



# Research Compendium

# ***Sing, Spell, Read & Write* Research Compendium**

## **TABLE OF CONTENTS**

<b>I.</b>	<b>Introduction.....</b>	<b>1</b>
	Overview .....	1
	The <i>Sing, Spell, Read &amp; Write (SSRW)</i> Program.....	2
	About the Compendium .....	3
<b>II.</b>	<b>National Reading Panel .....</b>	<b>5</b>
<b>III.</b>	<b>San Francisco Study .....</b>	<b>7</b>
<b>IV.</b>	<b>Memphis Study Citation .....</b>	<b>27</b>
<b>V.</b>	<b>SSRW Research Paper.....</b>	<b>31</b>
<b>VI.</b>	<b>School Score Reports.....</b>	<b>47</b>
	Alabama .....	48
	Fayette County Schools.....	48
	Arkansas.....	49
	Earle Elementary School .....	49
	Jonesboro School.....	50
	West Clay County Elementary School .....	51
	Wynne Primary School.....	52
	California .....	53
	Fenton Avenue Elementary School, LAUSD.....	53
	Washington Primary School, Berkeley .....	54
	Colorado.....	55
	Christian Heritage Elementary School.....	55
	Florida .....	57
	Century Elementary School.....	57
	Ernest R. Graham Elementary School.....	58
	Freeport Elementary School.....	60
	Tice Elementary School .....	63
	Georgia.....	64
	Bleckley County Schools .....	64
	D.D. Crawford Primary School .....	66
	Mississippi .....	67
	Aberdeen and Taylorsville Schools .....	67
	New Jersey .....	68
	Mahwah Elementary School.....	68
	Schull School .....	69
	Traphagen School .....	70
	New York .....	71
	P.S. 138, Queens .....	71
	Oklahoma .....	73
	Eugene Fields Elementary School .....	73
	Tennessee .....	75
	Tusculum College Study, East Tennessee.....	75
	Texas .....	76
	Kerens Elementary School.....	76
	Lone Oak Elementary School.....	77
	Valley View Elementary School.....	78
	Virginia.....	80
	Chesapeake Self-Contained Learning Disabilities Study .....	80

## INTRODUCTION

### Overview

In 1997, Congress asked the National Institute for Child Health and Human Development (NICHD), in collaboration with the Secretary of Education, to convene a National Reading Panel to review a vast collection of research pertaining to reading instruction. In 2000, the panel issued a report pinpointing five essential components necessary for reading success: phonemic awareness, phonics, vocabulary development, fluency, and comprehension.

Also in 2000, the National Assessment for Educational Progress (NAEP) in *The Nation's Report Card* showed that more than 85 percent of fourth graders in high-poverty schools scored below the proficient reading level. Clearly, many students were advancing through the school system without having mastered the basic skills associated with reading.

In January 2002, President George W. Bush reinforced the Panel's findings about reading instruction when he signed into law the No Child Left Behind Act of 2001. Among other things, the No Child Left Behind Act represents a commitment to literacy by emphasizing the need to make sure every child can read by the end of third grade. To achieve this goal, a comprehensive effort called "Reading First" has been put into place. This \$900 million state grant program promotes the use of high-quality reading instructional materials based on scientific research for grades K-3.

Reading First grants are awarded at the state level and dispersed via subgrants to local education agencies. Grant recipients implement instructional strategies that help young children – particularly those from low-income families – attain the skills needed for optimal reading development.

*Sing, Spell, Read & Write* is an ideal component of the Reading First initiative at the early grades. It is a unique 36-step learning-to-read curriculum that utilizes carefully sequenced, systematic, explicit phonics instructional strategies to build fluent independent readers. Using look, listen, point, sing-along, and echo routines along with gross-motor and fine-motor activities, the program actively engages the senses and effectively reaches all types of learners. This approach is strongly supported by current research on brain function, language acquisition, and reading.

This program presents an orderly and graduated sequence of multisensory language arts instruction designed to reach every avenue of the brain. Important phonics concepts are taught with recorded songs that have accompanying wall charts. These songs and charts provide the motivational practices that reinforce the correlated lessons in reading, writing, and spelling.

*Sing, Spell, Read & Write* is psychologically and academically effective because the method requires total participation. Every student must respond individually to each step in the program. Students each take turns playing games, singing songs, and taking part in a wide variety of multisensory activities. Children learn to read as early as kindergarten, and they can achieve complete decoding, fluency, and comprehension skills by the end of first grade.

Another unique characteristic of *Sing, Spell, Read & Write* is that the program creates an environment where learning is fun. Interesting games allow for needed repetition and provide a non-threatening atmosphere to master beginning skills.

The multimodal strategies incorporated into the program were developed and classroom tested for more than 25 years. The program incorporates the research-based principles of reading instruction including phonemic awareness; phonological awareness; phonics instruction; decodable texts; multiple readings (oral and silent, individual and shared) to provide practice and build fluency; and comprehension strategies designed to build higher-order thinking skills. The components – phonemic awareness, phonics, vocabulary development, fluency, and comprehension – provide an unprecedented and research-based roadmap for classroom instruction. *Sing, Spell, Read & Write* supports all five of the components identified by the National Reading Panel.

Current research clearly states that systematic and explicit phonics instruction is the most effective way to encourage a child's growth in reading. Systematic and explicit phonics instruction does two things. First, it introduces students to various letter-sound relationships in a clearly defined sequence. Second, it provides students an opportunity to apply their knowledge of such relationships as they begin to read and write.

*Sing, Spell, Read & Write* is a multisensory, multimodal program designed to make students independent readers and writers. It takes students in pre-kindergarten through second grade on a journey that incorporates catchy sing-along songs, games, phonetic storybook readers, and hands-on activities. Using a variety of gross-motor and fine-motor activities, *Sing, Spell, Read & Write* engages the senses and effectively reaches all types of learners.

## **The *Sing, Spell, Read & Write* Program**

***Sing, Spell, Read & Write* Pre-K Readiness Program** helps children develop the readiness and early literacy skills they need with developmentally appropriate activities. With *Sing, Spell, Read & Write* Pre-K, you can:

- Combine sing-along songs, rhythm, and movement – the most effective teaching strategies for preschoolers.
- Make reading meaningful through shared reading experiences, classroom materials that present words and symbols, and hands-on print activities.
- Provide a creative, non-threatening learning environment that engages every learning style and stimulates brain activity.
- Expose students to the concepts of letter and number recognition, visual and auditory discrimination, phonemic awareness, and letter/sound correspondences.

***Sing, Spell, Read & Write* Level K** uses phonics songs and interactive charts and games to teach the alphabetic principle, phonemic awareness, letter/sound correspondences, short vowel sounds, and blending. By the end of the year, students can apply their new skills when they read, fully decodable storybooks with single-syllable, short-vowel words. With *Sing, Spell, Read & Write* Level K, you can:

- Deliver powerful multisensory learning experiences with catchy sing-along phonics songs, interactive point-and-learn charts, activities, and games.
- Involve every child in every step of each activity to ensure individual understanding and success.
- Use repetition, rhyme, rhythm, and music to foster memory and skill mastery.

***Sing, Spell, Read & Write* Level 1** combines movement and music with carefully sequenced instruction to help students quickly master phonics skills. With *Sing, Spell, Read & Write* Level 1, you can:

- Teach phonics and decoding concepts through look, listen, point, and sing-along charts, songs, and echo routines.
- Reach every child using built-in multimodal teaching strategies.
- Provide opportunities for building listening, speaking, reading, and writing vocabulary.
- Assist students in developing fluency and accuracy.
- Teach comprehension strategies to build better readers.

***Sing, Spell, Read & Write* Level 2** provides phonics skills review and provides a transition to informational texts using a series of storybooks authored by children. With *Sing, Spell, Read & Write* Level 2, you can:

- Review phonics skills.
- Evaluate students' reading skills and provide intervention.
- Provide students with a transition to informational texts.
- Assess students' language arts skills.
- Assist students in developing fluency and accuracy.
- Teach comprehension strategies to build better readers.
- Provide opportunities for building listening, speaking, reading, and writing vocabulary.
- Develop strong writers.

*Sing, Spell, Read & Write* is published by Pearson Learning Group. Through its imprints of Modern Curriculum Press, Celebration Press, Globe Fearon, Dale Seymour Publications, and Good Year Books, Pearson Learning Group provides high-quality research-based and validated products for pre-K through grade 12. Please visit the web site at [www.pearsonlearning.com](http://www.pearsonlearning.com) for more information.

## About the Compendium

This document is a compendium of research on the *Sing, Spell, Read & Write* program. Included in the compendium are a variety of studies conducted over the last several years. Types of research include: full studies, historical test score analyses, research base analysis, and summaries of studies.

The National Reading Panel report of 2000 cited a study showing the effectiveness of *Sing, Spell, Read & Write* in kindergarten through second grade. A description of this meta-analysis of phonics programs is included in the compendium.

*Sing, Spell, Read & Write* was used as an intervention curriculum in the San Francisco Unified School District. The full report of this study is included in the compendium.

An article is included highlighting a study of *Sing, Spell, Read & Write* used in the Memphis City Schools, pointing to very high levels of success in kindergarten students, followed by second grade, and then first grade.

The *Sing, Spell, Read & Write* Research Paper documents the research base of the program supporting the National Reading Panel's findings on

the five essential components necessary for reading success. *Sing, Spell, Read & Write* supports phonemic awareness, phonics, vocabulary development, fluency, and comprehension.

Also included in this compendium are score reports from schools throughout the country that are using *Sing, Spell, Read & Write*.

Throughout the compendium, there is evidence of program success among various student populations. Students with Limited English Proficiency in San Francisco and Valley View, Texas showed benefits from the *Sing, Spell, Read & Write* program. Schools with lower socioeconomic status using *Sing, Spell, Read & Write* in New York City (P.S. 138, Queens) and Texas (Valley View Elementary) had gains in reading equal or greater to those of schools with higher socioeconomic status that used *Sing, Spell, Read & Write*. Low achieving students who had failed a grade or were having difficulties learning to read improved their skills using the *Sing, Spell, Read & Write* program in East Tennessee (Tusculum College Study) and Eugene Fields, Oklahoma.

## NATIONAL READING PANEL

### Comparison of Reading Programs Utilizing Phonics Instruction

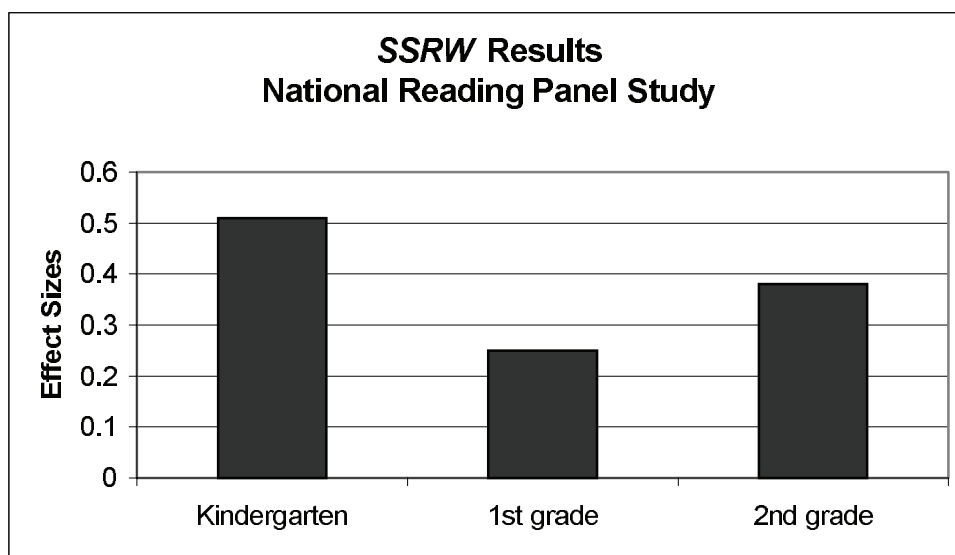
In December 2000, the National Reading Panel published a study that examined the effectiveness of different reading programs utilizing systematic phonics instruction. Several types of programs were examined. One type is systematic synthetic phonics, which teaches students to transform letters into phonemes and blend the sounds to form words. *Sing, Spell, Read & Write* falls in this category.

The effectiveness of all programs was reported in effect sizes, which indicate the amount by which the performance of the treatment group exceeded that of the control group. Effect sizes greater than zero indicate that the treatment group outperformed the control group. The higher the effect size, the greater the performance of the treatment group relative to the

control group. Control groups utilized other methods of reading instruction, such as basal readers, regular curricula, whole word programs, or whole language approaches.

The study found that the mean overall effect size for all phonics programs was  $d = 0.44$ , indicating that phonics programs were significantly more effective than the control conditions in teaching children how to read. Also, phonics programs were found to be a more effective intervention for kindergarteners and first graders than for students in later grades, and especially for at-risk students in these lower grades.

Results for the *Sing, Spell, Read & Write* program for kindergarten, first grade, and second grade are illustrated below. The program was most effective at the kindergarten level.



# **The Use of *Sing, Spell, Read & Write* as Intervention Curriculum**

**Analysis of a Four-Week  
Summer School Pilot Program  
in Ten Elementary Schools in the  
San Francisco Unified School District**

**Analysis by:**

**Rowlette Research Associates, Inc.**

## San Francisco Study TABLE OF CONTENTS

Introduction.....	9
The No Child Left Behind Act.....	9
Four-Week Summer School Pilot Program .....	9
Evaluation Questions .....	9
The <i>Sing, Spell, Read &amp; Write</i> Curriculum and Program Implementation.....	10
Data Analysis & Findings.....	10
Achievement Outcomes .....	11
Summary & Conclusions .....	18
Appendix: Additional Graphs.....	19
Endnotes.....	25



## INTRODUCTION

### The No Child Left Behind Act

The 2001 No Child Left Behind (NCLB) Education Act identified five essential components of teaching reading that should be incorporated through explicit and systemic instruction:

1. Phonemic Awareness;
2. Phonics;
3. Vocabulary Development;
4. Reading Fluency, including oral reading skills; and
5. Reading Comprehension strategies.

These components are to be implemented by state and local educational agencies, using scientifically-based reading research to ensure that every student is reading at grade level or above by the end of third grade. The development of effective instructional materials and programs that can be proven to prevent or remediate reading failure is an important part of the implementation of these policies.

This study was conducted to assess the impact of Pearson Learning Group's Modern Curriculum Press *Sing, Spell, Read & Write (SSRW)*, a beginning reading program, in the San Francisco Unified School District. The purpose of the study was to examine the effectiveness of the *SSRW* program as a reading intervention curriculum.

### Four-Week Summer School Pilot Program

This report examines the impact of the *SSRW* curriculum in a four-week summer school program conducted during the 2000 academic year. The program was implemented in ten elementary schools, involving 51 kindergarten, first, and second grade elementary teachers and 790 students in the San Francisco Unified School District. The elementary schools involved in the study were: *Bryant, Carver, Chavez, Cleveland, Golden Gate, Gordon Lau, Monroe, E. R. Taylor, Visitation Valley, and Webster*.

A description of the students by grade level is provided in **Table 1**.

**Table 1**  
**Student Classification**  
**By Grade Level**

	n
	<b>790</b>
Kindergarten	258
First Grade	282
Second Grade	250

A description of the students by English language proficiency status is provided in **Table 2**:

**Table 2**  
**Student Classification**  
**By English Language Proficiency**

	n
	<b>790</b>
Non-English Proficiency	128
Limited English Proficiency	272
English Proficiency	149
Fluent English Proficiency	23
No Language Proficiency Identified	218

*SSRW* was the primary curriculum of the summer pilot program. The pilot program was four weeks in duration, with sessions five days a week for four hours a day, providing a total of 80 hours of instruction as the maximum number of hours possible for student participants during the period.

### Evaluation Questions

Specific evaluation questions were developed to guide the analysis of the San Francisco Unified District Summer School Program. These questions were:

- What were the achievement outcomes for the kindergarten, first, and second grade student participants across school sites?
- To what extent was the *SSRW* curriculum effective for the given varying levels of English Language Proficiency?
- To what extent was the *SSRW* curriculum effective across relevant demographic analyses?

## THE SSRW CURRICULUM AND PROGRAM IMPLEMENTATION

Sue Dickson<sup>1</sup>, veteran educator and the author of *SSRW*, designed an integrated program for teaching spoken language, reading, spelling, and writing. The curriculum is a program of carefully sequenced, systematic, explicit phonics instruction to build fluent, independent readers. Implementation of the curriculum employs the use of music and movement with multimodal teaching strategies. Using *look*, *listen*, *point*, *sing-along*, and *echo routines*, along with *gross motor* and *fine motor* activities, the program actively engages the senses and is designed to be effective for all types of preferred learning styles. The multimodal teaching strategies employed are strongly supported by current research on brain function, language acquisition, and reading.<sup>2,3,4,5</sup>

### The SSRW Curriculum

The *SSRW* curriculum includes many interactive and multimodal stimuli, including charts, books, audio cassettes, and games. Teachers' manuals are provided to promote consistency in methodology and include lessons, reproducibles, musical scores, and recommendations for relevant follow-up work. In the Level 1 Curriculum, students can chart their progress in the program by using a racecar chart. The program stresses intensive systematic phonics, vocabulary development, comprehension, spelling, and grammar. Lessons use sing-along phonics songs, interactive point-and-learn charts, and motivating practice to move readers to the next skill level.

### Program Training of Elementary Teachers

Several techniques were used to enhance the pedagogic consistency across school sites. Prior to the summer school implementation, an eight-hour in-service for teachers was conducted. Each teacher was given the appropriate manual, either kindergarten or first grade, with key parts pre-tabbed for ease of implementation. The trainers provided a mock classroom, showing the setup for the materials, and used student-teacher role-playing techniques to enhance the experience. Each of the program techniques was demonstrated, with any questions regarding implementation addressed.

Teachers were provided with a daily schedule for the 80-hour pilot program as well as a checklist of components. Videos demonstrating each one of the program techniques were shown as the materials were presented. Teachers were coached post-video by individual trainers and given the opportunity to practice.

Once the pilot program began, assistance was provided for all the pretesting, and again for the posttesting process. Consultants visited the classrooms during the summer sessions and, when needed, modeled key techniques for the teachers.

## DATA ANALYSIS & FINDINGS

Pretest and posttest scores from the various curriculum areas were calculated and electronically entered into a database, along with the following information:

- Student identification number
- Name of the school
- Name of the teacher
- Grade level
- Language proficiency level: English proficient; Limited English proficient; Fluent English; Non-English proficient, and not identified.

Data were analyzed using statistical analysis software. T-tests by grade level and language proficiency level were

used to determine the variance between pretest and posttest means and level of significance for each database subset of students. Effect sizes were calculated and a Binomial Effect Size Differential (BESD) provided in tables for each student category findings. A pooled kindergarten and first grade sample was used to increase statistical power for subset analyses because both grades were given the same pretest/posttests. Second grade students were given a different set of pretests and posttests.

Findings are presented in terms of the specific evaluation questions posed at the beginning of the study.

## ACHIEVEMENT OUTCOMES

The first evaluation question examined was: “*What were the achievement outcomes for the kindergarten, first, and second grade student participants across school sites?*” In this study, effect sizes were calculated to measure the impact of the program on student achievement. Effect size is a numerical representation of the impact of instruction on the experimental group relative to the control group. The data clearly showed that the curriculum produced an educationally significant effect<sup>6,7,8</sup> of .33 on the overall skill level of the kindergarten/grade 1 student participants. The sample size is almost twice that necessary for statistical power  $p < .05$ , as can be seen in **Table 3**.

**Table 3**  
**Kindergarten/First Grade Sample**

<b>Effect=0.33</b>					
	n	Mean	SD	t	p
Overall Pretest	540	71.5	35.6	-26.52	<0.0001
Overall Posttest	540	94.3	34.3		
Difference	540	-22.8	20.0		

The effect achieved for the kindergarten-extracted sample was even greater at 0.44, while the first grade sample remained the same, as presented in **Tables 4 and 5**.

**Table 4**  
**Kindergarten Sample**

<b>Effect=0.43</b>					
	n	Mean	SD	t	p
Total Pretest	258	52.1	26.9	-19.77	<0.0001
Total Posttest	258	78.2	33.9		
Difference	258	-26.1	21.2		

**Table 5**  
**First Grade Sample**

<b>Effect=0.33</b>					
	n	Mean	SD	t	p
Total Pretest	282	89.2	33.3	-18.14	<0.0001
Total Posttest	282	109.0	27.2		
Difference	282	-19.8	18.3		
Difference Between Means	-19.8				

Similar results were found for second grade students. As can be seen in **Table 6** below, an educationally significant effect of .44 was achieved in overall skills from pretest to posttest using the *SSRW* curriculum. The sample size is almost 100 more than necessary to provide statistical

power for significance at  $p < .05$  as can be observed in **Table 6**.

**Table 6**  
**Second Grade Overall Sample**

<b>Effect=0.44</b>					
	n	Mean	SD	t	p
Total Pretest	250	47.241	6.615	-13.61	<0.0001
Total Posttest	250	52.034	4.442		
Difference	250	-4.793	5.690		

These findings from the analysis of the research data are best understood by a brief explanation of the BESD and the conversion of the effect sizes to BESD equivalents. The most striking feature of the BESD representations of the effect size is the different impression they give of the potential *practical significance* of a given effect from that of the standard deviation unit expression.

For example, an effect size of one-fifth of a standard deviation (.20) corresponds to a BESD success rate differential of .10, that is, 10 percentage points between pretest and posttest success rates (e.g., 55% versus 45%). A success increase of 10 percentage points on a pretest group baseline of 45% represents a 22% improvement in the success rate (10/45). Viewed in these terms, the same intervention effect that might appear minimal in standard deviation units—for our discussion example purpose, a .20—looks potentially meaningful in terms of effect size.

Looking at the BESD for the overall outcomes for kindergarten, first grade, and second grade populations in this summer school pilot study, we find the following intervention impact demonstrated in **Table 7**.

**Table 7**  
**Kindergarten/First Grade and Second Grade Binomial Effects Size Differential**

Samples	%Above Mean Pretest	%Above Mean Posttest	Gain Differential %
Kindergarten/First Grade Overall	<b>42%</b>	<b>57%</b>	<b>15%</b>
Second Grade Overall	<b>40%</b>	<b>60%</b>	<b>20%</b>

The results of a BESD of 15%<sup>9</sup> from a baseline of 42% is that it represents a 36% *gain overall* (15/42) for the kindergarten/first grade participants in the summer school program during a four-week period. The BESD gain for the second grade participants is even more marked with a

20% increase from a baseline of 40%, representing a 50% gain (20/40).

These results demonstrate the importance of more fully understanding evaluation data by utilizing a BESD, previously presented in standard deviation units.

### English Language Proficiency

Our next evaluation questions results are presented in **Tables 8 and 9**: “*To what extent was the SSRW curriculum effective for the given varying levels of English Language Proficiency?*”

**Table 8**  
**Kindergarten/First Grade Overall Skills**  
**Limited English Students**

Effect=0.32					
	n	Mean	SD	t	P
Total Pretest	169	84.3	35.0	-14.23	<0.0001
Total Posttest	169	105.2	31.0		
Difference	169	-20.8	19.0		

**Table 9**  
**Second Grade Overall Skills**  
**Limited English Students**

Effect=1.71					
	n	Mean	SD	t	P
Total Pretest	103	46.816	6.924	-10.35	<0.0001
Total Posttest	103	53.350	2.906		
Difference	103	-6.534	6.406		

As can be determined from **Tables 8 and 9** above, kindergarten/first grade participants with *limited English proficiency* achieved an educationally significant effect from pretest to posttest of one-third of a standard deviation in four weeks.

However, the results were highly dramatic for the second grade participants with limited English proficiency. From pretest to posttest, *their scores changed almost 2 standard deviations during the four- week period*. The changes in terms of BESD equivalents are presented in **Table 10**.

**Table 10**  
**Kindergarten/First Grade and Second Grade**  
**Limited English Participants**  
**Binomial Effects Size Differential**

Samples	%Above Mean Pretest	%Above Mean Posttest	Gain Differential %
K/1 Overall	42%	57%	15%
Second Grade Overall	17%	82%	65%

The results of a BESD differential of 15%<sup>10</sup> from a baseline of 42% is that it represents a 36% gain overall (15/42) for the kindergarten/first grade participants with *limited English proficiency*. The BESD differential gain for the second grade participants with *limited English proficiency* represents a 382% gain (65/17). Next, we examined the pretest and posttest results for the kindergarten/first grade students designated as *non-English proficient*. There were no second grade participants with this designation to include in the analysis. The scores for this subset group are presented in **Table 11** below.

**Table 11**  
**Kindergarten/First Grade Non-English**  
**Proficiency**

Effect=0.54					
	n	Mean	SD	t	p
Total Pretest	128	47.9	23.5	-15.28	<0.0001
Total Posttest	128	78.3	32.8		
Difference	128	-30.4	22.5		

The sample size for this population subset exceeded the number required for the effect size to be significant at  $p \leq .05$ . The BESD equivalent is presented in **Table 12**.

**Table 12**  
**Kindergarten/First Grade Non-English**  
**Proficiency Participants**  
**Binomial Effect Size Differential**

Samples	%Above Mean Pretest	%Above Mean Posttest	Gain Differential %
K/1	38%	62%	24%

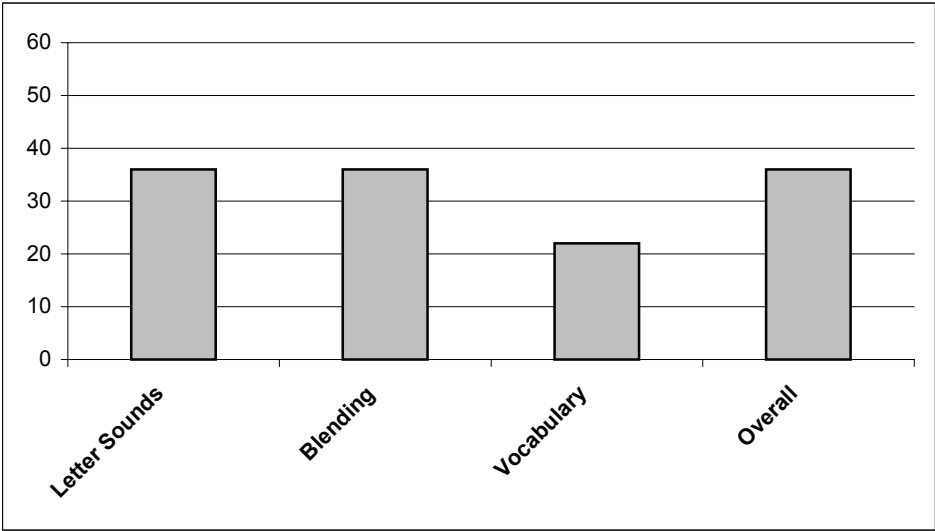
The result of a BESD differential of 24% from a baseline of 38% represents a 63% gain (24/38) for the kindergarten/first grade participants with *non-English proficiency*.

Next, the results for students with proficient or fluent English language skills were examined. Although the sample sizes were too small in these participant subsets for definitive conclusions<sup>11</sup> the results trend in the same direction as results for the other student participants overall and in the student subsets: the pretest to posttest effect for the *fluent- English K/1 participants* is 0.31; the pretest to posttest effect for the *English-proficient kindergarten/first grade participants* is 0.35; and, the pretest to posttest effect for the *English proficient second grade participants* is 0.43.

**Relevant Demographic Analyses**

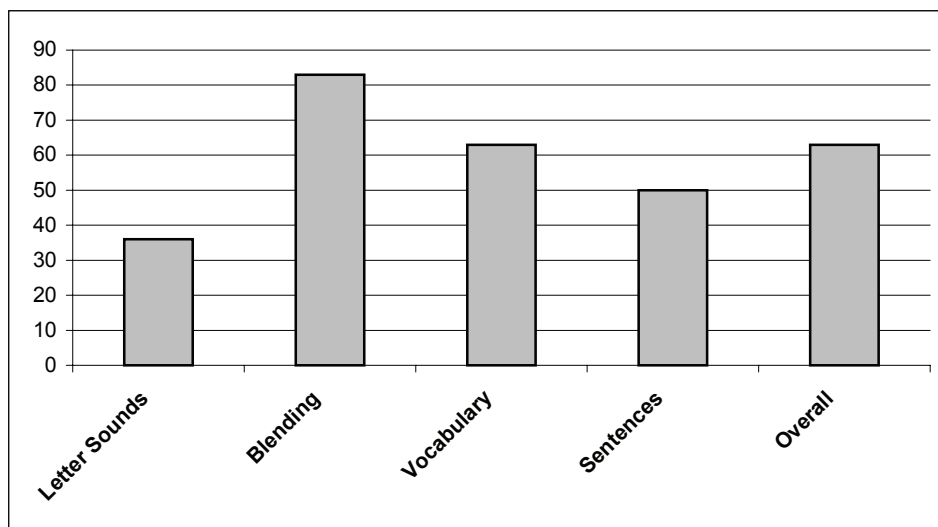
Finally, we were interested in reviewing our last evaluation question: “*To what extent was the SSRW curriculum effective across relevant demographic analyses?*” We present the findings of curriculum category pretests and posttests for the various student sample populations across school sites in the charts on the following pages.

**Kindergarten/First Grade Student Participants, Overall Sample  
BESD Success Rate Percentage Gain**



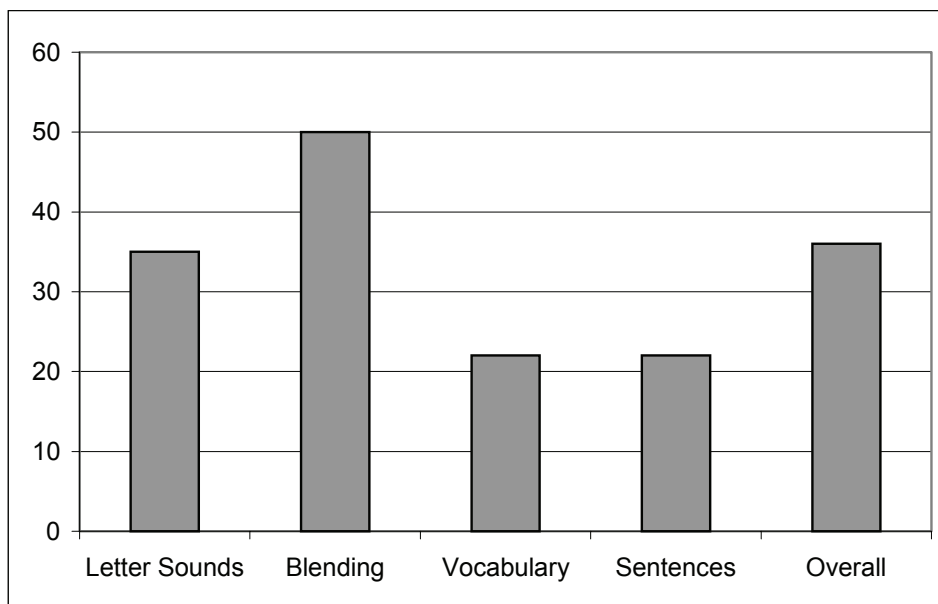
Sample n=540	Letter Sounds Effect Size	Blending Effect Size	Vocabulary Effect Size	Overall Effect Size
K/1	0.34	0.39	0.24	0.33

### Kindergarten/First Grade Student Participants, Non-English Proficiency Sample BESD Success Rate Percentage Gain



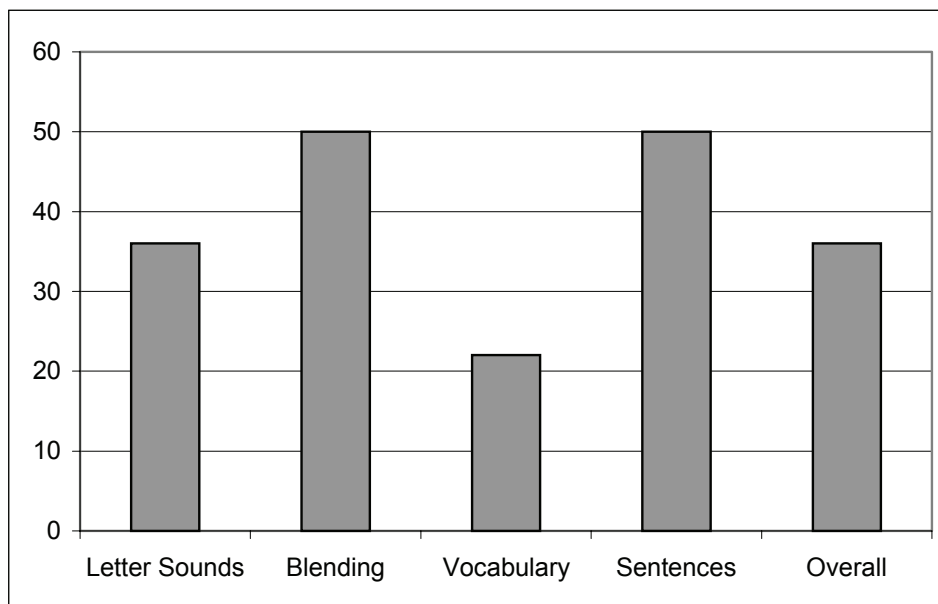
Sample n=128	Letter Sounds Effect Size	Blending Effect Size	Vocabulary Effect Size	Sentences Effect Size	Overall Effect Size
K/1	0.37	0.60	0.53	0.43	0.54

### Kindergarten/First Grade Student Participants, Limited English Sample BESD Success Rate Percentage Gain



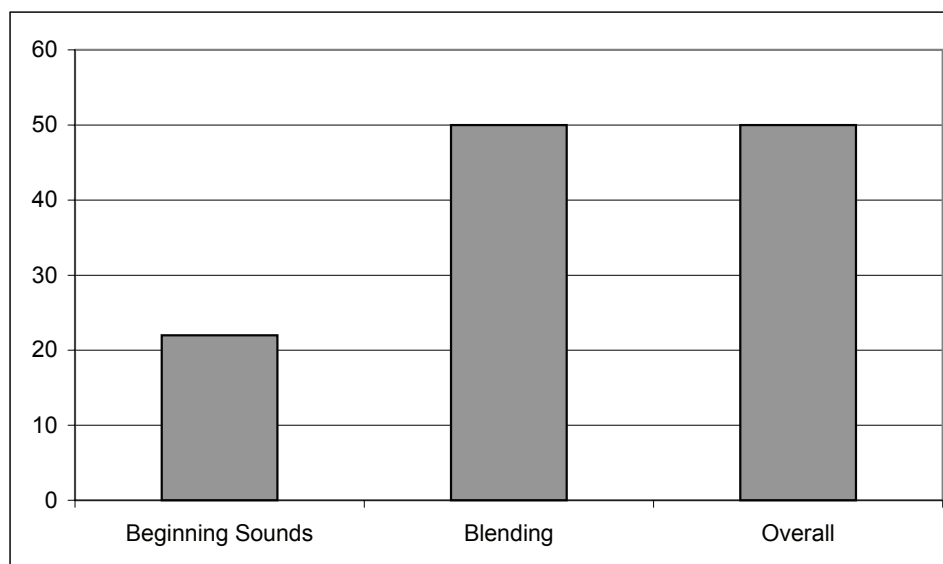
Sample n=169	Letter Sounds Effect Size	Blending Effect Size	Vocabulary Effect Size	Sentences Effect Size	Overall Effect Size
K/1	0.35	0.43	0.22	0.25	0.32

### Kindergarten/First Grade Student Participants, English Proficient Sample BESD Success Rate Percentage Gain



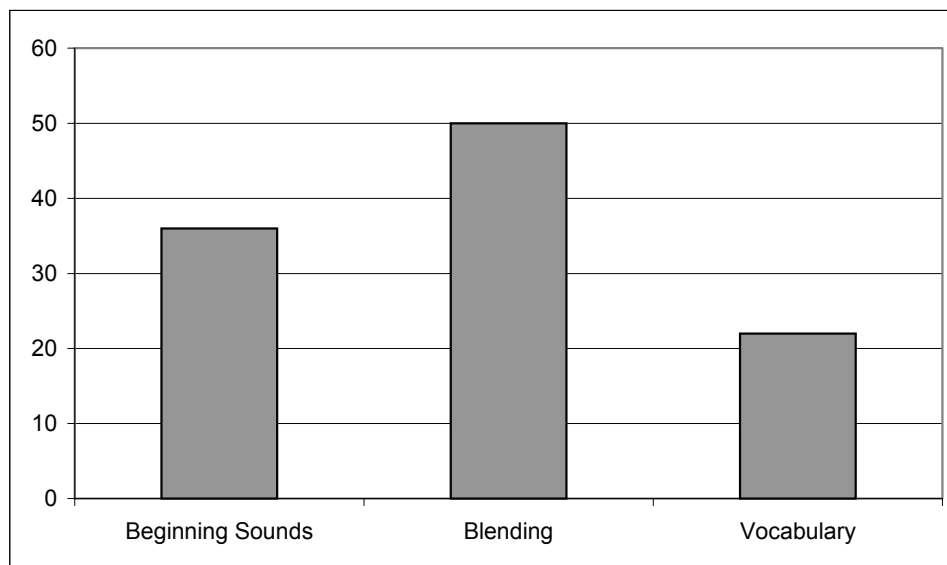
Sample n=121	Letter Sounds Effect Size	Blending Effect Size	Vocabulary Effect Size	Sentences Effect Size	Overall Effect Size
K/1	0.37	0.40	0.22	0.47	0.35

### Second Grade Student Participants, Overall Sample BESD Success Rate Percentage Gain



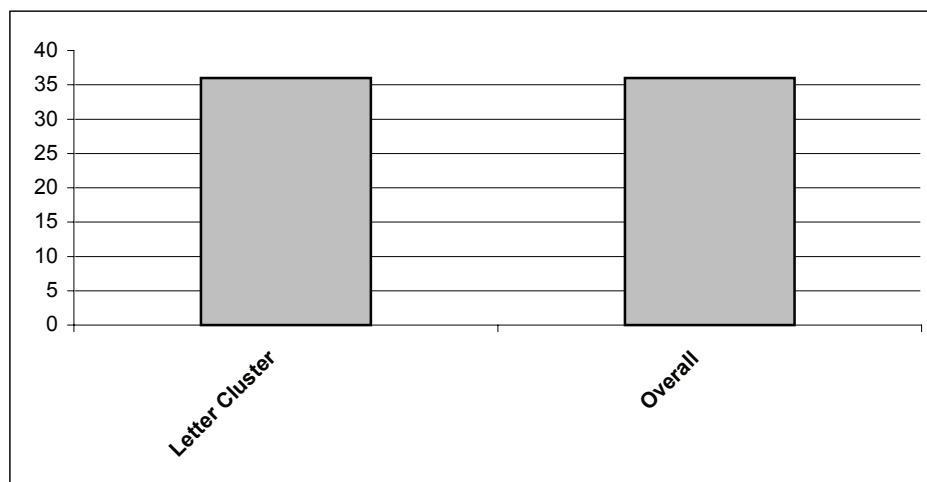
Sample n=250	Beginning Sounds Effect Size	Blending Effect Size	Overall Effect Size
Second Grade	0.20	0.44	0.44

**Second Grade Student Participants, Limited English Sample  
BESD Success Rate Percentage Gain**



Sample n=103	Beginning Sounds Effect Size	Blending Effect Size	Vocabulary Effect Size
Second Grade	0.37	0.40	0.22

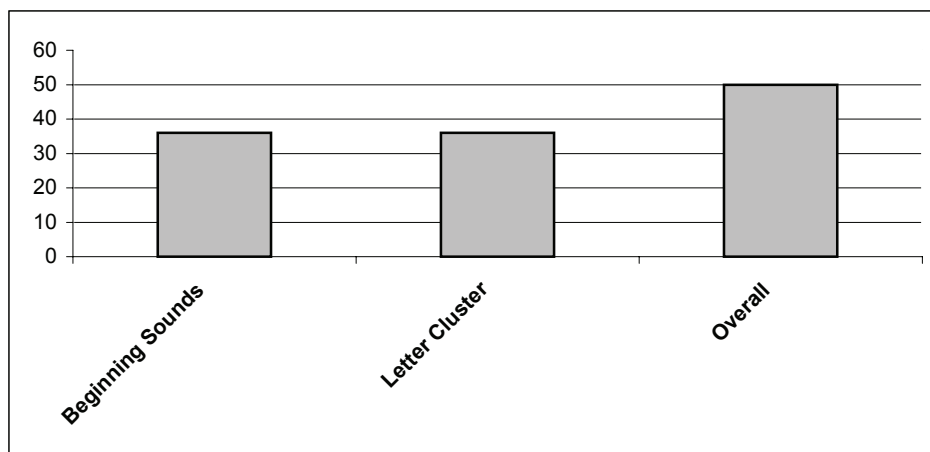
**Second Grade Student Participants, No Proficiency Designated Sample  
BESD Success Rate Percentage Gain**



Sample n=119	Letter Cluster Effect Size	Overall Effect Size
Second Grade	0.38	0.30



**Second Grade Student Participants, English Proficient Sample  
BESD Success Rate Percentage Gain**



Sample n=28	Beginning Sounds Effect Size	Letter Cluster Effect Size	Overall Effect Size
Second Grade	0.36	0.35	0.43

## SUMMARY AND CONCLUSIONS

The goal of this analysis was to determine if a four-week, 80-hour pilot test using the *SSRW* program as intervention curriculum is effective for elementary populations with various English language proficiencies. The data demonstrate that the intervention produced educationally significant effects for both the kindergarten/first grade and second grade participants overall, produced dramatic effects for students with *limited English proficiency* overall and across skill subsets, and produced significant effects and beneficial outcomes for participants with normal English language proficiency.

The program appears to be highly promising as a primary curriculum intervention, even for short summer sessions of even four weeks. The program demonstrated effects on curriculum subset skill areas in Letter Sounds, Beginning Sounds, Letter Clusters, Blending, Sentences, and Vocabulary.

Although a variety of teachers and ten different school sites in the San Francisco Unified School District tested the program, there was a very detailed implementation methodology provided for each site. The approach to increase pedagogic consistency in implementing the program across sites may have contributed to the successful outcomes during the concentrated period of time.

These findings corroborate published research on the effectiveness of the *SSRW* program used for intervention<sup>12</sup> for special at-risk populations and provide additional evidence for effectiveness in focused, short-term programs.

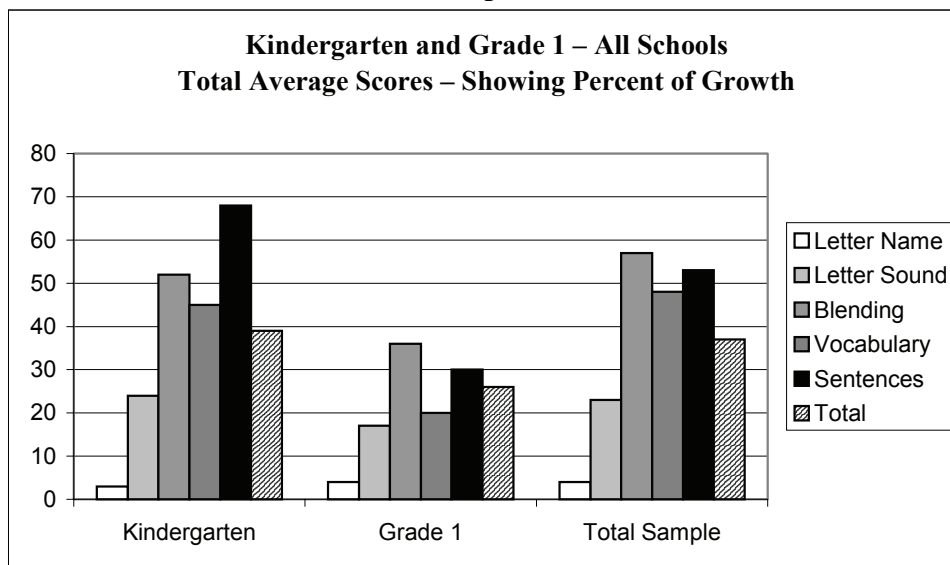
## APPENDIX: ADDITIONAL GRAPHS

### Kindergarten and Grade 1 Results

**Graph 1** shows the percent of growth achieved by kindergarten and first grade participants during the

program. Both kindergarten and first grade participants were administered the same pretest/posttest covering six curriculum areas.

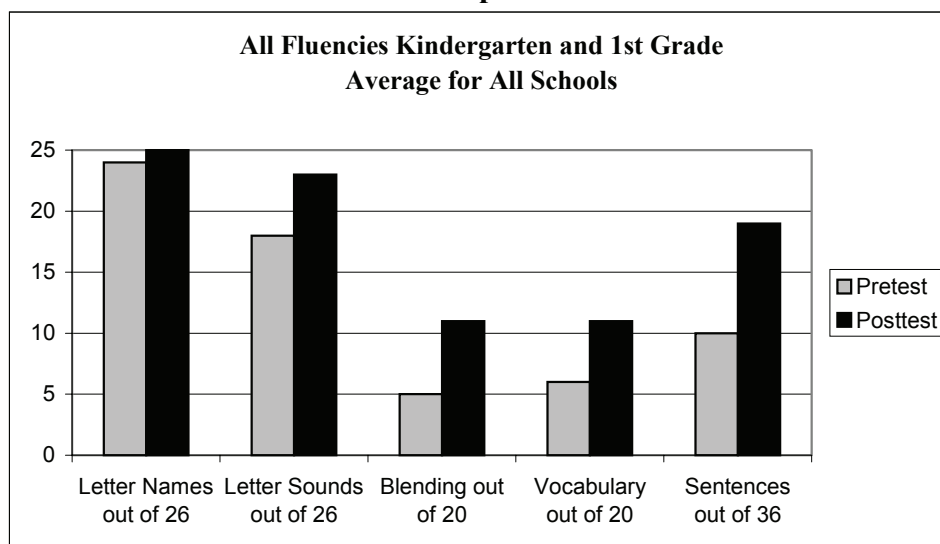
**Graph 1**



In terms of educational **effect**, the data were clear that the curriculum produced an effect of **0.43** for the kindergarten classes with a statistical power of  $p < .05$ .<sup>13</sup> The effect size of the program on the first grade classes was **0.33**, also significant at  $p < .05$ .

The level of achievement across all fluencies for kindergarten and first grade is presented in **Graph 2**.

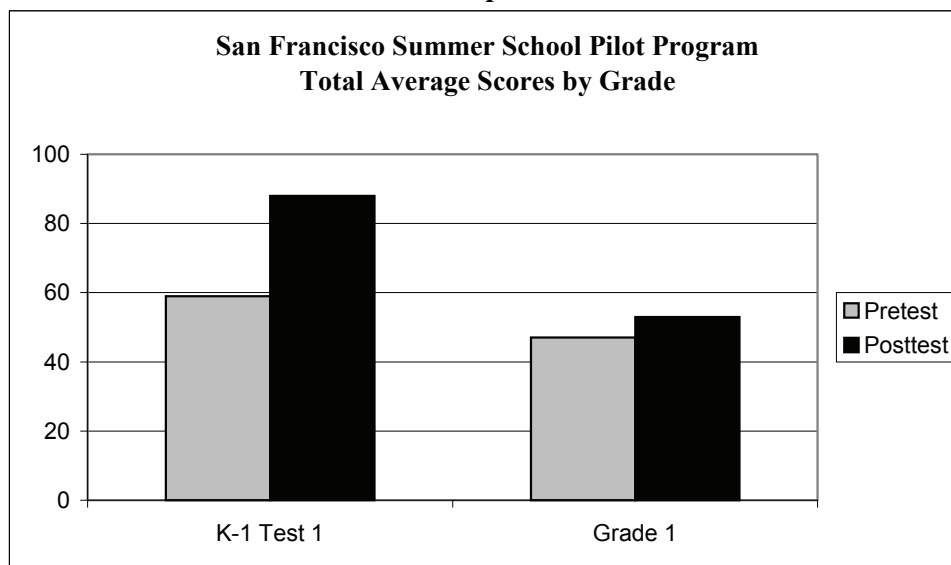
**Graph 2**



The impact of the summer program on the combined kindergarten/first grade sample and the total second grade sample is presented in **Graph 3**. The effect size of the program on the kindergarten/first grade sample was 0.33

from pretest to posttest and for the second grade, 0.44<sup>14</sup> from pretest to posttest. Both results are educationally significant.

**Graph 3**



### Program Effects by Grade and Language Proficiency<sup>15</sup>

All educationally significant effects presented in the tables that follow are highlighted. As can be seen in **Table 1**, the non-English proficient student participants made highly significant gains overall, and in blending and vocabulary skills in particular. As evidenced in **Table 2**, the kindergarten non-English participants made very dramatic

gains in letter sounds. **Table 3** shows results for the first grade sample.

As shown in **Table 4**, perhaps the most dramatic outcomes of the pilot summer school program were achieved with the second grade participants with limited English proficiency. The 1.71 effect size overall is equivalent to a gain in SAT scores of 171 points.

**Table 1  
San Francisco Summer School Effect Sizes  
Kindergarten and First Grade Combined**

Sample	n	Overall	Letter Sounds	Blending	Vocabulary	Sentences
All Fluencies	540	.33	.34	.39	.24	.26
Non-English Proficiency	128	.54	.37	.60	.53	.43
Limited English Proficiency	169	.32	.35	.43	.22	.25
English Proficiency	121	.35	.37	.40	.22	.47

**Table 2**  
**San Francisco Summer School Effect Sizes**  
**Kindergarten Sample Only**

<b>Sample</b>	<b>n</b>	<b>Overall</b>	<b>Letter Sounds</b>	<b>Blending</b>	<b>Vocabulary</b>	<b>Sentences</b>
All Fluencies	258	.43	.35	.42	.37	.34
Non-English Proficiency	124	.36	.60	.51	.42	.53

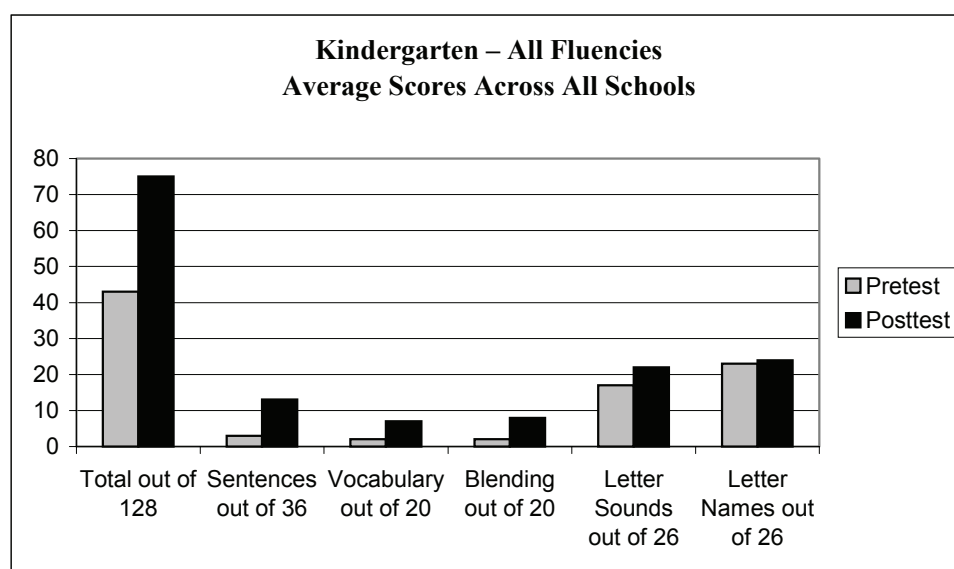
**Table 3**  
**San Francisco Summer School Effect Sizes**  
**First Grade Sample Only**

<b>Sample</b>	<b>n</b>	<b>Overall</b>	<b>Letter Sounds</b>	<b>Blending</b>	<b>Vocabulary</b>	<b>Sentences</b>
All Fluencies	282	.33	.34	.42	.23	.27
Limited English Proficiency	108	.29	.27	.48	.20	.25

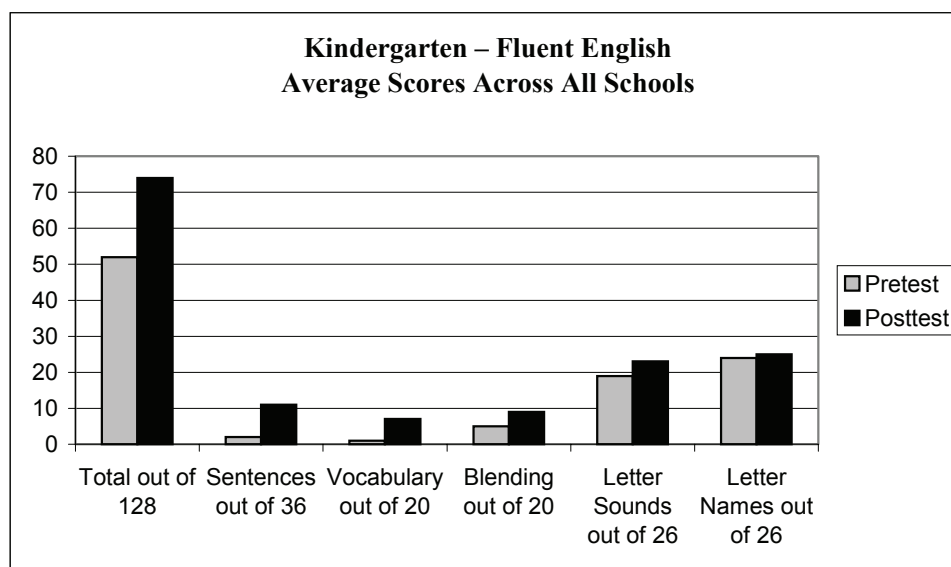
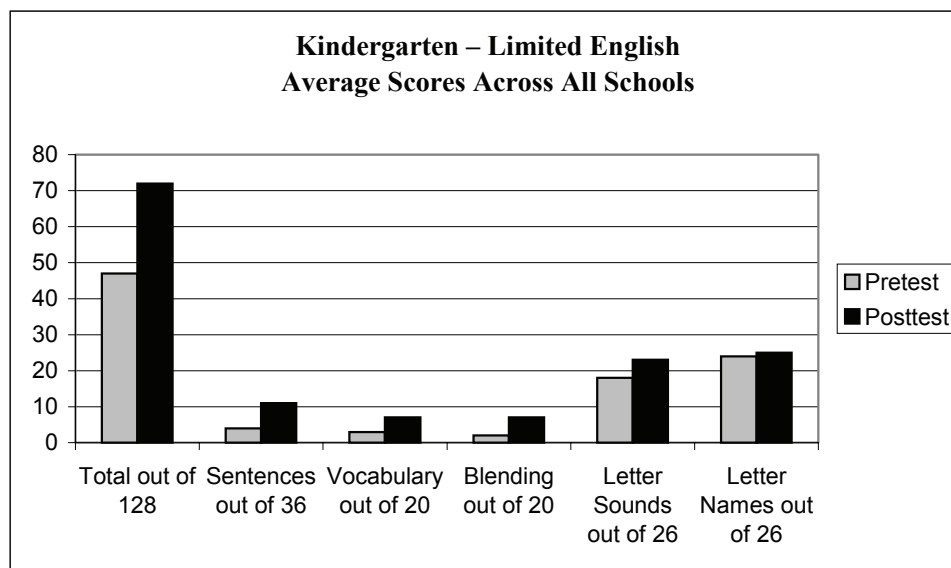
**Table 4**  
**San Francisco Summer School Effect Sizes**  
**Second Grade Sample**

<b>Sample</b>	<b>n</b>	<b>Overall</b>	<b>Beginning Sounds</b>	<b>Letter Cluster</b>	<b>Word Recognition</b>	<b>Sentences</b>
All Fluencies	250	.44	.20	.42	.15	.09
Limited English Proficiency	103	1.71	.52	.66	.13	.19

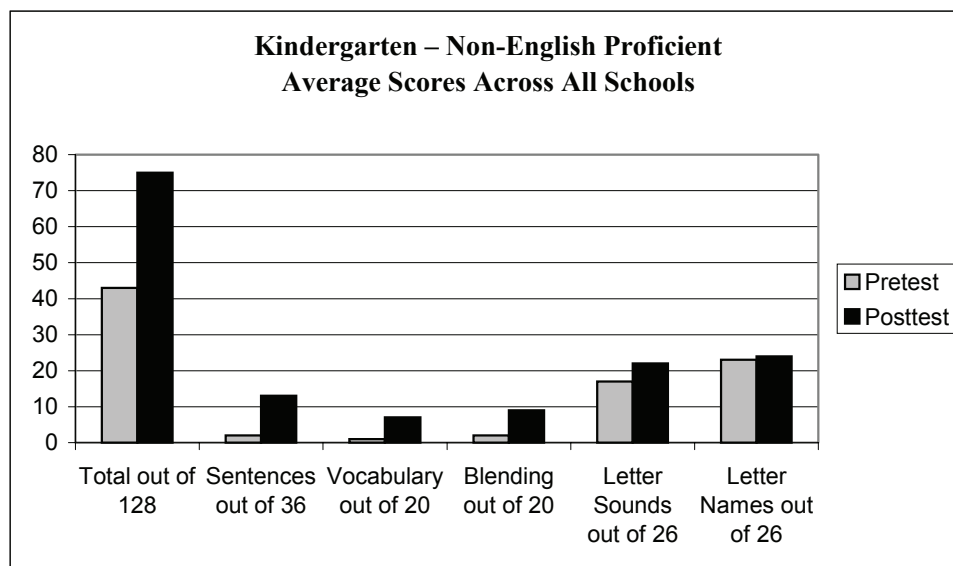
## Kindergarten Participants



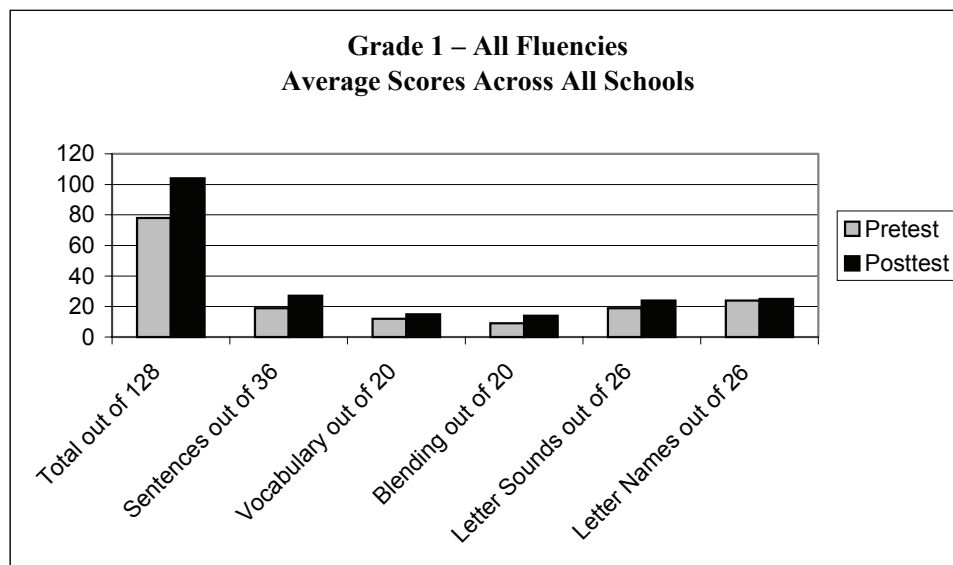
## Kindergarten Participants (continued)



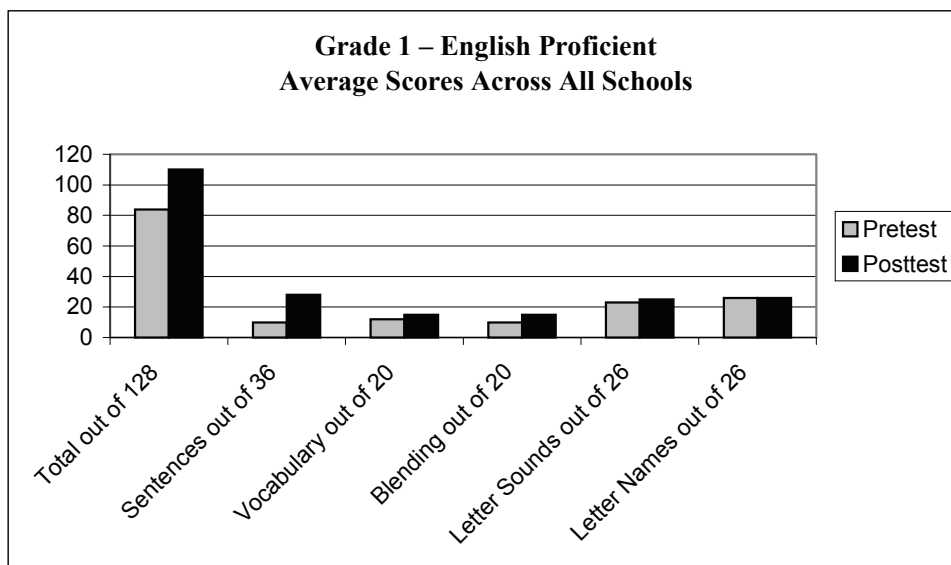
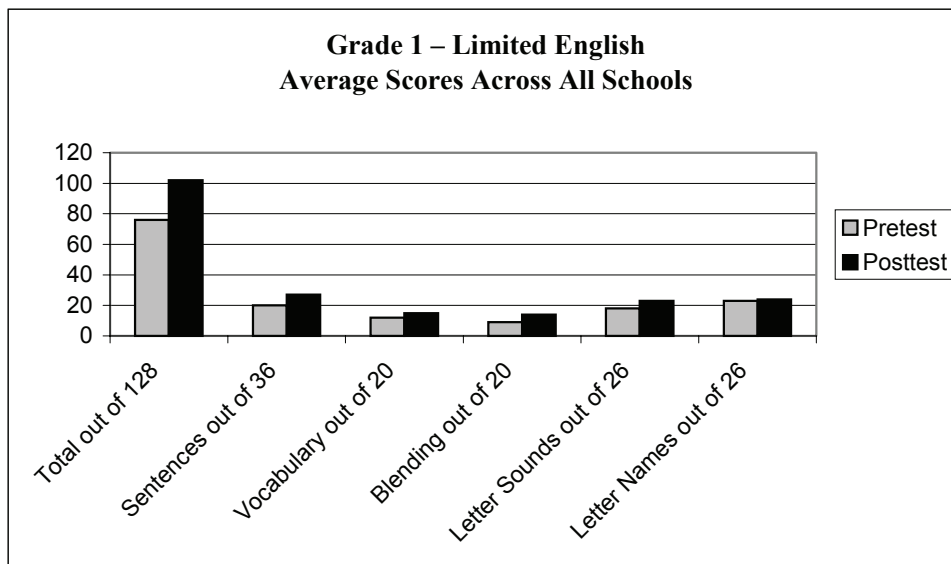
## Kindergarten Participants (continued)



## First Grade Participants



## First Grade Participants (continued)





## ENDNOTES

<sup>1</sup> Dickson, S. (1984) *Sing, Spell, Read & Write*. Chesapeake, VA: Sue Dickson, Publisher.

<sup>2</sup> Adams, M.J. (1990) *Beginning to Read: Thinking and Learning about Print*. Cambridge, MA:MIT Press.

<sup>3</sup> Hiebert E.H., & Raphael, T.E. (1996) Psychological perspectives on literacy and extensions to educational practice. In D.C. Berliner & R.C.

Calfee (Eds.) *Handbook of Educational Psychology*. New York: Macmillan.

<sup>4</sup> National Academy of Sciences (1998) *Preventing Reading Difficulties in Young Children*. Washington, D.C.

<sup>5</sup> Meisels, S. J. & Shonkoff, J. P. (Eds.) (1990) *Handbook of Early Childhood Intervention*. New York: Cambridge University Press.

<sup>6</sup> In this study, effect sizes were calculated to measure the impact of the program on student achievement. Effect size is a numerical representation of the impact of instruction on the experimental group relative to the control group.

<sup>7</sup> "Effect size is defined technically as the proportion of variance accounted for by the treatment measured in standard deviation units. The seminal work in this field has been done by Cohen (1977, 1988) who developed categories for effect sizes for social science research." Hedrick, T.E., Blackman, L., and Rog, D. J. (1993) *Applied Research Design: A Practical Guide*., P. 75. Sage Publications, Newbury Park, London, New Dehli.

<sup>8</sup> "In general, an effect size of +0.25 or more is considered to be educationally significant. To give a sense of scale, an effect size of +1.00 would be equivalent to an increase of 100 points on the Scholastic Aptitude Test (SAT) scale or 15 points of IQ—enough to move a student from the 20<sup>th</sup> percentile (the normal level of performance for children in poverty) to above the 50<sup>th</sup> percentile (the norm for mainstream students)." (Fashola, O.S. and Slavin, R. E. (1996) *Effective and Replicable Programs for Students Placed at Risk in Elementary and Middle Schools*. Washington, D.C.: Office of Educational Research and Improvement, U.S. Department of Education.)

<sup>9</sup> The 0.33 effect achieved for the kindergarten/first grade participants and the effect of 0.44 for the second

grade participants are both actually between two scale points on the BESD which is graduated on a scale using tenths: 0.3, 0.4, etc. Therefore these BESD equivalent differentials are underestimates (See *Handbook of Applied Social Research Methods*, Blickman, L. and Rog, D. J. , (Eds), (1998), p. 63. Sage Publications, Newbury, London, New Delhi.

<sup>10</sup> The 0.33 effect achieved for the kindergarten/first grade participants and the effect of 0.44 for the second grade participants are both actually between two scale points on the BESD which is graduated on a scale using tenths: 0.3, 0.4, etc. Therefore these BESD equivalent differentials are underestimates (See *Handbook of Applied Social Research Methods*, Blickman, L. and Rog, D. J. , (Eds), (1998), p. 63. Sage Publications, Newbury, London, New Delhi.

<sup>11</sup> A sample size of 290 is needed for a 0.30+ effect; a sample size of 175 is needed for an effect size of 0.40+ for  $p < .05$ .

<sup>12</sup> Bond, C., Ross, S, Smith, L. and Casey, J. (1993) *Longitudinal Study of Sing, Spell, Read and Write: Year One*, Memphis State University Center for Research in Educational Policy, Memphis, TN.

<sup>13</sup> This means that only 5 times out of 100 would the significance level be attributable to chance.

<sup>14</sup> The graph for the second grade showing average score differences might mislead the reader to conclude a lesser effect than that achieved for the kindergarten/first grade classes. However, kindergarten/first grade had a different curriculum and different testing from that used in second grade.

<sup>15</sup> Only samples large enough to be meaningful have been presented.

# *Policy/Practice Brief*

## CENTER FOR RESEARCH IN EDUCATIONAL POLICY

No. 9302

October 1992

### **An Alternative for Teaching "At Risk" Children? A Look at Sing, Spell, Read and Write**

**Carole L. Bond, Lana J. Smith, Steven M. Ross, John A. Nunnery, and Rebecca R. Goldstein**

"Sing, Spell, Read, and Write" (SSRW), is a kindergarten through Grade 3 language arts program. The author, Sue Dickson (1984) suggests that SSRW can be used as a self-standing program for teaching reading, writing, spelling, and speaking. During the spring semester of 1991, a preliminary evaluation of SSRW was conducted in two Memphis City Schools. Results indicated some benefits for reading at the kindergarten and first grade levels. In order to examine those benefits more closely, and because of the popular support for SSRW by teachers using the program, a larger, more comprehensive evaluation was designed and conducted during the 1991-92 school year.

For the past four years the Plough Foundation has sponsored SSRW in several Memphis City Schools. The sponsorship of the program has been in the form of funding and training of the teachers who implement the program. Based on its interest in helping Memphis City Schools find innovative and successful ways to teach children, the Plough Foundation agreed to fund an extensive evaluation of SSRW for the 1991-92 school year.

The SSRW program consists of several charts, books (both readers and workbooks), letter and word cards, tests, and audio tapes. The audio tapes contain songs about several phonics generalizations. Through the tapes the students learn the sounds of letters and letter combination. Once students have mastered certain sounds, they are introduced to the accompanying readers.

During 1991-92, SSRW was being implemented in 11 Memphis City Schools. Of these, nine were randomly selected for the purpose of evaluation. The nine treatment schools were divided into three strata (high, middle, and low) on the basis of socioeconomic status, determined by the percentage of students receiving free lunch. The nine treatment schools were matched with nine control schools which used a basal reading curriculum and did not have a SSRW program in any grade level. Factors used to match the treatment schools to the control schools included socioeconomic status, racial makeup, and standardized achievement (TCAP) scores from the previous year. Within each of the matched treatment-control schools, classes were matched on the basis of class size, TCAP scores, and class structure. Class structures were either regular; Focused Instructional Program (FIP), designed specifically for lower achievers; or mixed regular/FIP.

In the nine treatment schools, only kindergarten and first grade had classes in all three strata. Grade two classes all fell in the middle stratum. There were no third grade classes using SSRW during the 1991-92 academic year.

Nine research questions were generated to evaluate SSRW on the basis of student achievement in reading, writing, and spelling. In addition, student attitudes toward reading, teacher and parent perceptions of SSRW, a comparison of SSRW with the basal series, and the costs of

SSRW were examined. Because of space limitations, comparison with the basal series and costs of SSRW will not be discussed in this brief.

Students in kindergarten through Grade 2 in all of the treatment and control classes were given pretests and posttests in reading, using the *Durrell Analysis of Reading Difficulty* and *Woodcock Language Proficiency Battery*. Only posttests were administered in writing (Grades K-2) and spelling (Grades 1 and 2). In order to obtain a writing sample, children were asked to write a short story based on a starter sentence, "This puppy gets into trouble," read to each child. The informal spelling test was designed to be used with children who had participated in a variety of spelling programs rather than in a particular program.

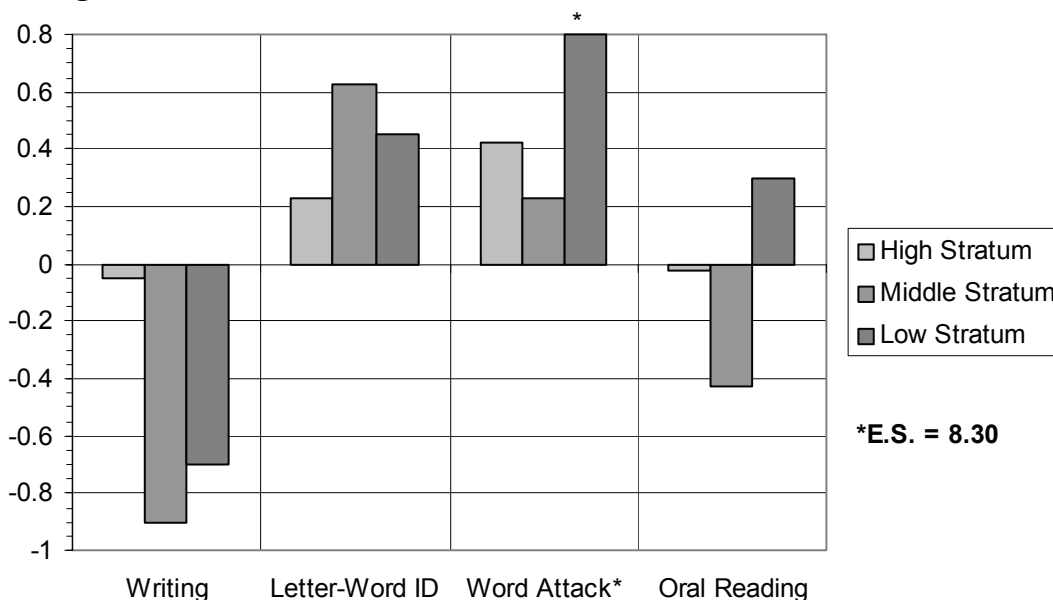
Results of the testing will be discussed in terms of effect size. Effect size indicates the number of standard deviations by which the treatment group differs from the control group. A negative effect size indicates that the control group mean was higher than the SSRW mean.

For kindergarten, the most pronounced effect size was observed for low stratum classes on the word attack posttest, with SSRW students scoring at more than 8 standard deviations above the

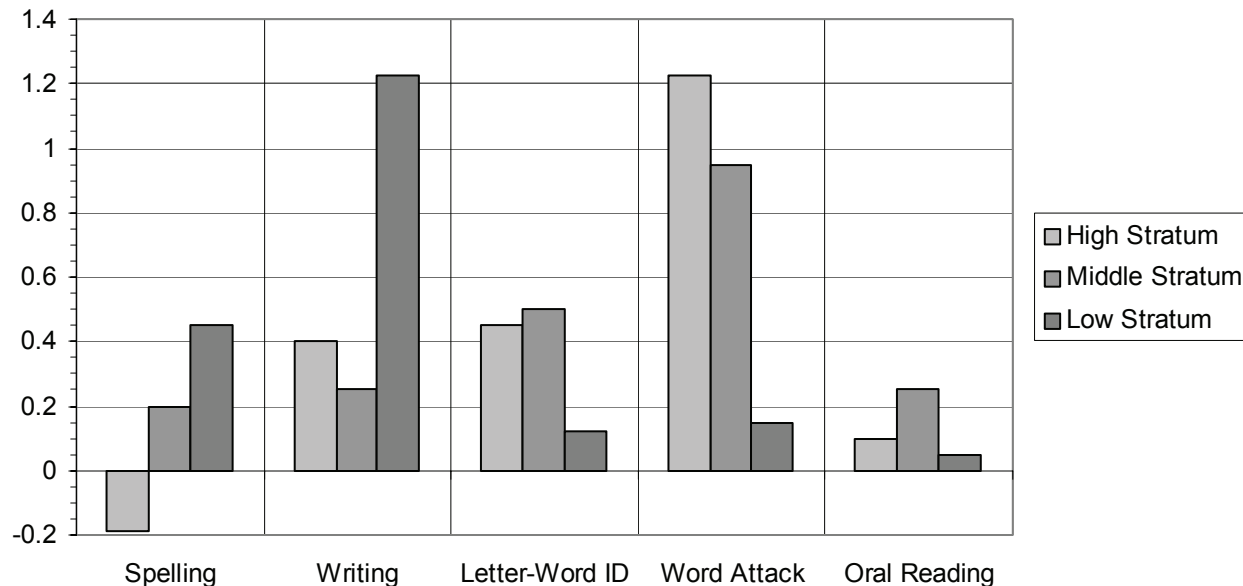
control group mean (see Figure 1). Effect sizes on word attack favored SSRW at the middle and high strata, although effects were less dramatic. Results of oral reading comprehension tests were mixed, with virtually no effect size for high stratum students, a substantial negative effect size for middle stratum students, and a small positive effect size for low stratum students. Results indicate that SSRW is somewhat more effective than the control condition for teaching word attack and letter-word identification, especially to students in low stratum schools. For more complex language skills, such as writing and oral reading comprehension, SSRW does not appear to be more effective than the conventional curriculum. In fact, SSRW kindergartners at the low and middle strata scored substantially lower than control students on the writing posttest.

First grade posttest effects favored SSRW for all tests at every stratum, with one exception: the spelling test effect size for high stratum first grade students (See Figure 2). Four moderately strong effects were observed, including spelling (low stratum), writing (high stratum), and letter-word identification (middle and high strata). Three strong positive effects were observed: writing (low

**Figure 1**  
**Kindergarten Posttest Effect Sizes**



**Figure 2**  
**First Grade Posttest Effect Sizes**

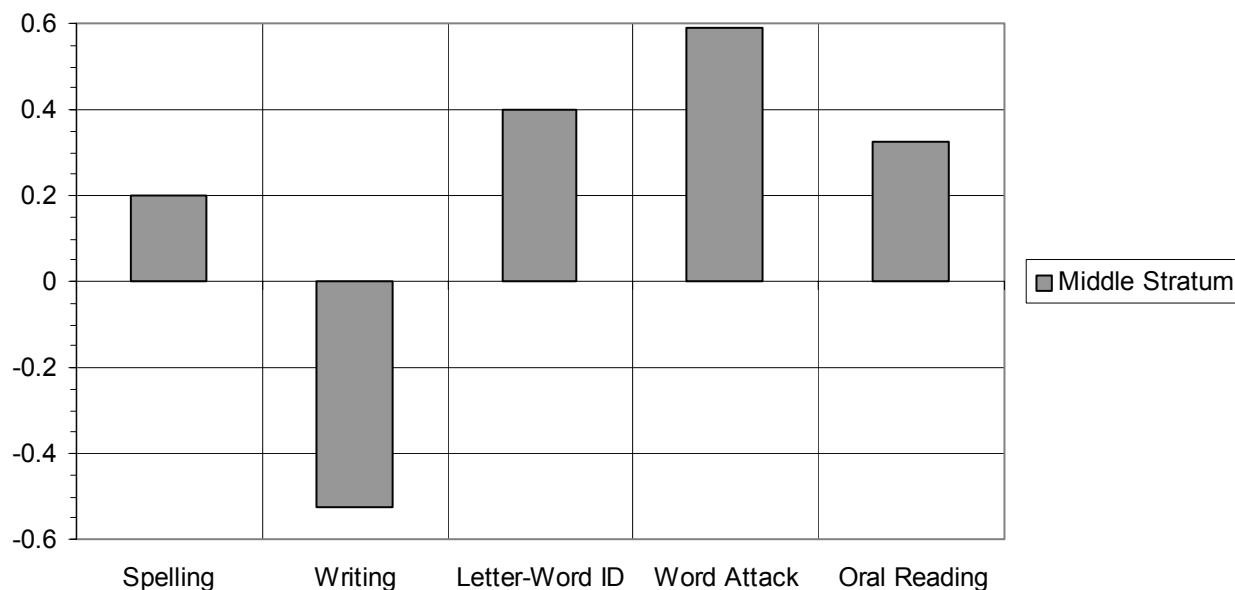


stratum), and word attack (middle and high strata). The remaining effects were weak. Results indicate that SSRW was not particularly effective with low stratum first graders in decoding or oral reading skills, but was somewhat effective in enhancing these students' writing and spelling abilities. The program seems to have been most effective at teaching letter-word identification and word attack to middle and high strata first graders.

Second second grade students, moderately strong positive effect sizes were observed for word attack and letter-word identification, while a moderately strong negative effect was observed on the writing posttest (See Figure 3). Effect sizes for spelling and oral reading comprehension were positive but small.

The dramatic effect size for kindergarten students in word attack suggests that the program

**Figure 3**  
**Second Grade Posttest Effect Sizes**



does give children a good foundation, as some teachers have suggested. An additional benefit is superior decoding skills relative to children in a regular basal reading program. In schools having high numbers of "at risk" students, the advantages warrant consideration of including SSRW as an option for teachers who are interested in using it. However, not all teachers will be supportive of a program with such a strong phonics emphasis. Without teacher enthusiasm, chances for SSRW to succeed will likely decrease. In a field where it is impossible to name a "best" approach to teaching because of the diverse characteristics of the classroom and teachers, teacher confidence in and enthusiasm toward SSRW is a definite positive factor, as was evident in teacher feedback.

In addition to teacher enthusiasm toward SSRW, students and parents appear to like the program. One of the goals teachers should establish, as suggested by the International

Reading Association, is to promote a love for reading so that it becomes a lifelong habit. Many children will never make reading a habit if they do not have pleasant and rewarding experiences early in their school careers.

Longitudinal effects of the Sing, Spell, Read and Write Program are still to be determined. Funding has been obtained for a three-year study to address this issue.

For more information related to this evaluation, please call Dr. Carole L. Bond, (901) 678-2378, or contact the Center for Research in Educational Policy.

#### Reference

Dickson, S. (1984). *Sing, Spell, Read and Write*. Chesapeake, VA: Sue Dickson, Publisher.

*Support for this Policy/Practice Brief was provided by the Center for Research in Educational Policy, College of Education, Memphis State University. The view expressed herein are those of the authors and do not necessarily reflect the position or policy of the Center, the College, or the University. Memphis State University is an Equal Opportunity/Affirmative Action University. It is committed to education of a non-racially identifiable student body.*

#### **POLICY/PRACTICE BRIEF**

**No. 9302**

October 1992

#### **Center for Research in**

#### **Educational Policy**

College of Education

Memphis State University

Memphis, TN 38152

Phone: (901) 678-2310

FAX: (901) 678-4778

*The Center for Research in  
Educational Policy is a  
Center of Excellence  
for the State of Tennessee*

## ***SING, SPELL, READ & WRITE*** **RESEARCH PAPER**

*Sing, Spell, Read & Write (SSRW)* is a complete beginning-literacy curriculum for grades K-1 that has helped to produce tens of thousands of fluent, independent readers. It reflects a unique 36-step system of carefully sequenced instruction that combines music and multimodal teaching strategies that were developed and classroom tested for more than 25 years. The program features the scientifically-based principles of balanced reading instruction that include phonemic awareness; systematic, explicit, intensive phonics reinforced with connected decodable text; multiple readings (oral and silent, individual and shared) to provide practice and build fluency; and comprehension strategies that help to develop higher-order thinking skills.

### **Brain Research and Multimodal Instruction**

We are born with more than a trillion connections in our brains. These connections, or synapses, will be either shed or enriched by our experiences, according to University of Illinois neuroscientist William Greenough, who is a pioneer in enrichment studies. Diamond and Hopson's (1998) research also shows that an enriched environment unmistakably influences the brain's growth and learning and allows a child to be an active participant rather than a passive observer. Challenging sensory stimulation has been rightfully compared to a brain "nutrient" (Jensen, 1998).

Neurobiologist Harold Chugani points out that the school-age brain almost glows with energy consumption, burning glucose at a rate that is 225% higher than that of adult brains. He asserts that the early school years are the time for the stimulation, repetition and novelty that lay the foundations for later learning (Jensen, 1998).

Musical experiences are in and of themselves multimodal, as they involve auditory, visual, cognitive, affective and motor systems (Hodges, 1996). When combined, music and motor stimulation are powerful factors in providing enrichment. For years, Lyelle Palmer has been documenting the beneficial effects of early motor stimulation (eye-hand coordination tasks, pointing, jumping, etc.) on learning. In 1980, for example, his test group showed positive effects over the control group on the Metropolitan Readiness Test, Test of Visual Perception and the Otis Group Intelligence Test. Palmer's studies provide a strong argument for mandating planned programs that feature specific motor stimulation in grades K-1 (Jensen, 1998).

Certainly, no single teaching method or approach is likely to be the most effective for all children. Good teachers bring into play a variety of teaching strategies that can

encompass the great diversity of children in schools (International Reading Association and National Association for the Education of Young Children, 1998). Among the most effective teaching strategies is the use of music in the classroom. The link between music and language development is supported by research (Weinberger, 1995; Lamb and Gregory, 1993; Rauscher et al., 1993; Dowling, 1993; Hanshumacher, 1980; all cited in Jensen, 1998). Music arouses the brain by providing patterning experiences that improve retention.

Music may, in fact, be critical for later cognitive activities and there is certainly a high correlation between pitch discrimination and reading skills. Music "primes" the neural pathways and also activates procedural memory (i.e., body). Consequently, that which is learned through music is learning that lasts. Studies conducted by Dr. Isabelle Peretz of the University of Montreal suggest that the brain has some part specifically designed to process music (Angier, 2001), and Dr. Mark Jude Tramo (2001) of Harvard Medical School has linked language processing with an area of the brain that is critical for perfect pitch.

Countering the commonly held perception that phonics instruction must be structured and boring, the National Reading Panel suggests that "systematic phonics instruction can be provided in an entertaining, vibrant and creative manner" (National Reading Panel, 2000). Because the phonological processor is highly attuned to patterns of rhyme, rhythm and pitch, songs are much easier to learn than unintoned lists (Adams, 1990). Sylwester (1995) points to "the arts, games and social organizations to provide pleasant metaphoric settings" that enrich the learning environment. Jensen (1998) found that music is not only stimulating but also that "songs encourage a playfulness with language and vocabulary that can spill over into reading-skills development..." Hanshumacher concluded in his survey of the research that art (i.e., music) education facilitates language development and boosts reading readiness (cited in



Jensen, 1998). Beyond that, research has shown that music improves the second stage of learning to read, which is establishing the correspondence between graphemes and phonemes (Weinberger, 1998).

Sylwester (1995) challenges educators to create and maintain an emotionally stimulating school environment and curriculum in which a young child's neurons are activated. Educational phonics songs, look-listen-point, sing-along, echo routines, music and multimodal instruction are at the core of *SSRW*'s effectiveness and its appeal to both teachers and students. Upon personal observation in a *SSRW* classroom, Dr. Joanna Williams (1983) stated that the songs constitute one of the most original and effective elements of the program ... and serve to enhance and consolidate the instruction. Furthermore, Rauscher's (1996) research indicates that music training may, in fact, benefit disadvantaged students by maximizing their academic and career potential.

## Phonemic Awareness

Stanovich (1994) simply defines phonological awareness as the ability to deal explicitly and segmentally with sound units smaller than a syllable. A number of training studies have shown that preschool and kindergarten children exposed to programs that include phonological awareness become better readers (Ball and Blachman, 1991; Bradley and Bryant, 1985; Cunningham, 1990; Lie, 1991; Lundberg, Frost and Peterson, 1988). During the last decade, researchers have finally reached a consensus that phonological awareness is the one cognitive process that is the single best predictor of early reading success. In fact, Stanovich (1994) maintains that phonological awareness is even better than IQ in predicting the ease of early reading acquisition.

While scientists have discovered that speech acquisition is a natural process for humans in which little direct instruction is required, learning to read, on the other hand, is an activity that requires a conscious awareness of phonemes as individual segments in words (Moats, 1998; Torgesen and Mathes, 1998). Indeed, the idea that learning to read is like learning to speak is not accepted by any responsible linguist, psychologist or cognitive scientist (Stanovich, 1994; Liberman and Liberman, 1990).

In 1998, Moats suggested that a fundamental flaw exists in many phonics programs. She maintained that these programs teach phonological awareness "backward," defying the logical and natural progression of language acquisition. Moats explained that most phonics programs teach from letter (i.e., symbol) to sound instead of from

sound to letter. She proposed that children should first be taught awareness of the sound system and then later be taught to anchor the letters, or symbols, to it. Moats appeals to the logical argument that it is easier to teach a sound, associate it with a key word mnemonic — i.e., /s/ snake, and then later anchor that sound to a grapheme (letter, letter group or letter sequence).

*SSRW* employs an instructional technique that is sequenced similarly to that proposed by Moats. This program introduces the sound (or phoneme) first, associates it with a key word and then later anchors the sound to a grapheme. For example, the sounds of every letter in the alphabet are first introduced in the "A to Z Phonics Song" without ever actually saying the letter name, but instead by associating the sound with a key word picture cue — i.e., /a/ /a/ apple; /b/ /b/ ball. Once these connections are established, the child then learns the *name* of the letter that represents the sound and receives repeated practices that integrate the sound, mnemonic, the letter symbol and the letter name. Once the alphabetic principle is established, children are systematically introduced to more complex sounds, again through song — i.e., *ch* = /sh/ for Charlotte's chandelier; /sh/ for shell; /oi/ for oil, soil, etc.).

During the full year of systematic, sequenced instruction with *SSRW*, children learn the graphemes for more than 40 phonemes. Both are taught and then reinforced through playful songs, interactive charts, gross-motor activities, games, manipulatives and highly decodable texts. The multimodal techniques teach children sounds and associate those sounds with graphemes in a way that helps the children to achieve the automaticity that is required for decoding mastery, reading fluency and, ultimately, comprehension (LaBerge and Samuels, 1974).

Researchers have learned that the children who quickly come to understand letter/sound correspondences and apply those correspondences to their print experiences also are most likely to become better readers (Share and Stanovich, 1995). Are there factors that give certain children phonological advantages over other children? Since the 1980s, research has shown that phonemic awareness may be an inherited trait, like musical talent, eye color, or bone structure (Liberman, Shankweiler and Liberman, 1989). Some children are simply born with "a good ear" for distinguishing sounds. Another factor that can affect a child's phonological ability is the preschool linguistic experience. The pedagogical clock is ticking relentlessly for youngsters from low-income and disadvantaged households—many of those children come

to school deprived of thousands of hours of word play, rhymes, songs and word-sound games and have barely even seen a book (American Federation of Teachers, 1998; Stahl, 1998; Adams, 1990).

Furthermore, it is estimated that 20 to 30% of children may actually experience some level of phonological impairment that could affect their early literacy skills. For children in whom phonemic awareness does not develop naturally or who have not had the stimulation of a language-rich environment, the National Right to Read Foundation (1999) recommends that they be directly and systematically taught phonemic-awareness skills. Phonemic awareness plays a critical role in learning skills

that require the manipulation of phonemes—specifically including word recognition and spelling. It is important for children to “overlearn” these lower-order processes until the processes are so automatic that the children’s attention will not be diverted from the higher-order processes of comprehending during reading (LaBerge and Samuels, 1974).

Due to the results achieved in Memphis, Tennessee, with low-stratum kindergarten students using *SSRW*, independent researchers concluded “that this might well be one of the best expenditures a school district could make for those children labeled as ‘at risk’ ” (Bond et al., 1992).

TM=Teacher’s Manual / SB=Student Book

<b>Phonemic Awareness and Instruction in <i>Sing, Spell, Read &amp; Write</i></b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Direct and Systematic Instruction of Phonemic Awareness</b>	<ul style="list-style-type: none"> <li>• A-Z Phonics Song Cards and Music (K-1)</li> <li>• Marching Along Parade Song (K)</li> <li>• A-Z Sound-O Game (K-1)</li> <li>• Short Vowel Song and Cards (K-1)</li> <li>• Ferris Wheel Chart/Music (K-1)</li> <li>• Long Vowel Song and Cards (1)</li> <li>• Letter Cluster Songs and Charts (1)</li> <li>• Pop the Balloons Chart (1)</li> <li>• Visit the Duck Pond Game (1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• TM (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Contains direct instruction on phonemic awareness.</li> <li>• Practices phonemic awareness of consonant sounds and short vowels.</li> <li>• First letter/sound correspondence lesson is always a phonemic awareness lesson (presents sound in isolation, then letter/sound match).</li> <li>• Builds on phonemic awareness skills to develop the more difficult understanding of how phonemes connect to print.</li> </ul>
	<ul style="list-style-type: none"> <li>• SB All Aboard (K)</li> <li>• TM Shared Reading and Recommended Reading (K)</li> <li>• A-Z Phonics Song (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Children hear sounds of words in rhymes and chants.</li> </ul>
	<ul style="list-style-type: none"> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• TM (K-1)</li> <li>• A-Z Phonics Song Cards (K-1)</li> <li>• A-Z Sound-O Game (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Motivates rhyming tasks, sound identification, and matching tasks.</li> </ul>
	<ul style="list-style-type: none"> <li>• Ferris Wheel Chart (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• TM (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Offers a variety of opportunities for hearing, comparing, segmenting and blending sounds.</li> <li>• Students add, delete, or move phonemes to generate new words.</li> </ul>
<b>Oral-Language Play</b>	<ul style="list-style-type: none"> <li>• A-Z Sound-O Game (1)</li> <li>• Marching Along Parade Song (K-1)</li> <li>• Ferris Wheel Chart Song and Cards (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Aids in recognition of letter sounds and syllables through hands-on sorting/matching of cards.</li> <li>• Enables sounding and blending of individual phonemes.</li> </ul>



TM=Teacher's Manual / SB=Student Book

<b>Phonemic Awareness and Instruction in <i>Sing, Spell, Read &amp; Write</i> (Continued)</b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Variety of Oral and Print Activities</b>	<ul style="list-style-type: none"> <li>• TM Suggested Read-Aloud (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Uses read-aloud books and alphabet books for phonemic awareness.</li> </ul>
	<ul style="list-style-type: none"> <li>• Games, Songs, Charts, SBs, TMs, Take-Home Storybooks, Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides assortment of activities to meet different learning styles.</li> <li>• Balances content and form to make learning about words and sounds fun.</li> </ul>
	<ul style="list-style-type: none"> <li>• Kindergarten Express Chart (K)</li> <li>• Raceway Chart (Scope and Sequence) (1)</li> <li>• SB Raceway (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Enables instruction at different levels of achievement.</li> </ul>
<b>Hearing, Segmenting and Blending Sounds</b>	<ul style="list-style-type: none"> <li>• A-Z Sound-O Game (K-1)</li> <li>• A-Z Pick-A-Sound (K-1)</li> <li>• Letter Cluster Sound-O Game (1)</li> <li>• Letter Cluster Pick-A-Sound Game (1)</li> <li>• Marching Along Parade Song (K)</li> <li>• A-Z Phonics Song and Cards (K-1)</li> <li>• Short Vowel Song and Cards (K-1)</li> <li>• Ferris Wheel Chart Song and Cards (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• TMs (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Develops auditory discrimination, listening and rhyming skills.</li> <li>• Refines auditory discrimination of target sounds.</li> <li>• Provides cues for auditory discrimination tasks.</li> </ul>
	<ul style="list-style-type: none"> <li>• Short Vowel Word Charts (K-1)</li> <li>• TMs (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses attention on sounds and words during shared reading.</li> </ul>
<b>Letter-Name Knowledge</b>	<ul style="list-style-type: none"> <li>• A-Z Phonics Song (K-1)</li> <li>• Marching Along Parade (K)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Targets key letters and sounds for lesson.</li> </ul>
	<ul style="list-style-type: none"> <li>• A-Z Phonics Song (K-1)</li> <li>• Marching Along Parade (K)</li> <li>• A-Z Sound-O Game (K-1)</li> <li>• A-Z Pick-A-Sound Game (K-1)</li> <li>• SB (K-1)</li> <li>• TM (K)</li> <li>• Assessment Book (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Allows active engagement with letters.</li> <li>• Measures alphabet letter recognition.</li> <li>• Promotes phonemic awareness through repetition; engages all learning styles.</li> </ul>

## Systematic Phonics and Decoding

Research has shown that early, systematic, explicit phonics instruction in kindergarten and the primary grades is essential in providing a successful foundation for reading because it gives children the decoding skills that demystify reading (International Reading Association and the National Association for the Education of Young

Children, 1998; Moats, 1998; Hiskes, 1998). Although many children seem to become efficient decoders regardless of how they are taught, at least 30% require straightforward instruction in decoding (Foorman, Fletcher and Francis, 1997). Research on reading methods shows that the systematic and direct teaching of phonics is particularly effective for at-risk, low-income children and those with reading or learning disabilities (Chall, 1989;

Chall, Jacobs and Baldwin, 1990; National Reading Panel, 2000).

It is critical that children learn to decode in first grade to ensure reading comprehension in subsequent grades. In its recently published report, *Teaching Children to Read*, the National Reading Panel found that systematic phonics instruction produces significant benefits for students in kindergarten through Grade 6 and for children having difficulty learning to read. A meta-analysis of studies found that phonics instruction produced kindergarten children who were better able to spell and read and first-grade children who were better able to spell, decode and, ultimately, comprehend text. Our failure to teach children the code through explicit phonics instruction will leave them without the keys to unlock the world of print (Beck and Juel, 1992).

**What is explicit, systematic phonics?** Explicit phonics builds from part to whole, moving from the smallest parts to the whole. Students learn sounds and letters first and then they build combinations of sounds and letters, recombine them, blend them into syllables and finally into words (Hiskes, 1998). Systematic phonics means that the introduction of the sound-spellings is coordinated with the material that children are asked to read. The words and stories that the children read are composed only of the sound-spelling relationships they have been taught. The most effective instructional programs teach children to read successfully with just 40 to 50 sound-spelling relationships (Grossen, 1997).

**What is sequenced instruction?** Explicit, systematic phonics instruction leaves little to chance and thus ensures

success for most children. Since the phonetic elements are taught in a logical, sequenced order from simple to complex, the predictable, common correspondences are taught before the variant, less common correspondences. Children are taught one linguistic concept at a time—a sound or a spelling—that constitutes the organizing principle and focus of a lesson (Moats, 1998).

After teaching individual letter/sound correspondences, effective reading programs should include explicit instruction in blending (Adams, 1990; Hiskes, 1998; Griffith and Olson, 1992; Grossen, 1997). Blending practice should be composed of only the sound-spelling relationships that students have learned. Blending is an activity that requires a slightly higher level of phonemic awareness and that helps to establish smooth eye-tracking skills.

Eventually, children develop sophisticated decoding skills as they accumulate explicit knowledge of linguistic patterns—phonological, orthographic and morphological (Moats, 1998). At the earliest stages of reading acquisition, Stanovich (1994) cautions that accurate decoding should not come at the expense of comprehension. He maintains, however, that comprehension fails not because of an over-reliance on decoding but because decoding skills have not been developed *enough*. Once letter/sound correspondences and linguistic patterns are assimilated, decoding becomes so automatic in good readers that they are virtually unaware that they are processing every letter and every word, regardless of whether they are reading isolated words or meaningful, connected text (Adams and Bruck, 1995; Adams, American Federation of Teachers, 1998).

TM=Teacher's Manual / SB=Student Book

Systematic Phonics, Decoding and Instruction in <i>Sing, Spell, Read &amp; Write</i>		
Research-Based Principle	SSRW Components	SSRW Practice for Research-Based Principle
<b>Early Systematic and Direct, or Explicit Development of Phonics and Decoding Skills</b>	<ul style="list-style-type: none"> <li>• Songs, Charts, Games, SBs, and TMs (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates comprehensive instruction in phonics and decoding.</li> <li>• Presents skills in stages — in order of their frequency of usage in language and their difficulty.</li> <li>• Sequenced instruction teaches all-important decoding skills by end of Grade 1; reviews in Grade 2.</li> </ul>
	<ul style="list-style-type: none"> <li>• Marching Along Parade Song (K)</li> <li>• A-Z Phonics Song and Chart (K-1)</li> <li>• Ferris Wheel Chart (K-1)</li> <li>• A-Z Sound-O Game (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> </ul>	<ul style="list-style-type: none"> <li>• First introduces consonants as beginning sounds.</li> </ul>

TM=Teacher's Manual / SB=Student Book

<b>Systematic Phonics, Decoding and Instruction in <i>Sing, Spell, Read &amp; Write</i> (Continued)</b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Early Systematic and Direct, or Explicit Development of Phonics and Decoding Skills (Continued)</b>	<ul style="list-style-type: none"> <li>• Short Vowel Song and Charts (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• Ferris Wheel (K-1)</li> <li>• Long Vowel Song and Chart (1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• SB On Track Vocabulary Pages (K)</li> <li>• SB Raceway Vocabulary Pages (1)</li> <li>• TM (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Uses phonograms (graphemes) to introduce and reinforce vowel sounds.</li> <li>• Includes instruction in building individual phonemes and phonograms.</li> <li>• Applies knowledge of phonemes and phonograms to spell words.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM (K-1)</li> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Components work together to provide direct instruction within meaningful context.</li> </ul>
	<ul style="list-style-type: none"> <li>• Songs, Games, Charts, SBs and TMs (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Strategies for both analyzing and synthesizing are taught through songs, charts and games and then practiced in the SB and Storybook Readers (K-1). This comprises the heart of the program.</li> </ul>
<b>Letter/Sound Principles</b>	<ul style="list-style-type: none"> <li>• TM (K)</li> <li>• Storybook Readers (K-1)</li> <li>• SB On Track Vocabulary Pages (K)</li> <li>• SB Raceway Vocabulary Pages (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Direct instruction in phonics through shared reading of predictable, repetitive language.</li> </ul>
	<ul style="list-style-type: none"> <li>• Songs, Games, Charts (K-1)</li> <li>• SB All Aboard &amp; On Track (K)</li> <li>• SB Off We Go &amp; Raceway (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Phonogram instruction helps children make independent analogies.</li> <li>• Provides strategies for decoding.</li> </ul>
	<ul style="list-style-type: none"> <li>• A-Z Sound-O Game (K-1)</li> <li>• Pick-A-Sound Game (K-1)</li> <li>• Letter Cluster Sound-O Game (1)</li> <li>• Letter Cluster Pick-A-Sound Game (1)</li> <li>• Visit the Duck Pond Game (1)</li> <li>• Ferris Wheel Chart with Cards and Song (K-1)</li> <li>• Letter Cluster Charts and Song (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on sorting and matching of cards aid letter/sound recognition.</li> <li>• Sorting word cards according to orthographic patterns as well as comparing sounds aids word-recognition skills for automaticity.</li> <li>• Oral and manipulative activities aid recognition of beginning sounds, phonemes and phonograms</li> <li>• Enables sounding and blending of individual phonemes.</li> </ul>
	<ul style="list-style-type: none"> <li>• Two Vowels Get Together Chart, Cards and Song (1)</li> <li>• Silent <i>E</i> Song and Dance Chart, Cards and Song (1)</li> </ul>	
	<ul style="list-style-type: none"> <li>• Assessment Book (1)</li> <li>• Kindergarten Express Chart (K)</li> <li>• Raceway Chart (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Measures and monitors stages of development of letter/sound associations.</li> </ul>
<b>Decoding Strategies</b>	<ul style="list-style-type: none"> <li>• SB Raceway Vocabulary Pages (1)</li> <li>• TM (1)</li> <li>• Storybook Readers #9-17 (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Instructs and provides practice using word study and morphology to help students read longer words.</li> </ul>
	<ul style="list-style-type: none"> <li>• Ferris Wheel Chart (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> <li>• Two Vowels Get Together Chart, Cards and Song (1)</li> <li>• Silent <i>E</i> Song and Dance Chart and Cards (1)</li> <li>• <i>Gh</i> Clown Song and Chart (1)</li> <li>• Storybook Readers (K-1)</li> <li>• TM (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Comparisons of words help develop pattern recognition needed for automaticity in reading.</li> <li>• Students make analogies using key phonograms or word patterns to decode or write new words.</li> </ul>

TM=Teacher's Manual / SB=Student Book

<b>Systematic Phonics, Decoding and Instruction in <i>Sing, Spell, Read &amp; Write</i> (Continued)</b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Decoding Strategies (Continued)</b>	<ul style="list-style-type: none"> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides independent reading for reinforcement and application of decoding and word structure skills.</li> <li>• Helps students make analogies to decode new words.</li> </ul>
<b>Variety of Context and Activities</b>	<ul style="list-style-type: none"> <li>• Charts, Songs, Games, SBs, Storybook Readers, TM Additional Related Activities (K), TM Reproducibles (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides an assortment of activities to meet different learning styles.</li> </ul>
	<ul style="list-style-type: none"> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> <li>• SB (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Phonics is applied to a wide variety of meaningful reading situations to produce better readers.</li> <li>• Encourages family involvement in practice and application of phonics and decoding skills.</li> </ul>
<b>Letter/Sound Correspondence</b>	<ul style="list-style-type: none"> <li>• SB All Aboard (K)</li> <li>• SB Off We Go (1)</li> <li>• Games (K-1)</li> <li>• TM Additional Related Activities (K)</li> <li>• TM Reproducibles (1)</li> <li>• A-Z Phonics Song Cards (K-1)</li> <li>• Long Vowel Cards (1)</li> <li>• Two Vowels Get Together and Silent <i>E</i> (1)</li> <li>• Song and Dance Charts and Cards (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on activities allow comparing, contrasting and sorting by sounds.</li> <li>• Use with picture cards for developing letter/sound awareness.</li> <li>• Use with word cards for matching and sorting.</li> </ul>
<b>Systematic Development of a Skill</b>	<ul style="list-style-type: none"> <li>• Kindergarten Express Chart (K)</li> <li>• Raceway Chart (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Highlights organization of phonics-skills development.</li> </ul>
<b>Word Study</b>	<ul style="list-style-type: none"> <li>• SB (K-1)</li> <li>• TM (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Highlights initial consonants, phonograms and other phonics elements targeted for instruction.</li> <li>• Strengthens letter/sound connection.</li> <li>• Focuses on word analysis and comparison with words in book context.</li> </ul>
<b>Decodable Text</b>	<ul style="list-style-type: none"> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> <li>• TM (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides opportunities to practice known phonics elements in supportive context.</li> <li>• Provides opportunities for shared reading.</li> </ul>

## Fluency

Reading fluency is the ability to read orally with speed, accuracy and proper expression. The National Reading Panel report (2000) suggests that complete and effective reading programs must provide opportunities for beginning readers to apply their phonics skills in text. In fact, the NRP notes that fluent and automatic application of phonics skills to text is critical and must be taught and learned to maximize oral reading and reading comprehension.

Cognitive scientists have shown beyond a doubt that fluent, accurate decoding is the hallmark of skilled

reading. Many researchers agree that the successful application of phonics skills is best achieved with connected text. Hiskes (1998) says connected text helps children “to review and reinforce the skills taught until they become automatic,” while a 1997 study states that the “integration of phonics and reading can only occur with the use of decodable text” (Grossen, 1997).

Furthermore, automatic word recognition depends on phonetic knowledge and allows the reader to concentrate on meaning, whereas slow, labored decoding stresses short-term memory and impedes comprehension (Moats, 1998). Moreover, a child should not be expected to read

text written at a level more complex than the one that has been taught (McGuinness, 1997).

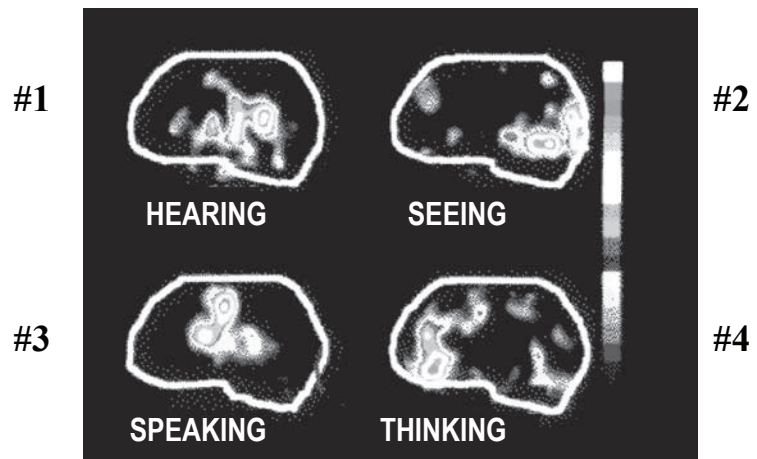
To that end, Adams (1990) recommends approaches that link code instruction with connected text to achieve superior reading results. She also suggests that the texts should be engaging for the child and contain words that are 90 to 95% decodable, while Moats (1998) recommends that high-frequency sight words should be introduced gradually and cumulatively to make sentences less stilted. Several recent studies (Felton, 1993; Foorman et al., 1998; Iverson and Tunmer, 1993) also provide strong arguments for the value of decodable texts. To ensure early reading success, these texts should maximize word recognition growth and be carefully coordinated with the content and schedule of the phonics lessons (Adams, 1990; Moats, 1998; Grossen, 1997).

Just as fluency and automaticity are dependent on each other, so are decoding skills and repetitive exposures to individual words. The research shows it takes between 4 and 15 successful attempts before a word becomes

automatically recognized (Honig, 1996). These repeated readings produce improvement in word recognition, fluency and comprehension (Adams, 1990) and “facilitate an increase in reading rate, word accuracy, expression and comprehension” (Levy, Nicholls and Kohen, 1993; Dowhower, 1994). Other studies have also shown that children must encounter words in text multiple times before the words’ meanings become part of the students’ vocabulary (Baker, Simmons and Kameenui, 1995). These rereadings bolster children’s sense of confidence and accomplishment (Adams, 1990).

The two most common approaches to teaching fluency are guided oral reading and independent silent reading. On the one hand, the National Reading Panel concluded that “... guided, repeated oral reading procedures that included guidance from teachers, peers or parents had a significant and positive impact on word recognition, fluency and comprehension.” On the other hand, the NRP determined that there was insufficient data to establish any causative relationship between silent reading and reading fluency.

*As shown in the graphic here, the research from Washington University in St. Louis on whole-brain instruction provides strong support for the benefits of oral guided reading involving activities (hearing, seeing, speaking and thinking) that engage four areas of the brain versus silent reading which engages only two.*



<b>Singing/Pointing</b>	(1) Hearing ✓	(2) Seeing ✓	(3) Speaking ✓	(4) Thinking ✓
<b>Spelling (Aloud)</b>	(1) Hearing ✓	(2) Seeing —	(3) Speaking ✓	(4) Thinking ✓
<b>Spelling (Test)</b>	(1) Hearing ✓	(2) Seeing ✓	(3) Speaking —	(4) Thinking ✓
<b>Reading (Aloud)</b>	(1) Hearing ✓	(2) Seeing ✓	(3) Speaking ✓	(4) Thinking ✓
<b>Reading (Silent)</b>	(1) Hearing —	(2) Seeing ✓	(3) Speaking —	(4) Thinking ✓
<b>Writing</b>	(1) Hearing —	(2) Seeing ✓	(3) Speaking —	(4) Thinking ✓

Reprinted by permission of Washington University, St. Louis.

The teaching methodologies of SSRW actively engage students in look-listen-point, sing-along echo routines, large- and small-group games, cooperative-learning activities, guided oral reading and shared reading. The curriculum provides repeated and multiple exposures to

words, both in isolation and with connected decodable text. It thus helps children build a 1,500-word reading, writing and spelling vocabulary, which forms the basis for comprehension.



TM=Teacher's Manual / SB=Student Book

<b>Fluency and Instruction in <i>Sing, Spell, Read &amp; Write</i></b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Application and Practice of Decoding Skills and Word Recognition</b>	<ul style="list-style-type: none"> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> <li>• Storybook Readers (K-1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• Two Vowels Get Together Chart (1)</li> <li>• Silent <i>E</i> Song and Dance Chart (1)</li> <li>• SB All Aboard (K)</li> <li>• SB Raceway (1)</li> <li>• Vocabulary List in Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Builds theme-related vocabulary and context clues to promote effortless reading.</li> <li>• Provides repeated exposure to regular and irregular words.</li> <li>• Practices reading words in isolation for automatic recognition.</li> </ul>
	<ul style="list-style-type: none"> <li>• Short Vowel Word Charts (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Highlights phonics patterns and high-frequency words when used in word walls or matching activities.</li> </ul>
	<ul style="list-style-type: none"> <li>• SB (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides additional practice in decoding and word structure skills.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Additional Related Activities (K)</li> <li>• TM (K-1)</li> <li>• SB Read, Write &amp; Spell Word Lists (K-1)</li> <li>• Storybook Readers (K-1)</li> <li>• Two Vowels Get Together Chart and Song (1)</li> <li>• Silent <i>E</i> Song and Dance Chart (1)</li> <li>• <i>Gh</i> Clown Song and Chart (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Motivates reading through puzzles and games.</li> <li>• Provides a variety of practice to match different learning styles.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Additional Related Activities (K)</li> <li>• TM Process Writing (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Applies learned phonics skills to writing.</li> </ul>
	<ul style="list-style-type: none"> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides contextual practice of learned phonics and decoding skills.</li> </ul>
<b>Independent, Assisted and Repeated Reading</b>	<ul style="list-style-type: none"> <li>• SB Read, Write, Spell Word Lists (K-1)</li> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Helps develop pattern recognition needed for automaticity.</li> <li>• Increases reading speed and aids fluency through assisted, shared or repeated reading opportunities.</li> <li>• Provides reinforcement application of skills during independent reading.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Procedure, Guided Reading and Recommended Read-Aloud (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages repeat reading for meaning.</li> <li>• Encourages independent reading of books within a student's range of difficulty.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Recommended Read-Aloud (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides links to and application in literature to build fluency.</li> </ul>
<b>High-Frequency Words</b>	<ul style="list-style-type: none"> <li>• Word-O Game (1)</li> <li>• Vocabulary List in Storybook Readers (K-1)</li> <li>• SB Read, Write and Spell (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Highlights high-frequency words targeted for lesson.</li> <li>• Includes stage-by-stage high-frequency words.</li> </ul>
<b>Word Recognition</b>	<ul style="list-style-type: none"> <li>• Word-O Game (1)</li> <li>• Vocabulary List in Storybook Readers (K-1)</li> <li>• SB Read, Write and Spell (K-1)</li> <li>• <i>Gh</i> Clown Song and Chart (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Builds automaticity.</li> </ul>

TM=Teacher's Manual / SB=Student Book

<b>Fluency and Instruction in <i>Sing, Spell, Read &amp; Write</i> (Continued)</b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Reading Aloud</b>	<ul style="list-style-type: none"> <li>• TM Recommended Read-Aloud Literature (K-1)</li> <li>• TM Guided Reading (K-1)</li> <li>• TM Choral Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides teacher modeling of fluent reading.</li> <li>• Models pacing, cadence and expression.</li> </ul>
	<ul style="list-style-type: none"> <li>• Kindergarten Express Chart (K)</li> <li>• Raceway Chart (1)</li> <li>• Assessment Book (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Assesses children's strengths and needs.</li> </ul>
<b>Predictable Texts</b>	<ul style="list-style-type: none"> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Repeated readings build fluency; text supports include repetitive, predictable texts and text and picture matching.</li> </ul>
<b>Home Involvement</b>	<ul style="list-style-type: none"> <li>• TM Daily Spelling Word List (1)</li> <li>• Take-Home Storybooks (K-1)</li> <li>• Storybook Readers (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Engages families in practice of phonics and in decoding skills for fluent reading.</li> <li>• Promotes additional reading aloud and independent reading for speed and fluency.</li> </ul>
<b>Home-School Connection</b>	<ul style="list-style-type: none"> <li>• TM Additional Related Writing Activities (K)</li> <li>• TM Process Writing (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages children to write and share stories with families.</li> </ul>

## Comprehension

Reading comprehension depends on the ability to perceive words relatively quickly and effortlessly (Adams, 1990) and assumes that an individual's decoding processes are well-developed so that efforts can focus on the meaning of the text (Stanovich, 1994). The highest predictor of a child's comprehension score on a standard reading-comprehension test is a measure of decoding skill, or the ability to read one word at a time out of context. This means simply that if you are able to understand the meaning of spoken language, you should be able to understand the meaning of written language (McGuinness, 1997).

The National Reading Panel identifies three factors that affect comprehension—vocabulary development, text comprehension and comprehension instruction. There are two types of vocabulary—oral and print—and the larger a reader's oral and print vocabulary, the easier it is for him or her to make sense of the text. Harris and Hodges (1995) define comprehension as a cognitive process during which the text and the reader interact and construct meaning. In

other words, comprehension is enhanced when the reader can think about the text and relate his or her own experiences to those that are presented in print. So, the content of a child's early-literary experiences is important in developing comprehension skills. Comprehension is dependent on word recognition and word recognition is enhanced by a reader's interest in the content of the text (Baker, Simmons and Kameenui, 1995). The NRP's findings also recommend the explicit teaching of comprehension skills—specific cognitive strategies that can be used by the reader as needed to enhance his or her understanding of the text. These strategies should be modeled by the teacher until a child can carry them out independently. These comprehension strategies would include summarizing the main idea, predicting what will happen next, drawing inferences and checking if ideas make sense (National Research Council, 1998).

*SSRW* provides extensive support for oral and print vocabulary development, guided reading for comprehension and the teaching of comprehension strategies

TM=Teacher's Manual / SB=Student Book

<b>Comprehension and Instruction in <i>Sing, Spell, Read &amp; Write</i></b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Reading for Meaning</b>	<ul style="list-style-type: none"> <li>• Storybook Readers (K-1)</li> <li>• TM Guided Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides engaging text for reading enjoyment and discussion.</li> </ul>
	<ul style="list-style-type: none"> <li>• Storybook Readers (K-1)</li> <li>• TM Recommended Read-Alouds (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Exposes students to a variety of writing styles.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Recommended Read-Alouds (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Suggests suitable independent literature.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Comprehension Tips (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Enables monitoring and self-correction.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Setting the Purpose (K-1)</li> <li>• Vocabulary Word List in Storybook Readers (K-1)</li> <li>• TM Additional Related Activities (K)</li> </ul>	<ul style="list-style-type: none"> <li>• Uses themes to engage interest, expand background knowledge and introduce and apply decoding skills.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Additional Related Activities and Recommended Read-Aloud (K)</li> <li>• TM Process Writing and Recommended Read Aloud (1)</li> <li>• Storybook Readers (1)</li> <li>• TM Reproducibles (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Variety of poems, songs and activities provide context and foster discussion.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Grammar Lessons (1)</li> <li>• Storybook Reader #6 (K)</li> <li>• Storybook Readers #6, 8, 11, 12, 14-16 (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Develops decoding skills using repeated patterns.</li> <li>• Phonics instruction in meaningful, engaging context.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Setting the Purpose and Guided Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Allows for discussion.</li> </ul>
	<ul style="list-style-type: none"> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> <li>• Storybook Readers Vocabulary Word List (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Builds theme-related vocabulary.</li> <li>• Direct instruction in decoding and word structure (morphology).</li> <li>• Develops word study strategies.</li> <li>• Shows systematic development of word-recognition skills.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Additional Related Activities (K)</li> <li>• Word-O Game (1)</li> <li>• TM Reproducibles (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Makes learning words fun through puzzles and games.</li> </ul>
<b>Comprehension Strategies</b>	<ul style="list-style-type: none"> <li>• TM Comprehension Tips and Guided Reading (K-1)</li> <li>• Storybook Readers (K-1)</li> <li>• SB On Track Comprehension Pages (K)</li> <li>• SB Raceway Comprehension Pages (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Context clues aid word recognition.</li> <li>• Decoding in context.</li> <li>• Students apply decoding strategies and self-monitoring.</li> <li>• Consolidates skills and strategies at appropriate reading level.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Guided Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Students predict, make inferences, discuss and distinguish fact and opinion or cause and effect.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Setting the Purpose (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Builds background knowledge.</li> </ul>
<b>Strategic Comprehension</b>	<ul style="list-style-type: none"> <li>• TM Guided Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on strategies used in context.</li> <li>• Highlights comprehension strategies.</li> <li>• Provides opportunities to assess key story concepts.</li> <li>• Provides measure of storytelling comprehension through retelling.</li> </ul>



TM=Teacher's Manual / SB=Student Book

<b>Comprehension and Instruction in <i>Sing, Spell, Read &amp; Write</i> (Continued)</b>		
<b>Research-Based Principle</b>	<b>SSRW Components</b>	<b>SSRW Practice for Research-Based Principle</b>
<b>Strategic Comprehension (Continued)</b>	<ul style="list-style-type: none"> <li>• Storybook Readers (K-1)</li> <li>• SB On Track Comprehension Pages (K)</li> <li>• SB Raceway Comprehension Pages (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Provides opportunities to practice using strategies and phonics skills.</li> </ul>
<b>Background Knowledge</b>	<ul style="list-style-type: none"> <li>• TM Story Summary and Setting the Purpose (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion of topic builds background.</li> </ul>
	<ul style="list-style-type: none"> <li>• Storybook Readers Vocabulary List (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on key vocabulary and language concepts.</li> </ul>
	<ul style="list-style-type: none"> <li>• TM Additional Related Activities (K)</li> <li>• TM Process Writing (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Builds thematic understanding.</li> <li>• Supports and expands themes.</li> </ul>
<b>Interaction with Printed materials</b>	<ul style="list-style-type: none"> <li>• TM Recommended Read-Aloud and Additional Related Activities (K)</li> <li>• TM Recommended Read-Aloud (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Students share responses to literature.</li> <li>• Students respond to theme-related print.</li> </ul>
	<ul style="list-style-type: none"> <li>• Take-home Storybooks (K-1)</li> <li>• TM Guided Reading (K-1)</li> </ul>	<ul style="list-style-type: none"> <li>• Students discuss take-home storybooks.</li> <li>• Students recall details and main ideas.</li> </ul>
	<ul style="list-style-type: none"> <li>• Kindergarten Express Chart (K)</li> <li>• Raceway Chart (1)</li> <li>• Short Vowel Word Charts (K-1)</li> <li>• Pop the Balloons (1)</li> <li>• Visit the Duck Pond Game (1)</li> <li>• SB On Track (K)</li> <li>• SB Raceway (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Informal assessment to monitor and evaluate comprehension-related skills such as decoding proficiency, vocabulary mastery and knowledge of word structure.</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Assessment Book (1)</li> </ul>	<ul style="list-style-type: none"> <li>• Formal portfolio assessment of decoding, vocabulary and comprehension.</li> </ul>

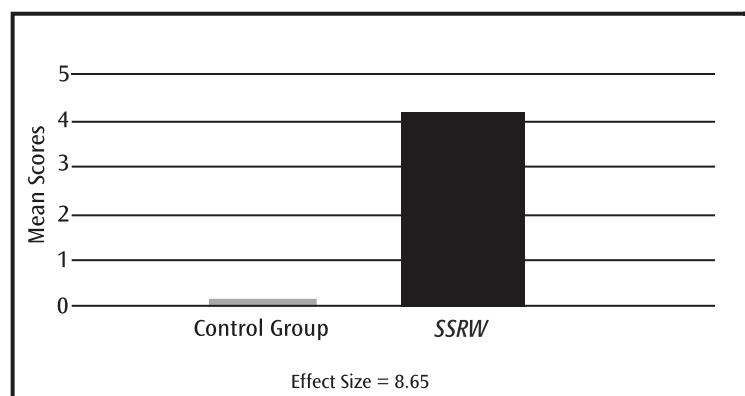
## Selected Validation Studies

### SSRW Boosts Word-Attack Skills Among Low-Stratum Kindergarten Children

*Memphis City Public Schools  
Center for Research in Educational Policy*

In this large-group study conducted with 10,000 students, the test group of low stratum kindergarten children realized an effect size\* gain in word-attack skills of 8.65 over the control group.

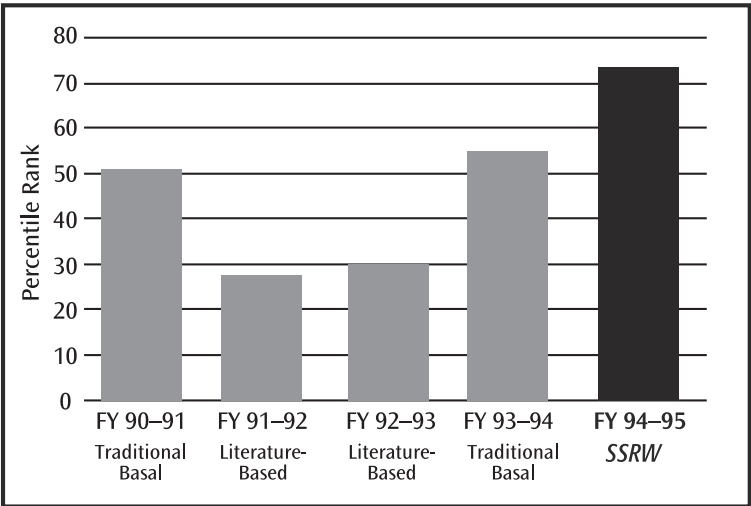
\*An effect size of just +.25 is considered educationally significant. To give a sense of scale, an effect size of +1.00 would be enough to move a student from the 20th percentile to the 50th percentile (Fashola and Slavin, 1996).



**SSRW Outperforms Traditional Basal and Whole-Language Programs in ITBS Total Reading**

*Longitudinal Study: Cochran, GA*

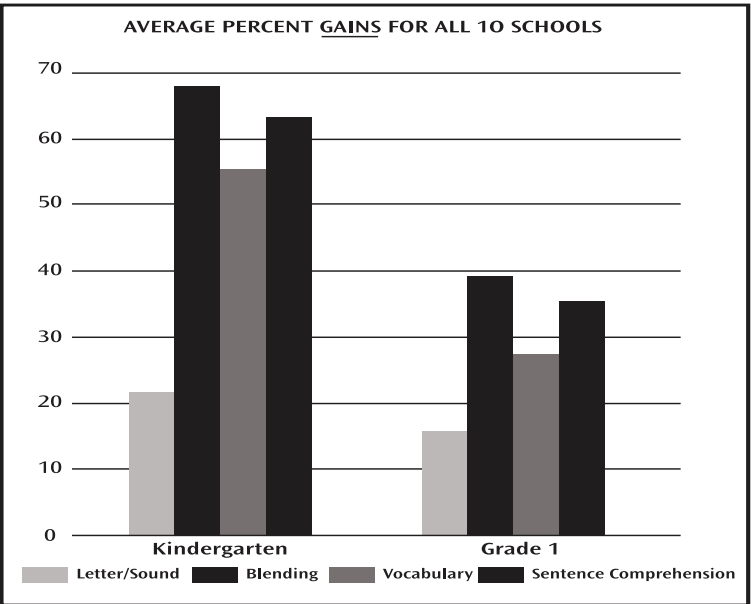
Using *SSRW*, first-grade children in Bleckley County, Georgia, ranked up to 43% higher on the ITBS in their total reading scores than when using the traditional basal program. They ranked up to 85% higher on the ITBS than when using a literature-based program.



**SSRW Summer School Net Gains for K-1 Students of All Fluencies**

*Pilot Study: San Francisco Public Schools*

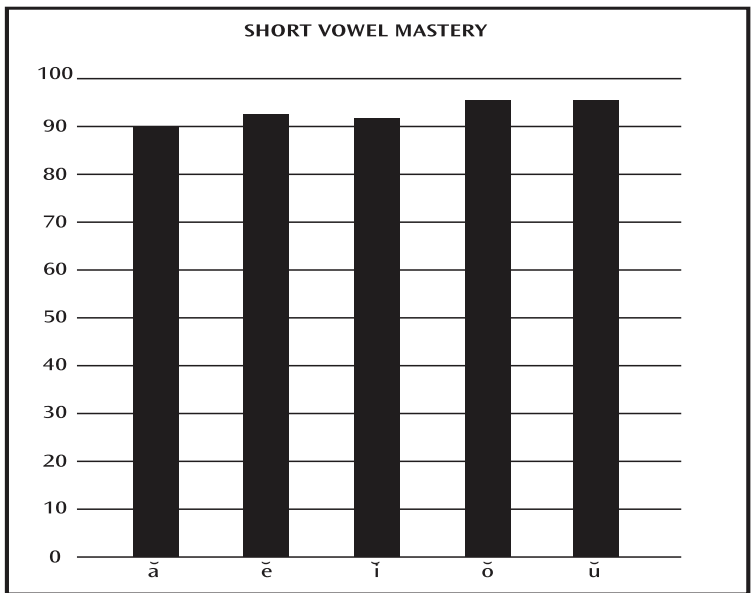
In 2000, a summer school pilot was conducted with 10 elementary schools in San Francisco among children of varied English-language proficiencies: English proficient, limited English, fluent English and non-English proficient. After six weeks of summer school instruction, pre- and post-test data showed that regardless of their levels of English-language fluency, children made significant gains in their early-reading skills, most markedly in blending, vocabulary-word recognition and sentence-comprehension skills.



**Special-Education Class Achieves Mastery of Short Vowels Using SSRW**

*Pembroke Elementary, Virginia Beach, VA*

The students in this cross-categorical special-education classroom attained an average class score of 90% or higher, indicating mastery level of all short vowels in the following areas: word recognition, word comprehension, picture-word matching, story comprehension and letter/sound correspondence.

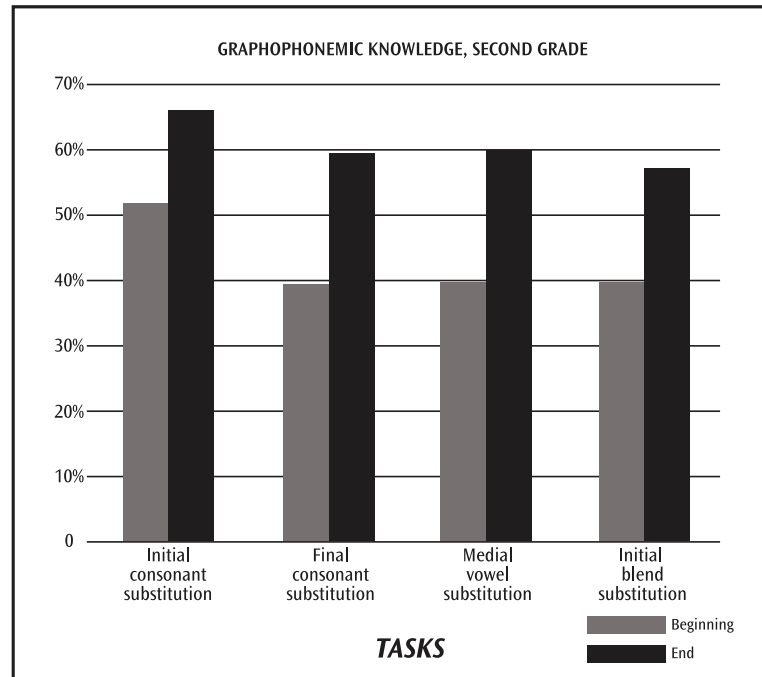


### Selected Validation Studies (Continued)

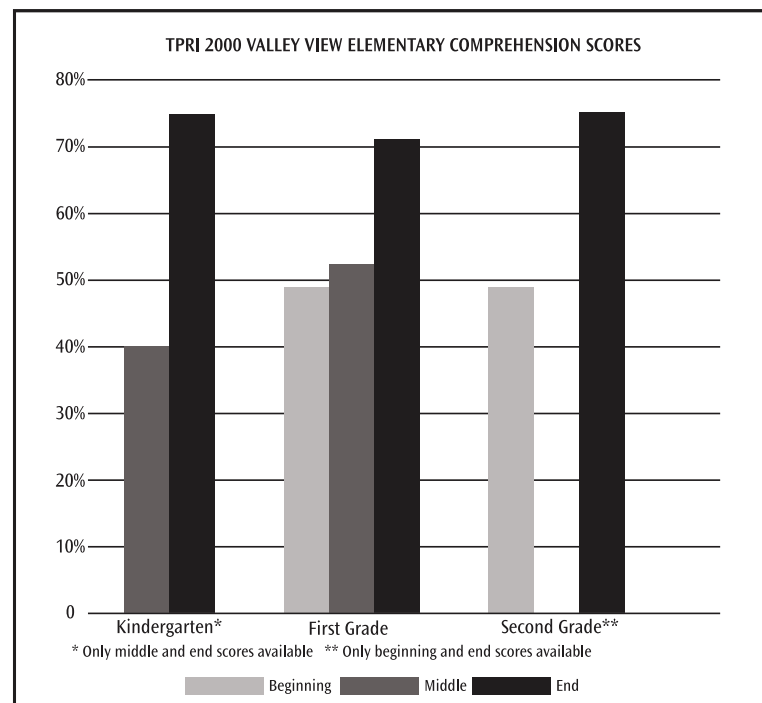
#### **SSRW Works with ESL Students to Improve Graphophonemic Knowledge and Comprehension**

*Valley View Elementary School, Hidalgo County, TX*

In the Texas Primary Reading Initiative, second-grade students at this 100% Hispanic campus realized gains from 37 to 50% in their graphophonemic skills, including initial-consonant, final-consonant, medial-vowel and initial-blend substitutions.



The most dramatic improvement in comprehension scores occurred among kindergarten children who showed a remarkable 88% increase in comprehension, while first- and second-grade children experienced 45% and 53% increases, respectively.



## References

- Adams, M.J. *Beginning to Read: Thinking and Learning About Print*. Cambridge: MIT Press, 1990.
- Adams, M.J. and M. Bruck. "Resolving the Great Debate." *American Educator* Summer 7 (1995): 10-20.
- American Federation of Teachers. "Improving Reading Achievement: It's Union Work." Position paper adopted July 19, 1998.
- Angier, N. "Sonata for Humans, Birds and Humpback Wales." *New York Times* January 9, 2001.
- Baker, S.K., D.C. Simmons and E.J. Kameenui. *Vocabulary Acquisition: Synthesis of the Research*. Technical Report No. 13. Eugene, OR: National Center to Improve the Tools of Education, 1995.
- Ball, E.W. and B.A. Blachman. "Does Phoneme Segmentation Training in Kindergarten Make a Difference in Early Word Recognition and Developmental Spelling?" *Reading Research Quarterly* 26 (1991): 49-66.
- Beck, I.L. and C. Juel. "The Role of Decoding in Learning to Read." In S.J. Samuels and A.E. Farstrup, *What Research Has to Say about Reading Instruction* (pp. 101-123). Newark, DE: International Reading Association, 1992.
- Bond, C.L., S.M. Ross, L.J. Smith, J. Nunnery, R. Goldstein and R.L. Bowie. *Analysis of the Impact of Sing, Spell, Read & Write on Reading/Language Arts Achievement of Primary Grade Children*. Center for Research in Educational Policy. Memphis: Memphis State University, 1992.
- Bradley, L. and P.E. Bryant. *Rhyme and Reason in Reading and Spelling*. Ann Arbor: University of Michigan Press, 1985.
- Chall, J.S. "Learning to Read: The Great Debate 20 Years Later." *Phi Delta Kappa* 70 (1989): 521-538.
- Chall, J.S., V.A. Jacobs and L.E. Baldwin. *The Reading Crisis: Why Poor Children Fall Behind*. Cambridge: Harvard University Press, 1990.
- Cunningham, A.E. "Explicit versus Implicit Instruction in Phonemic Awareness." *Journal of Experimental Child Psychology* 50 (1990): 429-444.
- Diamond, M. and J. Hopson. *Magic Trees of the Mind: How to Nurture Your Child's Intelligence, Creativity and Healthy Emotions from Birth through Adolescence*. New York: Dutton, 1998.
- Dowhower, S.L. "Repeated Reading Revisited: Research into Practice." *Reading & Writing Quarterly: Overcoming Learning Difficulties* 10 (1994): 343-358.
- Felton, R.H. "Effects of Instruction on the Decoding Skills of Children with Phonological Processing Problems." *Journal of Learning Disabilities* 26 (1993): 583-589.
- Foorman, B., J. Fletcher and D. Francis. (1997) *A Scientific Approach to Reading Instruction*. LD Online. [http://www.ldonline.org/ld\\_indepth/reading/cars.html](http://www.ldonline.org/ld_indepth/reading/cars.html).
- Foorman, B.R., D.J. Francis and J.M. Fletcher, C. Schatschneider and P. Mehta. "The Role of Instruction in Learning to Read: Preventing Reading Failure in At-Risk Children." *Journal of Educational Psychology* 90 (1998): 1-15.
- Griffith, P.L. and M.W. Olson. "Phonemic Awareness Helps Beginning Readers Break the Code." *The Reading Teacher* 45 (1992): 517-523.
- Grossen, B. *30 Years of Research: What We Now Know About How Children Learn To Read*. Washington, DC: National Institute of Child Health and Human Development, 1997.
- Harris, T. and R. Hodges (eds.) *The Literacy Dictionary*. Newark, DE: International Reading Association, 1995.
- Hiskes, D. "Explicit or Implicit Phonics: Therein Lies the Rub." *Right to Read* Vol. 4, No. 1 (1998): 1, 3.
- Hodges, D.A. "Neuromusical Research: A Review of the Literature." *Handbook of Music Psychology*, 2<sup>nd</sup> Ed. San Antonio, TX: IMR Press. 1996. Pp. 197-284.
- Honig, B. *Teaching Our Children to Read: The Role of Skills in a Comprehensive Reading Program*. Thousand Oaks, CA: Corwin Press, 1996.
- International Reading Association and the National Association for the Education of Young Children. *Learning to Read and Write: Developmentally Appropriate Practices for Young Children*. Joint position statement. Washington, D.C: National Association for the Education of Young Children, 1998.
- Iverson, S. and W. Tunmer. "Phonological Processing Skills and the Reading Recovery Program." *Journal of Educational Psychology* 85 (1993): 112-126.
- Jensen, E. *Teaching with the Brain in Mind*. Alexandria, VA: Association for Supervision and Curriculum Development, 1998.
- LaBerge, D. and S.J. Samuels. "Toward a Theory of Automatic Information Processing in Reading." *Cognitive Psychology* 6 (1974): 263-323.
- Levy, B.A., A. Nicholls and D. Kohen. "Repeated Readings: Process Benefits for Good and Poor Readers." *Journal of Experimental Child Psychology* 56 (1993): 303-327.
- Liberman, I.Y. and A.M. Liberman. "Whole Language vs. Code Emphasis: Underlying Assumptions and Their Implications for Reading Instruction." *Annals of Dyslexia* 40 (1990): 51-77.
- Liberman, I.Y., D. Shankweiler and A.M. Lieberman. "The Alphabetic Principle and Learning to Read." In D. Shankweiler and I.Y. Liberman (eds.) *Phonology and Reading Disability: Solving the Reading Puzzle*. IARLD Research Monograph Series. Ann Arbor: University of Michigan Press, 1989.
- Lie, A. "Effects of a Training Program for Stimulating Skills in Word Analysis in First Grade Children." *Reading Research Quarterly* 26 (1991): 234-250.

## References (Continued)

- Lundberg, I, J. Frost and O. Peterson. "Effects of an Extensive Program for Stimulating Phonological Awareness in Preschool Children." *Reading Research Quarterly* 23 (1988): 263-284.
- McGuinness, D. *Why Our Children Can't Read and What We Can Do About It*. New York: Free Press, 1997.
- Moats, L.C. "Teaching Decoding." *American Educator* Spring/Summer (1998): 42-49, 95-96.
- National Reading Panel. *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. Washington, DC: NICHD, 2000.
- National Research Council. *Preventing Reading Difficulties in Young Children*. Snow, C., M.S. Burns and P. Griffin, Eds. Washington, DC: National Academy Press, 1998.
- The National Right to Read Foundation. Federally funded research. (Nov. 1, 1999) <http://www.nrrf.org/nichd.htm>.
- Rauscher, F. "The Power of Music." *Early Childhood News* 46 (September/October 1996): 46.
- Share, D.L. and K.E. Stanovich. "Cognitive Processes in Early Reading Development: Accommodating Individual Differences into a Mode of Acquisition." *Issues in Education: Contributions from Educational Psychology* 1 (1995): 1-57.
- Stahl, S.A., A. Duffy-Hester et al. "Everything You Wanted to Know About Phonics (But Were Afraid to Ask)." *Reading Research Quarterly* 33 (3) (1998): 338-55.
- Stanovich, K.E. "Romance and Reality." *The Reading Teacher* 47 (1994): 280-90.
- Sylwester, R. *A Celebration of Neurons: An Educator's Guide to the Human Brain*. Alexandria, VA: Association for Supervision and Curriculum Development, 1995.
- Torgesen, J.K., and P. Mathes. "What Every Teacher Should Know About Phonological Awareness." Monograph. Tallahassee, FL: State of Florida, Department of Education, 1998.
- Tramo, M.J. "Enhanced Music of the Hemispheres." *Science* 291 (2001): 54-56.
- Weinberger, N.M. "The Music in Our Minds." *Educational Leadership* 56 (1998): 36-40.
- Williams, J. Unpublished report on a visit to a *Sing, Spell, Read & Write* Classroom in Mahwah, NJ, June 9, 1983.

## SCHOOL SCORE REPORTS

This section presents the findings of schools throughout the country using *Sing, Spell, Read & Write*. Schools used various testing measures, including the Iowa Test of Basic Skills (ITBS), the Gates-MacGinitie Reading Test, the Stanford Achievement Test, and the Texas Primary

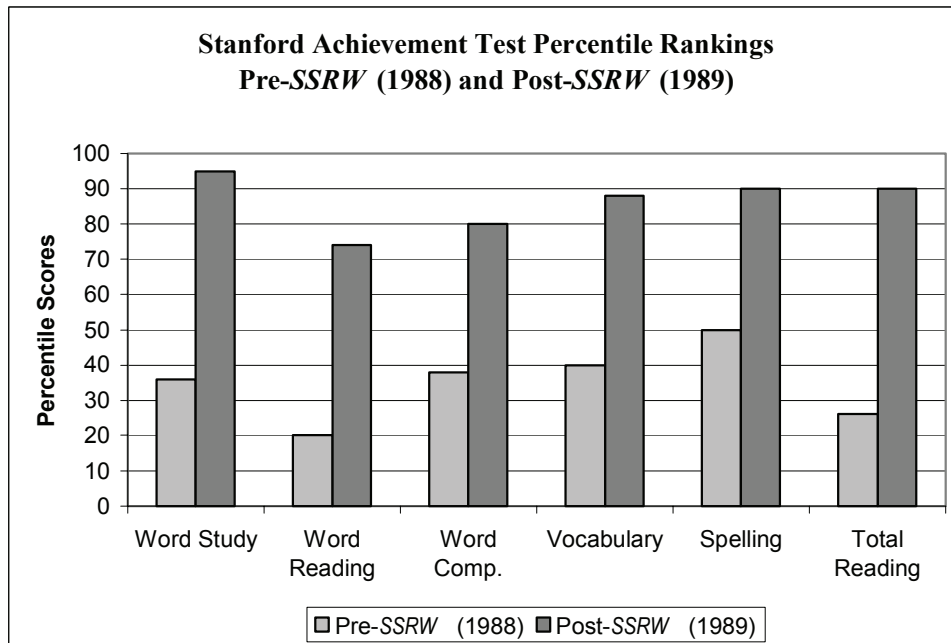
Reading Inventory (TPRI) test, to measure the success of the program among a variety of student populations and grade levels. In this section are score reports for the states shown below.

Alabama .....	48
Arkansas.....	49
California.....	53
Colorado.....	55
Florida .....	57
Georgia.....	64
Mississippi.....	67
New Jersey .....	68
New York.....	71
Oklahoma.....	73
Tennessee.....	75
Texas.....	76
Virginia .....	80

## Fayette County Schools, Alabama

First grade classes in Fayette County, Alabama piloted *SSRW* during the 1988-89 school year. As indicated by the graph below, the first grade showed significant, positive improvements over first graders from the previous year in Word Study, Word Reading, Word Comprehension, Vocabulary, Spelling, and Total Reading as measured by the Stanford Achievement Test. On average, first grade students using *SSRW* during the 1988-89 school year were 59 percentile points higher than the

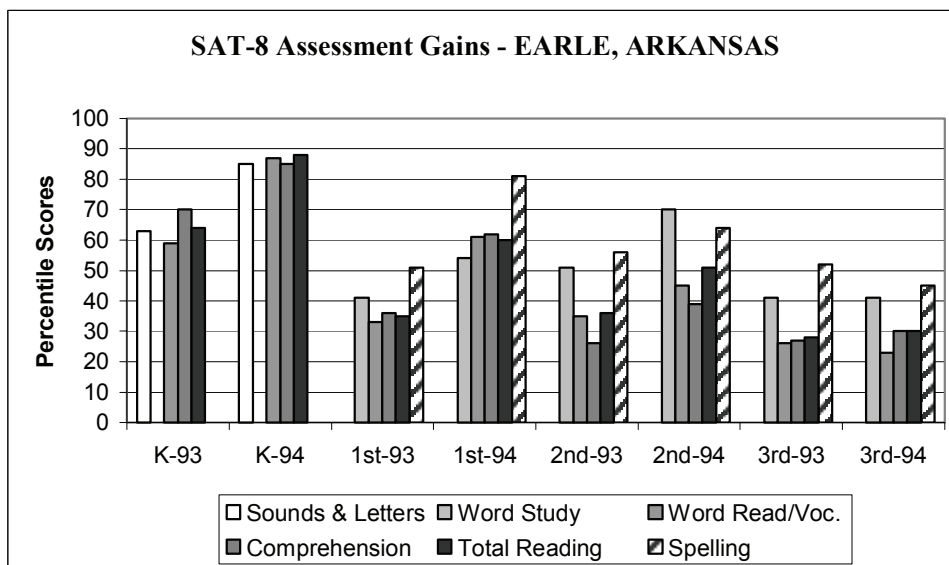
previous year's first graders in Word Study Skills, 55 percentile points higher in Word Reading, 43 percentile points higher in Reading Comprehension, 48 percentile points higher in Vocabulary, 40 percentile points higher in Spelling, and 62 percentile points higher in Total Reading. The dramatic increases in sub-test percentile scores from pre- to post-intervention are educationally significant and thought by school faculty to be in large part due to the initiation of the *SSRW* language arts program.



## Earle Elementary School, Arkansas

Kindergarten, first and second grade students at Earle Elementary used the *SSRW* program, while

third grade students used a different program.



Category	K	Grade 1	Grade 2
Sounds & Letters	+ 24		
Word Study	N/A	+ 12	+ 18
Word Reading/Vocabulary	+ 29	+ 30	+ 10
Sentence Reading/Comprehension	+ 27	+ 26	+ 13
Total Reading	+ 25	+ 25	+ 14
Total Language	N/A	+ 22	+17
Spelling	N/A	+ 31	+ 8
Listening	+ 19	+ 12	+ 13
BASIC BATTERY	+ 38	+ 26	+ 20



## Jonesboro School, Arkansas

### State Compensatory Education Evaluation School Year 1993-94

*SSRW* was purchased for each kindergarten classroom to use as a supplement to the regular reading readiness program. The prime target for this supplement was the Sounds/Letters section of the Total Reading sub-test on the Stanford Early School Achievement Test 1 & 2 (administered Fall/Spring). While all children received the benefit of the program since it was taught to the whole class, the targeted participants were those scoring below 45 NCE (Normal Curve Equivalent) on the pre-test. The overall gain for these targeted students was +11 NCE on Sounds/Letters and +14.5 NCE on Total Reading. Not all teachers implemented the program to the same degree. Using a rank order provided by the principal, three groups of six teachers each were identified as **Full, Partial, or Little Implementation**. The number of at-risk students

and their pretest scores were very similar (see data below). The group fully utilizing these materials showed the greatest gain with at-risk students (+23.3 NCE's in Sounds/Letters and +20.4 NCE's in Total Reading). In fact, *SSRW* classes with "Full" implementation produced twice the gains of "Partial" or "Little" implementation.

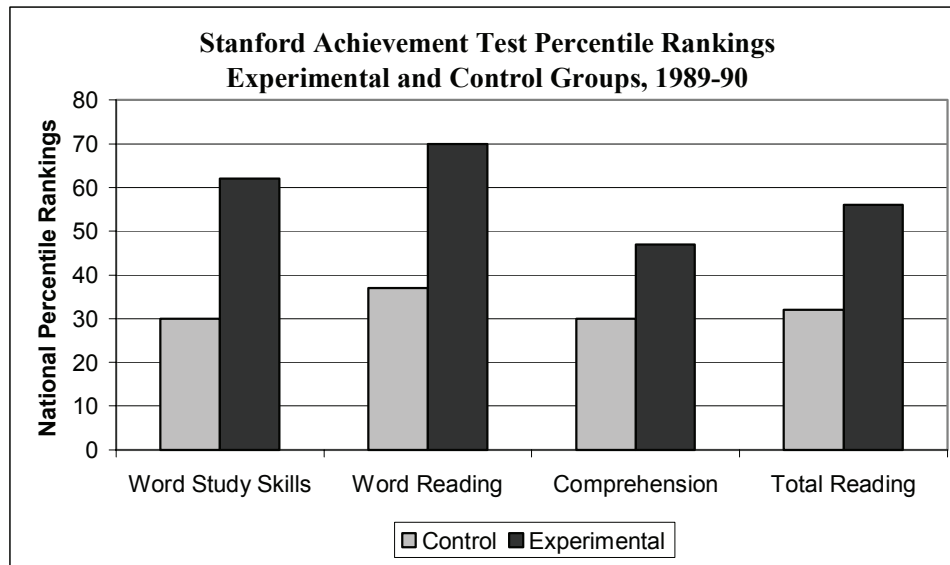
Parents attended sessions conducted both school-wide and for Chapter 1/Compensatory Education parents to learn about the program and to discover ways of assisting their children. Through other cooperative funding (Adult Education and K-3 Parent Involvement), 15 parents of these at-risk students attended a 6-week Active Parenting Class. In addition, these parents were encouraged to attend 4 Chapter 1/Compensatory Education mini-workshops on topics such as correct formation of letters, folder games to use at home, etc.

GRADE LEVEL	AREA TESTED	NO. OF STUDENTS IN PROGRAM	PRE-TEST NCE AVER.	POST-TEST NCE AVER.	AVERAGE NCE GAINS	NUMBER OF STUDENTS WITH +NCE GAINS	PERCENT (%) OF STUDENTS WITH +NCE GAINS
K	R-SOUND/LETTERS	157	26.5	37.5	+ 11	122	78%
K	R-TOTAL READING	178	28.6	43	+ 14.5	158	89%
<b>BY GROUP ACCORDING TO DEGREE OF IMPLEMENTATION OF <i>SSRW</i></b>							
FULL USE	R-SOUND/LETTERS	47	25.9	49.2	+ 23.3	41	87%
PARTIAL USE	R-SOUND/LETTERS	57	24.3	35.5	+ 11.2	40	70%
LITTLE USE	R-SOUND/LETTERS	53	29.3	42.1	+ 12.8	41	77%
FULL USE	R-TOTAL READING	54	28	48.4	+ 20.4	51	94%
PARTIAL USE	R-TOTAL READING	62	26.6	36.3	+ 9.7	53	85%
LITTLE USE	R-TOTAL READING	62	30.8	45	+ 14.2	54	87%

## West Clay County Elementary School, Arkansas

A first grade class at West Clay County Elementary School piloted *SSRW* during the 1989-90 school year. As indicated by the graph below, this first grade class (the experimental group) outperformed the control group (not using *SSRW*) in Word Study Skills, Word Reading, Comprehension, and Total Reading on the Stanford

Achievement Test completed in spring of 1990. On average, students using *SSRW* were 32 percentile points above the experimental group in Word Study Skills, 33 percentile points above the experimental group in Word Reading, 17 percentile points above in Comprehension, and 26 percentile points above in Total Reading.

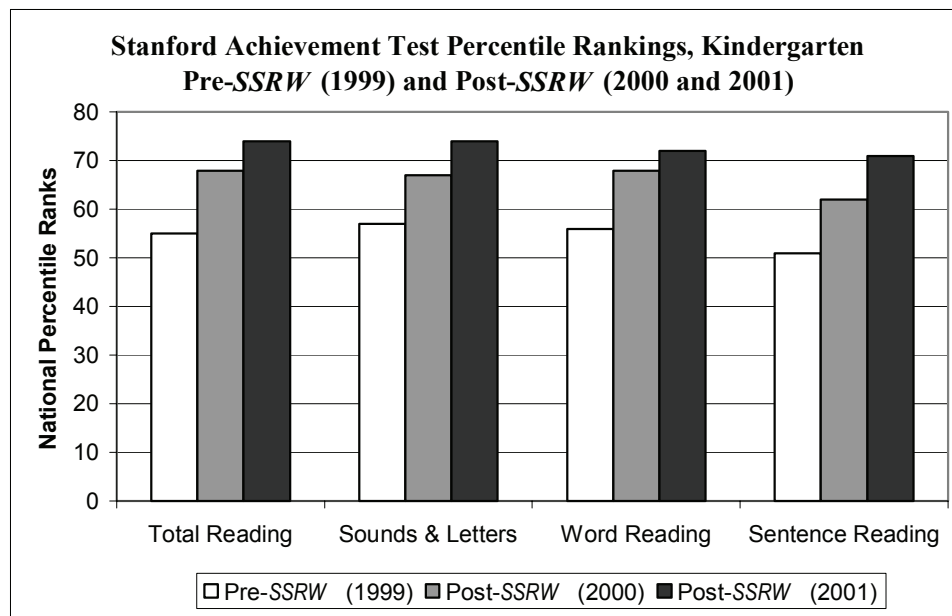


## Wynne Primary School, Arkansas

Wynne Primary School serves grades K-2 in the Wynne School District in Wynne, Arkansas. The school's enrollment during the 2000-01 school year was 632 with a district enrollment of 2,762. Students attending Wynne Primary School are 31% Black and 68% White. Sixty percent of all students enrolled in the school are at or below poverty level.

Kindergarten classes at Wynne Primary School piloted *SSRW* during the 1999-2000 school year. As indicated by the graph below, the kindergarten class in both the first and second year of *SSRW* implementation showed significant, positive improvements over the kindergarten class from the year prior to implementation (1998-99 school year) in Total Reading, Sounds and Letters, Word

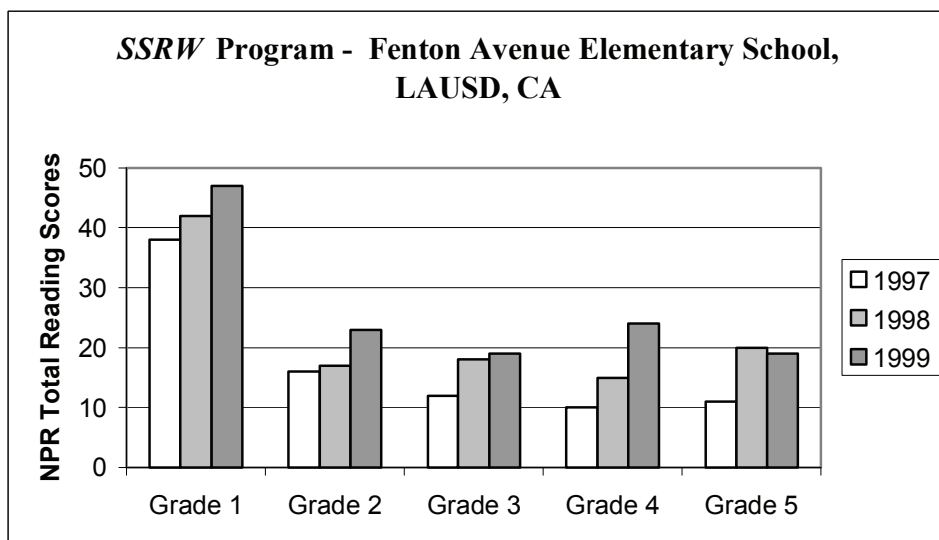
Reading, and Sentence Reading as measured by the Stanford Achievement Test. During the first year of *SSRW* implementation, there was a 13 percentile point increase in Total Reading, a 10 percentile point increase in Sounds and Letters, a 13 percentile point increase in Word Reading, and a 11 percentile point increase in Sentence Reading. After the second year of *SSRW* implementation, percentile rankings increased 19 points in Total Reading, 17 points in Sounds and Letters, 17 points in Word Reading, and 20 points in Sentence Reading from the year prior to implementation. After just two years of *SSRW* implementation, kindergarten students in Wynne Primary School moved from slightly above the 50<sup>th</sup> percentile to well above average national percentile rankings.



### Fenton Avenue Elementary School, LAUSD, California

During the 1998-1999 school year, Fenton Avenue Elementary School in the Los Angeles Unified School District, California, utilized the *SSRW* Program. In previous years, other programs had been used. The

following results show Stanford Achievement Test (SAT-9) scores for the 1998-1999 year, in which the *SSRW* program had been used, as well as for previous years.



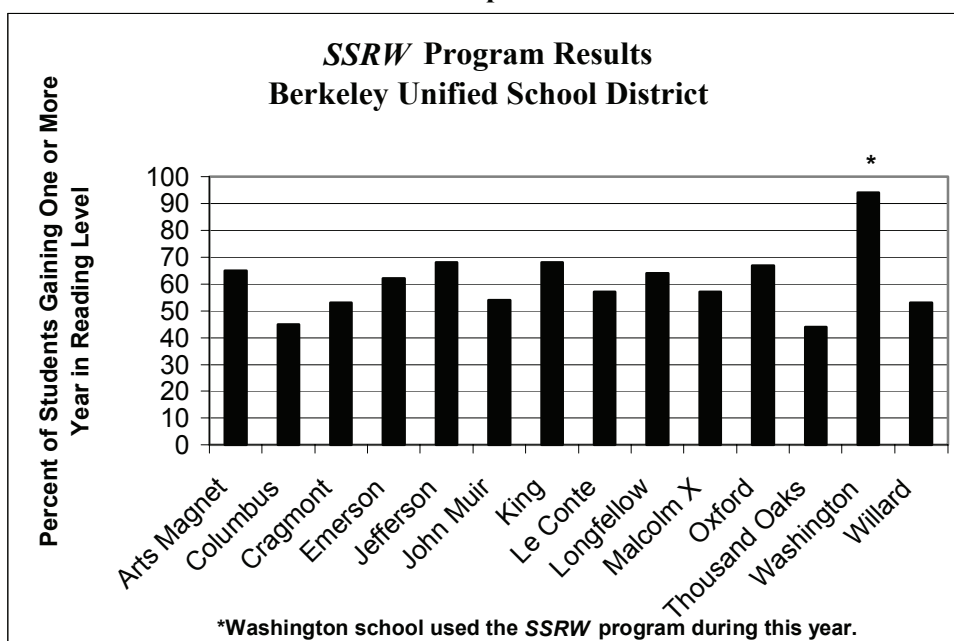
## Washington Primary School, Berkeley, California

Berkeley School District, California, implemented the *SSRW* program at Washington School during the 1989-1990 academic year with 26 first grade students. **Graph 1** shows the CTBS test results for Washington School in relation to other schools in the district, which did not use the *SSRW* program.

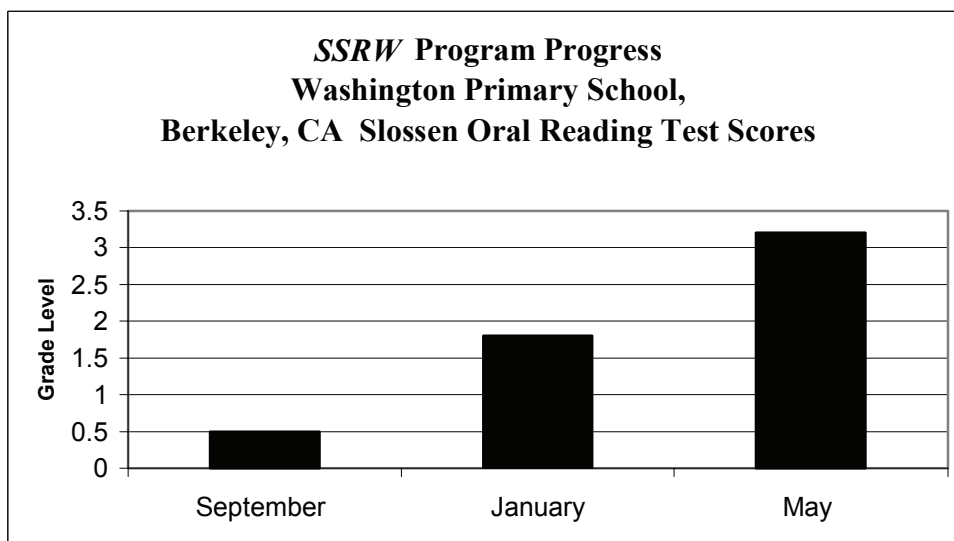
The Slossen Oral Reading Test was used as a pre- and post- test measure at Washington Elementary. **Graph 2**

shows the progress in the program. When the students entered first grade in September, one third were non-readers, and the remaining two-thirds were significantly below grade level. The average reading score for the class in September was 0.5. When the students were retested in May, the average class score was 3.2, for an overall gain of 2.7 grade levels with one year of *SSRW* instruction.

Graph 1



Graph 2



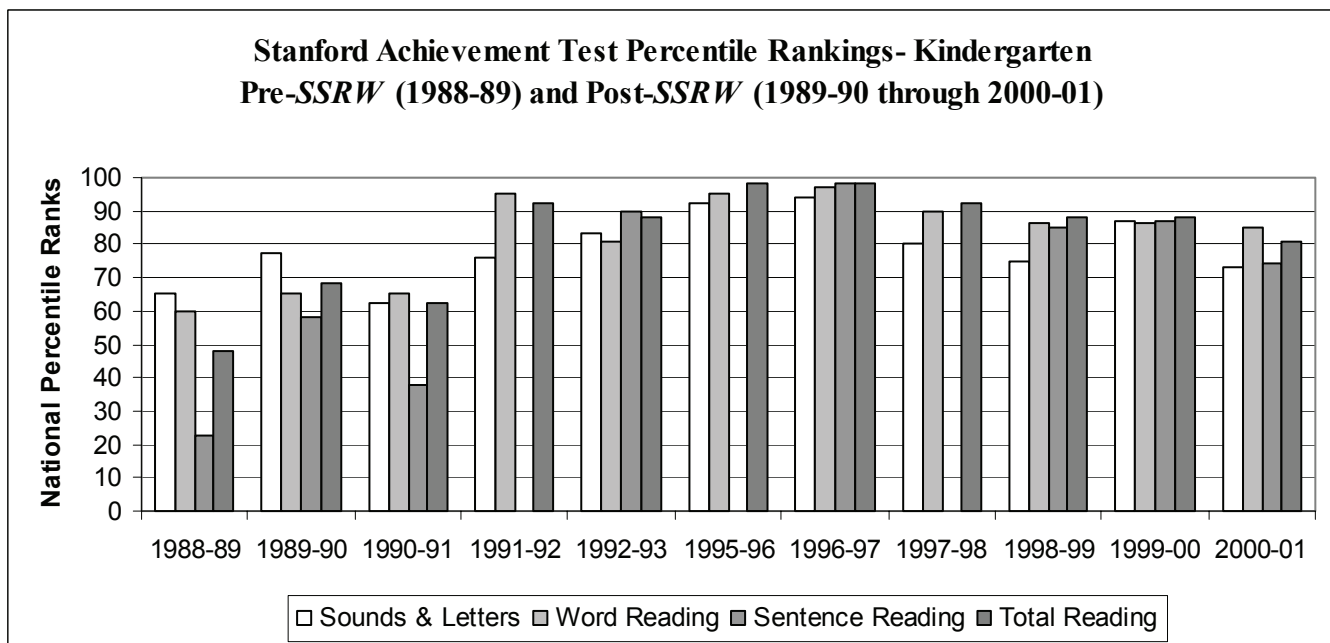
## Christian Heritage Elementary School, Colorado

*SSRW* was piloted in kindergarten and first grade at Christian Heritage Elementary School in Steamboat Springs, Colorado during the 1989-1990 school year. The following graphs show Stanford Achievement Test percentile for the year prior to *SSRW* implementation and the years after implementation through the most recent school year (test scores were not available for the 1993-94 and 1994-95 school years).

Kindergarten students in both the first, second, and all subsequent years of *SSRW* implementation showed positive improvements over the kindergarten class from the year prior to implementation (the 1988-89 school year) in Sounds and Letters, Word Reading, Sentence Reading, and Total Reading as measured by the Stanford Achievement Test. During the first year of *SSRW* implementation, there was a 12 percentile point increase in

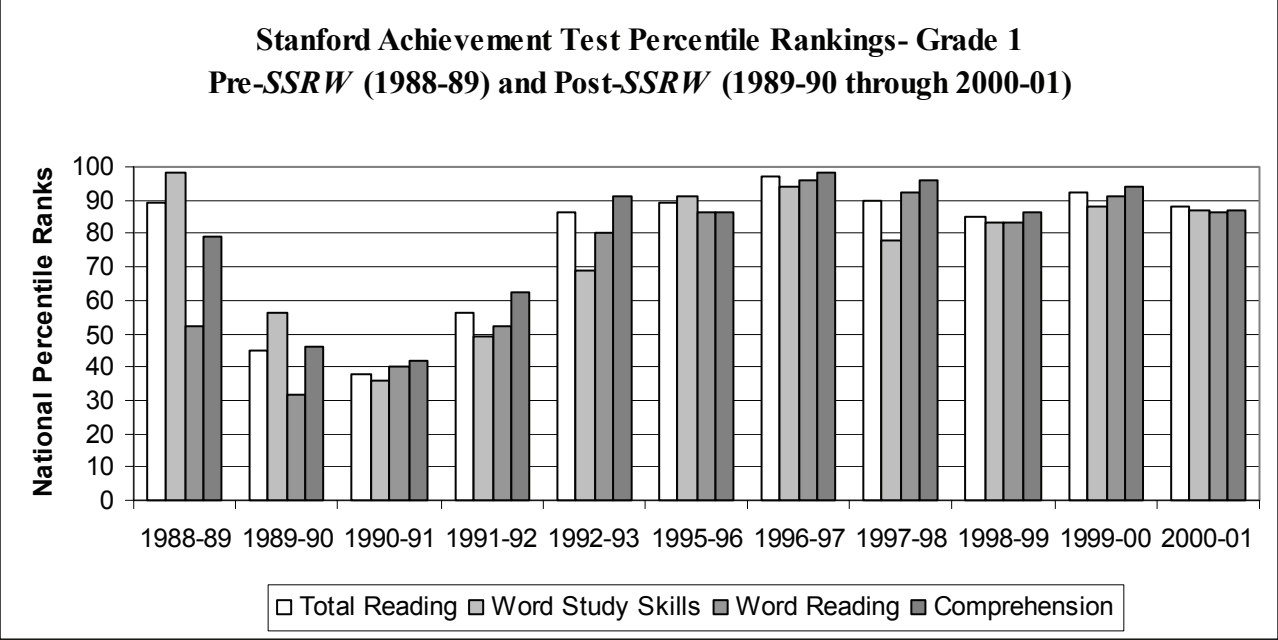
Sounds and Letters, a 5 percentile point increase in Word Reading, a 34 percentile point increase in Sentence Reading, and a 19 percentile point increase in Total Reading. After three years of *SSRW* implementation, there was an 18 percentile point increase in Sounds and Letters, a 21 percentile point increase in Word Reading, a 68 percentile point increase in Sentence Reading, and a 39 percentile point increase in Total Reading. This trend was maintained through the most recent year school year.

After just several years of *SSRW* implementation, kindergarten students in Christian Heritage Elementary School went from approximately the 50<sup>th</sup> percentile in most sub-test areas (the norm for mainstream students) to well above average national percentile rankings in all sub-test areas.



For the first grade students, during the first year of implementation, national percentile scores for first graders decreased. By the 1991-92 school year, the percentile scores began increasing slightly in all four sub-test areas, and eventually scores in most sub-test areas increased to or slightly below the pre-SSRW level in the later years of the series. First graders showed the greatest improvements in Word Reading over time; although percentile rankings

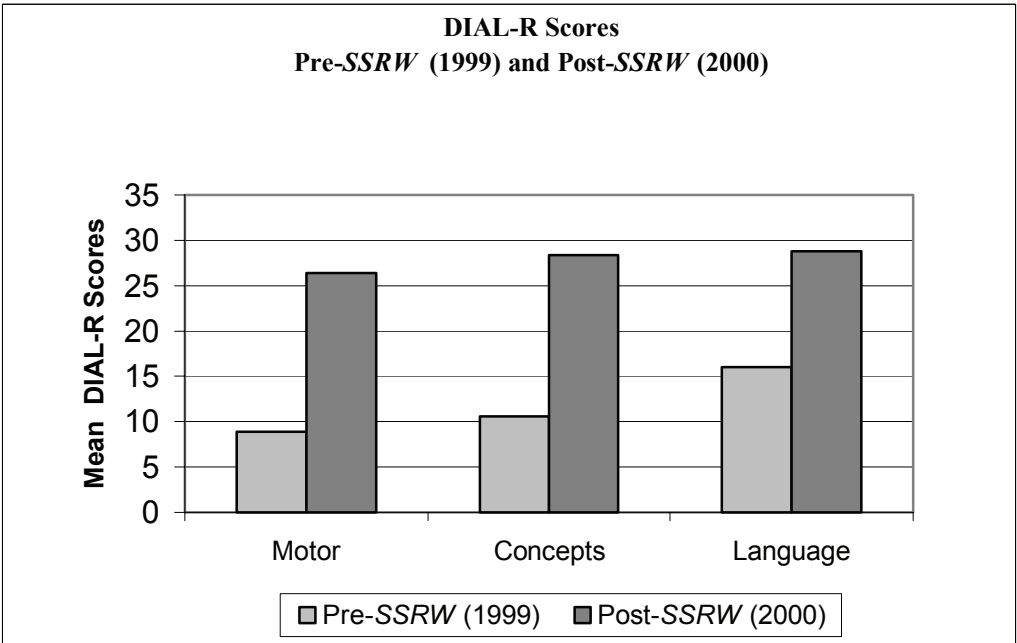
in Word Reading initially decreased, by the 1992-93 school year students had moved from the 50<sup>th</sup> percentile to the 80<sup>th</sup> percentile and higher in subsequent years. Students also showed increases in Word Comprehension over time. By the 1992-93 school year, students had moved from the 80<sup>th</sup> percentile in the year prior to SSRW implementation to nearly the 90<sup>th</sup> percentile.



Century Elementary School, Florida

Century Elementary School piloted *SSRW* in a class of fifteen students during the 1999-2000 school year. As indicated by the results presented below, the students' scores on the Developmental Indicators for the Assessment of Learning – Revised (DIAL-R) Motor, Concepts, and Language sub-tests were higher after *SSRW* was implemented. Specifically, mean scores on the Motor sub-test nearly tripled (a 17 point increase, from a mean score of 9 to 26) after *SSRW* implementation. This increase is statistically significant,

with a paired t-test score of 4.73 ( $p < 0.01$ ,  $df = 14$ ). Scores on the Concepts subtest more than doubled (a 17 point increase, from a mean score of 11 to 28), although this result is not significant with a paired t-test value of 1.66 ( $p > 0.10$ ,  $df = 14$ ). Scores on the Language sub-test nearly doubled (a 13 point increase, from a mean score of 16 to 29) in the year of *SSRW* implementation. This result is significant with a paired t-test score of 1.85 ( $p < 0.1$ ,  $df = 14$ ).





## Ernest R. Graham Elementary School, Florida

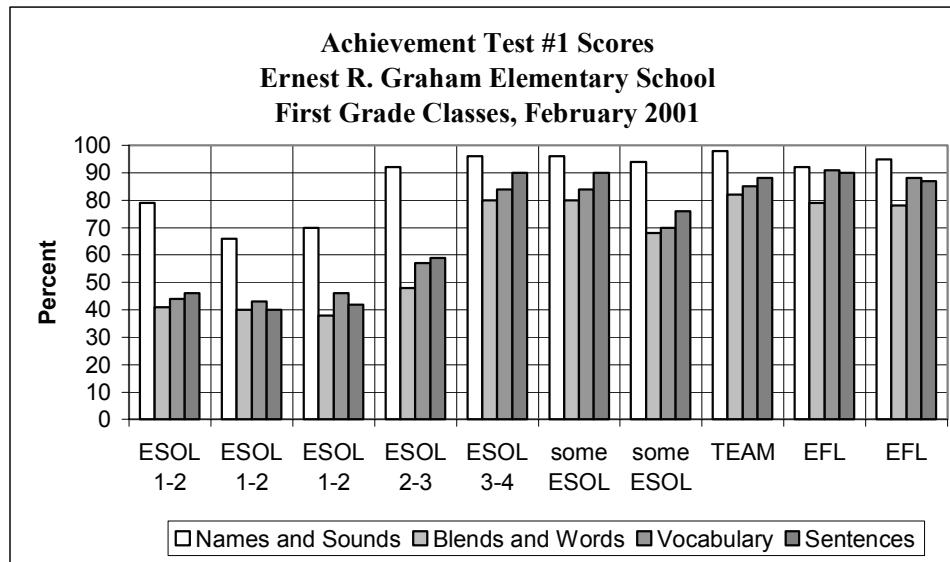
Ernest R. Graham Elementary School serves grade pre-K through grade 6 in Hialeah, Florida. The school's enrollment during the 2000-01 school year was 2,430. More than 30 percent of all students attending Ernest R. Graham Elementary are limited-English-proficient and 74 percent are eligible for free and reduced lunch. This school recently received an "A" grade on Florida's school grading system.

Several first grade classes at Ernest R. Graham piloted a **modified** version of *SSRW* during the 2000-01 school year, beginning in October of 2000. **Graph 1** below compares the first grade classes from Graham Elementary that did not implement *SSRW* (all ESOL 1-2 classes and one ESOL 2-3 class) with several first grade classes that implemented the modified version of *SSRW* (the ESOL 3-4 classes, the TEAM class, and the two Extended Foreign Language classes). After partial implementation of *SSRW*

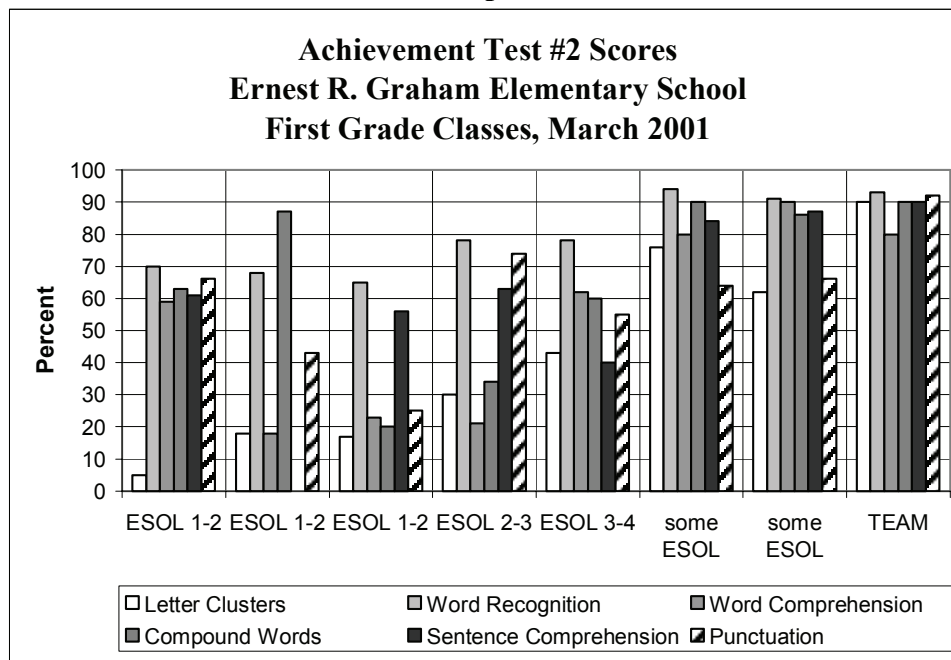
began in October 2000, students in these classes were tested using Achievement Test #1 administered in February 2001. Average scores from each class in each of the areas of Letter Names and Sounds, Blends and Words, Vocabulary, and Sentences are presented below. The school standard for class mastery on Achievement Test #1 is 85 percent across all subject areas.

As indicated, all classes in which the modified version of *SSRW* was implemented scored higher on Achievement Test #1 than the ESOL 1-2 and ESOL 2-3 classes that did not implement *SSRW*. This finding holds for all four subject areas in which students were tested. A total of four first grade classes achieved mastery (a class average of 85%) in these subject areas – all four classes achieving mastery had implemented *SSRW*. None of the classes who did not implement *SSRW* achieved mastery.

**Graph 1**



Graph 2



In March 2001, most of the first grade classes were again evaluated using Achievement Test #2 which examined mastery of Letter Cluster Sounds, Words Recognition, Word Comprehension, Compound Words, Sentence Comprehension, Punctuation, ABC Order, and Rhyming Words (because data are incomplete for the areas of ABC Order and Rhyming Words, these categories have been omitted from the analysis). As shown in **Graph 2**, most of the first grade classes implementing a modified version of *SSRW* scored higher on Achievement Test #2 than those classes not implementing *SSRW*. Specifically, the two partial ESOL 3-4 classes and the TEAM class scored much higher than the other classes in all subject areas. Additionally, only two classes achieved mastery on this test – both classes achieving mastery of the subject areas had implemented *SSRW* whereas all classes not implementing *SSRW* failed to reach mastery.

After implementing a modified version of *SSRW* in several first grade classes during a time period of just several months, results suggest that classes being exposed to *SSRW* scored higher on both Achievement Tests 1 and 2 than classes not being exposed to the program. Additionally, the only classes achieving mastery on the achievement tests were classes exposed to *SSRW*. It should be noted, however, that not all classes implementing *SSRW* achieved mastery. Although these findings are noteworthy, caution is in order. Without having additional information about the student composition of each class and more detailed knowledge of how *SSRW* was actually implemented, it is difficult to rule out alternative explanations for achievement test score differences between these groups. More information is necessary to draw firm conclusions.

## Freeport Elementary School, Florida

During the 1993-1994 school year, Freeport Elementary School implemented the *SSRW* program in its first-sixth grade classes. The Comprehensive Test of Basic Skills (CTBS-4) was used as a measure of program progress.

In **Graph 1**, longitudinal data from the years prior to implementation of the program shows a steady decline in reading scores from 1991-1993. After the *SSRW* program was implemented, scores increased to the 1992 level.

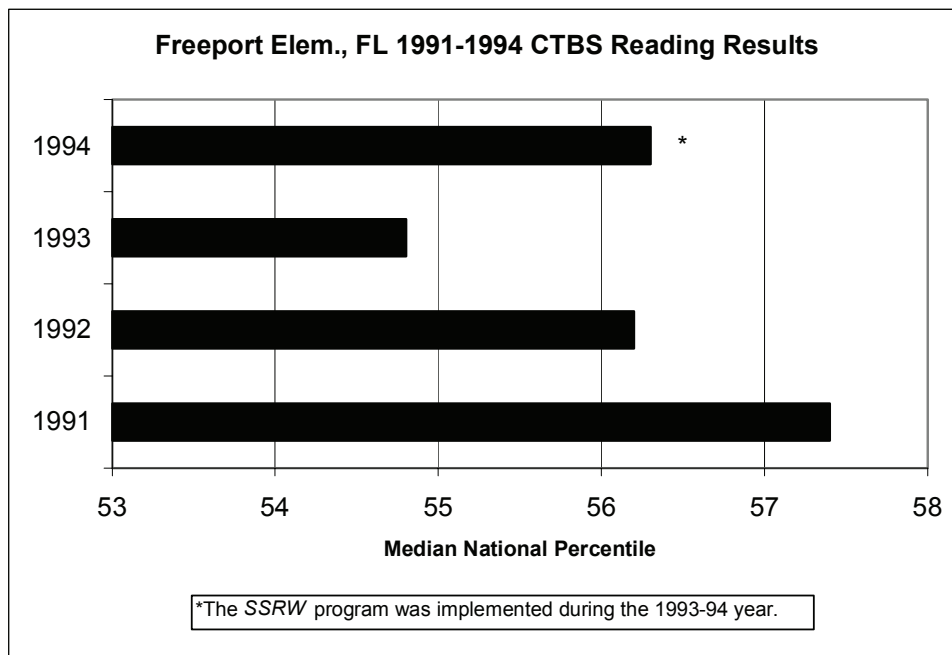
**Graph 2** shows that the greatest gains are made by the second grade group.

In **Graph 3**, language scores showed similar results, with an increase in scores after the implementation of the *SSRW* program.

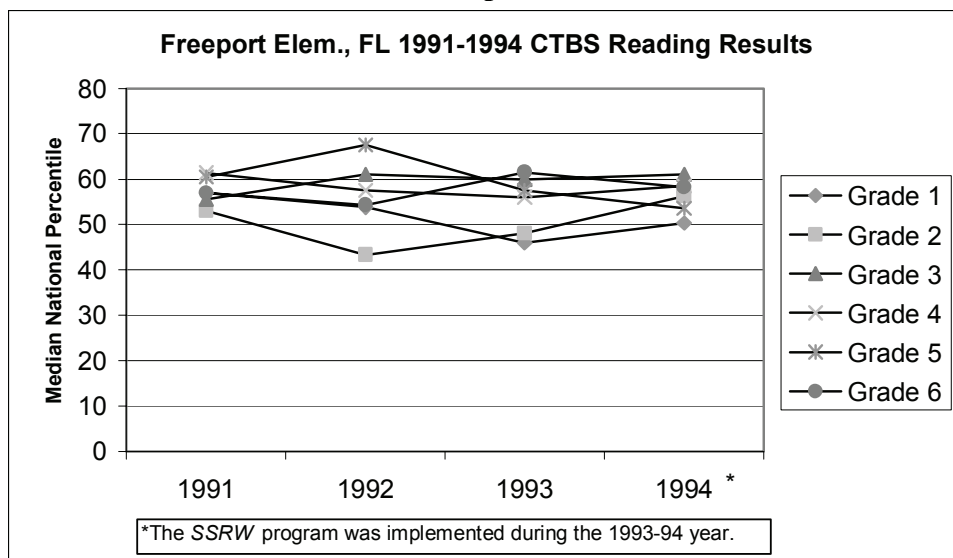
In **Graph 4**, the second grade again showed the greatest gains during the 1993-1994 year.

As shown in **Graph 5**, further analysis of the second grade scores at Freeport Elementary shows significant positive differences between Anticipated and Obtained scores on the CTBS 1994 posttest.

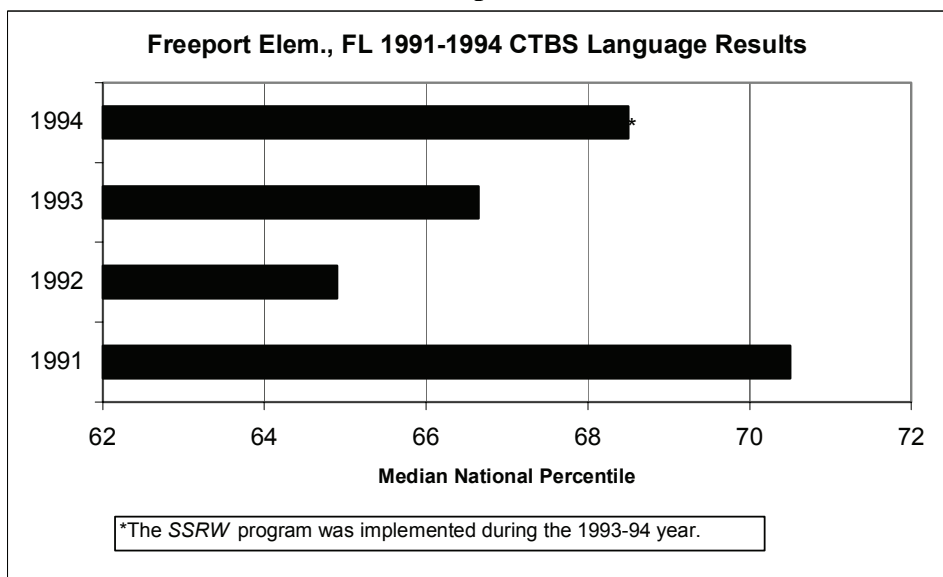
**Graph 1**



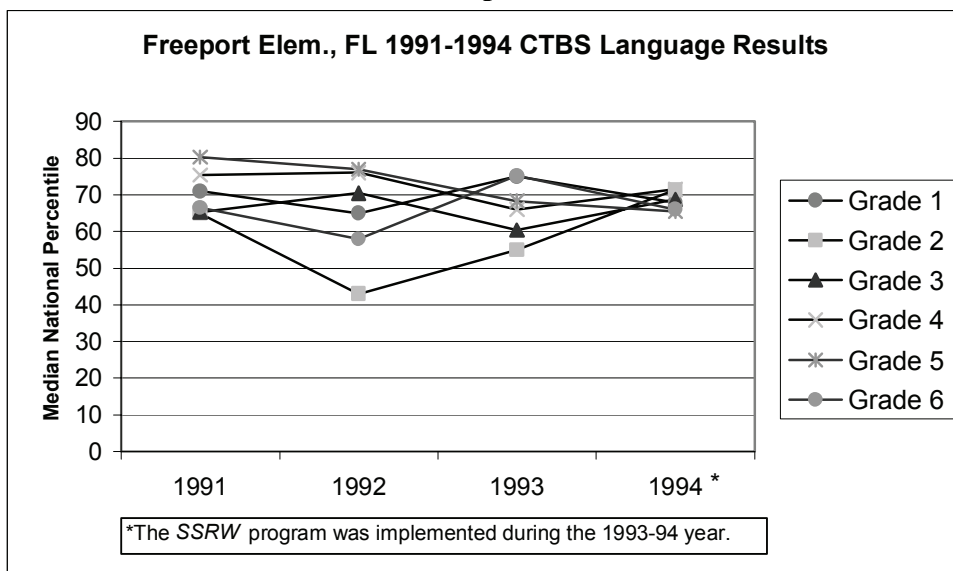
Graph 2



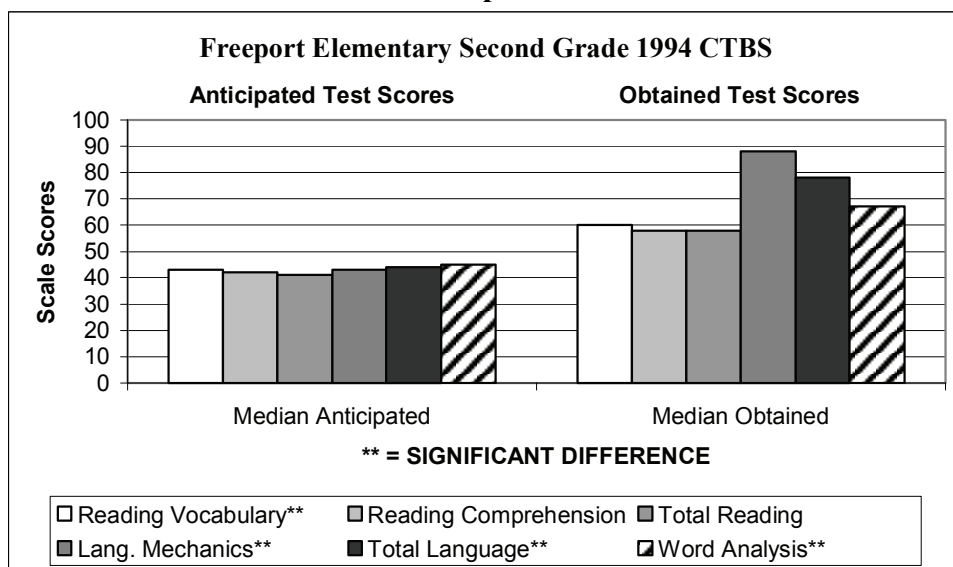
Graph 3



**Graph 4**



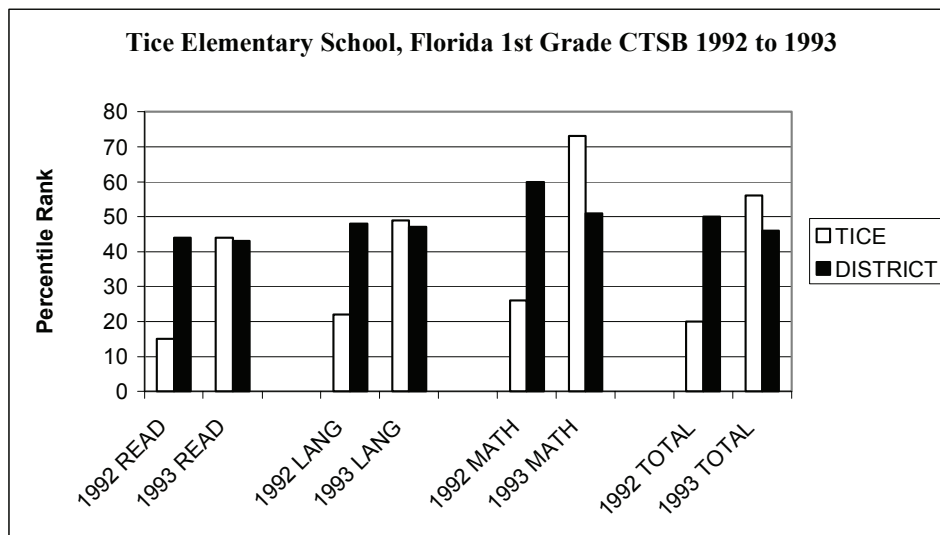
**Graph 5**



## Tice Elementary School, Florida

In 1993, Tice Elementary School piloted *SSRW* and *Musical Math Facts* in first grade. The following

chart and graph compare 1992 scores and 1993 scores.



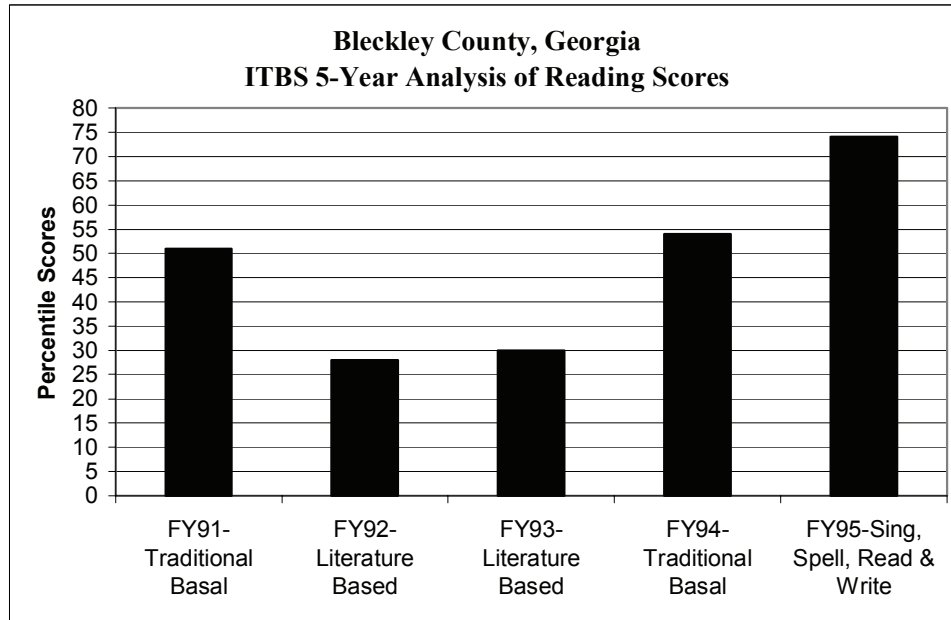
### Tice Elementary 1<sup>st</sup> Grade CTBS 1992 to 1993

	TICE AVERAGE	DISTRICT AVERAGE
	Percentile Rank	Percentile Rank
<b>1992 READING</b>	15 %	44 %
<b>1993 READING</b>	44 %	43 %
<b>1992 LANGUAGE</b>	22 %	48%
<b>1993 LANGUAGE</b>	49 %	47 %
<b>1992 MATH</b>	26 %	60%
<b>1993 MATH</b>	73 %	51%
<b>1992 TOTAL</b>	20 %	50 %
<b>1993 TOTAL</b>	56 %	46 %

## Bleckley County Schools, Georgia

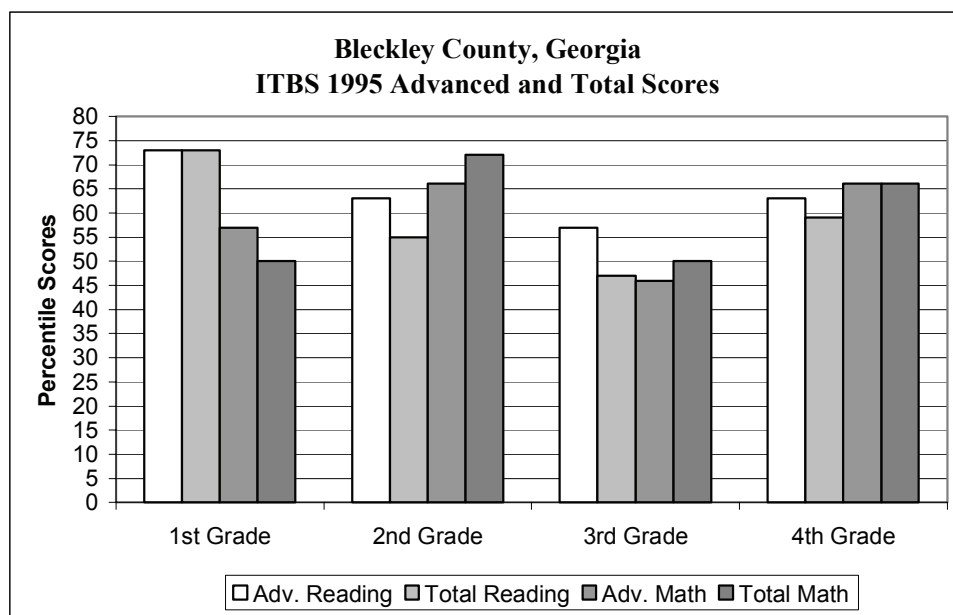
In 1992, with the introduction of a literature-based reading program, Bleckley County schools' first grade test scores fell from the 51<sup>st</sup> percentile to the 25<sup>th</sup> percentile. School

district officials began to consider alternative methods of teaching reading.



The traditional basal method was reinstated for the 1993-1994 school year, and scores rose to the 53<sup>rd</sup> percentile. However, at the end of the 1993-1994 school year, the school's Chapter 1 (now Title 1) program was required to go into "program improvement" because of continued regression in the test scores of Title 1 students. A school improvement planning team was organized which included the principal, the assistant principal, several teachers, the curriculum director, a parent, and the assistant superintendent of Bleckley County Schools. Teachers within the school were interviewed. The literature was reviewed. Parents were contacted. A highly respected university professor was contacted and asked to serve as a consultant.

As a result of this research and planning, the *SSRW* Program was chosen as the school's first grade reading program for 1994-1995. The greatest results of the implementation of *SSRW* were seen on the Iowa Test of Basic Skills. In less than a full year of implementation (and in some cases with just two months of implementation), test scores rose to very acceptable levels in almost every grade level where *SSRW* was implemented. The mean first grade reading score was in the 73<sup>rd</sup> percentile for both advanced and total reading. Students in second grade did almost as well as first grade students.





## D.D. Crawford Primary School, Georgia

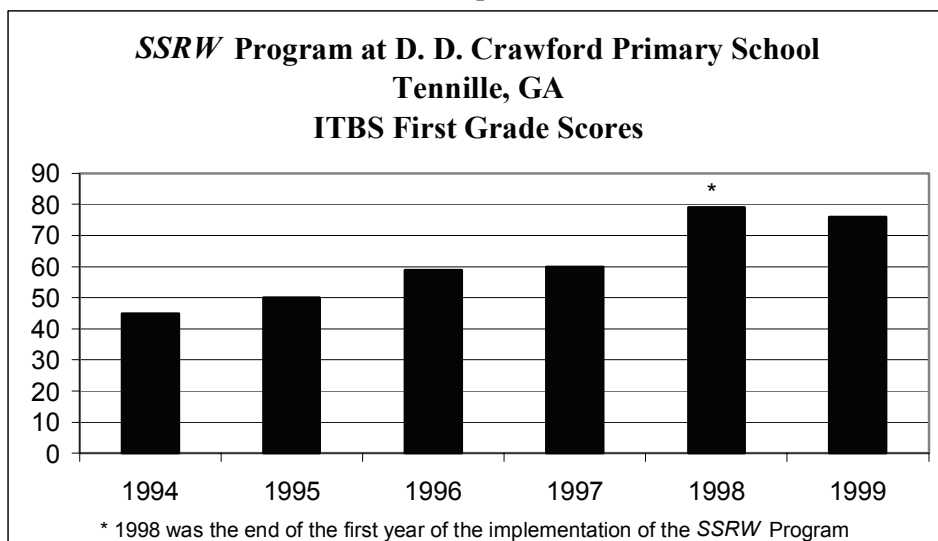
During the 1997-1998 school year, D.D. Crawford Primary School initiated the use of the *SSRW* Program for its first and second grade classes. The following graph shows the ITBS scores for the school for the 1997-1999 year and for several previous years.

**Graph 1** shows gains for the first grade classes. The scores after the implementation of the *SSRW* Program are

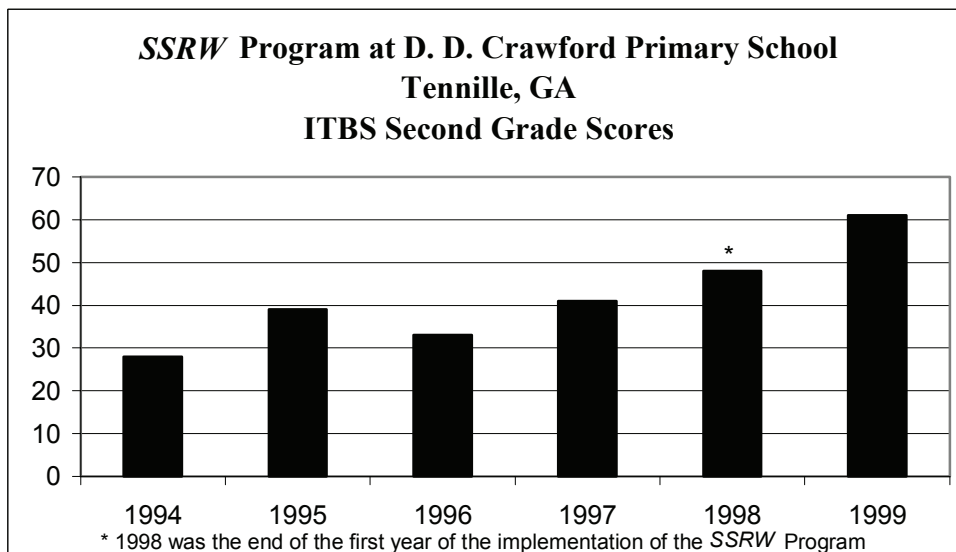
higher than any other scores during the 6-year time span covered by the graph.

**Graph 2** shows gains for the second grade classes. Note that the second grade made even higher gains during 1998-1999, the second year of the program.

**Graph 1**



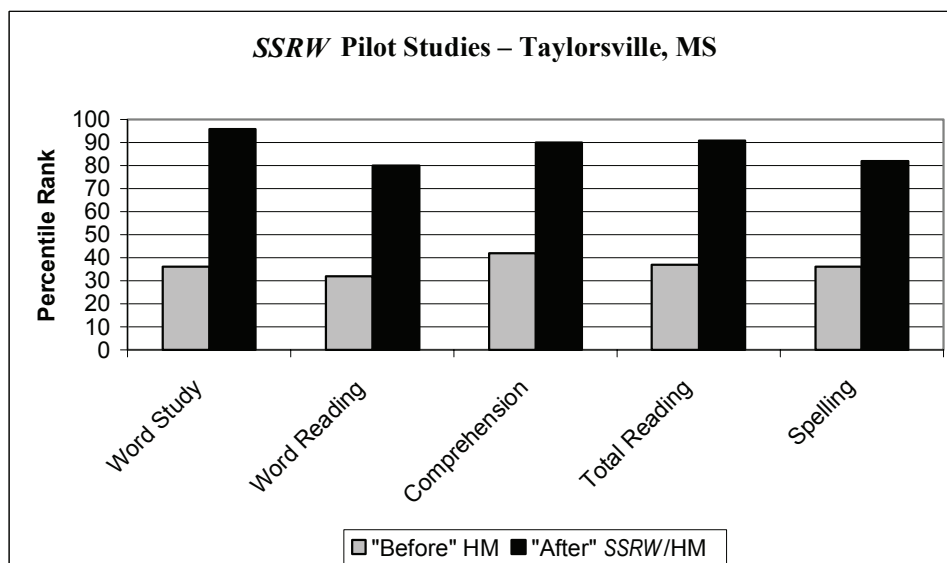
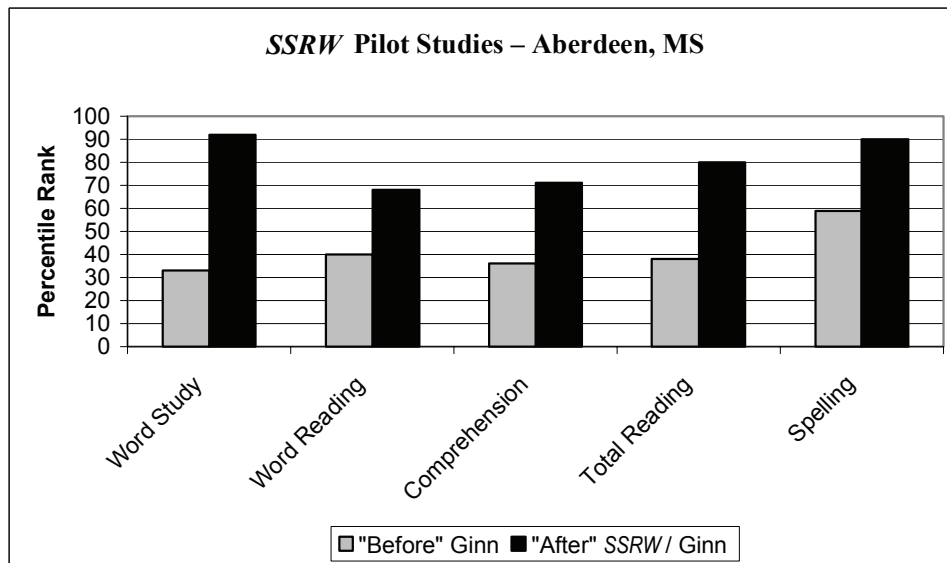
**Graph 2**



## Aberdeen and Taylorsville Schools, Mississippi

In 1991, Dr. Jane Hodges (Professor of Education, Mississippi University for Women) presented test results from studies conducted in Mississippi comparing traditional basal reading program achievement scores with scores from schools that had implemented *SSRW*. Aberdeen City Schools in Aberdeen, Mississippi initiated the program in all first grades. There was a 42 percentile

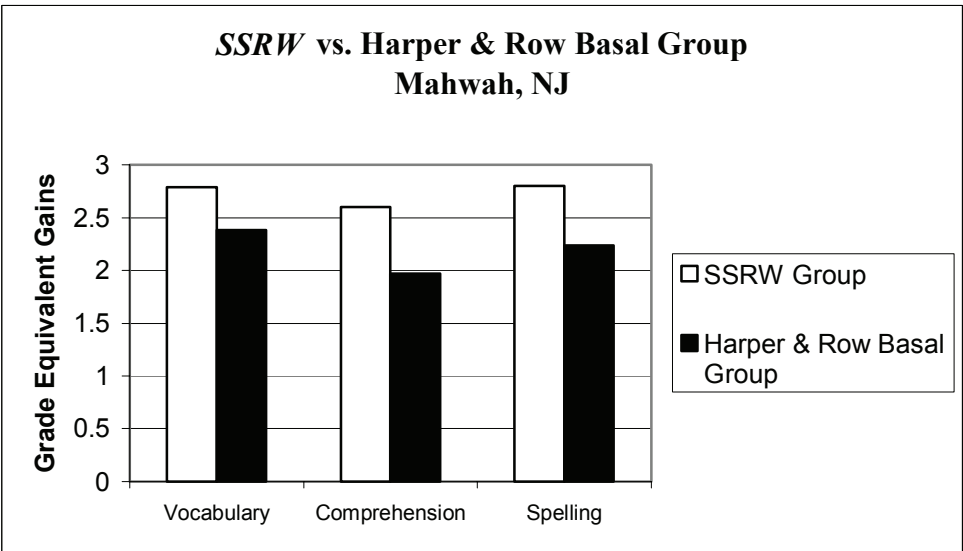
point increase in total reading scores, and 34 point increase in comprehension. Similar results were found in Taylorsville, Mississippi. The graphs below show reading and spelling scores following implementation of *SSRW* as a supplement to the basal program, as compared to basal only scores.



**Mahwah Elementary School, New Jersey**

From 1969-1970, two first grade classes in Mahwah Elementary School participated in research on the *SSRW* program. The same teacher taught both classes, using different approaches. The *SSRW* class included 25 students, and had an average grade placement of 1.9 at the beginning of the year, as assessed by the Metropolitan Achievement Test. The control class used Harper & Row Basal readers, included 17 students, and had an average grade placement of 2.1 at the beginning of the year, as assessed by the California Achievement Test.

By the end of the year, the *SSRW* group had reached an average Grade Equivalent of 2.79 in Vocabulary, 2.6 in Comprehension, and 2.8 in Spelling on the Metropolitan Achievement Test. The Harper & Row Basal class had realized posttest Grade Equivalents of 2.38 in Vocabulary, 1.97 in Comprehension, and 2.24 in Spelling on the California Achievement Test.

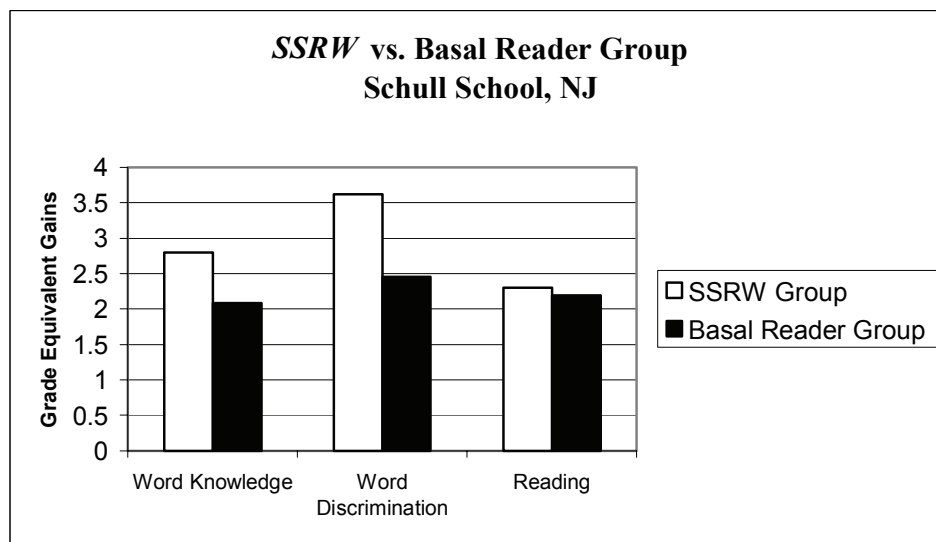


## Schull School, New Jersey

In 1974, two second grade classes at Schull School participated in research on the *SSRW* program. The *SSRW* class contained 17 students and a control group, using Basal readers, contained 14 students. The average beginning Grade Equivalent for all students was 2.5 on the Metropolitan Achievement Test.

By the end of the year, the *SSRW* group was at the 2.8 Grade Equivalent in Word Knowledge, 3.62 in Word Discrimination, and 2.3 in Reading. The Basal Reader group was at lower levels of a 2.09 Grade Equivalent in Word Knowledge, 2.45 in Word Discrimination, and 2.19 in Reading.

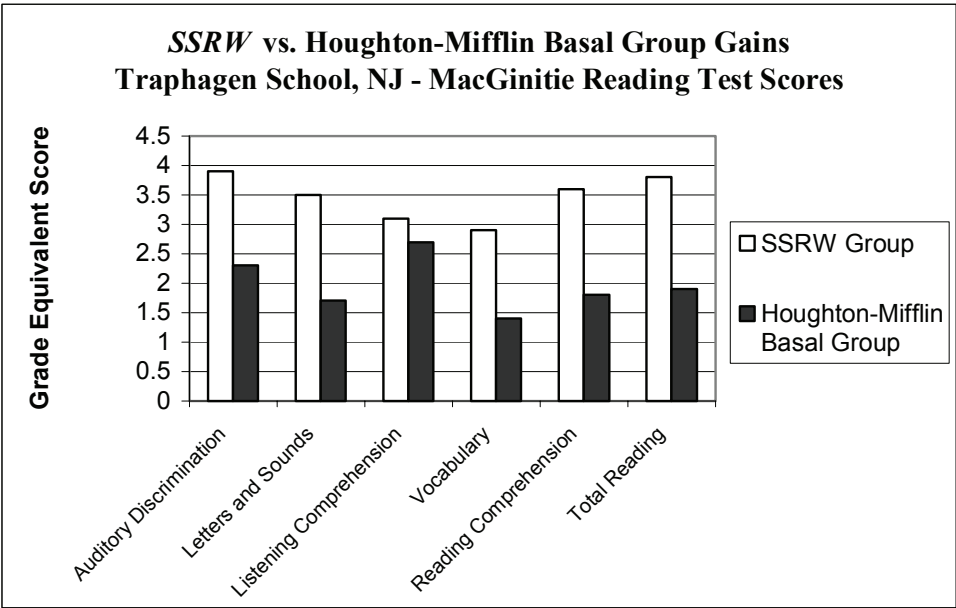
A multivariate analysis of variance on subtests of the Metropolitan Achievement Test showed that there was a significant difference between the *SSRW* group and the Basal reader group [ $F(3) = 3.43$ ,  $p = .03$ ]. Follow-up univariate analyses showed that the Word Knowledge [ $F(1,29) = 8.556$ ,  $p = .01$ ], Word Discrimination [ $F(1,29) = 9.36$ ,  $p = .01$ ], and Reading [ $F(1,29) = 7.90$ ,  $p = .01$ ] posttests showed significant differences between groups. The *SSRW* group had significantly higher posttest scores than the Basal reader group.



Traphagen School, New Jersey

During the 1979-1980 school year, Traphagen School adopted the *SSRW* program for one of its first grade classes. Another class, using the Houghton-Mifflin Basal Program, was used as a comparison group. The

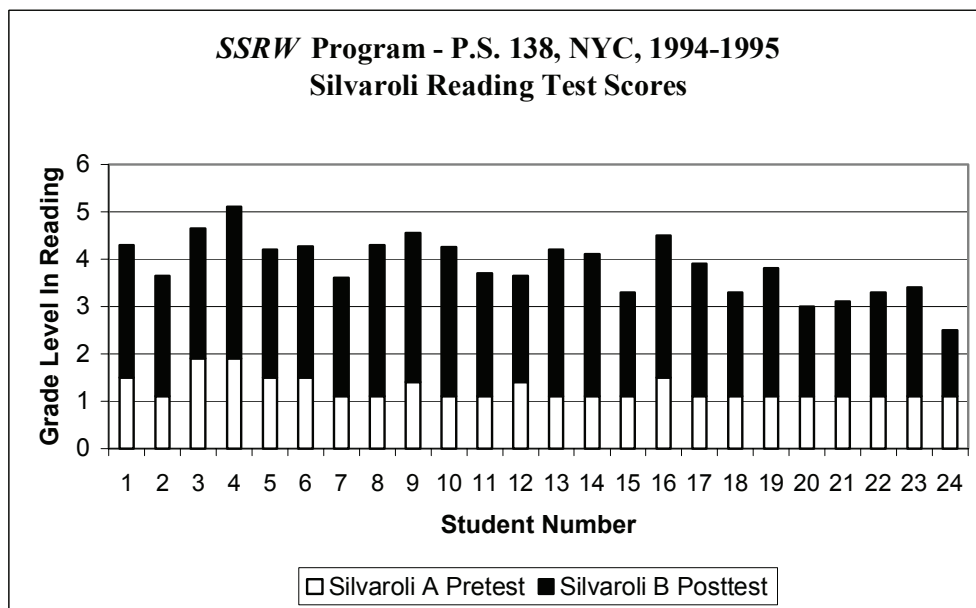
MacGinitie Reading Test was used to measure program progress. The *SSRW* group showed greater grade equivalent scores across all areas of the test, as compared to the Houghton-Mifflin Basal Group.



## P.S. 138, Queens, New York

From 1994-1996, P.S. 138 (Sunrise School) in Queens, NY completed two pilot studies on the *SSRW* program. During the first year, 1994-1995, a second grade class received instruction using the *SSRW* program. Their average September pretest reading score on the Silvaroli reading test was at the 1.2 grade level. After 7 months of instruction, in May of 1995, the average grade level was

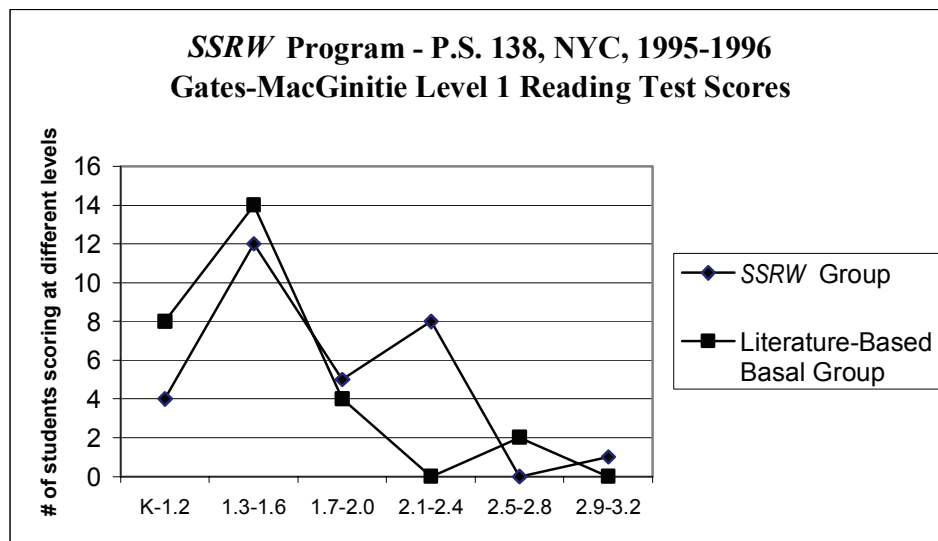
2.6. This represents an average gain of 1.4 grade levels in reading during the course of the year. The class was also tested on the Gates MacGinitie Level 2, Form K reading test in May only. The posttest score on this measure was at the 2.3 grade level. The gains of individual students on the Silvaroli reading test are shown on the graph below.



During the 1995-1996 school year, the Sunrise School completed its second *SSRW* pilot program. Two first grade classes participated in the program. The *SSRW* class was composed of 30 students and contained 5 students who had failed a previous year, 4 ESL students, one student who was recommended for the Special Education program, and one child from Kenya who was a non-English speaker. The control class used Silver Burdett Ginn, a literature-based basal program. Twenty-nine students were in the control class, and 28 of these were

tested. Approximately 80% of the students in each class received free lunch.

The graph below shows the scores of the two groups on the Gates-MacGinitie Level 1 Reading posttest. The *SSRW* group has a larger percentage of students scoring at the upper levels at posttest than does the literature-based basal group.





## Eugene Fields Elementary School, Oklahoma

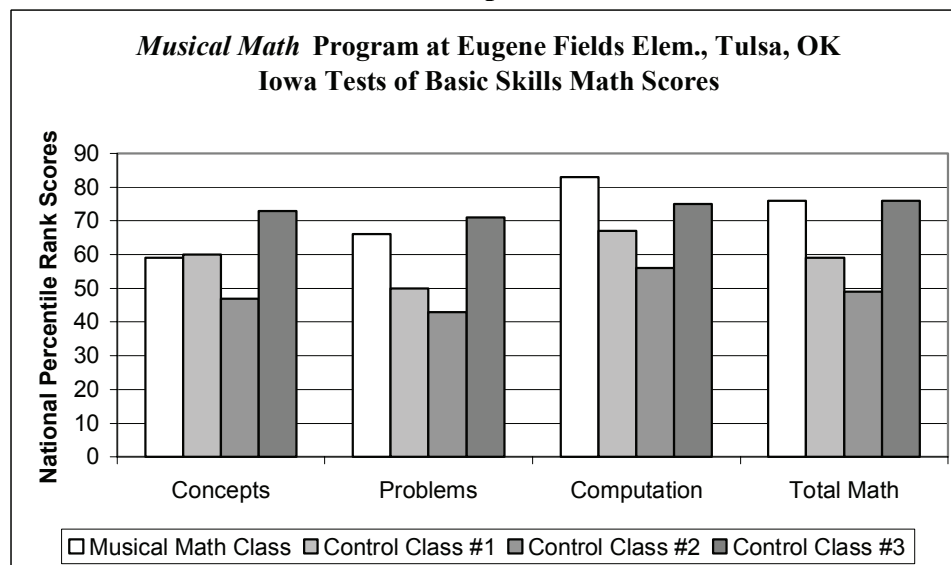
During the 1992-1993 school year, the Language Arts Foundation of America ran a pilot program at Eugene Fields Elementary to assess the benefit of the *SSRW* and *Musical Math* programs on several first grade classes. There were one *SSRW/Musical Math* class and three control classes. The control classes utilized the Silver Burdett text for Whole Language presentation, with a Heath text for Mathematics. The pilot class used the *SSRW* and *Musical Math* programs, was composed of 14 low-performing students, and had the lowest average entrance test scores of the four groups. The control classes each had 13 students, none of whom were classified as low-performing. In Control Class #3, ten of the students were

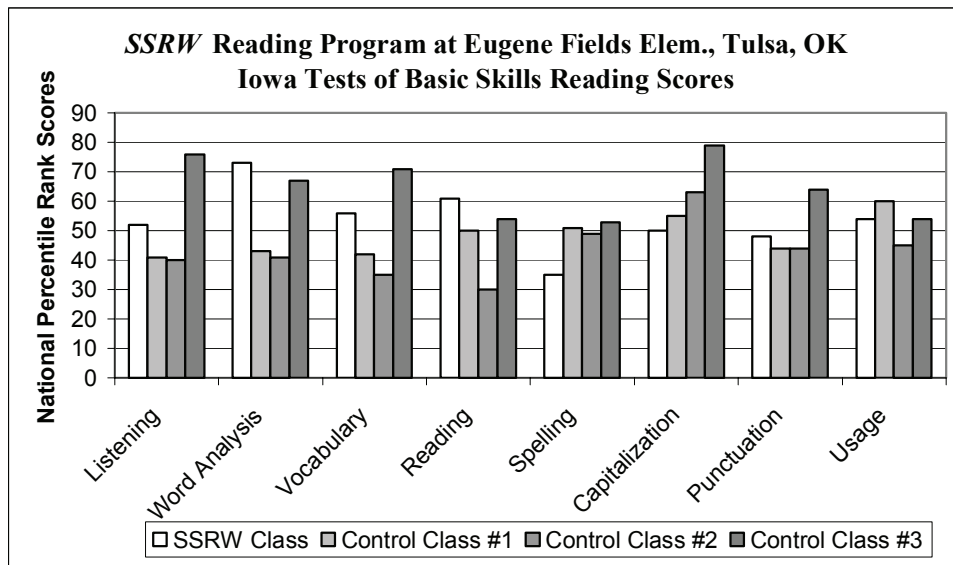
higher-performing, and had already completed one year of Transitional first grade before entering the program. All groups were assessed using the Iowa Tests of Basic Reading Skills (ITBS).

**Graph 1** shows the performance of the different groups in math. The *Musical Math* class outperformed all control groups except for Control Class #4, which included high-functioning students.

**Graph 2** shows the performance of the different groups in reading. The *SSRW* class's performance often matches or exceeds that of the control groups, even though the *SSRW* class contained the lowest-performing group of students.

**Graph 1**



**Graph 2**

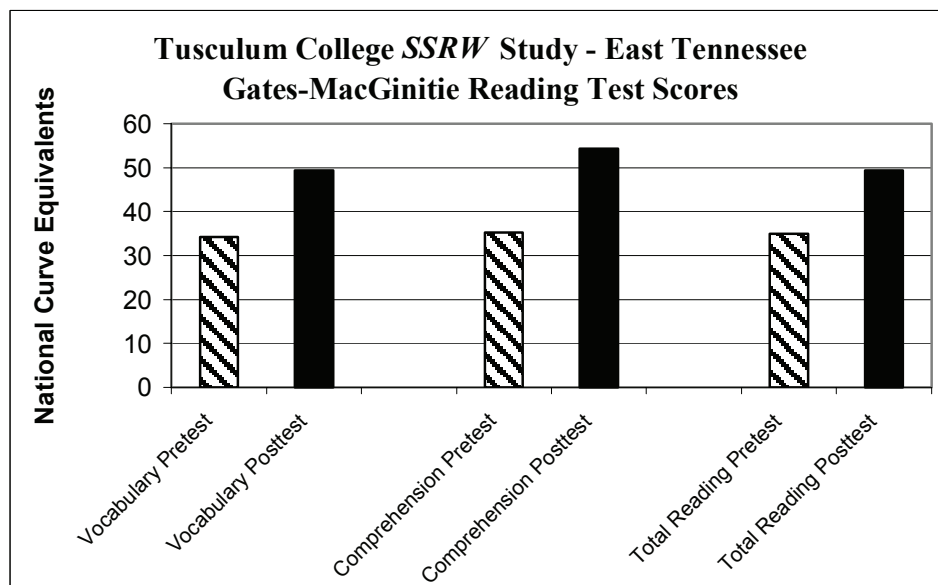
## Tusculum College Study, East Tennessee

In April, 1990, Donna Cagle from Tusculum College completed a research study on the *SSRW* program as her Master's Thesis. She worked with a group of twelve second grade students in a school in a low SES area of East Tennessee. All students participating in the program were repeating the second grade due to deficiencies in reading and writing skills. The students had placed below the 49<sup>th</sup> percentile on the Stanford Achievement Test the previous year, and received Chapter 1 reading services. All students were identified as learning disabled in reading. The students had previously been instructed using basal readers.

The *SSRW* program was used for 40 minutes each day, and the Silver Burdett basal series was used for 30

minutes each day. The Gates-MacGinitie Reading Test was used as the criterion measure of program success. The pretest was administered in August 1989 and the posttest was administered in January 1990, after five months of instruction using the *SSRW* program.

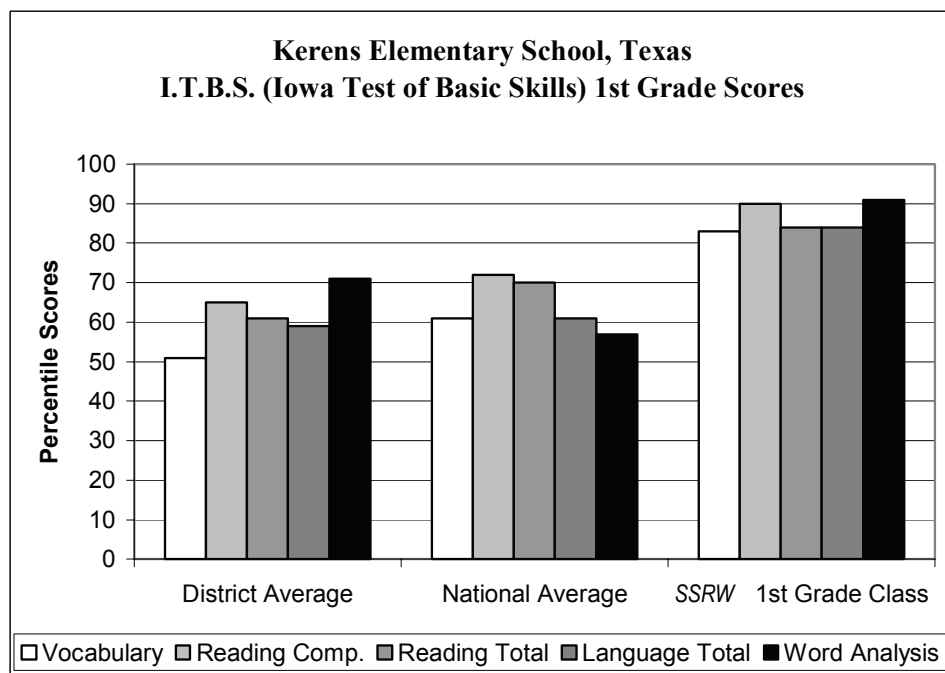
Paired samples t-test results show that student scores differed significantly from pre to posttest in Vocabulary ( $df=11$ ,  $p = .00$ ), Comprehension ( $df=11$ ,  $p = .00$ ), and Total Reading ( $df=11$ ,  $p = .00$ ) subtests on the Gates-MacGinitie. The following graph shows group averages from pre to posttest on the Gates-MacGinitie. Students gained an average of 15 NCEs on the Vocabulary subtest, 19 NCEs on the Comprehension subtest, and 14 NCEs on the Total Reading subtest.



### Kerens Elementary School, Texas

Students in grades 3 and 4 participated in the *SSRW* program as they progressed from kindergarten through grade 2. They scored in the 85<sup>th</sup> percentile for Reading in third grade and in the 84<sup>th</sup> percentile in fourth grade.

Students participated in the *SSRW* program for 30-45 minutes daily and completed individual oral reading one hour per day.



## Lone Oak Elementary School, Texas

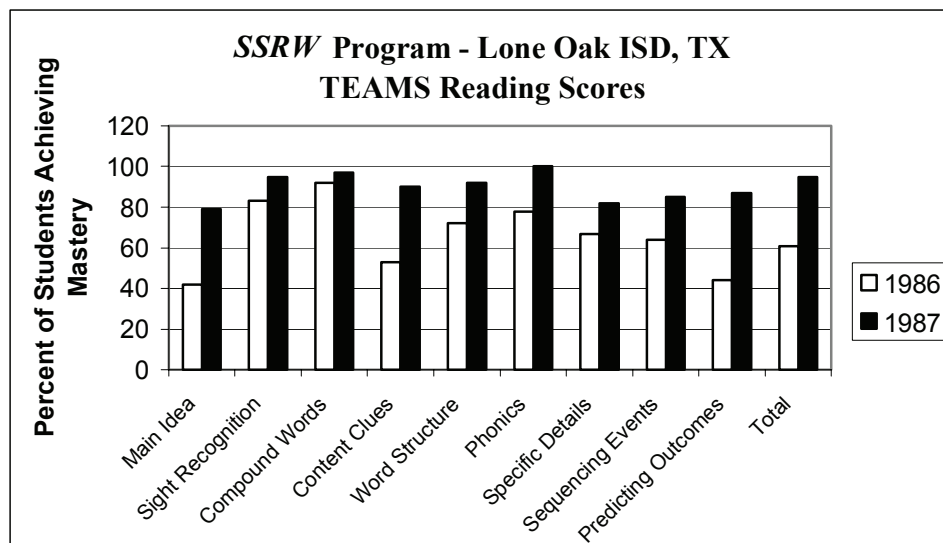
Lone Oak Elementary School implemented the *SSRW* program for first grade classes during the 1986-1987 school year. The students' progress was assessed using the Texas Assessment of Minimal Skills (TEAMS).

**Graph 1** shows the progress of the first grade students in reading skills measured by the TEAMS. Scores from the 1985-1986 school year, before *SSRW* was implemented, are compared with the scores the year after *SSRW* was

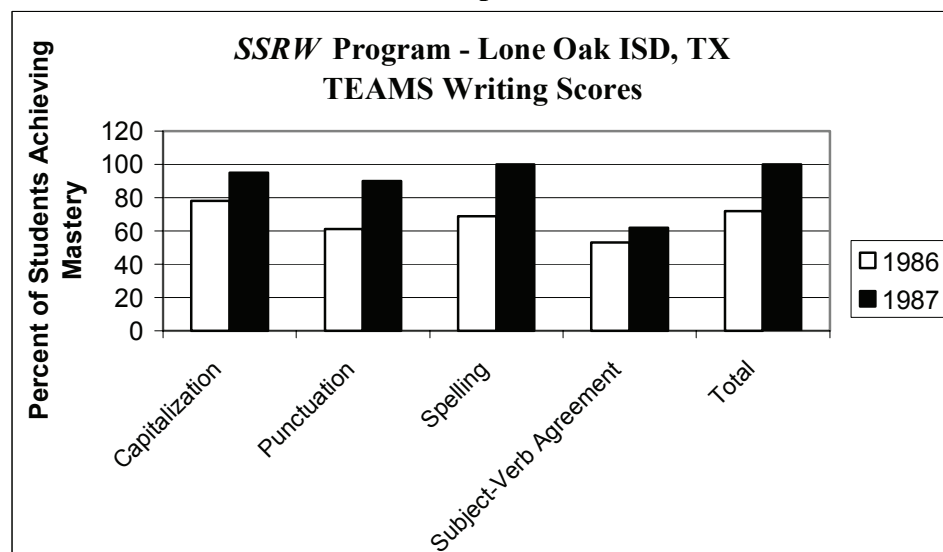
implemented. There is an increase in scores for all sections in 1987, after the *SSRW* program was implemented. The Total Reading score jumped from 61% achieving mastery in 1986 to 95% achieving mastery in 1987.

**Graph 2** shows the progress of the first grade students in writing. In 1986, 72% of the students achieved mastery in writing, while 100% showed mastery on the same skill in 1987, after going through the *SSRW* program.

**Graph 1**



**Graph 2**



## Valley View Elementary School, Texas

Valley View Elementary School implemented the *SSRW* Program during the 1999-2000 school year. The program was implemented for the kindergarten, first grade, and second grade classes. Progress was measured on the Texas Primary Reading Inventory (TPRI) test.

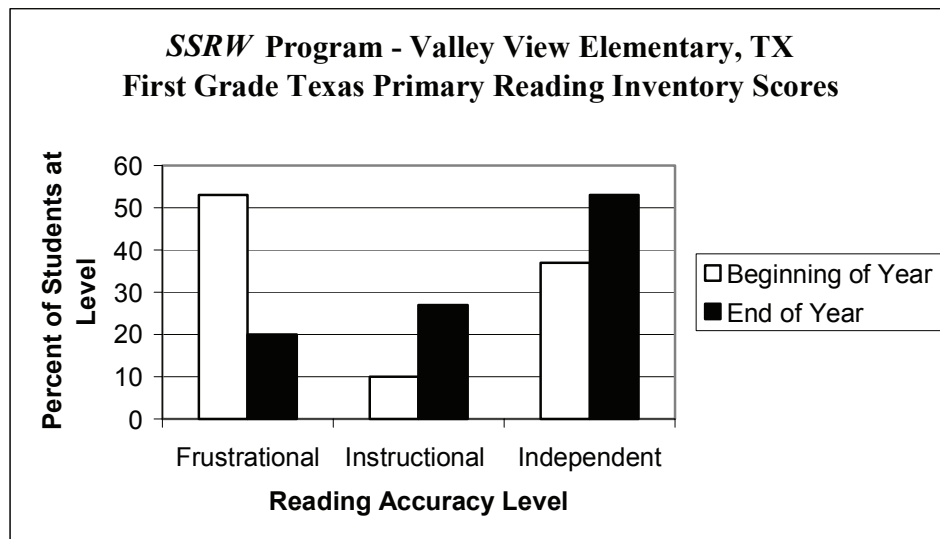
As evidenced in **Graph 1**, from the beginning until the end of the year, the majority of first grade students moved into the Independent reading level. At the beginning of the year, only 37% of students were reading at the Independent level, while 10% were reading at the Instructional level, and 53% were reading at the Frustrational level.

**Graph 2** shows a similar pattern for second grade students, with most students moving into the Instructional and Independent reading levels by the end of the year.

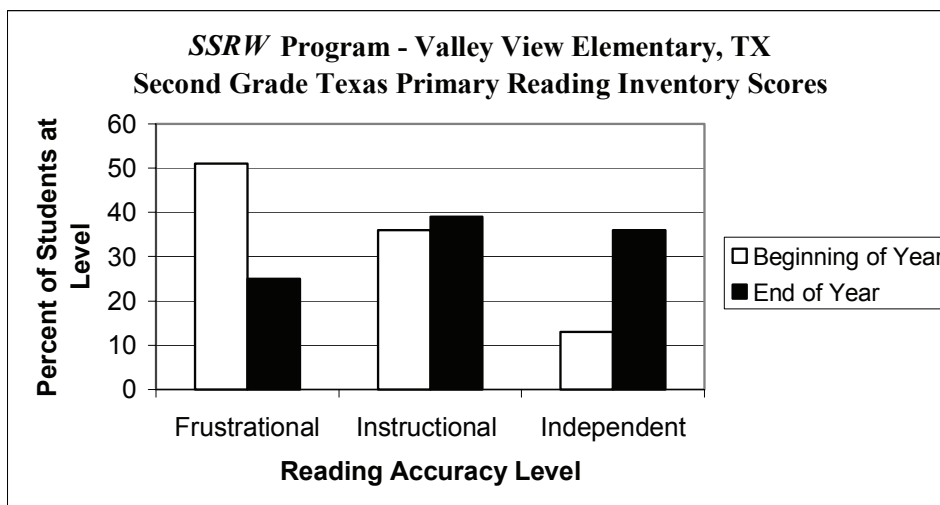
**Graph 3** shows that second grade students also made impressive gains in their mastery of different Graphophonemic Knowledge Tasks assessed by the TPRI.

**Graph 4** shows that all grade levels made gains on the Comprehension subtest of the TPRI from the beginning until the end of the year.

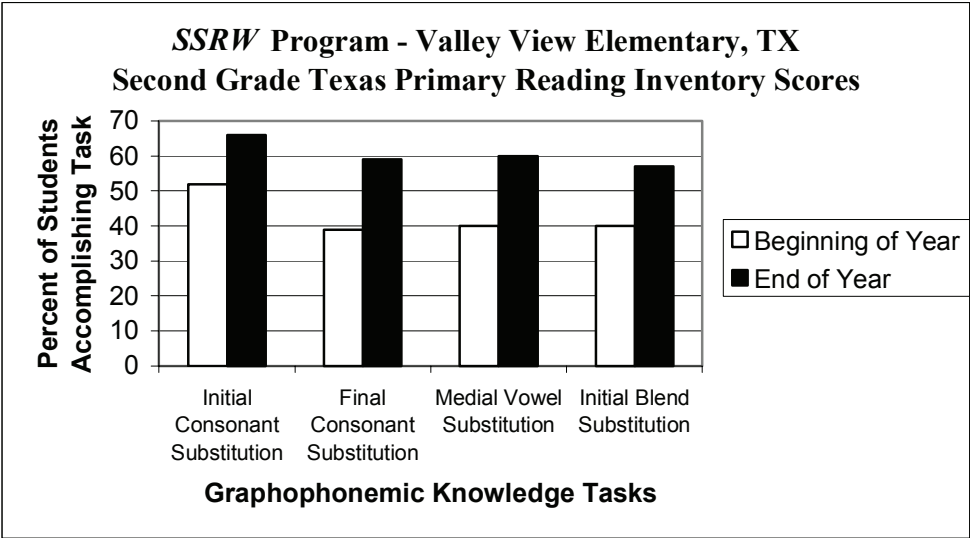
**Graph 1**



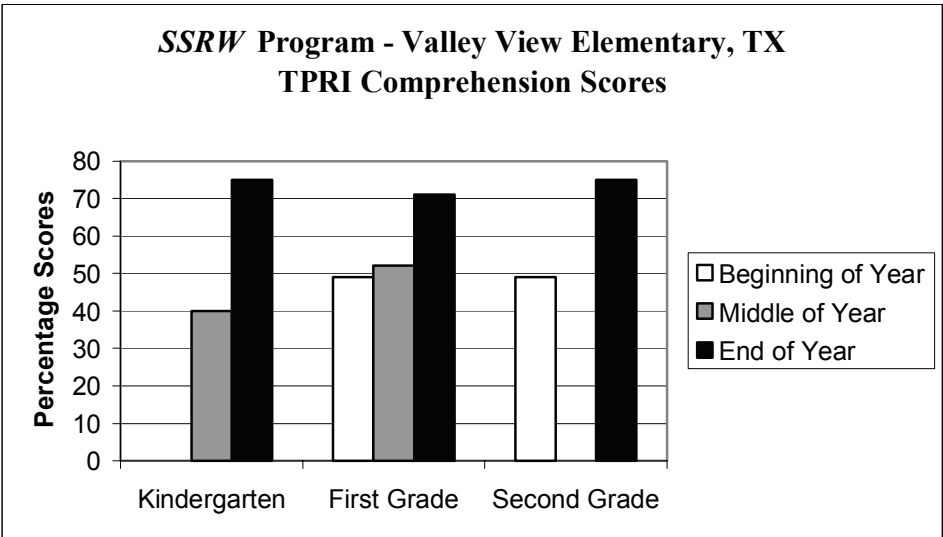
**Graph 2**



Graph 3



Graph 4



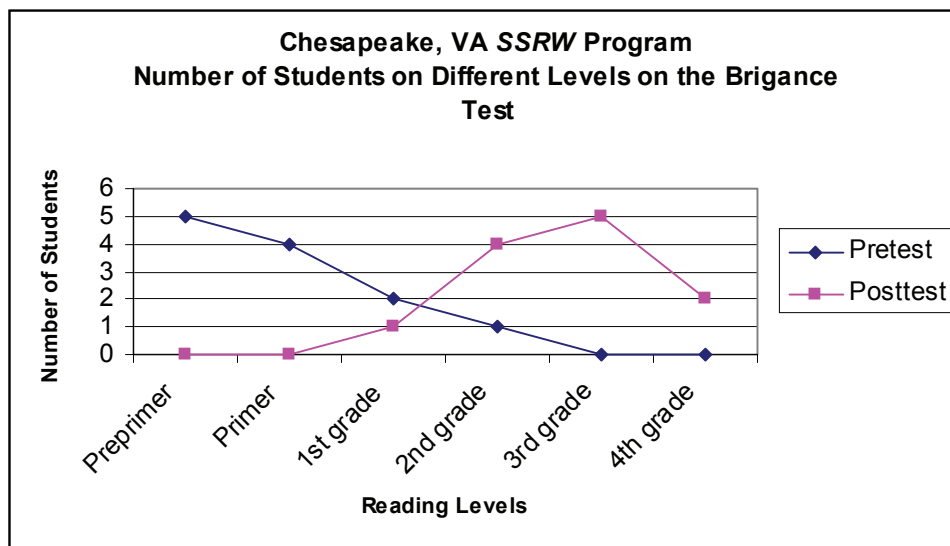


## Chesapeake, Virginia

From 1986-1988, the *SSRW* Program was implemented in a Chesapeake, Virginia Self-Contained Learning Disabilities class for two consecutive years. A total of twelve students took part in the program. Over the course of the school year, many students moved from pre-reading levels to grade level reading.

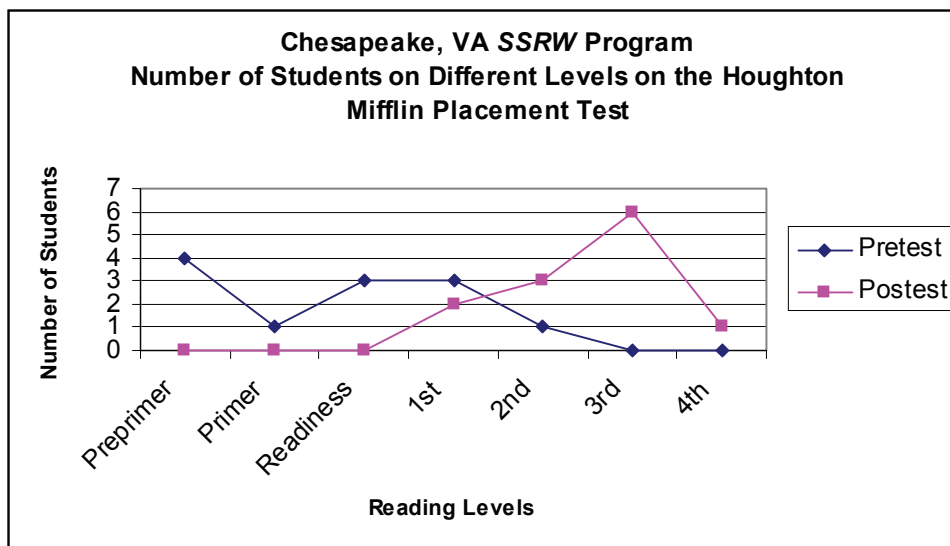
On the Brigance Test of Reading, many students

moved from Preprimer and Primer levels to first, second, third and fourth grade levels. At the beginning of the year, nine students were in the Preprimer and Primer levels and none were in the third and fourth grade levels. By the end of the year, seven students were in the third and fourth grade levels and none remained in the Preprimer and Primer levels.



Reading progress was also seen on the Houghton Mifflin Placement Test, with many students moving

from Preprimer, Primer, and Readiness levels to 1<sup>st</sup>-4<sup>th</sup> grade reading levels.



PearsonSchool.com  
800-848-9500

Copyright Pearson Education, Inc., or its affiliates. All rights reserved.