonics.

First Grade

First grade classrooms continued with phonics and decoding activities, with 15% of time spent in the winter and 22% of instruction time in the spring. On the other hand, the range of activities gradually decreased by spring and became more focused on guided oral reading of connected text with teacher feedback on decoding unfamiliar words (see Figure 11). This occurred most likely because children spent more time applying letter-sound knowledge in daily reading and writing.

By the spring, teachers primarily used only teacher-led instruction including modeling using text, demonstrating skills and explaining.

Figure 11
Phonics Activities in First Grade



Fluency

Research supports the importance of reading fluency or the ability to read quickly and accurately in helping children focus their attention on meaning. The objective of fluency as an instructional content in reading and language arts is to develop readers who are able to read aloud with expression, changing tone and emphasis, and pausing appropriately within and at the end of sentences. Fluency involves the ability to read words automatically and accurately, and with no apparent cognitive effort. When children are able to recognize words automatically, they are able to give their attention to comprehending or understanding the meaning of text. Fluency, according to research, develops slowly and entails opportunities for practice.

Kindergarten

As seen in **Figure 12**, kindergarten teachers spent 17% of instruction time in the winter on fluency; this decreased to only 6% by spring. Unfortunately, there is no apparent explanation for this decrease; perhaps teachers felt that fluency instruction was premature. Teachers primarily engaged students in activities meant to identify isolated sight words and repeated oral reading. To this end, teachers used drilling in combination with teacher led instruction including modeling and explaining.

First Grade

Unlike the decrease in fluency time seen in the kindergarten, first grade teachers increased time spent on fluency from winter to spring. Even still, the percent of time spent in fluency activities in the spring topped out at 17%. With a greater emphasis on reading connected text in first grade classrooms, a greater range of

fluency activities occurred in first grade compared to kindergarten. As seen in **Figure 13**, first grade fluency activities with the highest frequency by spring time included identifying isolated sight word, oral reading text without teacher guidance and silent reading. Repeated reading increased slightly.

Figure 12
Percent of Time Spent in Fluency Activities by Grade
Winter and Spring

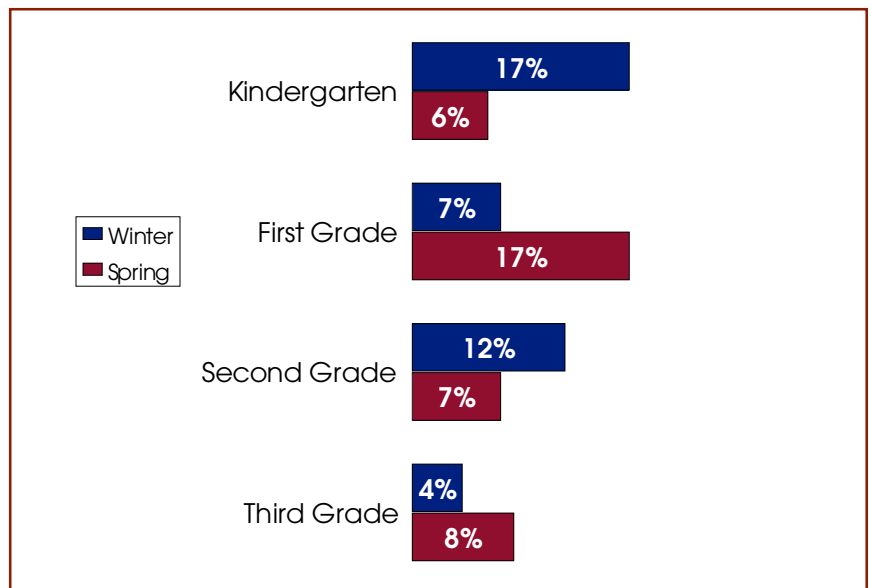
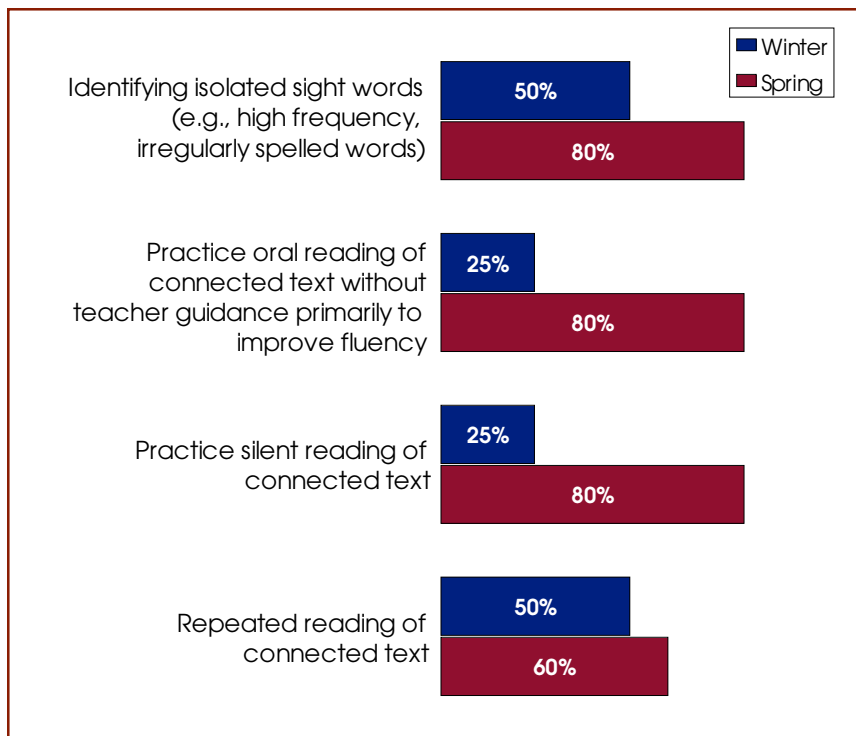


Figure 13
Fluency Activities in the First Grade



In the winter, first grade teachers drilled students in activities and used explicit skills instruction. By the spring, perhaps due to more students reading on their own, in pairs or in groups, fluency reading instruction was increasingly characterized by having students work independently.

Second and Third Grade

Time and intensity spent on explicit fluency instruction decreased by the spring of 2nd and 3rd grades to about 7 or 8% of reading instructional time. In the winter of the 2nd grade, repeated oral reading was high

(75%), followed by identifying isolated sight words via teacher-led instruction. By spring, the frequency of activities was more evenly spread out.

In the winter of third grade, fluency activities primarily were split between practicing oral reading of connected text without teacher guidance and monitored, repeated oral reading. By the spring of third grade, students were primarily engaged in silent reading of connected text. During independent time, teachers coached individual students.

Vocabulary

Vocabulary knowledge plays an important role in learning to read, in reading comprehension, and in overall academic achievement. Vocabulary is developed both indirectly when children hear and see words used in many different contexts, and through direct learning when children are explicitly taught both individual words and word learning strategies.

Kindergarten

In kindergarten classes, teachers built vocabulary and background knowledge most often through experience, discussion, direct teaching, or relating personal experience to text. The building of background knowledge increased from 50% in the winter to 80% by the spring, and the building of vocabulary knowledge increased from 75% to 100%. The amount of time spent on vocabulary instruction increased from 7% of the reading block to an average of 11% by the spring term. This increase perhaps reflects more time spent listening to connected text, thereby being exposed to new vocabulary and opportunities to discuss unfamiliar vocabulary.

First Grade

In first grade, time spent in vocabulary decreased from 12% to 9%. Teachers used similar vocabulary building activities in the winter and spring term through teacher-led instruction, explicit instruction, and interactive discussion (see **Figure 14**). Word study, which was not observed during kindergarten, increased in average frequency by the spring of first grade. This reflects the evolution from letter to letter decoding observed beginning in kindergarten classes, to recognizing spelling patterns and reading by orthographic units.

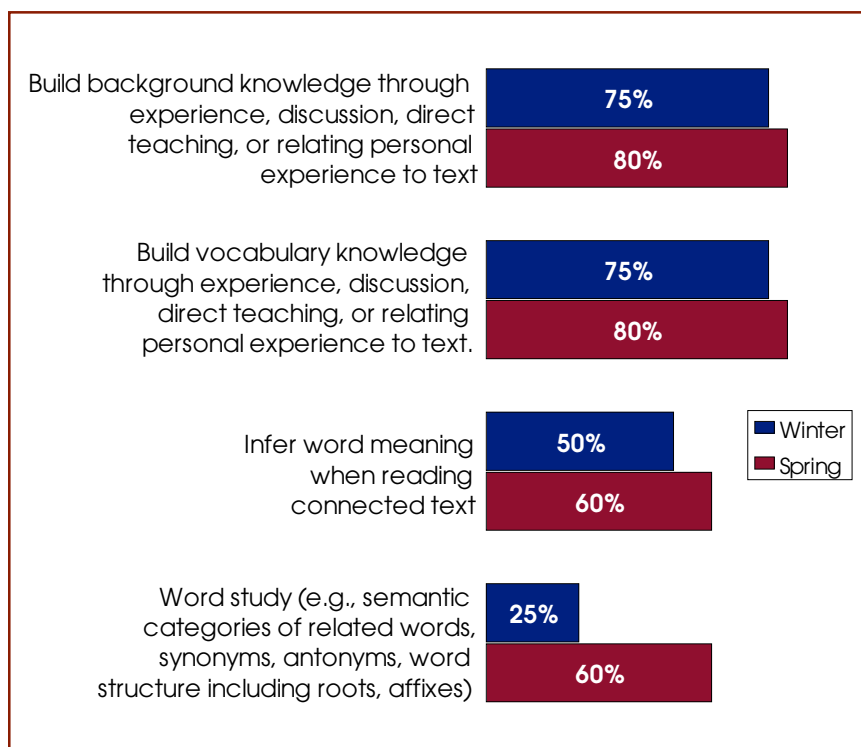
Second grade

The average time spent on direct vocabulary instruction in second grade remained around 12%. The vocabulary building strategies used in the spring in first grade classrooms continued to be used in second grade classrooms during winter and spring observations. In their vocabulary instruction, second grade teachers used a range of strategies incorporating teacher-led, literature-based discussion approaches to build vocabulary and background knowledge, and explicit skills instruction using a systematic scope and sequence with instructional texts for word study activities.

Third grade

By the spring of third grade, vocabulary instruction continued to include those activities used in first and second grade, though they were used more frequently in the third grade classrooms (around 15% of instruction time). By the spring, on average, 83% of vocabulary instructional activities in third grade involved building background and vocabulary knowledge. This increase is likely due to students reading more text with more unfamiliar words than the more decodable text with fewer unfamiliar words of earlier grades. Teachers continued to use similar instructional strategies to those used by second grade teachers including teacher-led instruction, embedding skills in literature based approach and engaging students in interactive discussion. The use of a dictionary or thesaurus was observed for the first time during spring observations in third grade.

Figure 14
Vocabulary Activities in First Grade



Reading Comprehension

The goal of reading comprehension instruction is to help students understand and remember what they read, along with being able to communicate with others about what they read. Studies indicate that good readers use a number of cognitive strategies when they read and that it is possible to provide students with explicit instruction in strategies in order to help them understand, remember and communicate what they read.

Kindergarten

Throughout the school year, there was a steady increase in amount of time spent instructing students in reading comprehension strategies across all grades (Figure 15). In the kindergarten, teachers increased their time from 3% to 12% by spring. In the winter, the only activity documented was pre-reading activities, such as preview, predict and setting purpose to a story. Teachers used explicit instructional strategies for these activities. By spring, teachers added more activities that set out to determine the literal meaning of text by answering questions and cooperative work to construct text meaning, such as discussion

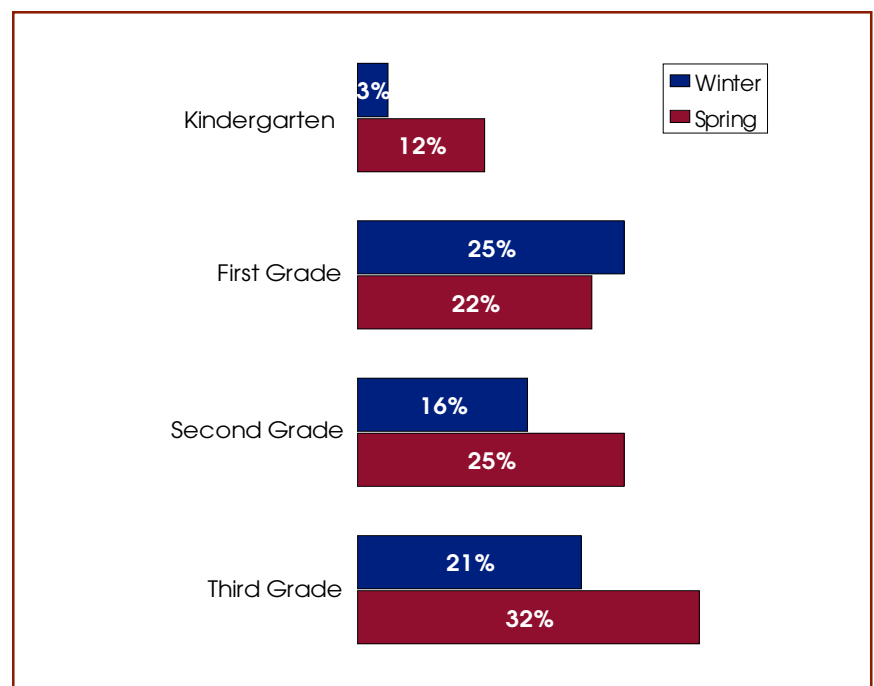
groups and peer pairs. Teachers also introduced graphic or semantic organizers to kindergarten students by spring. For the spring activities, teachers mostly embedded the teaching of skills in a literature-based approach though some teacher-led instruction was documented.

First grade

In the first grade, students spent between 22% and 25% of their time in reading comprehension activities. Teachers engaged students in reading comprehension activities that were conducted in kindergarten (e.g., pre-reading).

Teachers added activities such as summarizing the main idea and determining the inferential meaning of text to students consistently at both time points; 45% and 55% respectively, averaging over both time points. Teachers also began to instruct students to use multiple strategies together, such as predicting, questioning, and summarizing. Nonetheless, little explicit instruction was documented; on the other hand, comprehension activities were taught in the context of interactive discussions between teachers and students.

Figure 15
Amount of Time Spent in Reading Comprehension
Across All Grades



Second grade

Second grade teachers increased the amount of time spent in reading comprehension activities from 16% to 25% by the spring.

Teachers used graphic and semantic organizers at a greater frequency compared to first grade teachers. For the most part, second grade teachers conducted similar activities as first grade teachers. On the other hand, second grade teachers used more teacher-led instruction, such as modeling, explaining and demonstrating skills compared to first grade teachers (40% of time by spring). Teachers also coached individual students within teacher-led group instruction.

Third grade

By the spring of third grade, students were engaged in reading comprehension strategies for about one-third of reading instruction time. Several noticeable changes took place in third grade compared to the lower



Studies indicate that good readers use a number of cognitive strategies when they read and that it is possible to provide students with explicit instruction in strategies in order to help them understand, remember and communicate what they read.

grade. One, summarizing main events, had decreased to 17% and use of graphic/semantic organizers decreased to 33% by spring. This was perhaps due to more focus on instructing students to use multiple strategies together, such as predicting, questioning, and summarizing

reciprocal teaching and working cooperatively to construct text, both of which were found in high frequency. Two, third grade teachers taught self-monitoring reading comprehensions skills such as rereading and self-correction with greater consistency and frequency than was

documented in the earlier grades.

Similar to lower grades, third grade teachers did little explicit skills instruction. For the most part, third grade teachers embedded teaching of skills in a literature-based approach.

Summary

The descriptions of classroom activities related to reading reveal both positive and negative findings. On the positive side, kindergarten teachers spent the appropriate amount of time in phonemics awareness and used explicit skills instruction, as suggested by research. The same holds true for phonics instruction in both the kindergarten and first grades.

On the negative side, little time was spent in fluency instruction across all grade levels. Moreover, time spent in fluency involved a lot of oral reading without teacher guidance and silent independent reading. To date, there is little research to support the connection between independent reading and reading achievement. Furthermore, there is evidence to suggest that when students do practice fluency without teacher guidance, they tend to choose selections that are easy to read, thus do not learn more challenging words.

The classroom data also revealed that teachers did not rely primarily on explicit instructional strategies when teaching reading comprehension. Some explicit instruction was documented in the kindergarten and teacher led instruction was documented in the second grade teachers; how-

Indeed, the National Assessment of Education Progress found that students who scored low on fluency measures also scored lower on comprehension measures.

ever, many teachers relied on literature-based approaches. Research supports direct instruction, that is, when a teacher explains to students what type of comprehension strategies should be used and how to apply them. In doing so, teachers also model strategies or guide students as they learn how to use the strategy. The data in this study suggest that teaching of reading comprehension might have been more incidental and less deliberate.

Taken together, these findings suggest areas of weakness in reading instruction that might account for the lag in reading fluency scores on the DIBELS assessment. Clearly, teachers at all grade levels did not devote a lot of time to fluency instruction. Furthermore, most of the time spent in fluency included reading

without teacher guidance.

The relationship between fluency and reading comprehension has been documented in research studies. Indeed, the National Assessment of Education Progress found that students who scored low on fluency measures also scored lower on comprehension measures. Fluency is important because students' familiarity with words allows them to focus on the meaning of the text they are reading. If students spent too much time decoding words, they cannot apply comprehension strategies. Unfortunately, in the present sample, there was little explicit instruction in reading comprehension as well. These are areas that need greater focus if students in RFR schools are to read successfully.

The next section of the report further documents the relationship between SBRR instruction and student outcomes. In this section, we will see the relationship between SBRR practices including instruction, assessment, and modifications and improved outcomes. Furthermore, we will see the conditions that promote teachers' use of SBRR instructional strategies.

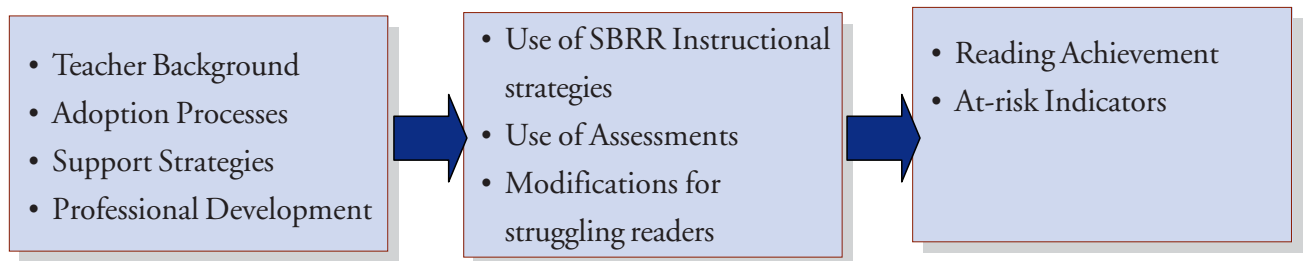
Findings on the Relationship Between Program Variables and Outcomes

As explained in the evaluation methodology section of the report, the conceptual framework for the RFR evaluation indicated that the RFR adoption

process, teacher background characteristics, professional development, and the level of support offered to teachers would predict teachers' use of scientifically-based reading research practices in

instruction, assessments, and classroom modifications. In turn, the SBRR implementation variables would predict student outcomes.

Conceptual Model for Studying the Implementation and Impact of RFR



We conducted a series of regression analyses to assess the relationship between the variables in the model. This section of the report highlights and describes the variables that were significantly related to one another.





Table 4
Relationship between Antecedent Variables and Program Implementation Variables

	SBRR Instructional Strategies	Assessment	Interventions
Teacher Background	+		
Adoption Process	+	+	+
Support to Teachers	+	+	+
Professional Development	+		

Table 4 shows the relationship between the antecedent variables and SBRR implementation variables; a plus sign (+) indicates a significant relationship between the variables. These relationships are described below and are organized by SBRR implementation variables.

SBRR Instructional Strategies

Teachers' use of scientifically based reading instructional strategies was significantly related to all antecedent variables. In other words, we can make the following conclusions.

-  Teachers with more teaching experience and a higher educational degree were likely to use SBRR instructional strategies.
-  Teachers who came from schools with well-managed and highly prioritized reading programs were likely to use SBRR instructional strategies.
-  Teachers who received frequent feedback and in-class support were likely to use SBRR instructional strategies.
-  Most importantly, teachers who spent more time in the Reading Academy and rated it as highly effective were likely to use SBRR instructional strategies.

Let's look at the data on the Reading Academy more closely.

As part of the Reading Academy, teachers participated in self-paced course content, which involved online work and a group component, which involving regular meetings with other teachers, and the Tier II coach. On average, teachers spent about 4 hours on

the self-paced work (one hour more than expected) and about 3 hours in group interactions for each of the eight modules. As seen in **Figures 16** and **17**, teachers gave high ratings to the effectiveness of the different components.

Figure 16
Effectiveness of Self-Paced Components : Percent of teachers who agreed with the following statements

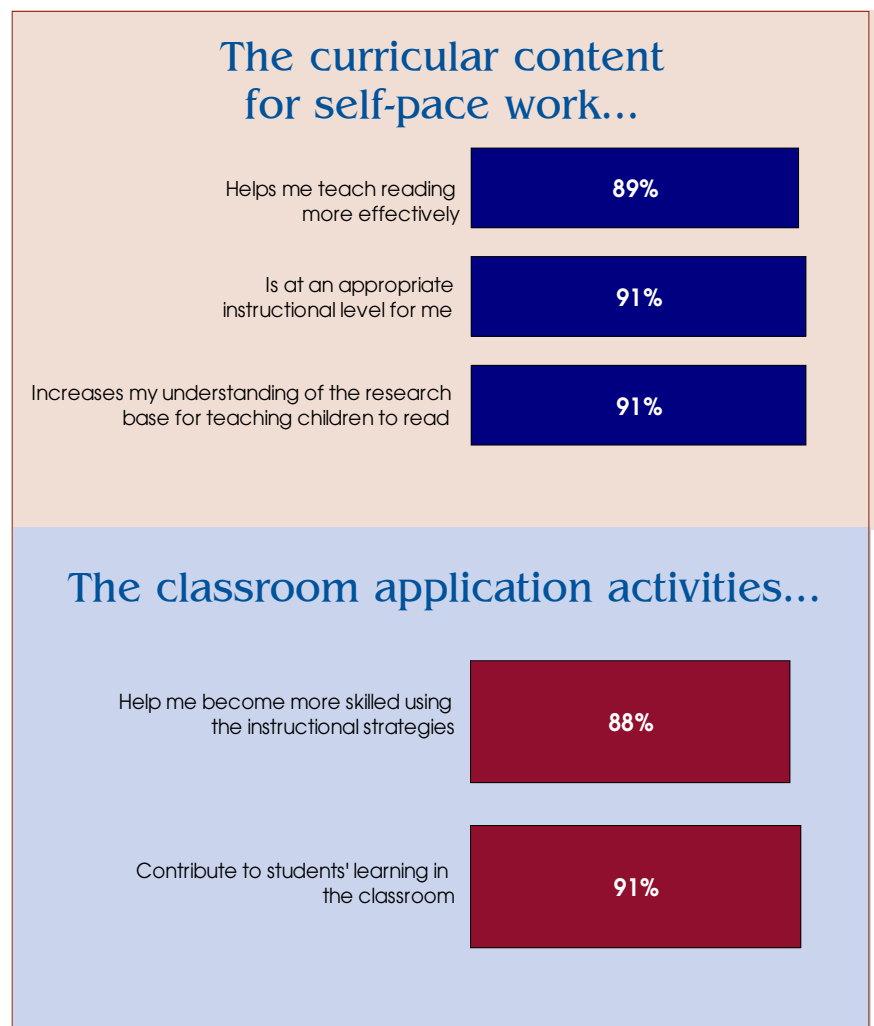
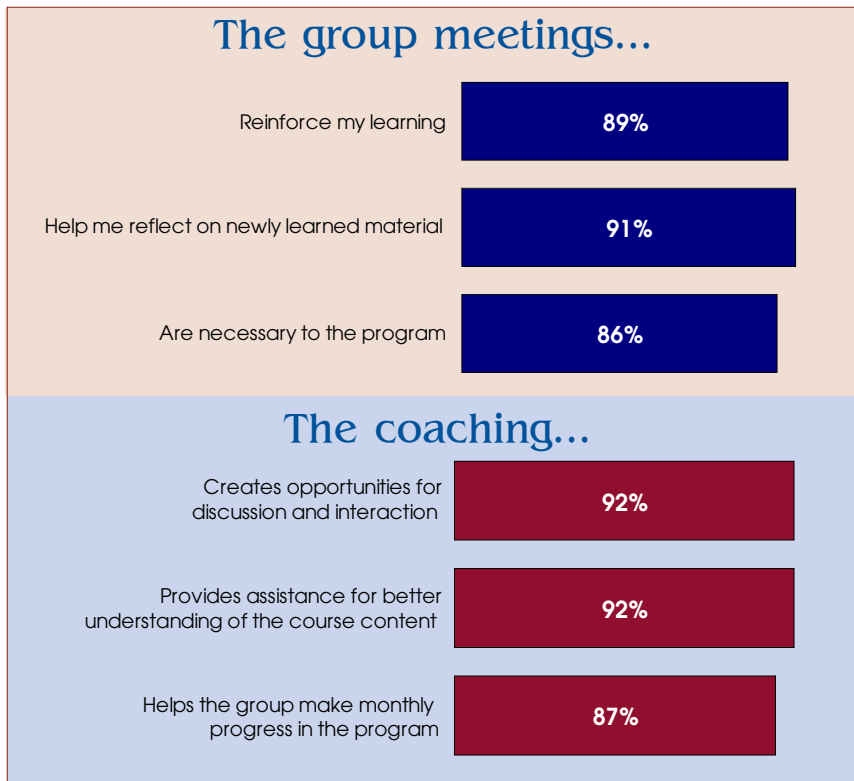


Figure 17
Effectiveness of group interaction
components of the modules:
Percent of teachers who agreed with the statements



Assessments

Teachers' use of assessments was significantly related to the adoption processes and the support they received. More specifically, teachers who reported that the reading program was well managed and a high priority in their school were also likely to increase their use of assessments. Furthermore, teachers who received more feedback and in-class support were likely to increase their use of assessments.

Teachers used different types of assessments frequently. For instance, 54% of teachers used

What type of SBRR instructional practices teachers report as a result of their participation in the Reading Academy? **Figure 18** lists the percent of teachers who increased their use of various SBRR instructional strategies. Over half of teachers reported more emphasis on explicit skill instruction and guided practice. Moreover, over half of teachers grouped students differently for instruction and used different assessments to make diagnoses.

Figure 18
Percent of Teachers who Increased their Use of SBRR Instructional Strategies

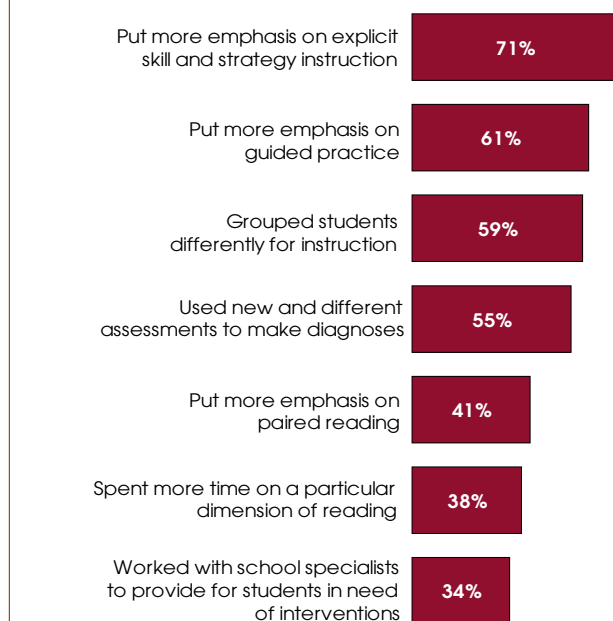


Table 5
Relationship between Implementation and Outcome Variables

	End of Year ISF score	End of year LNF score	End of year PSF score	End of year NWF score	ORF gains	# of Students On or Above Grade level by year end
SBRR Instructional Strategies			+	+	+	+
Assessment			+		+	
Classroom Modifications			+	+		+

diagnostic tests at least three times a year to assess more in-depth information on student skills and to plan instruction. On the other hand, 78% of teachers used progress monitoring assessments with defined benchmarks to determine if students were making adequate progress; these assessments were administered on a need basis. Classroom-based assessment were also administered on an ongoing basis by 83% of teachers.

Teachers increased their use of assessments for a greater variety of purposes. These purposes are bulleted below, along with the percent of teachers who used assessments for each purpose.

- 📖 To deliberately guide instruction (68%).
- 📖 To identify students

for intervention, including early screenings for reading difficulties (65%).

- 📖 To identify grade level skills students have mastered (65%).
- 📖 To plan flexible grouping (64%).
- 📖 To provide immediate and detailed feedback to students (64%).

Classroom Modifications

The analyses also confirmed that teachers' use of modifications was related to the adoption processes and slightly related to support. Teachers who came from schools that managed and prioritized their reading programs were likely to make the following modifications to their reading instruction for struggling readers.

- 📖 Change instructional strategies such as using coaching and scaffolding and use of teacher-directed, small groups for explicit instruction (89%).
- 📖 Change content such as scaling back the curriculum (69%).
- 📖 Devote extra time to reading (83%).
- 📖 Use variety materials of resources for different readers (81%).
- 📖 Group students by instructional level (89%).
- 📖 Integrate assessment and instruction (64%).

As seen in **Table 5**, in the second level of analyses, we found that teachers' use of effective reading strategies

predicted student outcomes in various areas. Listed below are descriptions of the findings.

Teachers use of SBRR instructional strategies were related to three out of five of the DIBELS assessment subtests, namely end of the year mean scores on the phonemic segmentation fluency (PSF) and non-sense word fluency subtests and oral reading fluency gains. Translated, teachers who used more SBRR reading strategies and spent more time in reading instruction had students with higher end of the year and gain scores on the DIBELS tests previously stated.

Furthermore, teachers' use of SBRR instructional strategies was related to the number of students who were reading on or above grade level by the end of the year.

Table 5 also shows that teachers' use of assessments was related to two out of five of the DIBELS subtests. Translated, teachers who use a variety



Teachers who reported that the reading program was well managed and a high priority in their school were also likely to increase their use of assessments.

of assessments and who used these tests often to monitor students and adjust instruction had students with higher year end scores on the phonemic segmentation fluency test and oral reading fluency gains.

Teachers' use of classroom modifications was also related to two out of five DIBELS subtests and the

number of students who were on or above grade level by the end of the school year. Specifically, teachers who made modifications to their instruction for struggling readers in a timely fashion also had students who scored high on the phonemic segmentation fluency and nonsense word fluency subtests of the DIBELS assessment. Moreover, these teachers also had a high number of students who were on or above grade level by the end of the school year.

Summary

Important findings were revealed in this section of the report. Most important, teachers' use of SBRR instructional strategies were related to student outcomes, particularly measures of phonemic awareness, phonics, and reading fluency and the percent of students on or above grade level in reading. This finding suggests that teachers who used

SBRR instructional strategies such as explicit, direct instruction were likely to have students improve their reading skills. In addition to instructional strategies, teachers who used assessments and classroom modification appropriately also had students improve their reading skills.

This section also highlighted another important finding, which was the relationship between professional development and teachers' use of SBRR practices. Teachers who spent more time in the Reading Academy and rated it as highly effective were more likely to use effective instructional practices. This finding has implications for future programming, which are explained in the next section.

Implications and Recommendations

Based on the findings in this report, we offer the following recommendations to schools, districts, and the New York State Education Department, as they begin to implement Reading First grants.

Increase focus on fluency instruction. Not only do teachers need to focus more on fluency instruction, they should also include more instruction that involves repeated oral reading. In a typical repeated reading activity, students read a passage orally several times, with explicit guidance and feedback from a teacher. Other forms of repeated reading have been found to increase fluency, too. An example is paired reading, which involves a fluent reader who reads with a less fluent reader. Computer-assisted reading and readers theater are effective too. Computer-assisted programs include speech recognition and immediate feedback systems to students as they read aloud to text on a computer screen. In readers theatre, students rehearse and perform a play to peers; fluency is improved as students practice their scripts. The common element in all of these forms of instruction is that they provide ample opportunities to practice reading with feedback to help them gain awareness of and correct their mistakes.

Increase focus on explicit instruction in reading comprehension. In the area of phonemic awareness and phonics, teachers in this study were fluent in their use of explicit instruction. The same degree of explicit instruction needs to be applied to reading comprehension. Reading comprehension requires intentional thinking on behalf of the reader, that is, the reader applies specific cognitive strategies to understand what they are reading, particularly when they encounter barriers. Though readers may acquire strategies informally, research shows that explicit instruction that includes modeling and explaining multiple comprehension strategies is most effective in improving comprehension.

Continue to provide high quality professional development. Teachers gave high ratings to the Reading Academy's curricular content, classroom applications, and opportunities to meet as a group to discuss the newly learned material. Furthermore, coaches created opportunities for discussion and helped teachers in their learning of the course content. Coaches also ensured that the teachers made monthly progress in the program. These elements—curricular content, classroom application, group discussion and coaching—were important qualities to the of a professional development program and should continue to be emphasized in future planning.

Though readers may acquire strategies informally, research shows that explicit instruction that includes modeling and explaining multiple comprehension strategies is most effective in improving comprehension.

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Appendix

New York State's
Reading for Results

